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EXPORTING THROUGH E-COMMERCE
How Indian Exporters have
harnessed the IT Revolution

Dipankar SENGUPTA

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SECTION I

Introduction

The promise of the information revolution

The information revolution aided by the revolution in telecommunications and institutional innovations had initially promised to change the nature of markets altogether. The market's primary role as merely a place where buyers and sellers meet (it had seemed) would be revolutionised by the impact of the information revolution on its subsidiary role, i.e. as a transmission belt of information. Thus the market would be a place where there would be no intermediaries between a seller of a good and its final buyer to the mutual benefit of both parties. The economy as a whole would benefit when the former intermediaries would have to turn to directly productive activities to make a living.

The roadmap to the 'new economy' had two facets. The first of these stressed on the reduced cost of information that made producers and consumers aware as to where products and markets lay. This development had the potential to make direct selling the rule rather than the exception. The need to duplicate extensive marketing networks by newer entrants into any market would be eliminated as the cyber-market afforded free entry to all. Thus entry into markets to challenge established incumbents by new firms would become easier leading to increased competition.

The second facet of this roadmap laid emphasis on reduced transaction costs. The information revolution aided by technological and institutional innovations has a tendency to reduce transaction costs. Economics has long recognised that firms exist because of the existence of transaction costs¹. It pays to consolidate some economic operations under a single corporate unit and circumvent the market even at the cost of losing flexibility. This is because if these operations were carried out under separate corporate units, the enhanced costs in the form of expenses of drawing up contracts between the separate units, insurance costs and transportation costs would be greater than the benefits of flexibility. If, however these costs fell then the nature of the conventional firm would

¹ Coase, R. 'The Nature of the Firm', *Economica*, 1937

change. The change would be in two directions. The firm's organisational pyramid would flatten, as fewer middle level managers would be required to manage informational flows to and from the shop floor to the entrepreneur. Functionally, the firm could easily sub-contract a large part of its operations to other corporate entities as Berkel the European scale manufacturer has done because lower transaction costs would no longer justify vertical integration². The ASEAN economies have reaped the maximum benefit from the decision of Japanese manufacturers to outsource parts of their operations that were hitherto located in Japan. India on the other hand has started to benefit from the first tendency, i.e. the outsourcing of the non-core operations that formed part of the pyramidal structure of the firm. Thus setting up a new firm itself would no longer call for heavy investment and thus entry of new firms as producers would be easily facilitated. Thus given the ease with which goods and services would be produced and marketed electronically because of the information and the complementary telecommunications revolution, competition would increase leading to (hopefully) a frictionless market and all round efficiency.

Information Revolution, E-commerce and the Third World

If the Information Revolution by ushering e-commerce in, promised to revolutionise the market by increasing competition through enhanced market access and better information, it could do no worse for at least a section of the Developing countries not completely left out by the digital divide that has witnessed a disproportionate spread of the telecommunications revolution in the richer countries than in the poorer countries. This was especially true for dual economies like India and China where high-technology enclaves replete with telecommunications infrastructure co-exist with a more 'traditional' economy. In any case the relevant agents of transformation in these countries would be businessmen whose ability to breach the digital divide should be higher than that of ordinary citizens³certainly where countries like India and China are

² de Smidt, Marc, Egbert Wever (Eds): *The Corporate Firm in a Changing World Economy. Case Studies in the Geography of Enterprise*. London / New York, Routledge, 1990

³ We are not concerned about the relative share of benefits between the rich 'North' and the poorer 'South' but only the absolute benefits that could accrue to the 'South.' This study in particular concentrates on benefits that could accrue to India.

concerned. Properly utilised, e-commerce by raising awareness about where markets for their products lay, the prices that prevailed, costs of inputs as well as information about marketing seemed to be the key to increasing their global presence via increased exports. As in the market economies of the west, e-commerce held out the promise of circumventing established marketing networks by reaching the consumers directly to the mutual benefit of both producers as well as consumers. Thus for the labour surplus economy with its advantage in labour intensive items like apparel and leather goods, the elimination of intermediaries and their commissions meant higher prices received for goods sold while the consumers paid lower prices. This would bring forth increased supplies of the commodity exported leading to higher income⁴.

The scope for labour intensive services seemed to be more dramatic, especially those that were knowledge intensive. E-commerce showed the potential that existed for certain services like accountancy services to be availed of and supplied without physical movement of any sort. For many third world countries with their almost unending supply of unemployed graduates⁵, the scope for export of such services seemed to be vast. Hitherto, in the richer countries these were services that could have been supplied only by expensive resident skilled persons. The same task could be done by a firm in the Third World at a fraction of the cost and the work would be transmitted electronically to any part of the world. *Indeed, any knowledge based activity which is routinised enough to be carried out by non-super specialised skilled workers, but not sufficiently routinised to be carried out wholly by a computer was an appropriate activity for an economy with a large pool of educated unemployed persons to carry out. The study will also comment on the supply constraints that such sectors face and the relative scope of scaling up production for such services and the steps that may be taken by which extra demand can be met.* Software development has turned out to be one such service. But increasingly, services like accountancy and a host of other financial as well as managerial services are also lending themselves to be exported electronically. Thus for quite a few third world countries, the potential for

⁴ For an example of official optimism see E-commerce and Development Report 2002, UNCTAD

⁵ For a reason as to why this is so see Todaro, Michael 'Economic Development In The Third World, Longman', New York & London, Third Edition 1985

the export of these type of services was felt to be considerable. While India immediately springs to mind, economies like Ghana⁶ as well as Jamaica⁷ too are being touted as potential destinations where these tasks can be carried out.

Thus e-commerce promised to make globalisation a process that had much potential for the third world. It has been a promise that has not been fulfilled. Given the fact that it promised so much and delivered so little we have to ask ourselves why.

The Unfulfilled Promise and the Incumbency Advantage

Those who expected the e-revolution to sweep the old economy away and with it the established firms and brand names underestimated the resilience of the old economy. The value of old brand names and goodwill and their resilience is a commodity which while intangible has stood by them in good stead. Certainly, the absence of reputation where many of the e-retailers are concerned which could not compensate for the lower prices that were offered for either goods or services hampered them from eating into the market of existing firms. Consumers, either individuals or firms have generally preferred to go with known brand names and tested partners rather than unknown brand names or unknown partners although on paper savings could have been enormous. This should not have come as a surprise to observers as the value of goodwill had been adequately demonstrated before the e-revolution was to have taken place⁸.

For example, when Douwe Egberts, a subsidiary of Sara Lee, purchased the consumer division of AKZO, it paid 300 million guilders for the plant and machinery, but 900 million guilders for the goodwill, especially of the known brand names⁹. To expect e-retailers to breach this reputation built over decades without cost was clearly unrealistic and thus

⁶ Yarney, John, 'Ghana jumps into BPO', *Computer World*, Tuesday, April 01, 2003

⁷ 'The Rush to Send Back-Office Business Overseas - Part 1' http://knowledge.wharton.upenn.edu/100902_ss.html

⁸for a more realistic view on e-business in general, see Coltman, T. A. Latukefu, D.F. Midgley, 'E-business: Revolution, Evolution or Hype?' www.ccc.agsm.edu.au/papers/researchBriefings/A01_Paper_RB001_eBizRevolutEH.pdf, 2001

⁹ de Smidt *et al*, *op cit*.

we should not be surprised that the e-commerce has not by any means swept aside the old economy. The advantage of incumbents has not lain in their tangible physical assets, but rather in the intangible qualities of reputation and goodwill (as the Douwe Egberts-AKZO transaction indicates).

However, it would be incorrect to say that the e-commerce has not taken off at all. *Of interest is the nature of e-commerce today, especially the way in which it is reflective of the old economy.* Like in the old economy, most e-commercial transactions are inter-firm transactions rather than business to consumer transactions¹⁰. In many cases, the old mode of transactions between long-term partners has simply undergone technological transformation into e-commercial transactions between the same partners. Likewise, even where transactions are between business and consumers, it is likely that consumers are buying from firms whose reputations were well-established in the old economy itself.

The Gains from Trade and E-commerce: Who Has Gained?

As with globalisation, it appears that most of the gains from E-commerce have not gone to consumers in the form of lower prices, but to producers in the form of lower costs. Lowered costs are not always passed on to consumers in the form of lower prices. With the freeing up of trade, it was discovered that the movement of prices and wages have not always acted in the way trade theory predicted it would¹¹. One way to explain this is to point to oligopolistic nationwide marketing chains which while buying from the manufacturer/economy offering the lowest prices, is under no compulsion to pass on some of the fall in costs to consumers in the form of lower prices. His brand name and market power imparts a degree of inelasticity to his demand. For manufacturers from the third world to set up marketing networks in developed countries was an expensive proposition

¹⁰ Report of the National Committee on E-Commerce, Confederation of Indian Industry (CII), 2002

¹¹ Rodrik, D, 'Globalisation and Labour, or: if Globalisation is a Bowl of Cherries, Why are there so many glum faces around the table?' in *Market Integration, Regionalism and the Global Economy* edited by R.E Baldwin, D. Cohen, A. Sapir and A. Venables, Cambridge University Press, Cambridge, 1999

and they have had to be content with the oligopsonistic nature of their relationship with their buyers.

Similarly, the benefits of the e-revolution, limited though it has been, has gone largely to companies already well-established. Their ability to discern the quality of their suppliers has made them more ready to buy services or subcontract part of their operations to more efficient producers in countries like India. What sets these firms as e-consumers apart from individuals is their *organizational ability to process information* and decide which supplier is dependable. Individuals trying to find a cheap and dependable source for all his household items from the internet would probably face *information overload*. This is not to say that they have all the information they want; but the absolute amount of information that they have to process is generally beyond their capacities.

Thus the importance of brand creation, building marketing networks as well as strategies aimed at better targeting of information become obvious if the potential of e-commerce as an engine of trade promotion is to be realised.

E-commerce as an engine of international trade, Trade in Services and Trade-related labour mobility

Is it possible to suggest a framework that firms, states in the third world and the international community may use to overcome the problems of credibility, reputation and a lack of marketing outreach in order to use e-commerce as a powerful tool of export? For that, one would have to ask the question- are there policy measures that can/must be taken at the firm (at the national and international levels) to overcome problems/shortcomings of e-commerce?

It is likely that there are appropriate policy responses at all levels. However, these policy responses may be so interdependent that it may make little sense to pursue well-designed policies at any one level in isolation. For example investments made by firms may come to naught in the face of absence of international agreements to prevent discrimination between national and foreign firms. Efforts to build networks may be

stymied because of restrictions on certain business practices by particular countries.

What one must look for are the appropriate steps that firms in the third world exporting both tangible commodities as well as services need to take in order to use e-commerce effectively. Having done so, one must look at the necessary measures the state must take nationally and the agreements that must be arrived at internationally in order to legally enable firms to take the aforementioned appropriate steps.

Thus it may be argued that a solution must work itself upwards from the level of the firm to state intervention and then ultimately onto international cooperation mainly in making appropriate changes to the legal basis for international commerce in order to enable e-commerce to flower.

The role of firms

Let us begin with the role of the firms in empowering e-commerce. As has been said earlier, the resilience of the old economy firms (and the fact that established companies have done relatively better in e-transactions) has shown the importance of credibility, goodwill and brand creation. Thus if firms in the third world wishing to export commodities and services into the developing countries want to use e-commerce to enhance market presence they must undertake steps that give them and their products a certain reputation, and the firms a certain credibility. How does one proceed? Firstly, awareness that leads to reputation has to be spread about the commodities and services being offered. This is easily accomplished in the case of services that are more likely to be inter-firm. As indicated earlier, the buying firm's ability to discern quality of the service being offered is greater than an individual customer who tries to gauge the quality of goods over the net. Sellers of specialised knowledge-intensive services tend to be few in number making choice easier. Moreover complaints regarding poor service are easier to deal with when the actors are both large firms and the seller is trying for a long-term relationship.

However when the service/ commodity being sold is a final good like offers to audit a firm, or clothes, then *e-tailing* is far more difficult as

credibility and *reputation* assume paramount importance¹². How do firms overcome this problem? One way is of course through an advertising blitz aimed at raising awareness of services/commodities of comparable quality available at lower prices. For firms selling services like software development or auditing services, this blitz will be more personal and interactive. Continued personal interaction in the case of specialised services are more likely to win the confidence of would-be clients than mere conventional advertisements. Once this confidence has been won then the actual service offered may be transferred wholly or substantially over the 'wire'. In the same vein where commodities are concerned it is clear from the dominance of the old economy firms in e-tailing, that a certain physical presence in the destination country is prerequisite. Indeed, the surest way of attracting customers and maintaining a hold on them is to get them to physically examine wares before buying. A satisfied customer is more likely to be a repeat buyer than one who only knows about the commodity over the internet. ***Thus in both cases satisfactory personal interaction and experience is necessary if the economic relation is to be continued even if virtually.*** As a result, third world firms wanting to increase global presence would like to invest in offices and showrooms across the destination countries. This, however, is unrealistic given the investment required. In such a case innovative ways of marketing and using the net is called taking advantage of the nature of the project sold as also the nature of the market, specifically the buying class or retailers in the importing country. ***The performance of Indian firms to devise ways to use the internet for e-commerce-aided-export and its analysis is the first set of issues that this study aims to explain.***

It is also now evident, that more than goods, that it is certain services that lend themselves very easily to being traded over the net. Indeed software development, maintenance of IT systems, financial services, insurance services et al. lend themselves very well to e-commerce. Indeed, rapid changes in communications technology has ensured that services that had hitherto been considered non-tradable are no longer so.

¹² for a general discussion on trust, see Pavlou, P.A., 'The Economic and Social Impacts of E-commerce' Idea Group Publishing Hershey, PA, USA, 2003

The identification of services that lend themselves to e-commerce and the success of Indian firms in these services as well as the analysis of the firms involved will be the second set of issues that the proposed study seeks to explain.

The study will confine itself to the following areas; in the case of commodity trade it will restrict itself to firms exporting and manufacturing garments and leather items. In the case of services, the study will look at firms exporting IT services but more closely at firms in Business Processes Outsourcing, specifically the sectors of financial services like accounting and payrolls operations et al. To sum up, the study will focus on the manner in which Indian firms have used e-commerce to push exports of both goods and services, their successes and failures and the reasons for the same.

Methodology

Our study is in part survey-based at least when it comes to garment/leather goods/handicrafts exporters. We have confined ourselves to firms that are located in and around Delhi. The questionnaires (the details of which are given in Annexure I) submitted to the firms form an attempt to obtain information about the nature of the firms, the products they sell, the volume of exports, turnover, and more importantly the efforts that they have made to use the net to bring about e-commerce aided exports. The firms that were surveyed were listed on the website of the Federation of Indian Exporters Organisation. All firms located in the vicinity of the National Capital Territory of Delhi were chosen.

We must, however, report that *no firm disclosed turnover or export figures*. While the firms were forthcoming on their e-commerce experiences, they insisted that financial information asked was not relevant to our study and thus would not be volunteered. While this is a drawback, it may be held that our study that delves into the e-commerce experiences of the surveyed firms is not seriously compromised by the refusal of firms to part with financial information.

The problem that non-disclosure of information may be summed up thus: conventionally, empirical work should stick to the following

approach, hypothesize a relation between economic variables like the export share of firm, firm size, extent of use of e-commerce, and possibly time for which e-commerce has been used and frame this relation in the form of an equation of the type:

Export share of firm = f (firm size, extent of use of e-commerce, time for which e-commerce has been used).

This should logically be followed by the use of data that captures each of these variables as closely as possible and a statistical exercise carried out (most likely a regression) with the magnitude, sign and the significance of the coefficients revealing the factors that affect exports as well as the role of e-commerce in promoting exports. The formulation used above is not necessarily the only relation that can be tested and several other relations derived from alternative arguments can be thought of. Thus for example we could formulate a relation:

Ecommerce usage = f (size, nature of workforce) etc.

However, what is required is data particularly about exports of each firm in the sample, their size (turnover/assets), nature of ownership et al. But as we know the study is at a gross disadvantage as none of the respondents gave any information about their annual turnover, annual exports, nature of ownership or any other variable crucial to running a statistical exercise. Additionally, and as importantly (as the study and survey indicate) for all firms e-commerce as a tool to push exports have failed. Thus e-commerce usage as well as impact is the same for all firms, i.e. absent near totally.

Thus a statistical exercise becomes meaningless. This is not restricted to our study alone but is also to be found in other studies that seek to examine the impact of e-commerce on exports of garments¹³. While these studies were more fortunate in procuring firm level data regarding turnover, export destination etc, the dependent variable i.e. additional export through e-commerce was near zero for most firms making statistical exercises meaningless.

¹³ This is not unique to this study but is similar to other cases, e.g. South Africa described in the later part of the paper

This leaves us with other approaches. One has to look at a cross-sectional view of the effect of e-commerce across industries, use data (or suitable proxies) for average firm size, organisation, technological competence and carry out relevant statistical exercises to find the effect of e-commerce. Clearly this is beyond the scope of this study.

An alternative approach is to look at Industrial Organisational Theory to explain the findings especially the works of Coase¹⁴, Williamson¹⁵ and others to explain the failure of e-commerce aided exports. While we have adopted this approach partially, the advent of e-commerce is like no other technology and does not lend itself easily to analysis using framework that was developed some time earlier. (This literature's emphasis on transaction costs in the determination of the nature of the firm to the exclusion of government policy is not always illuminating. As we will see, the problem posed by the findings of this survey poses the question - Why have not Indian firms been able to reap the benefits of transactions cost-reduction that e-commerce brings forth?). An algebraic treatment too will have to make certain foundational assumptions (and reveal its bias in favour of or to the exclusion of a particular strand of literature).

In the same vein, the literature on negotiation and competition between organisational hierarchies deterring/impeding information flows are also of little relevance. It must be noted that the firms surveyed are very small with little or no hierarchy. Internal information one presumes is used and used efficiently. What this study brings about is its inability to extract and utilise external information.

The paper's approach is the following. It has compared the failure of the Indian garment exporting firms to use e-commerce/the ICT revolution effectively and compared to its the successful use by large corporate bodies like ITC Ltd under far more difficult circumstances. Upon comparing the difference between the two types of firms, it has then come up with explanations for the failure of the Indian exporting firms to use e-commerce.

¹⁴ Coase *op cit*

¹⁵ see Williamson, O.E. and S.G. Winter, 'The Nature of the Firm, Origins Evolution and Development, Oxford University Press, New York, 1991

The approach with regard to IT and ITES is similar. The reason is not really similar because Indian IT firms have been able to use the IT revolution to aid their export of software. The reason for adopting a similar approach is the paradoxical situation in the ITES sector (a relatively low technology area) where MNCs have a commanding presence whereas in the IT software development Indian firms they have a sizeable presence. The relatively lowkey (i.e. numerous but atomised and dispersed) presence of Indian firms in the latter sector means that data collection becomes a problem (although by no means impossible to obtain). That is why the study relies largely on interviews with practitioners and combines the approach of the first section in analysing findings. In the same vein Cyert and March's view¹⁶ of organisations 'as coalitions which negotiate goals' is also not relevant given the small size of the firms which does not allow for much hierarchy and where intra-firm information and goal setting is coherent. The problem as we shall see is to do with the processing of what is available outside the confines of the firm, which the firm is unable to do.

In the case of IT and ITES, we have taken recourse to interviews of executives and consultants associated with both big and small firms. Here again anonymity was stressed as certain views asserted were controversial. However, little was said that was not on public record somewhere or the other. Even if controversial statements were taken out (and for this study, controversial statements have been omitted), the conclusions of the study would not be seriously compromised.

In both cases the study uses the copious standard literature that exists both on the net and outside it. Work on this field has been considerable and much of it is of very good quality and is exhaustive. A survey of literature is not provided but relevant work is introduced wherever necessary, e.g. to compare the actions of Indian firms or observed business phenomena with conclusions of empirical and theoretical literature on e-commerce.

The wealth of literature in this field is the reason why we have restricted ourselves to that area which has remained relatively untouched;

¹⁶ Cyert, RM & March, JG (1963): *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ

i.e. the organisational aspects of the firms that have attempted to take the aid of e-commerce aided exports and how this aspect has affected their efforts.

The choice of items and sectors are given in the relevant sections of the paper.

The study is organised as follows: the following section (II) deals with e-commerce in the export of goods where India is perceived to have a comparative advantage. Section III deals with e-commerce in the export of IT and IT enabled services. We will briefly comment on the possible role of the state in both sections since given the differences in the nature of the two areas, the role of the state may be expected to differ.

SECTION II

E-Commerce and the Old Economy

Indian exporters in the realm of E-commerce: A Case Study of Garment Exporters of Delhi

What is the importance of e-commerce, especially exporting through e-commerce, as far as India is concerned? Have Indian exporters tried to use e-commerce to consolidate old markets and penetrate new markets? If so, how successful have they been and what have been the experiences of Indian exporters where e-commerce is concerned? And finally what are the lessons to be learnt?

Before we get into a discussion of the results obtained from the survey of local firms a discussion on experiences of garment exporters in developing countries using e-commerce to promote their own exports will not be out of order. We concentrate on studies conducted in South Africa and Bangladesh. The results from both regions are depressing and mirror the findings of this survey, although the conclusions drawn are not always the same.

For South Africa, Moodley, Morris and Velia¹⁷ after surveying 28 firms conclude that they have found no evidence that inter-firm transactions have increased due to e-commerce. Nor have they found evidence that middlemen have been reduced/eliminated as a result of e-commerce. In addition there is no evidence of facilitating international trade by reducing coordinating costs or any change in the basic business models of the firms surveyed. Observers¹⁸ explain these results by claiming that business relations in this line of business are highly personalized and critically dependent on relations fostered over long periods of time. This is due to the nature of the business, extra-market requirements as well as the complexity of information that cannot be easily extended over the net. According to the study 'The market is not demanding it, and the payoffs of transaction-oriented e-commerce and e-marketplaces are regarded as

¹⁷ Moodley, S. Mike Morris and Myriam Velia, 'E-commerce for exporting garments from South Africa: "digital dividend" or leap of faith?' IDS Working Paper 182, 1 March 2003

¹⁸ Moodley, S. 'E-Commerce & the Export Market Connectivity of South African Garment Producers: Disentangling Myth from Reality', [http:// www.irfd.org/events/wf2003/vc/ papers/papers_africa/ R34.pdf](http://www.irfd.org/events/wf2003/vc/papers/papers_africa/R34.pdf) as well as Moodley *op cit*

being uncertain. Moreover, without active encouragement from buyers, many suppliers are likely to choose to wait¹⁹.’

Najmul Hossein²⁰ asserts that the ready-made-garment sector in Bangladesh has always been technologically dynamic in the sense that it has from time to time upgraded office equipment dedicated to communications. Despite all this, he admits that the level of B2B transactions are very limited with the net being used for e-mailing purposes more than anything else. Hussein points to the infrastructural and legal lacunae existing in Bangladesh that has stymied the growth e-commerce and asks for the state to take requisite steps. For India, Nasscom also comes up with similar conclusions (which will be discussed in the later part of this section).

The evidence of success stories (i.e. developing countries using e-commerce to export) are by and large anecdotal. There are few unifying patterns. The E-commerce Development Report 2001 showcases 16 success stories of which interestingly seven are B2C models. These are largely handicraft outfits based in Africa that have successfully used the internet to market their products in countries like the USA. In general, these enterprises have built up a loyal customer base over a period of time and today are in a position to harvest initial investment. Yet these are niche markets and duplicating their successes is not likely to be easy.

It is probably this massive gap between potential and performance which has led some observers to believe that at this stage of development e-commerce has no role whatsoever for a majority of the poorer developed countries²¹. The reasons given are standard; most developed countries are not prepared for e-commerce on account of poor telecom infrastructure, lack of necessary legal structure that is e-compatible and the condition of the economy in general. As importantly as these is the fact (as Odedra-Straub²² points out) that enterprises have not yet gauged what e-commerce

¹⁹ Moodley *et al op cit*.

²⁰ Hussein, Najmul, ‘E-commerce in Bangladesh: Status, Potential and Constraints’, Country Report 31, Center for Institutional Reform and the Informal Sector, January 2000. University of Maryland

²¹ Odedra-Straub, Mayuri, ‘E-commerce and Development’: Whose Development?, The Electronic Journal on Information Systems in Developing Countries, vol 2, 2003

²² *ibid*

has to offer and have taken no great effort to exploit the potential that exists.

As we will see that some (but by no means all) of these results are reflected in our findings. Indeed we will also show how companies operating in conditions outlined above may yet take advantage of e-commerce and do so profitably, showing that physical limitations imposed by poor infrastructure need not make e-commerce impossible or unprofitable.

It has already been stated in the previous section about the possible and potential benefits that could accrue to India should the promise of e-commerce, especially exporting through e-commerce be fully realised. As India is a labour abundant country, this benign development would have to make its impact felt through absorption of labour in certain gainful economic activities. The range of such activities would include the production of any item that can be traded globally. They could range from conventional items like garments and leather items to the exotic like handicrafts.

The reason for the choice of garments for the study is the following: garments constitute a large proportion of India's exports; garment exports for example are likely to top US \$5 billion in 2003-4²³. Should e-commerce accentuate this trend, National income would rise accompanied by the expansion of a labour absorbing sector. This is the kind of employment creating growth India certainly looks for after its experience in the 1980s²⁴. The potential expansion of the handicrafts market on the other hand has additional implications as well. Apart from the potential employment creating benefits, e-commerce also enables the sustenance of an old/traditional way of life. Thus globalisation (often seen as a process that inexorably destroys old modes of living) is transformed by the

²³ Srinivasan, G, 'Readymade garment exports up in Apr-Dec' <http://www.thehindubusinessline.com/bline/2004/01/07/stories/2004010702150500.htm>

²⁴ Bhalotra, Sonia R, 'The Puzzle of Jobless Growth in Indian Manufacturing', *Oxford Bulletin of Economics and Statistics* 1998 60 (1)5-32

communications revolution into an agent of preservation of traditional lifestyles. Indeed as artisans and craftsmen find new markets for their handicrafts, the breakdown of traditional village life is halted, even reversed. Thus it becomes possible for art forms like the Madhubani School of painting (given the success of certain African Handicrafts²⁵ firms to successfully market their wares over the net) to achieve greater acclaim and win more adherents as well as for bamboo handicrafts from the North East to appeal to the environmentally aware sections of the USA and Europe.

There is, of course, the problem of the nature of garments as a product that lends itself to be sold easily via e-commerce. Admittedly, there are other items that are much better suited to being transacted over the net. Music and books are types of items that are extremely suited for this. Homogenous products such as wheat or others that lend themselves to being comprehensively described over the net are also suited for e-transactions. Thus the penetration of e-commerce in automotive parts is higher than the apparel industry²⁶. However, as this paper looks at India's comparative advantages and products that constitute a major share in India's export basket, garments/apparel as a choice of study may be justified. While it is true that photographs and description of various items do not completely reveal quality, we will argue in the later part of this section how such shortcomings may be circumvented or tempered.

The question (and indeed the subject of enquiry of this occasional paper) is whether this potential of e-commerce has been truly realised. Our study reveals, that unfortunately that this has not been so. Our study, based on a study of 51 firms in and around Delhi reveals that the exporting through e-commerce is a revolution that has passed India by at least when it comes to the export of garments and leather goods. There have been additional reasons. Indeed we will argue that many of the reasons for the failure of e-commerce to take off lay in the policy-making by the government especially the policy of reserving certain items like garments for the small-scale sector.

²⁵ Humphrey, J,R. Mansell, D. Pare and H Schmitz, ' The Reality of E-commerce with Developing Countries', March 2003, <http://www.gapresearch.org/production/Report.pdf>

²⁶ Nasscom Report 2002, New Delhi

This policy has been the subject of much criticism from Indian economists²⁷ as well as from even multi-lateral bodies²⁸ for its inhibiting effect on exports. We will argue that in addition to the reasons stated in the introduction, this policy of reserving items for the small-scale sector has impeded organisational learning that is so necessary (even if not sufficient) to utilise the communications revolution to penetrate new markets as well as consolidate old ones.

A Brief Examination of the Results of the Survey of Indian Exporters

As a prelude to our argument, we will briefly examine the results of a survey of Indian exporters carried out by us between 1st September and 31st November 2002. Initially, it had been decided to survey a number of Delhi based firms that were oriented towards exports. The items in question had been initially narrowed down to the following classes of goods:

1. Garments and leather goods
2. Handicrafts

The first were chosen as they constitute the most significant portion of India's exported commodities today. The second was chosen given the potential benefits to traditional modes of life should e-commerce come good on its promise. However, (as our survey revealed) unlike the former group, none of the latter firms made their own goods (typical for this activity) but were themselves middlemen. As a result, they were excluded.

All the Delhi-based firms that were listed in the website of the Federation of Indian Exporters were included in the survey. Likewise, all Delhi-based firms that exported handicrafts and were listed on the website of Indiamart.com were also included in the survey. All the firms included in the survey had their own websites (an important criteria for selection to the survey) either under domain names that they had booked for themselves or were hosted on the server of their organising body. While the number

²⁷ Goldar, Biswanath, (1988) Relative efficiency of modern small scale industries in India, in: K.B. Suri (Ed.) *Small Scale Enterprises in Industrial Development. The Indian Experience* (New Delhi, Sage Publications), Chapter 5.

²⁸ <http://www.saarcnet.org/newsarcnet/countryprofile/India/india27.htm>

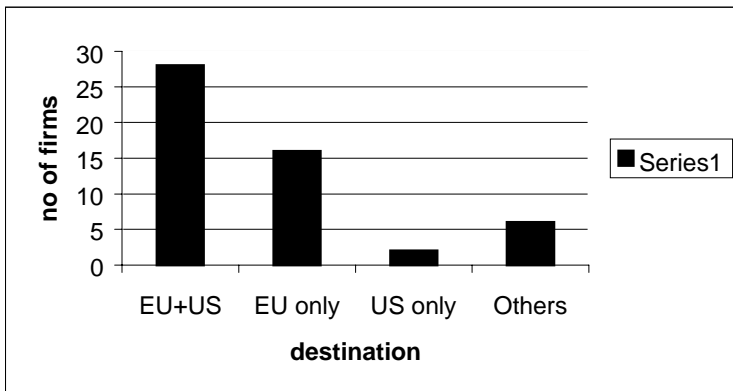
of firms in the list of firms to be surveyed was 67, the number of firms actually surveyed was 51. Significantly, the remainder 16 in number had ceased operations entirely or were untraceable. While the garment exporters were also manufacturers, the same cannot be said about the handicraft exporters.

The enterprises surveyed are without exception located in the National Capital Territory of Delhi.

The survey itself is striking for it does not reveal as much as for what it reveals. For example, the refusal of firms to reveal their total yearly turnover to the investigators is near unanimous. In the same vein, the exporters have refused to reveal the total value of their exports in physical or value terms. The refusal to answer these questions makes it impossible to gauge the relative or absolute export-orientation of the firms involved. But it does not irreversibly impair our ability to examine the impact of e-commerce on these firms as other questions pertinent to the question have more or less been answered satisfactorily.

The European bias of Delhi exporters is striking (**see chart 1**). Almost every exporter exports to Europe with only about half also exporting to the USA. Japan as a destination is strikingly absent.

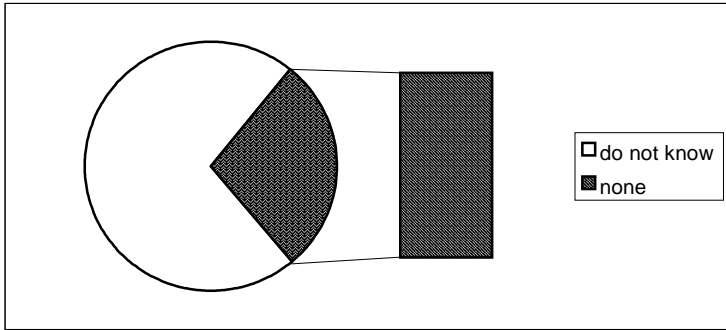
Chart 1 : Destination of Exporters



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

There is widespread absence of knowledge about the number of middlemen between them and the final retailer (see **chart 2**). While a section claimed that there were no intermediaries between them and the retailer in the foreign country, those who could not make the claim also had no knowledge how many intermediaries there actually were.

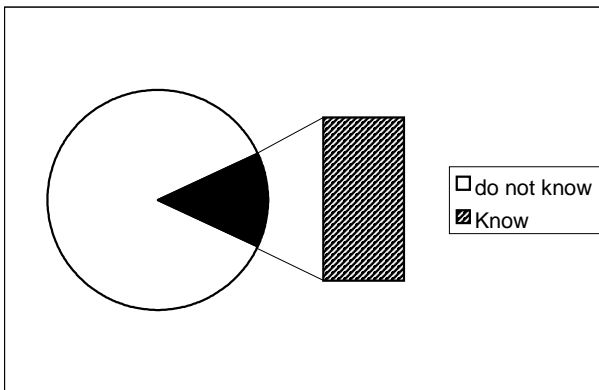
Chart 2 : Intermediaries between exporter and retailer



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

Similarly there is a near total absence about the knowledge of the price that is actually paid by the European or the American consumer for his product (**chart 3**).

Chart 3 : Knowledge about final price of product



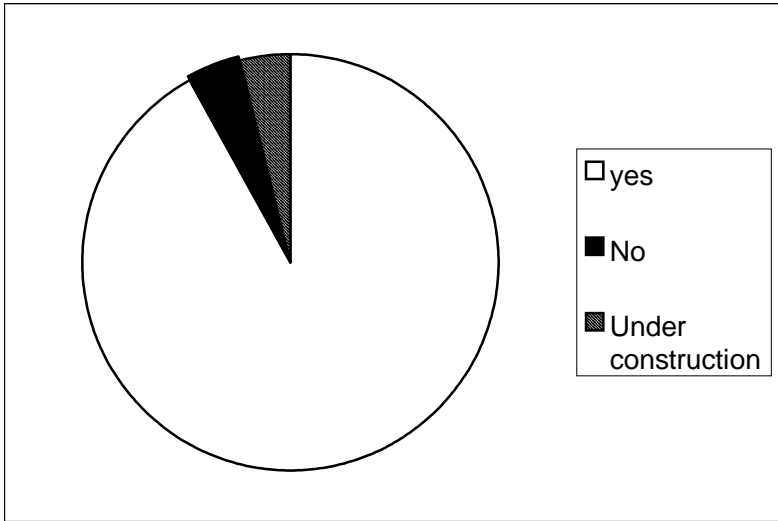
**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

Almost all of those surveyed claimed that they have considered marketing their own goods abroad. Almost the same number claimed that they had a fair idea what setting up a distribution network entails.

While almost all of those surveyed claimed to know their fellow exporters, they had never thought of collaborating or teaming with them to act in a coordinated fashion for mutual benefit.

As regards the internet, all of those surveyed were aware of the internet as they either hosted dedicated websites or were in the process of setting up one.

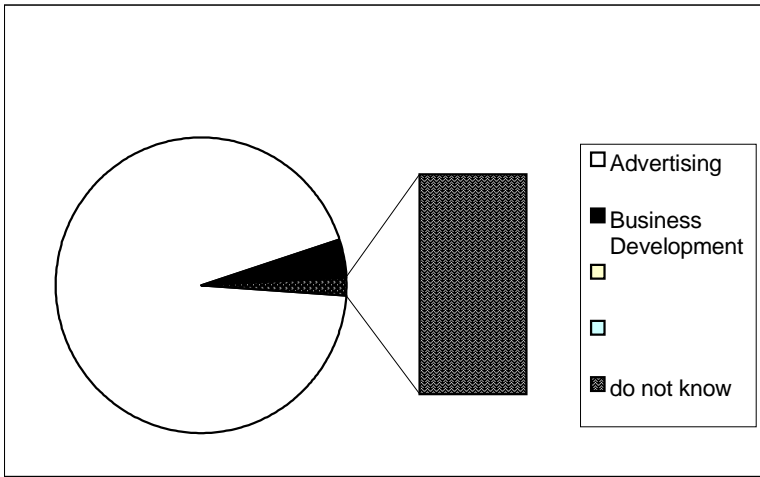
Chart 4 : Do you Host a dedicated Homepage?



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

A large majority felt that it could be utilised for conducting business. However, for the overwhelming majority, the only major use they saw for the internet was in the field of advertising with a very small fraction also seeing the potential for soliciting business ('business development' in their words) over the net.

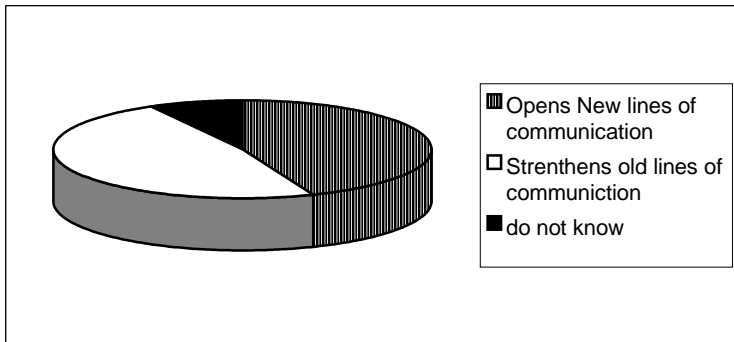
Chart 5 : How can the Net be used for business?



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

For a significant majority the internet opened up new lines of communication as well as replaced old ones(see **chart 6**).

Chart 6 : How does the net affect communications?

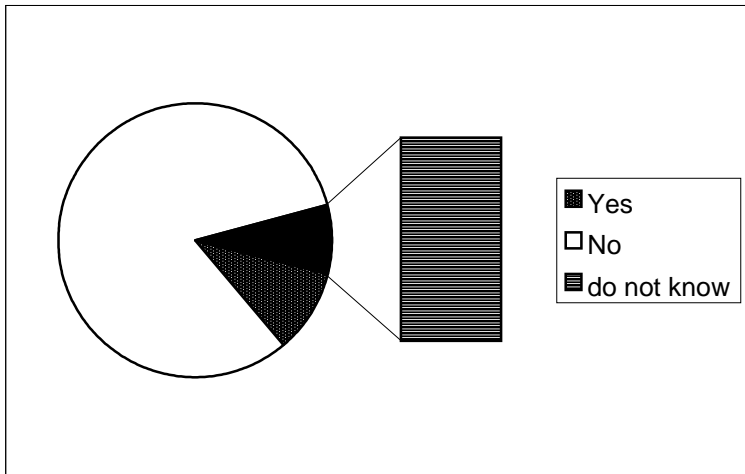


**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

For the vast majority of those surveyed, trust/credibility and marketing/supply networks could not be built over the net. Only a small

section of firms averred that it was possible (see chart 7). Significantly, these firms (the ‘yeah-sayers’) were also those who had just set up new websites to promote their wares. Earlier they had been part of the FIE website. These firms also claimed that their goods could be sold over the net while the vast majority of the surveyed firms claimed otherwise. The overwhelming majority held that this was so as there was a lack of trust between the buyer and the seller.

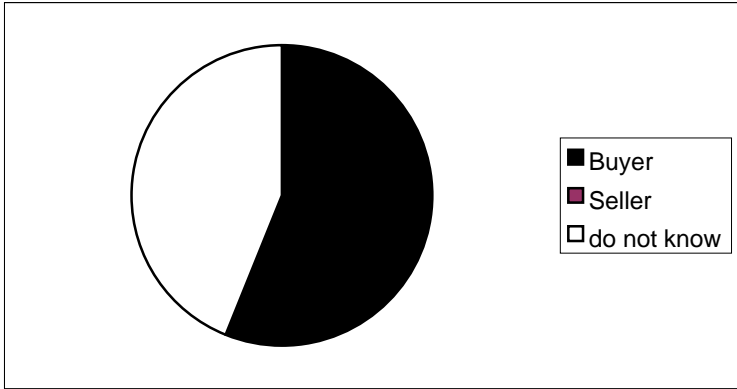
Chart 7 : Can distribution networks be built over the net?



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project ‘Exporting through E-commerce’, 2002*

Significantly, slightly more than half the surveyed firms indicated that in net trading it was the buyer who had the advantage and the seller who ran the risk (we even interviewed a firm who claimed to have been defrauded by a buyer)(**chart 8**).

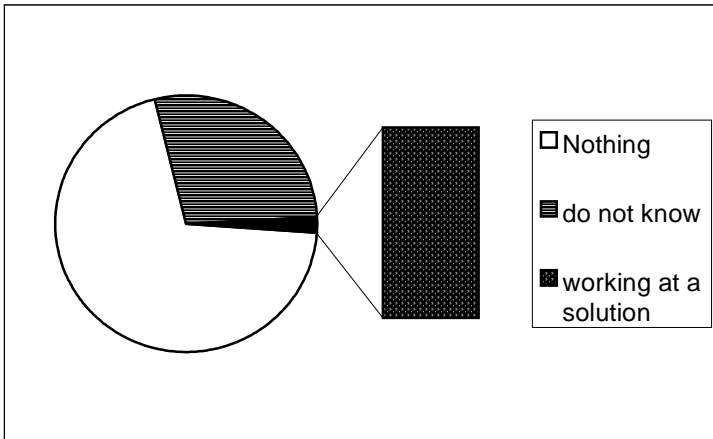
Chart 8 : Which side has the advantage in transactions



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

A large majority felt that the state could do nothing when asked whether any steps could be taken to enable them to sell goods through the internet, between complete pessimism ('nothing') and bewilderment (I dont know) (see chart 9).

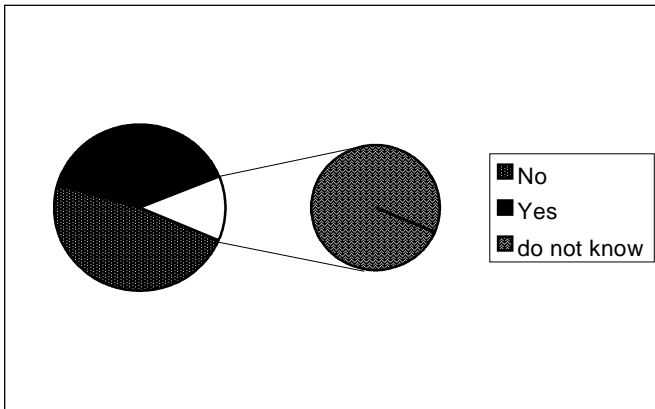
Chart 9 : What can be done to remove shortcomings in e-commerce?



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

However the firms were unanimous in their belief investment and inter-firm cooperation/coordination was essential to whatever steps that would make internet trading possible. Interestingly a majority of firms felt that such a step did not call for government intervention (No reasons were given for such a feeling) (see chart 10).

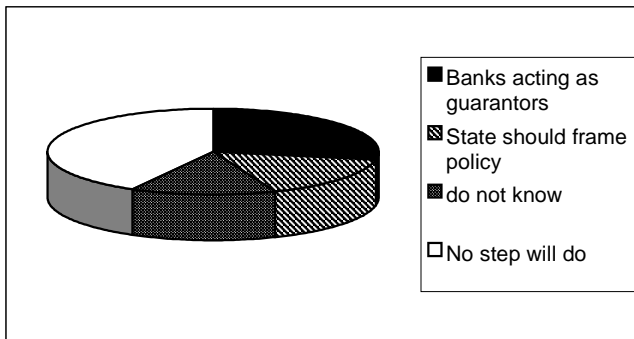
Chart 10 : On the need for state intervention to activate e-commerce



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

Those who did refer to the EXIM policy of the government, while a small proportion of respondents asked the state to frame policy and police net trading (chart 11).

Chart 11 : What concrete step can make e-commerce a reality



**Source: Centre de Sciences Humaines survey of Indian Garment Exporting Firms for the project 'Exporting through E-commerce', 2002*

In contrast to the pessimistic scenario painted by the firms, the respondents informed the interviewing team that they had not always felt this way. Indeed, spurred by presentations made by website designers about the potential of web trade and the potential benefits of hosting a website, they had decided to host a website in the first place. However, the spate of enquiries from foreigners interested in their wares did not materialise; nor did orders for their goods. After having invested approximately two to three years in the website (and some money as well) they have become more pessimistic. According to them all it had done was to replace (to some extent) old modes of communication such as the fax and the telephone with e-mail²⁹. It may be revealed that none of the exporters considered themselves to be ‘web savvy’ and none took it upon themselves to aggressively push themselves via the internet to stores or wholesalers abroad through e-mails or web advertisements.

The lessons of brand importance and goodwill, as well as trust and credibility have thus come to these exporters at the expense of some money (not significant, concede most exporters) and a lot of time.

The Indian Experience: Are Conventional Theories Validated?

On the face of it the survey would tend to validate the earlier theories about the pitfalls of e-commerce. For example, it could be argued that like earlier thinkers, Indian exporters had thought that the telecommunications revolution exemplified by the internet would enable them to breach barriers to distant markets by making information available to them as to where sources of demand lay, and to the buyers as to where items like garments (or to art aficionados works like Madhubani paintings) could be had for moderate prices. More realistically, retail store owners would access this information, make enquiries in order to bring matters to a logical conclusion close the deal at a price lower than he paid his local wholesaler (but one that gave the Indian exporter a better price than he was currently receiving). This would promote demand in the importing country and supply in the exporting country to the mutual benefit of consumers and labourers/artisans.

²⁹ As with South African Exporters see Moodley *et al op cit*

Indian exporters by their own admission did not aggressively promote their goods either through e-mails or web advertisements. Thus they never dispelled the fog of ignorance that hid the availability of Indian goods from foreign consumers. However, it could be argued that even if they had, things may not have been necessarily better. For one, buyers would be chary of buying a product of uncertain quality and are prepared to pay a higher price at the local supermarket (since quality is assured). Thus the consumer in the foreign country is bound by a brand-name that stands for a particular standard although it extracts a price for it. The brand name itself has been acquired by a domestic manufacturer over a long period of time and now pays for itself when the brand-owner subcontracts production to more efficient overseas producers.

While this is an explanation, this is by no means the only one, or a completely satisfactory one. There is no doubt that the logic in the argument given above is internally consistent. However, as we argue later, the explanation also fails to take into account certain peculiarities of Indian exporters.

The Nasscom Report: A Brief Digression

There are other explanations as well especially in the Indian context and in the context of e-commerce. The Nasscom³⁰ in a study has indicated a number of factors as to why e-commerce may not take off despite its potential. The study divides the factors inhibiting e-commerce in the context of India into two parts.

The first part refers to Infrastructure Specific factors, most notably-

- Limited net access
- Poor telecom infrastructure (although this is increasingly becoming less true)
- Legal and Regulatory Lacunae
- Lack of Payment gateways.

It is clear at least in the case of the firms surveyed in our study, these factors are not paramount in the failure of e-commerce-aided exports

³⁰ Nasscom Strategic Review 2003

to take-off. Limited net access was not stated as a problem. This no doubt is concerned with the fact that the net *per se* was sparingly used! Most respondents expected prospective buyers to be pro-active with queries. It would have been a factor if indeed prospective buyers had responded with sufficient queries. Thus limited net access, undoubtedly important as a factor, was not necessary for failure in this case.

Regarding poor telecom infrastructure, few complaints were received by the firms surveyed. Indeed, none claimed that it had been responsible for poor utilisation of the net for e-commerce-aided export.

Legal lacunae or lack of payment gateways too were cited as important factors which in any case assume greater importance for B2C e-commerce than B2B commerce that e-commerce-aided exports were looking at (as to why this is so is explained in the next section), but these were perceived needs (although no doubt correctly perceived) rather than actual stumbling blocks.

In addition to these Infrastructure-specific factors, the Nasscom Survey also highlighted certain firm-specific factors namely:

- Perceived uncertainty of benefits
- Turf protection
- Fear of transparency
- Business Partner IT systems not geared to maximise benefits from e-commerce.

It must again be stressed that except for the first factor, the others did not receive the kind of emphasis generally reserved for a constraining factor. Perceived uncertainty of benefits was certainly on their mind when they embarked. However, since paying for the design and maintenance of the website was the only investment that was perceived, it seemed a worthwhile risk.

On the other hand turf protection by employees can realistically only be factors in large firms with a large number of employees distributed over several departments. The firms in question do not employ a large workforce.

Nor is fear of transparency a factor as they do not perceive e-commerce aided export as revealing their state of finances to any one and thus come under added scrutiny from tax authorities. Indeed, the information that the firms put out on the net had few financial details about themselves in question and would in any case understate any financial detail that would attract penalty.

Since surveyed firms relied on the net to disseminate information and solicit queries and hopefully at a later stage demand, the business partner's IT systems not being geared to maximise profit was not a crucial factor. In any case the potential business partners on Indian firms selling garments and handicrafts are likely to be more IT savvy than the sellers. It is clear that the reasons for the failure of Indian firms to use IT to generate e-commerce lie elsewhere. Or at the very least we could argue that the factors stated in the Nasscom Report have not yet become relevant to Indian exporters as they may not have reached that level of 'web-savviness.'

Organisational Shortcomings and the Failure of E-commerce

Before we delve into reasons as to why e-commerce-aided exports have eluded Indian exporters of garments and leather goods, it must be pointed out that they are at a significant cost disadvantage vis-a-vis their Chinese and ASEAN counterparts. There are two main reasons for this. One is the fact that the Chinese have invested massive amounts in infrastructure (compared to India) that has the effect of lowering costs for manufacturers³¹. Secondly, relevant to our argument is the fact that India follows a policy that reserves garments for the small-scale industry. Thus Indian exporters operate in-optimal plants that produce garments at prices above their Chinese competitors, a policy that has now started to attract criticism from even multilateral organisations³². To survive, India has traditionally catered to niche markets where higher prices could be obtained. This means that there are specific target groups that buy Indian garments and that these groups (given the fact that they pay a higher price) are likely to be from the richer sections of society. Their access to the web and indeed

³¹ WDI 2002 CD-ROM, World Bank, Washington

³² <http://www.saarcnet.org/newsararcnet/countryprofile/India/india27.htm>

their proclivity to surf the web may be taken to be higher than the general populace³³. Secondly (and more importantly), the stores that they go to are likely to be more exclusive than the more common chain stores like Wal-Mart etc. Thus they would also be more discerning as regards supply and would likely look around for suppliers for premium apparel even though the costs involved may be higher. This should serve to make the likelihood of successful e-commerce even stronger as the market is looking for a source of supply as much as the supplier is looking for the market.

Here brand name is not so insurmountable a factor as the store on the lookout for quality apparel is likely to lend its name to the goods that it procures. Clearly the traditional modes of analysis cannot be blindly applied here given the peculiarity of the case.

The fact that Indian exporters have failed to contact the retailers who retail their goods in the country to which their goods are exported points to the failure of Indian exporters as much as to brand name resilience. Our survey has shown that Indian exporters display an amazing degree of ignorance regarding the specific destination of their product (Europe or America). The country (if in Europe), the state, the city or the locality in which their goods are sold are not known to them. Understandably, this is not something that will be revealed to them by their buyers abroad. Nor have they made any effort to find out. Nor do they know exactly the price for which their goods are finally sold for. Clearly, for the group of exporters surveyed, the financial size of their market is at best hazy, while its geographical and socio-ethnic contours are completely unknown. Additionally, by their own admission they are not web savvy. Under these circumstances, successful exporting driven by e-commerce is extremely unlikely even if it if the surveyed group had aggressively used the net. This is because the information that they would disseminate would not have been relevantly targeted.

Is it entirely accidental that the group surveyed almost without exception has behaved similarly and witnessed similar results? It may be

³³ for example see *Affluent Americans Lead Web Growth*, <http://www.internetnews.com/IAR/article.php/1481841>, October 15, 2002

argued that this is unlikely and points to a deeper malaise. Indeed we will argue that Indian exporters (as they are today) are not equipped to export through e-commerce. This inability comes from government policy specifically the reservation of certain items for the small-scale sector³⁴. While the National Textile Policy de-reserves garment production, its long innings has already played havoc with the cost economies of exports also affects the ability and capacity of business organisations to learn. Indeed it was so structured that the trajectory was aborted, thereby leading to a virtuous cycle of learning after a certain period of time.

Stunted Firms and E-commerce

The reservation of certain commodities for the small-scale sector implies that firms whose assets/turnover exceed a particular limit are automatically barred from participating in the production of the commodity. The chosen limit is often arbitrary. Certainly there are no transparent or obvious criteria for choosing such a limit. This policy is a bequest from the licence-permit Raj when the employment question was sought to be resolved by this policy as small-scale industries were associated with labour-absorbing technologies (although there are no reasons to such an *a priori* assumption). While the consequence of the licence-permit Raj was to give rise to in-optimal scales of production across industries, the policy of reservations only worsened the problem for producers of the targeted commodities. While the post 1991 reforms did away with the licence permit Raj, it did not do away with the policy of reservations for the small-scale sector till the National Textile Policy took garments out of this list. But its pernicious influence has remained.

While the inability of the exporting firms to evolve into optimally sized producers has no doubt increased their costs of production, it has (more pertinently for our study) stunted the growth of the organisation as well. Thus the Arrowian³⁵ learning-by-doing growth has been blocked. It is easy to see why this should be so. As a newly set-up firm commences

³⁴ for a comprehensive list of items reserved for the small scale sector go to <http://www.laghu-udyog.com/publications/reserveditems/resvex.htm>

³⁵ Arrow, K.J. "The Economic Implications of Learning by Doing", *Review of Economic Studies*, vol. 29 1962. While Arrow had technical progress in mind, the argument may also be adopted to marketing skills.

business, it learns from the very act of production. This learning is re-incorporated in the production process leading to falling costs and rising production which gives rise to even more learning. Indeed even if technically the production process obeys constant returns to scale, the learning process converts it into a *de facto* increasing returns to scale production function. Thus this cycle becomes a virtuous cycle of productive learning. If there is, however, a ceiling on individual firm production then this process comes to an end the moment that ceiling is reached. Thus the firm's learning is severely inhibited by policies that restrain growth artificially.

An important part of the firm's learning trajectory is the worldview of the firm which ideally should give it the ability to project into the future, plot changes in consumer demand, seek out new markets and plan for changing market conditions. For our purpose, the firm should be able to recognise available and hitherto untapped markets and be able to reach such targets using the most convenient technology. Alternatively, such firms should have the ability to recognise that external help is required to solve a crucial problem and adopt effective steps to get. Such firms should also be able to organise themselves into effective organisations that disseminate and seek relevant information. This ability is, of course, associated with expense that is easier to bear if the firm is larger. A 'stunted' firm is less likely to possess such a worldview. However, in the Indian context such stunted firms in the garment sector are the norm and hence the inability displayed in using e-commerce to extend markets.

Does Inter-Firm Coordination Help?

The survey shows that the firms have expressed some belief in the efficacy of coordinated action. It would be worthwhile to look into this. It has been argued that the low levels of awareness exhibited by the firms covered by the survey about the specific destination and price fetched by their products are at least in part the consequence of the policy of reservations. As this sector does not allow for the development of organisational knowledge, nor the entry of big business the sector as a whole remains ignorant of the steps needed to be taken to make exporting through e-commerce more effective. Symptomatic of this lack of

knowledge is the awareness that coordinated activity with fellow exporting firms is needed combined with the total absence of any programme to that end. While it may be argued that there is an exporting cluster in Delhi, this cluster breeds no externalities certainly not when it comes to creating brand awareness or increasing accessibility to markets. This is in stark contrast to clusters elsewhere, particularly Italy, where labour-intensive exports catering to niche sections are the norm³⁶. The membership of a cluster itself (often identified with towns) endows the member with a reputation of quality. For India this does not appear to be the case.

While there are exporters' associations, these are merely lobbies that petition the state on policies regarding taxes on duties on members. A cursory reading of the website of the Federation of Indian Exporters³⁷ (which was set up by the Ministry of Commerce) website indicates that identifying and developing markets, creating brand awareness is low on the list of priorities. This is not to say that the organisation does nothing in this regard. What it does is to inform members about the government's policies and measures to give marketing a boost by posting relevant information on its website³⁸. There is also provision for prospective importers to establish contact with Indian exporters³⁹. This is clearly not enough as much more is required. This is arguably not an organisation that has the sophistication to use the net in order to communicate effectively on behalf of its members to representatives of potential markets who we have argued in the case of India are likely to be discerning customers. This is not surprising given the finding of the survey that respondents either seek no help from the state or think that the only help that they can get is more financial assistance. Not a single firm asked for help with marketing although there is near unanimity among respondents that they have plans to distribute their own goods themselves.

There is recognition among members that the price their wares sell for is several times higher than what they receive. As a result, there is a desire to remedy that by setting one's own distribution network and yet

³⁶ Porter, Michael, *Competitive Advantage of Nations* Macmillan, New York, 1990

³⁷ <http://www.fieo.com>

³⁸ <http://www.fieo.com/mdalist.html>

³⁹ http://www.fieo.com/fieo_email/login/search/index.php

they still suffer under great opaqueness regarding the final destination of their own goods. Ironically, the very organisation that the respondents are members of, neither procures this information nor helps in the setting up of a marketing network⁴⁰. The disjoint between the requirements of the members and the objectives of their collective association is an indicator of the 'stunted' abilities of the firms themselves. The task of finding specific information about the final destination of Indian goods (garments included) and the price that such goods actually fetch is not difficult. The specific task of finding out this information about goods produced by individual exporters is more difficult but undoubtedly possible. But more relevantly, creating a targeted market profile about the class that actually purchases Indian exports and the list of agencies through which such markets are reached is also possible and is absolutely essential if exporting through e-commerce stands a chance of succeeding.

In a sense, this information that is relevant for all exporters becomes easy and inexpensive to acquire if it is jointly acquired. The organisation that they belong to should be the most obvious candidate to execute this task. However, their organisation (whose abilities and outlook is reflective of the firms themselves) does no such thing.

The attitude of the Federation of Indian Exporters organisation as a lobbying body can be contrasted with the other bodies like the Confederation of Indian Industry or the Federation of Indian Chambers of Commerce and Industry. Significantly, the latter possess larger resources, which are arguably spent with more imagination. This is reflective of the members themselves which are larger in size and more cosmopolitan in their worldview (despite the general dependence on the home market) as compared to the typical exporter who is more provincial (despite his dependence on the external market). This is in part because of their size that calls for the employment of executives with a certain minimum level of education that lends the organisation this characteristic as compared to the typical exporter which is an Indian variant of a 'Mom and Pop' store that hires largely labour in a family managed factory.

⁴⁰ *ibid*

In such circumstances, it is extremely difficult for Indian exporters to utilise e-commerce to promote exports significantly (although it must be pointed out that there are reasons to believe that with respect to e-commerce, the problems that Indian exporters face is the same as those faced by small firms in the USA)⁴¹. It requires coordinated action between members⁴² (something that respondents recognise today) and may benefit from state intervention (something that many respondents are reluctant to acknowledge). The question is whether it is possible to formulate a plan by which e-commerce may be raised from its near dormant state to play a more vibrant role in the promotion of exports.

An Outline of a Plan for Firms to Export through E-commerce

We outline a plan or more precisely a series of necessary measures under which e-commerce may be effectively activated to promote Indian export of garments. At the very outset it must be stated that the success of the efforts of the Indian exporters in using e-commerce to promote exports is inextricably linked to the success of the retailers who sell these products to the consumers. This is an appropriate starting point as it helps us to plot a sustainable trajectory for the Indian exporters consistent with the actions of the retailer. However, it cannot be overemphasized that the literature on e-commerce is by and large anecdotal (Kiang and Chi⁴³) and there are no proven successful models that offer themselves to general emulation.

Our approach is the following. We will analyse the stylised actions of (mostly higher end) retailers who have successfully harnessed new and existing technologies to gain significant value. Given the retailer's strategy the exporter must tailor his own strategy so as to maximise his gains. Pertinent to our analysis is the manner in which information technology can be utilised to accentuate the advantage possessed by Indian exporters. To this end, following Petersen⁴⁴ *et al*, we will concentrate on the following

⁴¹ Sherer, S. & B. Adams, Collaborative Commerce; The Role of Intermediaries in e-Collaboration', *Journal of Electronic Commerce Research* 2,2 (May 2001)

⁴² *ibid*

⁴³ see Kiang, M.Y.& Chi, R.T. 'A Framework for Analyzing the Potential Benefits of Internet Marketing' *Journal of Electronic Research*, vol 2 NO 4, 2001

⁴⁴ see Petersen R., Bronnenberg B., Balasubramanian S., 'Exploring the implications of the Internet for Consumer Marketing', *Journal of the Academy of Marketing Science* vol 25 No 4 1997

unique characteristics of the internet regarding communication⁴⁵:

- a) The ability to store whatever information that is required in whatever relevant form in a virtually costless manner and yet be accessible to all;
- b) interactivity and the property of producing information on demand at any time and
- c) provide information in a format superior to a printed catalogue and yet be less expensive.

This has to be contrasted with the unique disability that prevents him from using these features fruitfully and the steps that need to be taken to remedy such disabilities. E-commerce when properly utilised can then ensure that information dissemination is cheap as well as dynamic at the same time. (We will see how ITC operates a success e-business model in circumstances far from ideal by sticking to Petersen's requirements as far as possible)

How can the properties mentioned above help garment exporters? For this we take a look at what garment importers require. Following Mathews *et al*, we consider the four key value levers for apparel retailers and brands. They are (from the point of view of the seller in the importing country) as follows:

1. Reduce Supply Chain costs
2. Reduce product costs via enhanced market efficiencies
3. Increase revenue from more timely delivery of on-trend products
4. Reduce process costs associated with managing transactions.

Relevant to the Indian exporter is the second value lever, i.e. reduction of product costs via enhanced market efficiencies (the latter points mentioned are generally beyond the control of Indian exporters). This is because at this point the garment exporter can break into the export market by offering his goods at an economical price. After all, the retailer is supposed to take advantage of enhanced market efficiencies by reaching the lowest cost supplier, keeping in mind the niche he caters to. Thus quality is also a major consideration. Mathews⁴⁶ *et al* urge retailers (citing

⁴⁵ relevant to all parties in any economic/market transaction

⁴⁶ Mathews, B., I. Larkin, E. Mihas, M. van Kalleveen, *B2B for Apparel Retailers: Mix and Match to Create a Custom Portfolio of Marketplaces*, McKinsey and Company, 2001

successful cases) to use the electronic market place to reach the lowest cost providers worldwide although for garment sellers this is a problem (but not one that cannot be circumvented).

Thus there already are a section of retailers in the electronic market place looking for suppliers. However merely hosting a website (as all our respondents have done) is not sufficient. The information that is provided must be relevant, sufficient and ultimately interactive with graphics if potential buyers are to be satisfied. We have already established that the respondents covered by the survey have neither the ability and the resources nor the time to do so (since they are acting in isolation). Indeed, as the survey reveals, most exporters have no information about the specific location where their products are sold! Thus even talk of targeting successful retailers becomes meaningless. Additionally, we have also established that even acting in concert (through an association) will not do the trick as this dissemination of information has to be targeted and the information itself has to be pertinent, something beyond the capability of a body which has all along only lobbied the state for financial sops.

It is clear that this state of affairs does create the potential for state intervention: the state could step in and do something in this regard even if it is to appoint a relevant person to guide and coordinate the communication and information dissemination efforts of Indian exporters. We will argue later why such a conclusion may not be warranted.

Mathews *et al* correctly surmise that suppliers will be reluctant to join the new electronic market places. However, while this may be true of suppliers located in the developed countries this is unlikely to be the case for those economies that have comparative advantage in these products. For Indian exporters joining the electronic market place would imply the removal of the middlemen who stand between him and the retailer. Indeed, as Mathews *et al* point out the electronic market place can be seen as an institution where shared costs are minimised. Indeed, for the Indian exporters listed in one site, what is *de facto* offered to the retailer is a portfolio of products that enables him to allow variety while keeping costs under control.

All this, however, will be a merely academic exercise if the information is not disseminated in a proper fashion to the retailer. Given that the number of retailers is likely to be high the provider of information must be ready to respond to informed queries concerning price, quality and other logistics with regards to supplies. Equally important, this information must be provided on demand.

The peculiar problem of Indian exporters is the following. At one level some have hired designers to add value to their products so much so that some respondents of the survey fear that their designs could be pirated. However, when it comes to providing relevant information over the net they perceive themselves at a disadvantage. This task thus must be left to a body of individuals who are more at home with this technology.

Should the retailers be satisfied with the information, there is no reason why that should not lead to enhanced contacts between Indian exporters and foreign retailers. Then of course more serious problems will come into play like timely delivery of exports and waiting time at ports. But these were never the kind of problems that e-commerce was supposed to tackle.

It must be pointed out that security issues like guaranteeing payments and guaranteeing supplies is the least important of issues regarding e-commerce even if the players involved are newcomers without sufficient reputational capital to inspire confidence in others to part with money over the net. As long as there are institutions with reputational capital or authority to guarantee payment or delivery, payments can be made. The imprimatur of the state is always reassuring and if it inspires confidence, it should be utilised. This does not mean of course that the state necessarily has a role to play.

It is to be admitted that it is easier to form e-business models than to put them in practice. That is why it is imperative successful e-initiatives are discussed as well as demonstrated that e-initiatives in India can take-off even in India as exemplified by ITC's e-chaupal venture.

The ITC Experience : E-chaupals

Any discussion on commodity e-commerce in India is incomplete without a discussion on ITC's *E-chaupal*⁴⁷ experience⁴⁸. Strictly speaking the *e-chaupals* are not directly related to the subject at hand (although they are under the International Business Division of the ITC, they are for procuring commodities, not to sell them), but they are a very good example of how perceived constraints on e-commerce vanish when rewards from initiating e-commerce are sufficiently high and when a sophisticated resourceful organisation exploits this potential.

The ITC's *e-chaupal* project was conceived as means to tighten the supply chain that procured agricultural commodities that formed part of the exports of the International Business Division of the company (although now the company also uses the same chain to sell goods to the farmers⁴⁹ which again is in keeping with standard practice⁵⁰). While the primary task of this project is to effect economies into the task of procurement of agricultural produce, we will see that this project does much more.

The ITC's *e-chaupal* initiative was launched in 2000 and by the end of 2003 had grown to 2700 *chaupals*, covering 18,000 villages and 1.2 million people in the states of Madhya Pradesh, Karnataka, Andhra Pradesh, Uttar Pradesh and Maharashtra⁵¹. The items covered were - soyabean, coffee, wheat, rice, pulses, and shrimp. The company now plans to extend this project to 15 states with 20,000 e-chaupals covering 10 million people⁵².

Simply described, the model in action consists of village internet kiosks located around the company's supply clusters run by operators

⁴⁷ chaupal is a Hindi word for a rural market

⁴⁸ see http://www.itcportal.com/sets/echoupal_frameset.htm

⁴⁹ Cris Prystay, 'How to Make Money from the Poor?', Far Eastern Economic Review, 5 June, 2003

⁵⁰ see Ward, M.R. & M. Morgonosky, *Online Consumer Research and Purchase in a Multiple Channel Environment*, <http://ux6.cso.uiuc.edu/~ward1/cannibal.PDF>

⁵¹ 'Narrowing the digital divide', Business Standard, 2003

⁵² http://www.itcportal.com/sets/echoupal_frameset.htm

(called *sanchalaks*) selected from the farmers themselves. The farmers get relevant information about farm inputs, technology, farming practices and credit availability enabling them to plan and produce crops which are in line with demand conditions as well as ensure that the quality of such crops are high. Direct contact with the company enables them to receive a higher price than they would normally receive.

It may be then asked as to what ITC receives?

The ITC receives agricultural commodities which are of higher and more uniform quality at lower prices. It does so with the tightening of the supply chain by eliminating agents that were hitherto in the chain, like traders and moneylenders. This step reduces costs, the elimination of the first agent reducing the company's costs and the elimination of the second reducing the farmers costs. In this game the farmer and the corporation both win (at the expense of middlemen or agents who do not add value to the supply chain).

The fact that the quality of commodities is higher and more uniform enables the company to get a higher price in the international market.

It is interesting to note the constraints under which this model has been implemented. For one, it is necessary to situate this model in the rural areas as the company in question has a presence in agricultural exports.

In such areas, infrastructure is a major problem. Connectivity and bandwidth is especially a problem and in some areas connectivity does not exist at all. Power-supply is often irregular. The agents that the company deals with are farmers many of whom are illiterate. The state of contractual laws and regulations are also not as up to the mark as conventional literature demands that they should be.

The e-chaupal in its own way has evolved/innovated to tackle each problem. It has taken the help of existing technology - *'Power back-up through batteries charged by Solar panels, upgrading BSNL exchanges with RNS kits, installation of VSAT equipment, Mobile Choupals, local caching of static content on website to stream in the dynamic content more*

*efficiently, 24x7 helpdesk etc*⁵³ to bypass problems posed by lack of infrastructure like power, connectivity and bandwidth. It may be noted that these steps satisfy the first two of Petersen's⁵⁴ requirements even in areas where power and connectivity are problems.

The problem of inadequate legislation or perhaps more accurately, poor implementation of existing legislation was sought to be tackled by having the *sanchalaks* take a public oath in front of the farmers from the particular cluster taking into cognisance that a social contract (at least in rural India) is more binding than a legal one⁵⁵.

Training the *sanchalak* and ensuring that the web content and information is in the local language ensures that problems of the lack of education are mitigated.

The company claims to have cut transactions cost up to 6-8% of total procurement costs⁵⁶. Its investment in some areas was recovered in 'months⁵⁷'. Clearly then ITC has utilised e-commerce profitably notwithstanding the constraints that it had to necessarily face given its area of operations. Indeed in so doing it has bridged the 'digital divide' that exists between rural and urban India.

Can it be argued that ITC's tightening of the supply chain is internal to its organisation and thus not of relevance to other firms? This we argue is not entirely correct. It is true that ITC already had a supply chain in place. What it has done is to bring in other actors in the chain and cut out the middlemen. In any case what is of relevance is the manner in which ITC has used e-commerce in a 'grey' area using its existing information to successfully cut costs and improve quality of its procurement of goods. Vertical integration is achieved with a large number of autonomous players not owned by ITC and operating in circumstances which are far from homogenous.

⁵³ http://www.itcportal.com/agri_exports/e-choupal_new.htm

⁵⁴ Petersen *et al op cit*

⁵⁵ Sawhney, Mohanbir, 'Fields of Online Dreams' The CIO Magazine, 15 October 2002

⁵⁶ M Srinivas Rao, International Trade Division of ITC, seminar on 'IT for Development' organised by India Development Foundation, Hotel InterContinental, Delhi, 2003

⁵⁷ *ibid*

What enables ITC to fulfil the promise of e-commerce whereas the garment manufacturers have failed? On the face of it, the firms in question have had to face none of ITC's disadvantages (although admittedly they do not possess ITC's resources)? The answer lies in the nature of the organisations.

The firms the study surveys are stunted organisations who have not (and possibly are not capable) planned out their e-forays to maximise return on investment in a manner that the investment justifies itself. The average size of the Indian firms engaged in the manufacture of all types of textile garments and clothing accessories n.e.c. (except by purely tailoring establishments) from not self-produced material is approximately 3.7 crores of rupees with an average employee strength of ninety employees⁵⁸. It is unlikely that such organisations will have the resources or the intellectual capital to evolve a proper e-commerce strategy.

This is not true for ITC, a company (with a turnover on over 9000 crores and a separate IT division as well⁵⁹) that has evolved into a sophisticated organisation and puts all the information and experience that it has in the rural sector into designing an appropriate e-strategy designed to maximise gains. Indeed, in enlightened self-interest it has taken the trouble and expense to provide information to farmers relating to modern techniques as well as credit and not just operate a kiosk to interface with farmers. Secondly, its reliance on social contracts rather than binding contracts shows the sophistication of the entity in using social customs to compensate for legal lacunae. ITC's success flies in the face of dire predictions made for African economies with similar conditions to rural India⁶⁰. The claims that poor infrastructure fatally hobbles e-commerce (in addition to claims that the nature of agricultural sectors like horticulture⁶¹ are not e-commerce compatible) do not necessarily follow and their findings probably are due to the organisational shortcomings of players.

⁵⁸ <http://www.indiastat.com/india/ShowDataSec.asp?secid=14181&ptid=14172>, figure calculated from various issues of the Annual Survey of Industry

⁵⁹ <http://www.itcportal.com>

⁶⁰ Odedra-Straub *op cit*

⁶¹ Humphrey, J *et al op cit*

This innovation on the part of the surveyed firms is singularly lacking. Thus, although they have the advantage of potentially dealing with a more sophisticated market (as compared to ITC), they have singularly failed, although not necessarily for the want of trying. The firms surveyed are arguably not sophisticated enough to venture into this kind of an exercise.

Others⁶² have pointed to that the experience of certain African garment exporters who used the net to make online contacts which were followed by off-line contacts with faxes, phone calls and personal meetings. Overall incremental sales that actually materialised did not justify the high level of transition costs entailed by contacts made through e-bulletin boards. This negative experience leads them to conclude that the new trade relations on the net will be forged only for 'occasional products.' A dramatic increase in trade in core products with the possibility of repeat purchases via the net is not envisaged.

Our argument is as follows: It is not argued that the introduction of e-commerce will change business models overnight. Indeed like ITC, garment firms can utilize e-commerce to scan/survey business opportunities in the vicinity of those that are actually being exploited.

It is instructive to see again what ITC has accomplished. Its e-chaupal has been set up in those areas where it was already procuring produce for exporting. The subsequent rise in supply on more favourable terms is the result of an increment in suppliers to already existing suppliers (the former residing in the vicinity of the latter).

The garment exporter's role is reversed and arguably more difficult. He has to look at potential buyers in the vicinity of existing buyers. While the number of potential buyers is likely to be low (as compared to farmers selling their produce to ITC), a successful acquisition of a buyer will raise his export *significantly* as compared to ITC's getting an extra supplier which raises its total procurement *incrementally*. The probability of ITC obtaining an extra supplier is, of course, likely to be higher than the

⁶² *ibid*

probability of the garment exporter getting an extra buyer. But what is of note is that the fact that potential buyers in the vicinity of existing importers can actually verify claims of quality that may be made by the garment exporter. Thus with price information (that can be conveyed over the net), information about quality is provided *gratis* which is remarkable for this is the only information that cannot be fully conveyed over the net, no matter how detailed the technical specification provided. Payments and matters relating to law and logistic coordination then may be dealt with in the same fashion as is being dealt with the existing buyer. But for all this to occur garment exporters have to know where their products are being sold and at what price as well as potential importers who are located in the vicinity of their existing buyer. The telecommunications revolution amplifies organizational and informational strengths of economic agents. Our survey has revealed adequately how little informed the firms surveyed are about factors pertinent to firm profitability. Thus it is reasonable to conclude that the digital divide that exists is not necessarily geographical in nature. It is more organizational.

The Role of the State: A Brief Comment

That the state has a role to play in e-commerce by way of providing infrastructure as well as formulating and putting in place a legal structure compatible with e-commerce is not in doubt. Indeed it is unrealistic to expect that given the imperfections and risks associated with markets in developing countries, private parties would come in on their own without state guarantees. It is also unrealistic to expect that e-trading would take place unless there is a legal and institutional environment that supports e-commerce. The question is whether the state has any role to play other than a actor which provides infrastructure and enforces contracts.

It may be argued that large firms like the GE which are technology leaders employing e-commerce with some success in their operations have had to train their employees⁶³ (who themselves are large proportions technical men) in the proper use of e-commerce. This training has been formal and structured. Thus with technological market leaders carrying

⁶³ Faden, M, 'GE Tries E-business Training on a Large Scale', Informationweek, November 13, 2000

out training programmes for a workforce that is on average highly qualified technically, should not the state step in for similar programmes for its exporters?

The drawing of this analogy between a firm and the state is not as far-fetched as it may seem. Indeed it was Galbraith⁶⁴ who pointed out the similarity between a command economy and a large multinational company especially with regard to planning procedures. Given that this state of affairs (where a similar institution (the state) is faced with economic agents (instead of employees) is not e-commerce friendly is it entirely out of place that the state should carry out training programmes for exporters (like GE does) with its managers?

There is, however, one difference between a commercial corporate entity (irrespective of its size) and the state. The former and its constituents (i.e. employees) share at least common coherent goals, that of either profit maximisation or sales maximisation. Their target is also common and thus the kind of training imparted takes into account this coherence between goals and objectives. Thus the training programme so designed is also coherent. On the other hand, the economic agents of any economy may have similar goals but may cater to different markets and operate under different circumstances. To design a coherent training programme for such disparate individuals by an entity that is not part of the same team is far more difficult. To expect much to come out of such efforts clearly is unrealistic. Each entity has to design an e-approach to marketing given its specific nature. For that it has to have the organisational knowledge and resource to acquire, manage and utilise information. This study has so far contended that stunted firms fostered for long in a protected environment are particularly inhibited from doing so as the natural process of learning that comes about from 'learning by doing' is aborted when ceilings are placed on turnover of firms because the commodity they produce are reserved for the SSIs. This hobbles e-commerce, not factors like infrastructural or institutional shortcomings as these can be overcome with imagination and technology.

⁶⁴ Galbraith, JK, 'The Age of Uncertainty', Houghton and Mifflin, 1977

Implications and Conclusion

The initial forays of Indian exporters into e-commerce proved to be a failure for a number of reasons. The inability of the Indian exporter to aggressively promote his wares compounded by the lack of detailed knowledge about his market saw to it that e-commerce never took off. The actions of Indian firms were consistent with the stunted organisational knowledge which, in turn, is the product of the milieu that Indian firms operate under. Thus if e-commerce is to be fruitfully activated, it cannot be left to the Indian exporters or their representative association.

The ITC e-chaupal experience in contrast shows that a sophisticated organisation can overcome considerable odds that are both infrastructure specific as well as legal by using available technology and social customs. This experience is surely an indicator that e-commerce can succeed if the venture in question is properly planned.

In this situation, it is tempting to argue that the state step in to direct efforts which is done in a manner that is consistent with the actions of a value maximising retailer in the destination of export. There are problems with this approach. The e-initiatives are all likely to be firm-specific. Despite commonalities, aggregation of types in order to fulfil conditions for a single coherent plan is a 'one-shoe fit all' exercise that is likely to end in failure. It is unlikely to capture the dynamic needs and plans of all firms in their markets. Such efforts are likely to lead to information-overload (reminiscent of socialist economies) as well as in-optimal plans.

However, the imprimatur of the state is invaluable as it is costless (in so far as it is already there). The use of credibility with the state reassuring both parties (the buyer and seller that they will not be victims of fraud (vide non-receipt of goods or non-payment of bills) may be utilised. Again it must be stressed that this function can also be taken on by a private actor like a bank/financial institution with a good reputation who can even charge for this service. In addition, it must be stressed that this step alone will not solve substantially the problems that bedevil the surveyed firms when it

comes to utilising e-commerce to export. That depends on the nature of the e-initiatives designed by the concerned firms.

The framing process of an e-initiative is linked intrinsically to the nature of the organisation. A stunted organisation is likely to come up with a plan that utilises neither the advantages that its milieu offers nor provide for the constraints it faces. An organisation like the ITC is likely to achieve both. The problem lies in the nature of the organisation of the firm and policies that lead to the formation of such an organisation. It is clear that apart from in-optimal scales of production and subsequent high cost of production, reservation of such items for the small-scale sector leads to yet another shortcoming, the failure to use the IT and telecommunications revolution to procure markets abroad, in short the failure to use e-commerce to export. If the intention is to enable Indian firms to use the telecommunications revolution fruitfully, all impediments that stand in the way of their learning must be done away with. The National Textile Policy of 2000 is a step in this direction. But surely the state can start with a fresh look at the policy of reservation for SSIs in general.

SECTION III

E-Commerce and the New Economy

Introduction

The previous section has concentrated on the export of goods via e-commerce. For commodities, the telecommunications revolution is or was supposed to reduce middlemen and reduce transactions costs and thus aid commerce. For a lot of services, the information highway is additionally the mode of delivery itself! Thus if e-commerce can be taken to goods, its role in the export of certain services is even greater! For India, these services are IT and IT enabled services or what has euphemistically been called the ‘new economy’.

The case of the ‘New Economy’ in India is turning out into a peculiar one. The paradox that exists in this sector is the following: IT Enabled Services (ITES), the ‘low technology’ section of this sector is dominated by foreign TNCs while Indians have a considerably higher presence in the IT sector which is the more demanding high-technology/technologically advanced segment. Shares of Indian firms in IT services is 78% and in BPO it is 55%⁶⁵ which with the acquisition of Daksh by IBM in 2004 is likely to be below the 50% mark. Indeed we will argue that this paradox is in no small measure due to the peculiar interaction among several forces including e-commerce. Indeed factors no less than the lopsided nature of Indian education as well as organisational characteristics of Indian and foreign firms form part of the explanation.

The IT sector can be divided into two sub-sectors. One is the what may be termed as the ‘real’ IT sector, i.e. organisations that design and develop software and programmes and renders systems support, the other sector comprising of firms in ITES (IT enabled services) that carry out tasks that are essential to the functioning of most firms and yet not part of its core operations, i.e. functions like preparing financial records and payrolls, tele-marketing, customer services etc⁶⁶. These services were long treated as non-tradable services. However, with the advances in modern telecommunications and Information Technology, these services can be substantially divorced from the location of the firm or at least its main factory. For example, the accounts of the firm can be handled at any location

⁶⁵ NASSCOM-McKinsey Report 2002

⁶⁶ Admittedly, this is *not* a watertight classification as the two sub-sectors overlap. However, for the purpose of this study, we deem it satisfactory.

away from the firm as long as the necessary information can be delivered. This requirement at least today is very easily met. The raw information is thus transformed into a meaningful financial statement or payrolls created depending on what the firm requires. Similarly telemarketing and aspects of customer care that require personalised information dissemination and collection (but are not central to production) also can be carried out at sites other than the main location of the factory/office.

It was conventional wisdom that Indian IT through its export-structure had locked itself in a low-level technological trap⁶⁷ in the case of software development while the second ITES looked far more promising. Admittedly, this is by no means a universal view and there are observers who argue that there is evidence that suggests to the contrary.

If e-commerce, especially exporting through e-commerce has prospects in commodity trade, its potential for export of certain services is even more assured. This section will specifically deal with two types of services, IT services and services associated with Auditing and Accounting bearing in mind India's phenomenal record in the former and the obvious potential in the latter. Equally importantly, it may be observed that both these sectors render some services that are capable of being transferred over the 'wire' as the very nature of the service is its knowledge/skill intensiveness with little or no physical capital component.

However, the role of e-commerce in these sectors have not been an unmixed blessing according to some observers. There are reasons to fear that while e-commerce has boosted IT exports, the communications revolution has accentuated the 'locking-in' of innovation by pushing Indian exports on a particular trajectory. Secondly, Indian Accounting professionals have directly and indirectly been petitioning the government to afford them (Indian Auditing firms) protection against foreign auditing

⁶⁷see Parthasarathi, A. and K J Joseph (2002) "Limits to Innovation with Strong Export Orientation: The Experience of India's Information Communication Technology Sector", *Science, Technology and Society*, Vol 7, No.1 , D'costa , A.P, "Export Growth and Path Dependence:The Locking-in of Innovations in the Software Industry' *Science, Technology and Society*, Vol 7, No.1, 2002 and Heeks, R., *India's Software Industry; State Policy, Liberalisation and Industrial Development*, Sage, Delhi 1996

firms. This is surely a paradox given that this is an area that Indian professionals have a massive advantage.

Any analysis of the potential of e-commerce has to take into account and explain these fears even as policy measures are designed and disseminated. We will analyse the potential of exporting through e-commerce in these sectors, point to shortcomings/drawbacks that exist and suggest ways and means to counter these drawbacks.

Our conclusions are the following: We will argue that while e-commerce has certainly benefited the IT sector, the factors that act as obstacles to sustained and future growth of this sector lie again in great part in organisational shortcomings. However, we will also argue that the 'locking-in of innovation' cannot be laid at the door of e-commerce. As regards the prospects of e-commerce in the Business Process Outsourcing sector, notwithstanding the general consensus of a good outlook, we will point to shortcomings that prevent Indian firms from being successful in this field as compared to Trans-national Corporations (TNCs) based in India. As we have mentioned earlier, we have focussed primarily on financial services and payroll management excluding services like customer care (which comprise for the largest component of ITES exports). We have selected this as the latter employs skilled graduates on a long-term basis, reducing enormously the tensions that arise when educated employment rise beyond a critical level. Additionally, problems with the 'thick accents' have put a question mark about the continued spectacular growth of call-centres with more than one client withdrawing their custom from India. While the financial sector has also had its loss of customers these have been due to charges of malfeasance rather than quality⁶⁸.

India's IT Export performance and E-commerce

For quite some time now, the IT sector has been the most spectacular performer in the Indian economy growing from US \$ 5 billion and Rs. 18, 641 crores in 1997-98 to an estimated US \$ 16.5 billion and Rs. 18, 641 crores approximately in 2002-3. Of this the software and services market has grown in the same period from slight above US \$ 2.9

⁶⁸ BPO: Caution Ahead, Editorial, Economic and Political Weekly, March 27, 2004

billion and Rs. 10,900 crores to an estimated US \$ 12.5 billion and Rs 59,900 crores.

Likewise exports of IT services have also grown phenomenally from US \$ 1.76 billion (Rs 6500 crores) to US \$ 9.9 billion (Rs 47,500 crores) and are expected to perform at a similar pace in the future. However, export of IT services from India has certain peculiar characteristics of its own. As late as 1999, 58% of total IT exports was in the form of 'On-site' services. Such services are said to have been rendered when 'factors move to the site of the receiver'⁶⁹ and is colloquially referred to as 'body shopping.' Clearly, e-commerce is not a major factor in the rise of such services (while it may aid in its sustenance). However, the second largest category is 'offshore services' that account for 34% of India's IT exports. In this category of services there is limited movement (or at times none at all) by both the receiver and provider of the service. The service is developed domestically and sent to the customer over the 'wire'. This is e-commerce in its purest form. In the absence of adequate telecommunications, this trade in services simply would not take place. The third category of IT services where neither factor nor recipient moves is classified as products and packages is actually the section 'where the money is.' In 1997, the volume of sales in the USA was \$52 billion⁷⁰. They however comprise only 8% of India's software exports. It must be noted that given the nature of these products, e-commerce was neither necessary nor sufficient for this category of service for a long time, although even this probably changing.

Why is e-commerce vital for off-shore services? The nature of off-shore services are such that they while being routine, knowledge-based activities are not sufficiently routine to lend themselves to 'algorithmisation' and hence automation. These comprise of problems that are related to programmes designed to solve specific problems embedded in industries or firms i.e. applications related problems. So while a common knowledge-skill base helps in the solving of individual problems that arise, there is no programme/software that takes care of all of them. The nature

⁶⁹ Parthasarathi, A. and K J Joseph (2002) *op cit*

⁷⁰ US Dept of Commerce

of these problems can be communicated across the wire by the client to the service provider who in turn can devise the relevant solution and wire it back to the client. (In another example in the case of ITES the services provided by call centres is the same. The assistance asked for by customers in the market and the solution provided by the employee situated in India is almost never complicated. It is, however, unpredictable and diverse making automation difficult).

It is clear that without the telecommunications revolution this export of services would not be possible or at least greatly inhibited. Thus e-commerce has sustained and promoted this export of services. The question is that in doing so, has e-commerce also locked it in a trajectory that inhibits technological learning?

There is mounting evidence that Innovation and Export performance of Indian firms was for sometime negatively and significantly linked⁷¹. This is no doubt a disturbing trend that puts into question the sustainability of India's software boom.

Parthasarathi and Joseph argue that export orientation has a dampening effect on the innovative performance of firms. In the same vein, D'Costa argues that export dependence (which we hold is e-commerce assisted) has locked Indian firms into a dependent non-innovative growth path. D'Costa holds that higher end problems and user feedback linkages are more difficult to communicate/sustain/with a distant service provider. This affects learning and skill accumulation.

The argument seems to run thus. The services that Indian IT firms provide, i.e. body shopping and solving routine problems do not constitute the type of tasks that are suitable for a 'learning-by-doing' technological progress. The typical Indian exporter does not operate at the cutting edge of technology and as a result remains technologically backward. Thus over time it may be expected that Indian IT firms will find it increasingly difficult to meet what can be called routine problems a few years hence as the latter as these problems will be relatively more difficult than the routine problems

⁷¹ Parthasarathi & Joseph *op cit* and D'costa , A.P, *op cit*

witnessed today. In Arrovian⁷² terms, this may be explained as firms working mainly with capital of old vintage. As technical progress depends on the usage of capital of recent vintage (the more modern the machines more is the learning), working with old machines retard learning. If we substitute machine-vintage for assignment sophistication, we would be logically lead to the same conclusion, i.e. sluggish learning, stagnant technology and thus the export of low technology items that feeds into this vicious cycle of technological stagnation.

If Parthasarathi *et al* and D'Costa are right then it may be argued that e-commerce in the IT sector (by locking the sector in this malignant path dependence) has sown the seeds of its own demise.

However, this line of argument is self-contradictory. If as D'Costa points out higher end problems are not being given to Indian firms due to difficulties in communicating this problem to a distant client, then it is an indicator that telecommunications are not sophisticated and/economic enough. Indeed this is the sign that with respect to certain intractable technical problems, the existing level of communications do not support e-commerce. If they could be communicated e-commerce would ensure that even these problems would be part of Indian IT's off-shore services. Indeed any problem that involves distance lends itself admirably to e-commerce as it is (at least in the case of IT services) a distance-neutraliser *par excellence*.

Is there any reason to suspect a relationship (beneficial or otherwise) between e-commerce and technical innovation? To answer this question we adopt an indirect approach and ask what is responsible for stymieing technical progress/innovation in India. It has been argued⁷³ that in the case of Taiwan in the 1980s onwards there has been a constant flow of professionals back to Taiwan who had settled in the USA for educational and later professional reasons in the 1960s. This influx of professionals to

⁷² see Arrow (1962) *op cit*

⁷³ see Saxenian ,A. 'The Silicon Valley Connection: Transnational Networks and Regional Development in Taiwan, China and India,' *Science, Technology and Society*, Vol 7, No.1, 2002, as well as Krishnan, R.T, and G.N. Prabhu, 'Innovation in the Indian Information Technology Industry: A Study of the Software Product

Taiwan which quickened in the mid-1990s not only brought technology to the Taiwanese economy but a knowledge about market and technological conditions in the USA as well. This served to neutralise the distance between the market (USA) and the production site (Taiwan) and led to Taiwan's successful upgradation of its economy. One line of argument⁷⁴ points out that in the case of India this has only begun to happen on a minor scale. Initially, Indian professionals at the helm of affairs in US corporations while persuading the latter to sub-contract out part of their operations to low cost Indian suppliers generally adopted an arms-length approach.

This again is an unsatisfactory explanation. It must be remembered that Taiwan's successes are in the IT hardware sector. Here availability of finance especially to reap scale economies is also very important as technology is embodied in expensive machinery. While technological obsolescence is swift, a market segment based on bargain prices can always be obtained. Software on the other hand operates on a winner-take-all basis. As the skill/knowledge is the most significant and expensive part of the product (the CD or floppy that carries this knowledge adding little to cost) and as duplication is relatively inexpensive, a product captures the market very fast. Moreover, newcomers avoid problems of compatibility by choosing the most popular software while customers upgrade to newer variants of the original as switching costs to a new, even if better technology, may outweigh benefits. It is unlikely how the Taiwanese model could have worked in the case of IT unless of course upgradation takes place in the form of Indian firms climbing up the technology to perform higher-value functions (not necessarily related to the design and production of proprietary software).

The role of e-commerce is to accentuate this tendency as it makes the dissemination of software even cheaper and accessible to a larger market. Thus an entrenched player gets even more entrenched strengthening monopolies. This is even more strengthened by adopting tactics like offering free software downloads that run only on operating systems sold by the dominant seller. If Indian IT firms are tied to the monopolist, then this state of affairs lends them stability. But it also puts a barrier on future

⁷⁴ Saxenian, *op cit*

growth prospects as regards innovation in a field where a monopoly already exists. This is a property of e-commerce in the world of IT, which amplifies strengths and reinforces positions.

What then could be the role of e-commerce in enabling Indian IT firms to climb up the technological ladder? It must be remembered that so far IT in India has boomed on the strength of low value-added services (as we have alluded) which given India's manpower costs, have been very profitable⁷⁵. Thus there is little urge to upgrade. However there are some motivated companies that have set up subsidiaries (eg INFOSYS) in the USA which is the biggest market of Indian IT exports. This move is a traditional one that seeking to overcome the shortcomings of the communications revolution, acquainting themselves with the more complex problems that US clients face. But the dissemination of such problems and their part solution will be worked out in India. While this is no doubt a realistic scenario, this perhaps is not the dramatic breakthrough that observers of the Indian IT industry have been looking for.

Most consider only product innovation to be the only criterion that demonstrates technology creation. In keeping with conventional theories, most of the products produced by Indian IT firms have catered to Indian problems⁷⁶ and perhaps demonstrating that a presence in the market is being targeted is absolutely essential. Alternatively, it may be a sign that telecommunications may not have yet reached that level of sophistication/competency whereby programmers/technicians can get an adequate feel of the problem faced by the clients and thus a beachhead to do the needful must be established. The subsidiary thus communicates the problem to the office in India who solve the problem and communicate the results over the wire. It may be pertinent to point out that General Motors technicians in the USA share a virtual lab with their European colleagues communicating in real time using the necessary infrastructure to transfer moving images, graphics and technical information and indeed the same virtual drawing board⁷⁷.

⁷⁵ Parthasarathi and Joseph *op cit*

⁷⁶ see Saxenian ,A. *op cit*, as well as Krishnan, R.T, and G.N. Prabhu, *op cit*

⁷⁷ Creativity and Knowledge Creation, A workshop organized by the Reginald H. Jones Center for Management Policy, Strategy and Organization and the SEI Center for Advanced Studies in Management April 9, 1999, Proceedings, <http://jonescenter.wharton.upenn.edu/2003/events05.htm>

It may be opined that practically all stages of software development and subsequently business will ultimately lend themselves to being transacted over the web, i.e. amenable to e-commerce. This would no doubt require considerable upgrading of the telecom infrastructure but this is required in any case given the losses that accrue to Indian IT on account of poor telecom facilities. But it must be stated that telecom infrastructure is fast improving.

In other fields, there are already instances of animation software which were (not very long ago) being produced in the USA itself that is being done in India⁷⁸. What India does not possess is proprietary rights to these products. That requires investment which Indian firms either do not possess or are loath to spend. However should Indian IT/entertainment firms succeed, they will discover how their gains are amplified and reinforced by e-commerce.

Even as of now, e-commerce holds tremendous potential for the Indian IT industry even as it seeks to upgrade to higher value products. There is some indication that this is happening now.

New Developments: The Climb up the Technology Ladder

Of late, it has been reported by several observers⁷⁹ that Indian IT firms have been breaking out of their low-level technological trap that the industry had dug for itself given its export structure. There is now greater indication that Indian IT firms are now climbing the technology ladder developing more advanced software for firms outside India, mainly the United States. Thus it imperative that we ask ourselves what has changed.

It may be recalled that when the US economy started on its downswing after the end of the Clinton Presidency there were fears that Indian IT exports would be badly affected. At least one expert, Shiv Hari Nadar of HCL predicted otherwise. Nadar observed that the downturn would actually force leading IT software giants to cut costs, and given the

⁷⁸ see State of the Global Animation Industry and Opportunities for Outsourcing Content Creation (for animation), http://www.bitpipe.com/detail/RES/1069136926_274.html

⁷⁹ Saxenian *op cit* and Bomsel O. J. Ruet, S. Cognet, T. Durpthy, A. El Khoury, A. Maria, P. Masclot and B. Vannier , 'Digital India: Report on the Indian IT Industry' submitted to Centre d'economie industrielle Ecole Normal Superieure des Mines de Paris, 2001

labour intensive nature of the sector a major source of saving would be off-shoring certain activities hitherto done at home. This would mean that the composition of Indian IT would change. So while *ceteris paribus* the demand for lower end IT services would be affected (reflecting low demand given the recession), the increase in higher end services as a result of off-shoring would contribute to continued growth. Indeed a parallel can be drawn with the flow of foreign direct investment into South East Asia from Japan in the 1980s. The soaring yen or *endaka* that ensued as a result of the Brady Plan made Japanese imports of electronic goods more expensive. Japanese corporations responded by relocating the labour-intensive part of their operations (i.e. assembly) to economies with cheap labour in South East Asia. This was the *kudoka* (or the hollowing out of the Japanese corporations). The assembled goods were thus re-exported to the USA or Japan itself. Considerable savings were made and Japanese goods retained their cost advantage in spite of the soaring yen.

Obviously this is the practice that Nadar was alluding to with the hope that this would be a parallel that would be repeated in India with some differences of course. The expectation was that either the foreign IT firms would set up shop in India or off-shore more technologically demanding work to existing Indian IT firms or new firms would be set up by Indians (hitherto associated with the foreign IT) taking up assignments that were more advanced than what the average Indian IT firm designed.

The first case would be an example of Indian firms climbing the technology ladder. The second would be upgradation via FDI. The third would be the entry of technologically more advanced firms in this sector. While all three possible trajectories imply a technological upgradation of the sector, there are other different implications as well.

The first implies that the IT sector has started to climb the technology ladder because existing Indian IT firms have started to move the technology curve. This opens the possibility that this movement may be a permanent feature of such firms, which implies that the industry as a whole would be assuredly and continuously technologically mobile.

The second case which occurs through IT majors setting up India units e.g. IBM, ORACLE, ADOBE et al. also implies a technological upgradation of the sector; not because existing firms have become more dynamic, but because foreign firms are now using Indian technical manpower to design more sophisticated software. Indeed, as the home firm improves technologically, the Indian wing could also be expected to improve as a consequence by picking up tasks that the home firm does not take up anymore. In this case too there is still learning by the Indian wings and thus by the industry although it less arguably less dynamic than the previous case and with less prospects for future growth as the autonomy of the firms are curtailed by virtue of their foreign ownership.

The third case is more problematic. Here the upgradation of the industry takes place not because existing Indian IT firms are learning, but because newer firms endowed with higher levels of technical knowledge are entering the field. There is no guarantee though that as in the first two cases, continuous learning and upgradation will ensue (although we cannot *a priori* rule it out either). It is also clear that this is the phenomenon that has taken place that leading observers to believe that Indian IT may finally be on the path of sustained technological progress⁸⁰.

This position is, however, far from proven. Even acknowledging the paucity of time that has elapsed to make claims either way, it is possible to argue that the Indian IT industry may not even be the entrenched incumbent as a vendor to the American industry (as it may be believed). If the third case (whereby Indian professionals hitherto employed by IT majors in the United States have set up shop in India using the trust and reputation that their former associates in the USA repose in them) is indeed the predominant case, then the only advantage India possesses is cheap technical manpower. However, studies indicate that even this apparently plentiful manpower is at best overstated if not misleading. Indeed, economies like China will soon compete with India in the near future given India's lack of education infrastructure⁸¹. Moreover the ability of this manpower to move continuously up the learning curve is yet untested as it

⁸⁰ Saxenian *op cit* and Bomsel *et al, op cit*

⁸¹ Richter, F & P. Bannerjee, '*The Knowledge Economy in India*', Palgrave Macmillan, Basingstoke, 2003

is only now that India is attempting to break out of its low-level technology trap via the entry of new firms rather than the improvement of the old. Thus in the near future it is quite possible for IT majors' employees of other nationalities to use the same trust and reputation as their Indian counterparts possess to set up IT vendors in countries such as China. There is nothing that militates against the success of that particular project once China has sufficient numbers of qualified IT personnel. Clearly, Indian IT firms' advantage of reputation can only be stretched so far! Added to this is the fact that computer penetration in China is substantially higher than in India. Indeed the number of IT professionals in China who are familiar with computers *before* they receive training in IT software development will be substantially higher and their quality is, therefore, substantially better as compared to India where several professionals come into contact with a computer for the first time only when they receive training in Software development⁸². In a nutshell, what are the implications for the export of IT services through e-commerce? In so far as e-commerce is an amplifier *par excellence*, this bar on scaling up the size of this sector on demand will be amplified when such a ceiling is reached. According to NASSCOM India might be short of half a million professionals as early as 2005⁸³. A supply shock of this magnitude will force buyers to look elsewhere. This implies that others shut out of this market due to an existing lock-in effect will get more than a foothold in the industry. If China is the beneficiary of such a supply shock, its synergies in hardware will ensure that IT software too takes off. The upshot of all this will be that India will have a formidable rival in this sector by the very forces that gave India its presence in this sector in the first place, i.e. the forces of e-commerce.

Conclusion

That the IT industry has done well so far is not in doubt. What is in doubt is its sustainability given the nature of its exports. While there are signs of an overall churning in the industry as new firms entering the industry (both stand-alone firms by returning expatriates as well as US Software majors performing tasks and designing software that are on the upper part of the value chain), it is not clear whether this is a sign of a

⁸² *ibid*

⁸³ India's Software Firms to Reap Outsourcing Windfall, http://itmatters.com.ph/news/news_05102002b.html

durable and sustained shift. Ultimately success in this field also depends on factors extraneous to the players in this field eg. supply of IT professionals. With China investing huge amounts in education in IT training, it is not clear whether the advantages generated by the first-mover (India) accentuated by technological proximity caused by e-revolution will give India sufficient market-strength to hold its ground against China. This is especially more so as China will most probably leverage its strengths in IT Hardware with its software skills. It must be added that Indian IT majors have already acquired a presence in China by investing there in order to take advantage of China's low hardware costs. But the shortage of trained manpower will certainly bite into India's competitive advantage with the passage of time.

The presence of e-commerce will only amplify the existing strengths and weaknesses of Indian firms vis-a-vis their rivals. A distance-neutraliser *par excellence*, its role cannot be extended to cover basic inherent weaknesses.

E-commerce and IT Enabled Services

How Organisational Problems Neutralise Technological Progress

Introduction

One of the accomplishments of e-commerce has been to make tasks that were hitherto considered non-tradable into services that are eminently tradable. Thus today with the advances in telecommunications and duplication technology, at the level of analysis, there seems to be little doubt that services like telemarketing, certain aspects of customer-care services relating to information dissemination, and whole paraphernalia of accountancy services lend themselves very easily to being electronically transferred. For instance, firms in the USA wishing to get its payrolls prepared by Indian firms, can approach the USA subsidiary of the Indian firm and transfer the necessary financial data to it, either physically or electronically. The subsidiary in turn transfers it to its offices in India where the skill-intensive operations requiring a lot of skilled labour is carried out. The raw data is thus processed in a house in India and re-transferred back to the USA subsidiary electronically who then utilises this information to provide salaries. Thus agents that drew economic rent

given the once non-tradable nature of their professions (like that of the barber's) now find themselves in competition with professionals from India and the latter seem to be successful. Clearly there is enormous potential for the export of services through e-commerce.

On a more ambitious level but in the same vein, Indian auditing firms can act as auditors for foreign firms certifying the accounts prepared by the foreign firm (or by the Indian firm itself) to the shareholders of the company.

Thus given India's large pool of Bachelor of Commerce graduates as well as qualified accountants who are also proficient in English, India should possess as natural an advantage in this sector as it possesses in the case of the IT sector.

However, between this simple fable and its actual implementation lie of course, a host of obstacles. Firstly, is the commercial presence of Indian accountancy firms allowed in the country to which these exports are targeted? Are Indian professionals aware of the accounting standards and regulations prevailing in the country to which these services are targeted? Are Indian professionals required to be physically present in the foreign country. Would the latter be covered under GATS' movement of natural persons? These are the questions that have to be answered before further analysis is carried out.

It may be held that these are not insurmountable problems. For example, even if commercial presence was not allowed, it would be in the interest of at least one auditing firm to subcontract this work out to an Indian firm rather than hire expensive accountants to do what can easily be done at considerably less expense in a country like India. With regards to the second question, the accounting norms of a particular country are by no means confidential and professionals anywhere can be trained to follow such norms. Does the movement of natural persons cover accounting professionals. If not, then a professional in the foreign country could still be hired to do the needful and costs thereafter will be reduced (as the bulk of the work is done in a low cost location anyway).

Indeed even with the restrictions in place exporting through e-commerce in auditing services would still be possible. Such firms would

have a remarkable organisational structure. The skill-intensive operations would be carried out in India (a developing country), while the relatively less sophisticated task of representing the firm abroad as well as the unskilled tasks of physical verification of assets would be carried out by unskilled labour in the foreign country (which is a developed country). This constitutes an additional twist to the theories of structures of Multinational Organisations.

But more importantly, for our purpose, e-commerce would aid and enable Indian audit firms to export audit services to foreign clients profitably in the same manner in which off-shore IT services have been exported. Given the size of the global audit market, this is also a potentially high-volume export sector.

A Paradox

From here it should follow that Indian Audit/Accountancy firms should lobby the state to argue for the global liberalisation of this market at the WTO. In actual fact, Domestic Audit firms are not only firmly against any liberalisation of this sector, they have also argued that till certain conditions are achieved, even commercial presence of foreign auditing firms should be disallowed and the ones who have already set up office should be asked to leave.

This wide divergence between theory and reality has to be explained and this is precisely what the rest of the section is devoted to. Our conclusions are as follows:

The nature of auditing services are such that reputation and brand-name play a much bigger role than in the case of commodities. Thus the cost of the service provided assumes a secondary nature. With regards to brand creation, the attitude of the Indian Auditing firms is not different from Indian exporters and like the latter show no dynamism in trying to upgrade their status or form coalitions/consortia with middle-level audit firms abroad. In general, they have been myopic in their outlook and have sought to deal with their disadvantages by asking the state for protection. This inward looking strategy has obvious and profound implications for factor creation and may adversely affect the prospects of the scaling up of Indian ITES sector.

The Nature of the Auditing Sector and the Role of Reputation: The Impossibility of Indian Auditors

The role of the Auditor in a corporate economy cannot be overstated. The Auditors, unlike the financial executives/accountants of the company, are not company employees although the company pays them fees for their services. The auditors report to the shareholders, informing them about the financial health of their company as well as the current financial performance. It is based on their report that dividends are proposed and stock prices are affected. Given the separation of ownership and control, the auditors perform the function of informing the owners (shareholders) what the controllers (managers) are performing leaving the former to judge whether the latter should be rewarded for their performance or punished. The company's accountants on the other hand report to the board of directors.

It is clear, therefore, how important is the role of the independent auditors in the working of an economy dominated by equity financed companies. The credibility of the auditor must not be in doubt; thus credibility commands a premium that the shareholders are willing to pay rather than compromise on a service on which the fate of their investment depends.

As a result, it is hardly surprising that most international bourses are reluctant to list companies unless their accounts are audited by one of the Big Four auditing firms, namely PriceWaterhouse Coopers, Ernst & Young, KPMG and Deloitte & Touche. This *de facto* requirement confers on the Big Four firms great monopoly power at least where the larger corporations are concerned. Thus, in the USA alone some 97 per cent of the 15,000 to 16,000 publicly traded companies and mutual funds registered with the SEC are audited by the Big Four firms (and 80% of the top 100 corporations) as companies are interested in getting listed in as many bourses as possible. Indeed such is the degree monopoly that out of the remaining 1200 auditing firms (listed with AICPA) only two audit more than 100 companies⁸⁴.

⁸⁴ Joseph Radian, 'A Good Year for Outsiders' <http://www.cfo.com/article/1,5309,7800%7C15%7C%7C%7C,00.html>

In India the Big Four handle 4% of the corporations with medium sized Indian firms⁸⁵ (5-6 chartered accountants & article clerks) handling 25% of the companies. The rest are handled by the small firms (some operating with two chartered accountants with article clerks). In addition, the Big Four handle some 60% of the businesses⁸⁶. This again should not be a surprise. As Indian firms operate in an increasing globalised economy, it will be on the lookout for cheap capital especially to overcome the disadvantages of costly domestic capital. One of the most obvious ways is to raise capital from the financial markets in Europe and America which requires (*de facto*) certification by one of the Big Four firms⁸⁷. Thus it is likely that the most ambitious and dynamic sector of the Indian industry that seeks to operate globally will choose to get themselves audited by one of the Big Four rather than a local firm, even if the fees charged by the former are higher.

It is this realisation that has urged the Indian auditing firms led by the middle-sized firms to lobby with the government to put restrictions on entry by foreign firms. The committee set up by the government under Sunil Bhargav (a representative of the middle sized audit firms) to gauge the effects of liberalising entry has submitted a report but this has not yet been made public. However, if Bhargav's public comments⁸⁸ are anything to go by, then Indian Audit firms are reluctant to embrace the opportunity offered to them by the liberalisation of this service fear the future.

Bhargav echoes calls in the West that have shown concern at the nature of the audit industry? especially after the Enron scandal and the role of auditors Arthur Anderson. He says that with the extraordinary market power of the Big Four free trade in services is a misnomer and will lead to trade distortions. He claims that there is *de facto* discrimination against Indian firms and professionals. Moreover, professional standards are used as a trade barrier. He asks not for the negotiation for the mutual removal

⁸⁵ yet given Indian laws their audits are signed by their Indian acquisitions (e.g. Bharat Raut and Co for KPMG). The big four cannot operate under their own name in India thanks to the lobbying by the Institute of Chartered Accountants.

⁸⁶ Interview of employee of an Audit Major, name withheld

⁸⁷ Interview of employee of an Audit Major, name withheld

⁸⁸ Bhargav, S. 'WTO GATS regime: Implications for the accountancy sector', *The Chartered Accountant*, vol 51 no 5 2002.

of such barriers but calls for the effective exclusion of foreign firms for a period of eight years *after* India attains 3.5% share of the world market for accountancy services for two consecutive years⁸⁹!

This by any account seems to be a drastic remedy which if implemented will effectively shut out Indian firms from the financial markets in the rest of the world as the necessary certification by one of the Big Four will not be forthcoming. However, as our interviews with representatives of the Big Four in Delhi have confirmed, this is not the intention of the Indian firms⁹⁰. They seek to force the Big Four to be represented by Indian middle size accountancy firms such that their certification becomes de facto certification by the Big Four.

Are the Big Four worried about the potential e-competition from the middle level Indian firms? The interviewees aver that this could only affect the smaller auditing firms and not the Big Four. They argue that while there has been some move away (especially from middle-sized companies \$ 1 billion to \$500 million) from the Big Four after Enron's collapse, they claim that Indian firms were not in a shape to even take advantage of that. They claim that they have seen no indication of Indian firms either striking alliances with smaller American audit firms or upgrade their knowledge to include American accounting practices. In the opinion of the interviewees, many of the Indian firms are provincial in their outlook and remain 'clerical sweatshops' where employees have no motivation to learn. In their opinion, the perception of American corporations' about the quality of Indian auditing firms (but not Indian accountants) ranges from poor to uncertain and thus they are in no position to threaten even smaller US audit firms what to speak of the Big Four.

While we shall deal with this in greater detail when we focus on Business Processes Outsourcing, it is difficult not to get the impression that the representatives of the Big Four have judged their rivals well. Indeed,

⁸⁹ The company Act also forbids interdisciplinary business models which implies that a firm of accountants may not provide consultancy or management services. This, of course, is something that the Indian firms want to do away with. See "Birla Seeks Level Playing Field for CA's Business Standard, 19/12/2003

⁹⁰ interviews of employees of Audit Majors, names withheld

none of the Indian firms⁹¹ that we have interviewed ever considered the policy of attempting to export accountancy services. There is of course some initial investment involved when alliances are attempted to be struck. However apart from that, Indian firms who are traditional in their outlook have to re-orient themselves completely and that for most traditional firms especially the sole proprietorships may be well-nigh impossible. Operating as they do on low costs which implies poor quality help from clerks whose work has to constantly supervised, they are hardly geared to the more demanding standards that American companies expect.

It is clear that auditing as a service is (at this point in time and for quite some time in the future) realistically beyond Indian firms although foreign firms may and do hire Indian personnel in India itself for the bulk of their operations. Indian firms cannot counter the brand name that these firms have acquired over decades of service in so short a period. In any case, fees from auditing services itself are not very high. As an interviewee with one of the majors candidly averred that it is an opening that enables firms to ‘hustle⁹²’ into getting other more lucrative services such as consultancy⁹³. As we have earlier indicated, this courtship that involves *pro bono* services as a sop as well as to establish credibility is time consuming. The obvious *moral hazard* problem that existed with the role of the auditor as the custodian of shareholder interest and its new role as a consultant to the management came to a standstill with the Arthur Anderson-Enron fiasco ensuring that this option is no longer open to Indian firms.

Indeed India’s strengths lie elsewhere as the surge in ITES exports have shown.

Business Process Outsourcing: An Unmitigated Success Story

The surge in Indian IT exports that took place in 2001 was largely on account of ITES that contributed the bulk of the growth of this sector’s exports as exports of ITES surged from US \$565 million (1999-2000) to US \$930 million (2000-1) and to US \$1.47 billion (2001-2). This is estimated to grow to US \$ 2.4 billion in 2002-3. It employs at present a

⁹¹ interviews with domestic firms, names withheld

⁹² Interview with a senior employee of the Indian wing of an Audit major. Name has been withheld.

⁹³ Radigan *op cit*

little over a hundred thousand people and is dominated by Customer Care (29%), Finance, Administration (19%), Content Development (27%) and Payment Services (15%)⁹⁴. Like the IT market, the main destination of exports are the United States and United Kingdom markets accounting for 90% of the industry total⁹⁵. As has been stated earlier, in a sense this sector, which is less technologically demanding than the 'real' IT sector itself is paradoxically dominated by foreign Transnational Corporations who carry out operations from their Indian bases. We will argue in the following section that this was a development that was waiting to happen and one whose genesis is more easy to explain than India's successes in the 'real' IT itself.

It would be appropriate to begin with the definition of Business Process Outsourcing. For the purpose of this paper, we will follow the definition given by Gartner⁹⁶ according to which '*Business Process Outsourcing (BPO) is the delegation of one or more IT-intensive business processes to an external provider that in turn owns, administers and manages the selected process based on defined and measurable performance criteria.*' The processes that can be outsourced thus include human resources, finance and accounting, supply chain management, customer care etc. According to Gartner Inc. a company typically spends 6-7% of its total revenues on BPO. It also sees BPO services growing from \$119 billion in 2000 to \$243.5 billion in 2005⁹⁷. Of that \$533 million came to India in 2000 (employing over 45,000 persons) and rose to \$891 million (employing over 70,000 persons) in 2001⁹⁸ and was projected to reach \$3.6 billion in 2003⁹⁹. This, however, pales into insignificance compared to projections of \$200 billion (employing 40 million people) made by the Boston Consulting Group¹⁰⁰. Even if these projections are to be discounted, they do point to an enormous comparative advantage that India has in this field.

⁹⁴ Calculated from Strategic Review *op cit*

⁹⁵ *ibid*

⁹⁶ <http://www.outsourcingsurvival.com/BPOIndia.html>

⁹⁷ <http://www.express-computer.com/20020218/focus1.shtml>

⁹⁸ *ibid*

⁹⁹ http://www.nasscom.org/artdisplay.asp?Art_id=2359

¹⁰⁰ <http://www.rediff.com/money/2003/apr/28bpo1.htm>

What are then India's advantages?

1. The first of India's advantages is the large pool of educated and English-speaking manpower who typically earn 10-20% of their counterpart's remuneration in the West for the equivalent tasks. This point bears further elucidation. After all economies like Bangladesh, Sri Lanka and African economies also have their pool of unemployed graduates who are familiar with English. It must be remembered that compared to India their numbers are low, i.e. the market for educated manpower is thin which raises the possibility of violent wage changes. India on the other hand holds out the possibility of sustained expansion without wages rising. Thus India combines factor cost with the possibility of *economies of scale* as well.
2. Familiarity with Market economy practices: Indian firms, managers and graduates who have specialised in subjects like commerce and accounts are well-versed with the practices of firms in market economies. Thus they are able to organise and deploy educated manpower in a manner that leads to superior utilisation of resources.
3. The relative unimportance of state inefficiency in the provision of public goods: Much of the services rendered by BPO firms do not require much by way of highways and ports the lack of which has bedevilled the 'old' economy. What is required is appropriate telecommunications infrastructure (where the state has performed better), since even the shortage of power can be overcome by captive power generation.

Why has BPO export suddenly taken a sharp turn upwards? After all India's advantages in this field far from being recent have existed for quite some time now. Not only this, these advantages have been known to at least some firms in the West, especially Transnational corporations who had Indian subsidiaries and hired Indian managers and accounts professionals. One obvious answer was that the existence of these factor advantages combined with the knowledge that they existed was not sufficient. For long these were non-tradable services for which accountants in the West received a premium. It may be argued that it was the communications revolution that made the a hitherto non-tradable service a tradable one; thus this export was made possible by e-commerce. This is

not an unreasonable answer. But it does not answer why this did not take off the moment the internet arrived.

What seems to be inescapable (but of minor importance in this study) is the fact that the downturn in the United States economy set the ball rolling. The pressure to cut costs to preserve bottomlines led to cutting costs in those places where future prospects of growth would not be hurt. This meant tasks that could be off-shored would be outsourced. Thus monopolies in the United States who were lethargic in the period of expansion veered towards X-efficiency when demand conditions became recessionary. Having discovered a means to effect considerable savings (same tasks could be accomplished for half the cost¹⁰¹), it promises to become a trend.

It is also interesting to note that the big players in India in this particular field are by and large Transnational Corporations with Indian firms bringing up the rear¹⁰². Moreover at least one firm's core competency is in engineering and not BPO. Surely a situation whereby Indian firms dominate the technologically demanding 'real' IT while foreign firms based in the West dominates the supposedly technologically less demanding BPO sector. The sense of paradox is accentuated by the fact that like in the 'real' IT sector (in fact even more so) trained manpower is available and at a fraction of what it costs in the West. Why then have Indian firms lagged behind their foreign counterparts who based in India have made better use of India's factor advantages in this regard?

The answer is part historical and part due to government policy (not unlike in the case of the real sector). As we have mentioned earlier, technologically advanced TNCs like GE have long operated in India and have been aware of Indian cost conditions, at least where managerial and financial skills are concerned. GE also developed a financial arm (initially to arrange capital for its projects and later as a stand-alone entity). It is only natural that the advances in technology, an entity like GE (which deals with advanced technology), has a financial arm and is known for

¹⁰¹ <http://www.express-computer.com/20020218/focus1.shtml>

¹⁰² see Strategic Review 2003, The IT Industry in India, Nasscom, New Delhi, 2003

organisational efficiency) would relocate some of its operations that could be done with Indian operatives in India itself. A natural second step would be to offer to companies resident in the United States the same services as it did for itself at a fraction of what it cost American companies. No Indian firm had this advantage. Secondly, GE (and this applies to other TNCs in the BPO sector) were large companies with considerable repute in the American market. Thus confidentiality of operations/information (a very important requirement where clients are concerned) is assured. The damages from the costs of mistakes in data processing/preparation of financial statements can also be borne by the TNCs.

Indian Players and their disadvantages

In contrast, Indian firms wishing to enter this field had none of these advantages. As in the case of reservations of certain garments for the small-scale sector, Indian accountancy firms (a potential player in the BPO market) are hampered by the fact that under section 11 of the Companies Act the maximum number of partners in a partnership can be 20. Thus economies of scale or more appropriately variety of services are limited by the size of such firms. Employees with the Indian wings of the audit majors aver that Indian firms with limitations on their size have '*remained stunted in size as well as in outlook. Sadly enough given their outlook and government policy they have been unable to evolve into an entity more sophisticated than what they are...*' On this count, there seems to be little doubt that, as in the case of their counterparts in the garment sector, these firms have never grown beyond a particular point and thus never discovered the need to develop a variety of other services. Given that such a narrow range of services are offered they begin at a disadvantage vis-a-vis the TNCs. This disadvantage is compounded by the fact that they are small in size and the fact that they are individually unknown in the western markets while collectively their reputation, as we have already stated, ranges from poor to uncertain. In addition, they have been slow to adopt technology with PCs making their appearances only recently.

However, there is one field where Indian firms excel and that is in factor creation, i.e. the training they impart to trainees. One interviewee (an alumnus of one of the most prestigious management institute of the country) was of the opinion that the training he had received (from one of

the small partnerships) was as good as he had received anywhere and had stood by him in good stead throughout his career although the stipend was insignificant.

Clearly the need of the hour is to marry this aspect with other qualities required to be a successful BPO firm.

Towards a Indian BPO Firm

A possible trajectory towards the formation of a successful Indian BPO firm would be the marriage of an efficient Accountancy firm with a group of persons who are technically savvy and possess the technology to take care of the telecommunications requirement of such a venture. More importantly and counter to public perception, large amounts of capital have been spent upfront to set up this venture in order to establish a reputation for oneself and convince prospective clients that the BPO in question is a quality service provider. This will also increase the scale of operations without delay should clients decide to downsize an entire department and ask the firm to accomplish the same tasks.

Now this path to a sustainable operation depends on a number of factors. One set of interviewees (without exception employees of audit majors) opined that venture capitalists would be an integral part of such a process. They would rope in the relevant players (the accountancy firm, the technical team and the marketing and branding team) and bring in the capital required for this purpose. Thus in their opinion, it is possible and even probable that with the entry of venture capitalists, the third party stand alone BPO ventures competing with the TNCs would be far more common than they are today. In support of their arguments, they point out the case of successful operations like Daksh¹⁰³ (which now has been acquired by IBM), which they admit does not satisfy the trajectory specified but is nevertheless an example of a stand alone BPO provider.

The second set of interviewees (also employees of audit majors) are more pessimistic. They point out that it is not the 'veil of ignorance'

¹⁰³ See <http://www.daksh.com/> . See also Brayson, C., *The Offshore Option, Indian eCRM Services Are No Joke: They Represent the New Wave of Global E-Business*, http://www.talisma.com/press/articles/internetworld_010821/index.asp

that prevents the Indian accountancy firms from acting out on their own. The fact that many of the large Indian accountancy firms already have their own clients which over a long period have become a captive market and have made them risk averse. Such conservative players distrust innovation and are not inspired by technologically savvy firms (more so after the bursting of the dot-com bubble, although the services offered are not related with that of the dot-com companies) to go in for a partnership that calls for extra investment. They argue that it not that the Indian accountancy firm is not aware of prospective collaborators offering complementary services; the problem '*is that they do and do not like what they think they see*¹⁰⁴'.

Depressing though it is, the latter view earns credibility given the fact that most of the local accounting firms have failed to see the potential of BPO and have instead chosen to throw their weight behind efforts such as Bhargav's which resists all moves to open the profession to entry by overseas firms or the Chennai chapter of the Institute of Chartered Accountants that sought the de-affiliation of foreign firms¹⁰⁵. Thus the ability and indeed the willingness of local firms to adopt the necessary steps to enter the BPO market remains suspect. Clearly, the mere presence of the potential of e-commerce in such a lucrative sector does not guarantee its exploitation. Organisational problems and state policy leave their indelible impression on the trajectory of developments.

The Stock Market as a Technology/Opportunity Demonstrator and a Factor Creator

The success of E-commerce cannot be seen in isolation from other institutions that govern/affect the economy. As we have indicated elsewhere, success here does not follow the model where you have a few successful products which then can be duplicated endlessly such as Microsoft's Windows programme. Here success requires the continuous entry of new players or the scaling up of existing ones with more professionals from the fields of accounting, finance and IT being involved and employed as ITES are in a sense labour-intensive. Thus institutions

¹⁰⁴ Interviewee (name withheld)

¹⁰⁵ '*The Government must open up the accounting business straight away*' Business India - July 7-20, 2002

that enable the creation of such players amplify the role of e-commerce. We argue that efficient capital markets also have a role in e-commerce. The success/domination of the TNCs in the BPO sector has been explained succinctly as being attributable to the following factors

- Large Customers prefer vendors with size
- Large Vendors command a premium price
- Economies of Scale help margins¹⁰⁶

This has not gone unnoticed by Indian IT majors like Infosys, WIPRO or TCS. Nor has the profitability in this sector gone unnoticed by the three giants. Indeed forecasts of a \$1.2 trillion global market by 2006¹⁰⁷ have only whetted their appetites given the slowdown in their core areas of operations. Not surprisingly all three have entered the area¹⁰⁸.

Their *modi operandi* have been different.

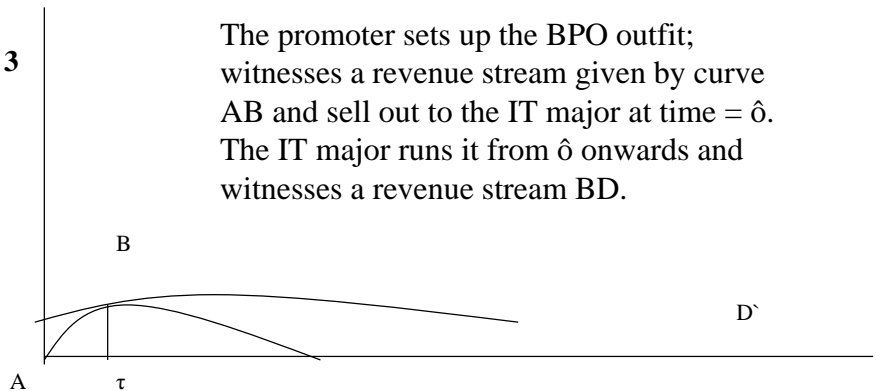
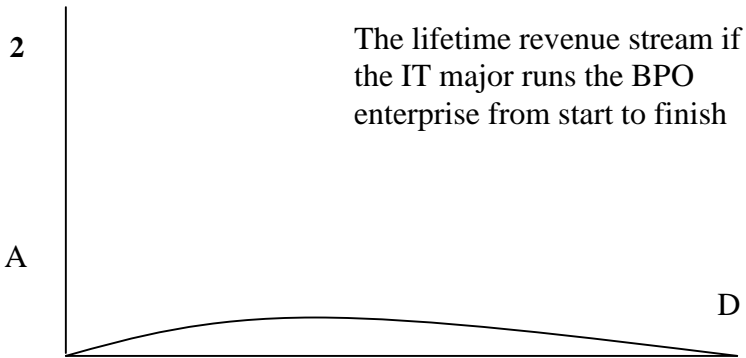
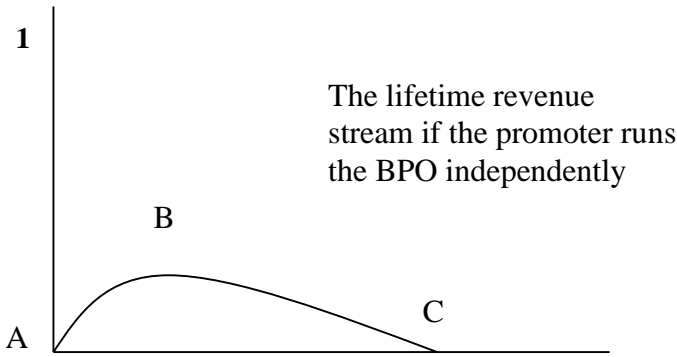
WIPRO has acquired Spectramind originally set up by Raman Roy in 2000. In its first year of operations its revenues were over 160 crores of rupees. In 2002 it was acquired by WIPRO and came to be known as WIPRO Spectramind. The question then remains is why the founder sold such an obviously profitable business after the hard work of setting it up in the first place. After all, given Roy's reputation as the Father of the BPO industry implies that he is the best in the business.

The following argument can be offered: while Roy may know a lot about the business, he cannot match WIPRO's global outreach, reputation as well as resources. These factors added to Spectramind's BPO experience would in all probability mean that as part of WIPRO the firm would earn far more revenues in the future given such energies than as a stand-alone outfit. Thus it makes sense for Roy to give up his independent status and merge it with WIPRO which adds to Spectramind skills to enhance future revenue flows. Diagrammatically, the argument (which can

¹⁰⁶ Nasscom Strategic Review 2003

¹⁰⁷ International Data Corporation forecast quoted in Mendonca, S , 'IT Daddies nurture BPO Prodigies' <http://www.openoutsourcing.com/resource-dated2061-IT%20daddies%20nurture%20BPO%20prodigies.phtml>, December 4, 2003

be extended to IBM's acquisition of Daksh) can be represented by the figures below¹⁰⁹:



¹⁰⁹ taken from Sengupta, Dipankar, 'Industrial Structure and Economic Performance', unpublished Phd thesis, 2003, JNU.

This phenomenon has been made easier given the presence of an equity market that smoothens transactions including those geared to the purchase/sale/takeover of firms. The first figure represents the flow of revenue over time if the BPO firms operate alone. The second figure represents the flow of revenue if the IT major establishes and operates a BPO outfit on its own. The third represents the fact that the BPO firms are set up by an ‘*opportunity demonstrator*’ who runs it for some time and then sells to the IT major. The IT major in buying an established company acquires the knowledge of that company and thus its initial revenue is the same as the BPO firms at the time of sale (represented by the parallel shift of its revenue curve to touch the BPO firm’s revenue curve at the time of sale). However, as it brings its own skills to add the BPO firms the decline is not so precipitate as it would be if the BPO operated alone. It can be shown that it is more rewarding for the founder of the BPO to sell the firm after founding it than to persist operating it in isolation¹¹⁰. This practice is also best accomplished in an economy with an efficient stock-market. There are clearly lessons to be learnt here for would be entrants including the traditional accountancy firms. *The very act of merely setting up a going concern is potentially rewarding in itself.* The choice whether to stick on or sell out after getting the BPO outfit going is potentially discretionary. Indeed in the earlier stages, it is the traditional firm allied with another providing the technical and marketing support that has the advantage over the IT majors. Nor is the field one where the first mover takes all. As the services in question cannot be duplicated without an estimation of expenses, extra demand requires the hiring of extra personnel and can thus accommodate late entrants as players. There is, however, no sign that this phenomenon has acquired a momentum of its own.

The Limitations of the IT Major as a Midwife

Not all IT majors have, of course, followed this route. IT Major INFOSYS founded PROGEON as a BPO outfit in 2001. Two years later it had revenues of about 17.8 crores of rupees with 11 clients. Compared to Spectramind, this venture, although breaking even in the first 10 months of its operations, comes off a poor second. This is not unnatural as BPO

¹¹⁰ Sengupta *ibid.* Using the Nash Bargaining Solution method, it may be shown that both parties receive revenue that is equal to half the area covered by curve ABD but the costs are borne by the promoter.

activities by their very nature have characteristics different from that of Software development. The fact that it is indeed profitable is a testimony to the advantages of global outreach and technological synergies.

But even with its initial disadvantages, it is difficult to argue with the IT majors when they assert their advantage vis-a-vis the independent players. INFOSYS is beginning to see that many of its software clients are also becoming its BPO clients¹¹¹. Indeed WIPRO asserts that they “leverage the global presence of Wipro; the opportunity and market size is of wider variety compared to small, stand-alone BPOs¹¹²”. But comparing the IT majors themselves, it may be argued that Spectramind scores over Progeon, for the simple reason that given its roots as an independent BPO service provider it is likely to be less dependent on the parent company’s software clients than Progeon although that particular niche is not ruled out.

However, the decision to buy an existing operation or to set up one is not necessarily one that depends on the IT major alone. Unless there is activity by way of business formation, the IT majors will have to take recourse to setting up their own units, as potential players like the traditional Indian accountancy firms whose activity is crucial to the BPO sector have been remarkably reticent in this regard. However, Indian majors have been active abroad in buying up BPO firms, thus showing evidence that they are willing to invest to capture markets abroad¹¹³.

Policy Implications

There is little doubt that Business Process outsourcing as an activity will continue and India will be a major recipient of this largesse. *The question is who will garner the profits in this game.* So far it has been the Transnational Corporations which have accrued the major share of the action by leveraging their global presence and resources. There is no reason to believe that the near future will be different.

¹¹¹ Mendonca, *S op cit*

¹¹² *ibid*

¹¹³ Kapur, Mansi, Raghuvir Badrinath and Subir Roy , ‘*Indian BPO goes global shopping*’, | November 19, 2003 , www.rediff.com/www.rediff.com/money/2003/nov/19bpo.htm*Originally, not listed in the questionnaire. Information was to be revealed informally to the surveyors.

However, if Indian firms are to increase their presence in this field, they will have to compensate for their shortcomings/disadvantages and leverage their advantages. The most obvious players (and indeed also the most reticent players have been the traditional accountancy firms) will have to marry their skills and training abilities with technical support from the new players or indeed IT majors themselves. This leap into a field which is not familiar to them however will not come easily. Here too, organisational shortcomings due to the legislated cap on their sizes must be partly blamed. The Companies Act must be amended to remove this lacuna.

The participation of the traditional firms must not be overstressed. It must be remembered that (as has been stated before) as success in acquiring business implies expansion of the firm by hiring more trained manpower, the presence of a large number of firms who also impart training simultaneously as they go about their business ensures that trained manpower shortage never holds up business. However on their own, they can do little (and indeed have done so).

Conclusion

This paper has focussed mainly on the organisational shortcomings of players that have held up e-commerce aided export in the case of garments or contributed to the relatively staid performance of Indian firms in a remarkably buoyant BPO market. The conclusions in both cases have similarities and differences. The similarity is the following: organisational shortcomings brought about by reservation of certain items for small-scale Industry and a similar cap on the size accountancy firms *vide* the Company Act has led to stunted organisations facing the task of devising marketing strategies with the help of the most sophisticated modes of communication, using the most sophisticated machinery and facing a rapidly changing market. Not surprisingly, the organisations in question have not been equal to the task. Given the success of other organisations (ITC in the case of commodities and INFOSYS and WIPRO in the case of BPO) it cannot be argued that the task of setting up a model for e-commerce aided export was not possible. Indeed the successes of the latter came under conditions that were far more trying. The difference lies in the nature of the two

types. The latter are sophisticated firms who have brought all their experience in their respective fields leveraging their advantages and bypassing disadvantages to set up models that enable them to export through e-commerce. Indeed if the potential profit is sufficiently large, obstructions suggested by conventional wisdom relating to lack of infrastructure, bandwidth shortage, connectivity, the rural-urban digital divide, legal lacunae etc all seem to be eminently solvable.

The difference is the following. The IT and the ITES sector will grow irrespective of state action regarding the Company Act. The question is one of ownership. If the state does not suitably amend the act this sector will be monopolised by non-Indian companies. But the sector *per se* will not stagnate. In contrast, the garment sector does not have this luxury and state inaction regarding reservation of items for the SSIs will have implications for the entire sector.

The implications are clear. All areas where export potential is considerable but demands innovative approaches, the barriers to learning must be removed. Caps on size that inhibit Arrowian learning-by-doing (apart from preventing economies of scale) thus perform no service in this respect and must be done away with. Entertaining protectionist appeals like disallowing foreign firms in the field of audit is unintelligent, as in the face of below par performance by India players the reputation, goodwill, marketing skills and the global outreach of Foreign majors could be used to ensure that outsourcing finds a base in India.

ANNEXURE 1

Questionnaire used for the Survey on Garment Exporters

Essential Features of the Questionnaire to Exporters of Garments for the *Centre de Sciences Humaines* survey of Indian Garment Exporting Firms carried out between 1st September and 31st November 2002 for the project '**Exporting through E-commerce**' are given below.

The number of firms surveyed is 51 and all the firms are located in the National Capital Territory of Delhi, New Okhla Industrial Development Area (NOIDA) and Gurgaon. These firms are those that still exist from the original 67 firms (located in the geographical area specified above) listed on the website of the Federation of Indian Exporters Organisation.

The survey was carried out with the help of Pinaki Routray (Phd candidate at the School of International Studies, Jawaharlal Nehru University) and Rahul Anand (enrolled in the MA programme, School of Languages, Jawaharlal Nehru University).

1. Name of the Firm (*nature of ownership**)
2. Main Commodity/commodities manufactured
3. Total Turnover (in crores of rupees)
4. Value of Exports (in crores of rupees)
5. Destination of Exports (to be as precise as possible)
6. Price paid by customer at the destination of export (if known)
7. No of middlemen between customer (or final retailer) and manufacturer (if known)
8. Have you ever thought of marketing your own goods?
9. If not, why not?
10. Do you know any of your fellow exporters?
11. Have you ever thought of teaming up with them?
12. Are you aware of what a distribution network entails?
13. Are you aware of the internet?
14. If so, do you think it can be used for business?
15. If so, specify how (whether to advertise, solicit business, etc)

Dipankar SENGUPTA

16. Do you have a homepage for your business? (specify nature of Homepage)
17. Does the Net open new lines of communication or merely replace old ones?
18. Can trust/credibility be built over the net?
19. Can a marketing/supply networks be built over the net?
20. Can your product be sold over the net?
21. If not, then why not?
22. Can anything be done which will enable you to sell goods over the net? (specify)
23. Would such a step require investment?
24. Would it require coordination with the other firms?
25. Would it require state intervention?
26. Specify the role of the state.
27. Which side (either buyer or seller) is at an advantage when business is transacted over the net?
28. Other comments

ANNEXURE II

Glossary of Terms

ADOBE	Adobe provides world-leading digital imaging, design, and document technology platforms for consumers, creative professionals, and enterprises ¹¹⁴ .
AICPA	American Institute of Certified Public Accountants
AKZO	Algemene Koninklijke Zout Organon (Dutch: General royal silk organisation; merger of AKU and AZO in 1968). The corporation acquired its present shape in 1994, when Akzo Nobel was formed through Akzo's acquisition of the Nobel shares owned by Securum and through a successful bid for the remaining shares ¹¹⁵ .
ASEAN	Association of South East Asian Nations
B2B	Business to Business
B2C	Business to Consumer
BPO	Business Process Outsourcing
BSNL	Bharat Sanchar Nigam Limited
CA	Chartered Accountant
CII	Confederation of Indian Industry
CIO	Chief Information Officers
FIEO	Federation of Indian Export Organisations
GATS	General Agreement on Trade in Services
GE	General Electric Corporation
HCL	Hindustan Computers Limited
IBM	International Business Machines
ICT	Information and Communication Technology
INFOSYS	Infosys Technologies Ltd. provides consulting and IT services to clients globally ¹¹⁶ .
IT	Information Technology
ITC	Indian Tobacco Company (formerly Imperial Tobacco Company of India Ltd.)

¹¹⁴ <http://www.adobe.com/aboutadobe/main.html>

¹¹⁵ <http://www.akzonobel.com/company/history.asp>

¹¹⁶ <http://www.infosys.com/company/default.asp>

ITES	Information Technology Enabled Services
KPMG	Klynveld Peat Marwick Goerdeler (accounting firm)
MNCs	Multinational Corporations
NASSCOM	National Association of Software and Service Companies (India)
ORACLE	Oracle is the world's leading supplier of software for information management, and the world's second largest independent software company ¹¹⁷ .
PWC	Pricewaterhouse Coopers, LLP (accounting/consulting firm)
RNS	Radio Network Subsystem
SEI	Software Engineering Institute (Carnegie Mellon)
SSIs	Small Scale Industries
TNCs	Transnational Corporations
VSAT	Very Small Aperture Terminal
WIPRO	Founded in 1945, Wipro has diversified into Information Technology, Consumer Care and Lighting, Engineering and Healthcare ¹¹⁸ .

¹¹⁷ <http://www.oracle.com/corporate/index.html?story.html>

¹¹⁸ <http://www.wipro.com/aboutus/history.htm>

BIBLIOGRAPHY

- Arrow, K.J. ““The Economic Implications of Learning by Doing”, *Review of Economic Studies*, vol. 29 1962
- Baldwin, R.E, D. Cohen, A. Sapir and A. Venables, (eds), ‘ *Market Integration, Regionalism and the Global Economy*’ Cambridge University Press, Cambridge, 1999
- Bhalotra, Sonia R, ‘The Puzzle of Jobless Growth in Indian Manufacturing’, *Oxford Bulletin of Economics and Statistics* 1998 60 (1)5-32
- Bhargav, S. ‘WTO GATS regime: Implications for the accountancy sector’, *The Chartered Accountant*, vol. 51 no 5 2002
- Bomsel O. ,J. Ruet, S. Cagnet, T. Durpthy, A. El Khoury, A. Maria, P. Masclet and B. Vannier , ‘*Digital India: Report on the Indian IT Industry*’ submitted to Centre d’conomie industrielle Ecole Normal Superieure des Mines de Paris, 2001
- Brayson, C., *The Offshore Option, Indian eCRM Services Are No Joke: They Represent the New Wave of Global E-Business*, http://www.talisma.com/press/articles/internetworld_010821/index.asp
- Coase, R. ‘The Nature of the Firm’, *Economica*, 1937
- Coltman,T, A. Latukefu, D.F. Midgley, ‘*E-business: Revolution, Evolution or Hype?*’ www.ccc.agsm.edu.au/papers/researchBriefings/A01_Paper_RB001_eBizRevolutEH.pdf, 2001
- Cris Prystay, ‘How to Make Money from the Poor?’, *Far Eastern Economic Review*, 5 June, 2003
- D’costa , A.P, “Export Growth and Path Dependence:The Locking-in of Innovations in the Software Industry’ *Science, Technology and Society*, Vol. 7, No.1, 2002
- de Smidt, Marc, Egbert Wever (Eds): *The Corporate Firm in a Changing World Economy. Case Studies in the Geography of Enterprise*. London / New York, Routledge, 1990

E-commerce and Development Report 2002, UNCTAD

- Goldar, Biswanath, (1988) Relative efficiency of modern small scale industries in India, in: K.B. Suri (Ed.) *Small Scale Enterprises in Industrial Development. The Indian Experience* (New Delhi, Sage Publications), Chapter 5
- Heeks, R., *India's Software Industry; State Policy, Liberalisation and Industrial Development*, Sage, Delhi 1996
- Kapur, Mansi, Raghuvir Badrinath and Subir Roy , 'Indian BPO goes global shopping', | November 19, 2003, www.rediff.com/www.rediff.com/money/2003/nov/19bpo.htm
- Kiang, M.Y.& Chi, R.T. 'A Framework for Analyzing the Potential Benefits of Internet Marketing' *Journal of Electronic Research*, vol. 2 No. 4, 2001
- Krishnan, R.T., and G. N. Prabhu. "Innovation in the Indian Information Technology Industry: A Study of the Software Product Development Process." *Science, Technology & Society*, Vol. 7, No. 1, 2002, pp. 91-115
- M Srinivas Rao, International Trade Division of ITC, seminar on 'IT for Development' organised by India Development Foundation, Hotel InterContinental, Delhi, 2003
- Mathews, B., I. Larkin, E. Mihas, M. van Kalleveen, *B2B for Apparel Retailers: Mix and Match to Create a Custom Portfolio of Marketplaces*, Mckinsey and Company, 2001
- Parthasarathi, A. and K J Joseph (2002) "Limits to Innovation with Strong Export Orientation: The Experience of India's Information Communication Technology Sector", *Science, Technology and Society*, Vol 7, No.1
- Pavlou, P.A., 'The Economic and Social Impacts of E-commerce' Idea Group Publishing Hershey, PA, USA, 2003
- Petersen R., Bronnenberg B., Balasubramanian S., 'Exploring the implications of the Internet for Consumer Marketing', *Journal of the Academy of Marketing Science* vol 25 No 4 1997

- Porter, Michael, '*Competitive Advantage of Nations*' Macmillan, New York, 1990
- Radigan, J, 'A Good Year for Outsiders' <http://www.cfo.com/article/1,5309,7800%7C15%7C%7C%7C,00.html>
- Report of the National Committee on E-Commerce , Confederation of Indian Industry (CII), New Delhi, 2002
- Richter, F & P. Bannerjee, '*The Knowledge Economy in India*', Palgrave Macmillan, Basingstoke, 2003
- Rodrik. D, '*Globalisation and Labour, or: if Globalisation is a Bowl of Cherries, Why are there so many glum faces around the table?*' in *Market Integration, Regionalism and the Global Economy*' edited by R.E Baldwin, D. Cohen, A. Sapir and A. Venables, Cambridge University Press, Cambridge, 1999
- Sawhney, Mohanbir, 'Fields of Online Dreams' The CIO Magazine, 15 October, 2002
- Saxenian ,A. 'The Silicon Valley Connection: Transnational Networks and Regional Development in Taiwan, China and India,' *Science, Technology and Society*, Vol. 7, No.1, 2002
- Sengupta, Dipankar, 'Industrial Structure and Economic Performance', unpublished Phd thesis, 2003, JNU
- Sherer, S. & B. Adams, Collaborative Commerce; The Role of Intermediaries in e-Collaboration', *Journal of Electronic Commerce Research* 2,2 (May 2001)
- Srinivasan, G, '*Readymade garment exports up in Apr-Dec*' <http://www.thehindubusinessline.com/bline/2004/01/07/stories/2004010702150500.htm>
- Strategic Review 2003, Nasscom, New Delhi, 2002
- Strategic Review 2003, Nasscom, New Delhi, 2003
- Suri, K.B. (Ed.)*Small Scale Enterprises in Industrial Development. The Indian Experience*, Sage Publications, New Delhi, 1988

Dipankar SENGUPTA

Todaro, Michael '*Economic Development In The Third*

World, Longman', New York & London, Third Edition 1985

Ward, M.R. & M. Morgonosky, *Online Consumer Research and Purchase in a Multiple Channel Environment*, [http:// ux6.cso.uiuc.edu/~ward1/cannibal.PDF](http://ux6.cso.uiuc.edu/~ward1/cannibal.PDF)

WDI 2002 CD-ROM, World Bank, Washington

Websites

<http://www.express-computer.com>

<http://www.fieo.com>

<http://www.itcportal.com>

<http://www.nasscom.org>

<http://www.outsourcingsurvival.com>

<http://www.rediff.com>

<http://www.saarcnet.org>

<http://www.openoutsourc.com>

<http://www.daksh.com>

<http://www.bitpipe.com>

<http://ux6.cso.uiuc.edu>

<http://www.thehindubusinessline.com>

<http://www.cfo.com>

<http://www.talisma.com>

<http://www.mcKinsey.com>

<http://www.bcg.com>

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EXPORTING THROUGH E-COMMERCE

How Indian Exporters have harnessed the IT Revolution

SUMMARY

This monograph looks at how Indian exporters of goods and services have used e-commerce to promote exports. Based partly on surveys and partly on interviews the study concludes that when it comes to garments Indian exporters have failed to use telecommunications to significantly boost exports. This failure is attributed to organisational failings (induced by regulations that reserve certain commodities for small scale industries) rather than the nature of the commodity or other commonly cited factors like credibility, trust et al. This is contrasted with the successful use by larger corporate bodies like ITC, of e-ventures designed to operate under conditions far more primitive than what garment exporters surveyed are used to and yet have proved far more successful. The study offers the view that the Digital Divide so often cited in the literature on IT is as much organisational as it is geographical in nature.

When it comes to export of services specifically of IT and IT enabled services, the study concludes that exporters of services have used the telecommunications revolution better because of the nature of goods exported; here telecommunications are not just a mode of delivering information, it is also a mode of supply delivery. The latter is an outcome of the telecommunications revolution that has made services hitherto non-tradable into tradable services. While shortcoming like the lack of skilled manpower and a correspondingly advanced IT hardware sector will probably see India ceding ground to economies like China, things will look better where IT enabled services especially BPOs are concerned. Here India's vast pool of educated manpower familiar with English ensures that India's cost advantages are considerable. Here the expansion of this sector may not be in doubt but of particular concern is the participation of Indian firms in this expansion. This study offers the view that, as in the previous case, organisational shortcomings of Indian firms fostered by archaic laws have ensured that they have lagged behind foreign firms in this field, which is technologically less advanced than the IT sector where Indian firms have the dominant presence.

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