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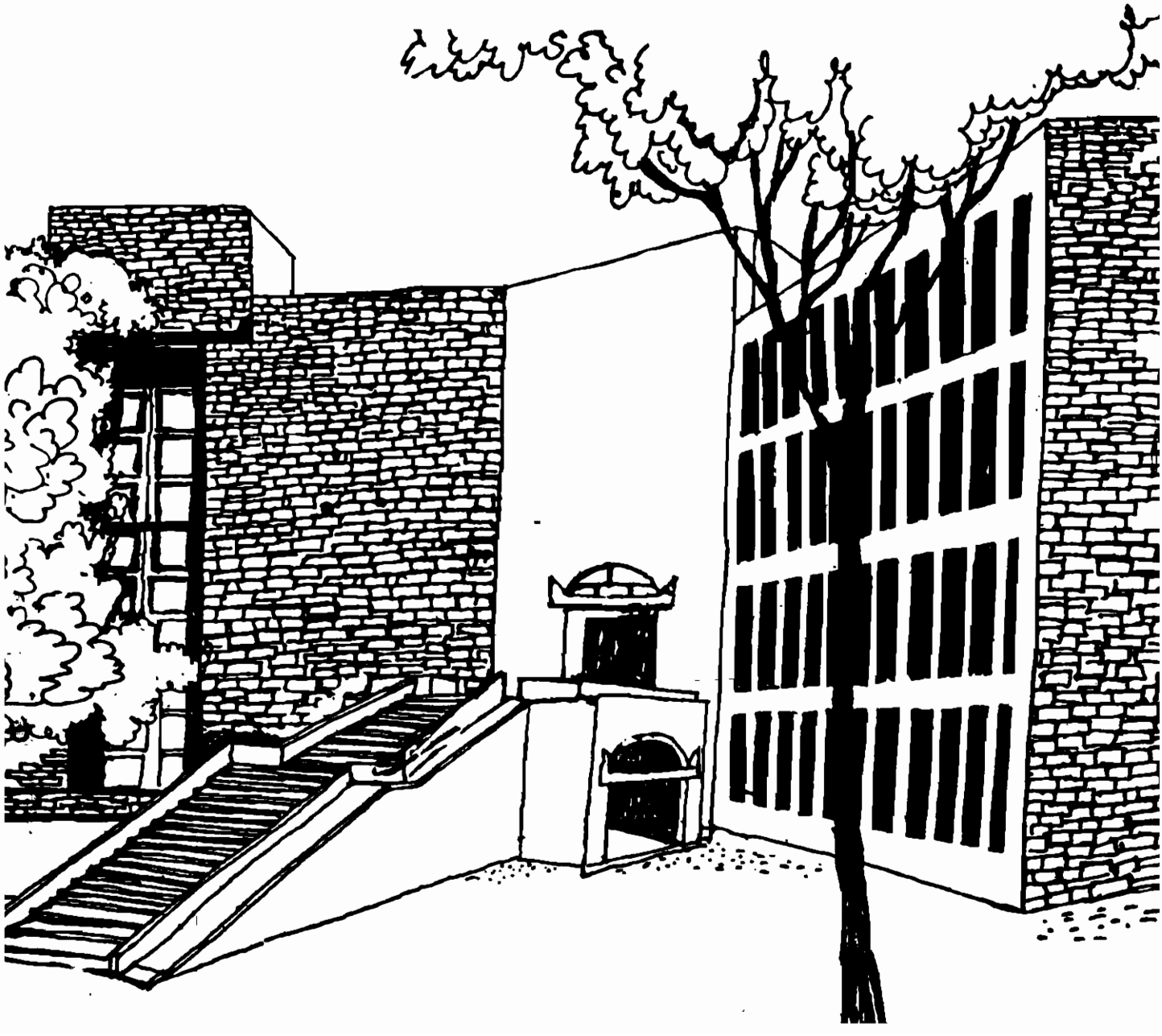

COMPETITIVE ADVANTAGE OF INDIA'S EXPORTS: ANALYTIC CASE STUDIES OF FOUR INDUSTRIES

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W.P. No. 98-03-01

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Competitive Advantage of India's Exports: Analytic Case Studies of Four Industries

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Abstract:

This paper examines the sources and sustainability of competitive advantage of India's exports on the basis of case studies of four labour intensive industries. By applying the conceptual framework of Ghemawat (1991), we show that the factors that provide competitive advantage in the present are not sticky, scarce and appropriable: which means the advantages are not sustainable in the long run. We bring out possible strategies and the underlying factors involved on the international marketing side for sustaining competitive advantage and increasing value-realization of exports.

First Draft: February, 1998

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Introduction

India's trade policy reforms, initiated in the early 90s, have reduced policy bias against exports and contributed to considerable increase in exports: between 1991-92 and 1996-97, exports have grown at annual rates of 22% in rupee terms (refer Table 1). The changes in the pattern of trade indicate the reforms are able to help India to make use of comparative advantage in factor endowments. Rajendran and Patibandla (1998) show that between 1991/92-95/96, share of labour intensive goods in the total exports has increased and share of developed countries in India's total exports has also increased. Exports of labour intensive industries such as garments, textiles and jewellery have increased substantially and continued to dominate the Indian exports by accounting for almost one-half of the total exports. The initial rapid growth in exports of the labour intensive goods appears to have slowed down considerably by the middle of 1997. In this context, it is pertinent to address how sustainable is India's competitive advantage of exports and what is required to move up on the value-chain. This paper brings out a few issues and insights on these questions.

Our sample of export industries - garments, jewellery, leather and software - reflects the earlier work on these industries by Ghemawat and Patibandla (1997, 1998). The present study takes the earlier diagnoses of these industries as its point of departure and focuses on the underlying sources of advantage and its sustainability. On the basis of a detailed examination of three exporting industries i.e. software, cut and polished diamonds and garments, Ghemawat and Patibandla (1998) observe:``..., our somewhat unexpected inference about demand conditions and related and supporting industries suggest the following testable hypothesis: internationally competitive industries from poor countries will tend to have a standalone character, at least initially. That is, they will be relatively detached from both domestic demand and domestic related and supporting industries. Suggestively, a recent study of Argentina (Ingham, 1995) finds a somewhat similar pattern

of isolated ``islands of international competitiveness.'' In other words, firms and industries in developing economies may acquire competitiveness by reducing their dependence on the inefficient supporting (input) industries. Secondly, in order to export to developed countries, firms have to produce differentiated and high quality goods while major part of domestic demand is for price-elastic (lower quality) goods which means export goods do not have a strong domestic demand base. Furthermore, in utilizing domestic comparative advantage in factor endowments, competitive firms may adopt organizational and technological practices that are different from the relatively non-competitive firms: for example, in software industry, Infosys company adopts in-house training, wage compensation and other human resource development practices for optimal utilization of human capital available in India. By taking off from Ghemawat and Patibandla, in this paper we address the issues of sustainability of competitive advantage of exporting industries in relation to demand and technological conditions in the world market and the issue of moving up on the value-chain.

Textiles and garment contribute almost 26% of the total Indian exports. While the garment industry is a final consumption good, textiles is a relatively upstream input in the value chain. India's share of world garment exports, at about 3%. Moreover, India's trade surplus from garments approximates export levels due to the high level of domestic value addition. However, the exports of low value-added textiles are increasing at a faster rate compared to that of ready-made garments (refer Table 2). The proportion of textiles has increased from 53% in 1991-92 to 56% in 1996-97.

In the case of gems and jewellery, cut and polished diamonds are also a final consumption good and it accounts for 15% of the Indian exports. However, cut and polished small diamonds forms a significant part of the world's exports (70% by weight and 30% by value). The trade surplus from this industry is relatively small owing to low domestic value addition and high import content. In the recent years, the proportion of jewellery in the gems and jewellery exports has increased from 6.8% in 1990-91 to 10.4% in 1995-96 (Table 3).

Leather and leather products has been glowing at a slower rate compared to the total exports and hence its proportion has come down from 7.1% in 1991-92 to 4.7% in 1996-97. While the finished leather is an intermediate input, leather garments and footwear are final consumption goods. The proportion of finished leather has remained stable at around 20% (Table 4). The domestic value addition is relatively high in this sector resulting in a significant trade surplus.

Software accounts for a very small part of the total Indian exports at 0.17% in 1996-97. However, software exports have grown at a much faster rate of 44% per annum in rupee terms over the last five years. Although this sector form an upstream input, the domestic value addition is proportionately high which is reduced to some extent by the import of hardware and software.

While textiles, garments, software and gems and jewellery have grown rapidly, leather industry has also been growing albeit to a lesser extent. Value addition seems to be reducing in garments but it is increasing in jewellery and software and is stable in leather.

The plan of the paper is as follows: In section 2, we trace out the sources of competitive advantage in these industries. Sustainability of competitive advantage of exports is addressed in section 3. In section 4, we discuss possible strategic elements of sustaining competitive advantage and moving up on value chain in the industries.

2. Sources of Competitive Advantage

In this section, we show that major source of competitive advantage in the industries lies in labour endowment which is not advanced. This helps in testing the proposition of Ghemawat and Patibandla(1998) that the export success stories are cases of isolated "islands of international competitiveness". Porter's (1990) diamond framework is used for the analysis of international competitiveness of these industries. The four elements are as

follows: factor conditions, demand conditions, related and supporting industries and firm strategy, structure and rivalry.

In the case of textiles and garments, the factor conditions that contribute to India's competitiveness are access to cheap raw material (cotton) and low wage costs. The cost data for 1993 (Table 6) indicates that the raw material cost of woven fabric is amongst the lowest in India and is almost 25% lower than world levels. However, the labour costs in countries like Brazil and Thailand are similar to Indian levels. While India might have a comparative advantage as compared to developed countries, the factor costs are at par with other developing countries.

On the demand side, the Indian customer does not have very sophisticated demand requirements. Indian demand is not integrated with the world demand conditions along the following dimensions: quality, fashions and kinds of dresses. While western ladies dresses form a significant proportion of Indian garment exports, the corresponding demand is almost non-existent. Indian exporters have countered this problem mainly through getting designs and samples from abroad and replicating them in India. In contrast, the global players have significant presence in their markets and try to keep abreast of the fashions.

With regard to the issue of the related and supporting industries: although the Indian domestic market for textiles is one of the largest in the world, the major presence of highly fragmented powerloom sector, causes low quality of cloth available to garment producers, and loss of economies of scale in production of cloth. In the recent years, the revival of a few large firms through integrated production appears to have resulted in realization of economies of scale and scope and reduced high lead-times in cloth production (Roy, 1996, Ghemawat and Patibandla, 1998). Certain large scale mills like Arvind Mills have invested huge amounts for modernisation and quality upgradation. Laxity of environmental regulations has also helped the dye industry which is an intermediate input for the garments industry. In garments industry, the major focus has been on cost minimisation

through flexible subcontracting structures which have relegated quality and speed to secondary objectives.

Cheap labour again seems to be the factor responsible for India's comparative advantage in gems and jewellery industry. Little has been done to upgrade the skills of the workers in the industry. The fact that small diamonds cannot be cut by machines is responsible for labour costs becoming extremely significant in the industry cost structures. Major part of domestic demand also seems to be disintegrated with that of the world. Most of the units are fully export oriented and have little contact with domestic demand conditions. In the jewellery segment, Indian styles and fashion are significantly different from that of the world.

The only related industries are those manufacturing advanced tools such as laser cutting tools. As most of the work is done by hand in India, this industry in neither critical nor well-developed. The industry is extremely fragmented and consists of small firms that are run as trading businesses rather than as manufacturing and designing. But for a couple of large firms, hardly anyone has made significant investments in equipment or training. There has been a conscious attempt to move into higher value added diamond studded gold jewellery in the recent years by a few large firms (Ghemawat and Patibandla, 1998).

In the case of leather and leather products, the main factor contributing to international competitiveness is again cheap labour. The labour cost per shoe is almost 20% of that of the developed countries. However, at the same time, productivity of an Indian worker is also quite low at four pairs per man day compared to about ten in Europe. This itself dissipates a significant part of the labour cost advantage. The demand conditions are again disintegrated with that of the world. The problems are similar to those in the garments business: relating to fashion and quality. Indian exporters have again resorted to getting designs and samples from abroad and replicating them in India. The related industries are also not very well developed to act as sources of advantages. Leather finishing and leather working machinery are not world-class industries in India. However, weak environmental

regulations have again come to the rescue of the Indian leather industry to give it a competitive edge. The industry is again extremely fragmented. The strategy of the firms has been to get orders with colours and designs and produce them in India at a low cost. Cost minimisation has been the strategy in this industry also. There has been a lack of investments in both equipment and training in this industry also.

For a change, the software industry seems to rest on certain advanced form of factors. The cheap labour in this industry is skilled rather than unskilled. However, the comparative advantage is again with respect to developed countries and not developing countries. Moreover, real advanced factors in this industry come from an understanding of the business processes and requirements of the consumer rather than knowledge of coding. The domestic demand conditions are again disintegrated with the rest of the world (refer Table 5). Pirated software is common in India and intellectual property rights are blatantly disrespected. Also, the kind of applications are more like computerisation and automation rather than using information technology for competitive advantage (refer table 14). The supporting industries seem to exercise a drag on the software industry. Poor telecommunications and hardware industry do not help in making this industry globally competitive. However, imports of hardware have led to an escape route, though reducing the value added in the bargain.

The industry structure is characterised by three kinds of firms: large Indian firms primarily for exports, MNCs having export units and small Indian firms. Except in the case of a few large firms, most the common strategy has been focused at body shopping and offsite development and coding rather than tackling the business problems of the customers.

In all the above industries cheap factor conditions especially labour are the key source of advantage. Two observations in this regard are warranted: One, the comparative advantage is typically with respect to developed countries and not developing countries. Two, poor productivity of Indian workers leads to the dissipation of a large part of this

comparative advantage. The factors that provide sources of advantage are primarily labour endowment and not very advanced.

Also, it is seen that the domestic demand and supporting industries are typically not very well developed for these industries. However, focus on export markets and a "st ategic" choice of business segments has helped to prevent the drag of these factors and led o the formation of "islands of international competitiveness" especially in industries such as software (Ghemawat and Patibandla, 1998).

Are these sources of advantages sustainable ? Can these industries hope to be globally competitive based on these sources of advantages ten years down the line ? The following section looks at these issues by considering the stickiness of these factors, their scarcity values and their appropriability.

3. Sustainability of Competitive Advantage

This section explores the issue of the sustainability of advantage in these industries. We use a framework proposed by Ghemawat [1991] to evaluate the issues behind sustainability. The factors driving sustainable competitive positions are: stickiness, scarcity and appropriability. Durability, specialisation and untradeability of factors contributes to their stickiness while threats of imitation and substitution impact their scarcity. Phenomena of hold-up and slack affect the appropriability. Factors which are sticky, scarce and appropriable lead to sustainable competitive positions.

In the case of textiles and garments, as discussed in the previous section, cheap raw materials (cotton) and labour have been the major sources of competitive advantage in this sector. These seem to be neither durable nor specialised in nature. The extent of training required for developing the skills of the workers is not very high. Although trade restrictions has made the raw material (cotton) untradeable to a large extent, with reduction in trade restrictions world-wide, this does not seem to be a very durable factor.

Moreover, the Asian economies (especially China) are subject to currency devaluation frequently which play a major role in the relative cost advantages and negatively impact the durability of the labour cost advantage. Hence, the stickiness of the factors is extremely doubtful in this industry.

The threat of imitation especially from the other developing countries such as Bangladesh, Pakistan and Sri Lanka is significant in labour intensive garments production. Both government subsidies and currency devaluation have made them cost competitive with respect to India. The issue of substitutability is a little more complex. Major part of the world market is for synthetic cloth (about 70 per cent), while the share of finer and higher quality cotton cloth has been increasing. India's exports are heavily dominated by cottons at the lower end even today. Moreover, in textiles labour replacing technological change in developed countries can eliminate low labour cost advantage of India. In garments, other countries are replacing labour cost disadvantages by improving their labour productivity. A study by KSA (refer table 7) indicates that the productivity in making shirts is about 15 shirts/operator/day in India compared to an average of 25 in China. After adjusting for productivity, the total indexed manufacturing costs for India is 41 compared to 24 for China and 26 for Korea (Germany being 100). Hence, the factor advantage offered by both cheap labour and raw materials is under attack and their scarcity values are being dissipated in the international markets.

The appropriability issue itself presents some exciting insights. Strict regulations, both domestic and international, have increased the hold-up in the system. For example, quota restrictions (refer Table 8) for exports and antidumping regulations by US / EU are responsible for diverting the value out of the Indian industry. At the same time, the slack in the system due to control over a very small part of the value chain leads to dissipation of this value. While the typical export prices for garments to US are around $4 (refer table 9), their market price in the US is around $10-20. This indicates the extent of the value chain that is available to the Indian industry. This problem is compounded by the high transaction costs faced by the Indian industry.

Thus, the factors of advantage in this industry are not sticky, scarce or appropriable. Hence, the competitive position of the textiles and garments industry seems to be unsustainable in the absence of restructuring of the industry in technology, skills, input base and reduction of lead times.

Cheap labour is again the source of competitive advantage of India in the gems and jewellery industry. The main reason why India has a big presence in this sector is that the small diamonds cannot be cut by machines. Hence, the high labour content in this segment. While the labour is clearly untradeable, it is not really specialised. The amount of training is not significant as evidenced by entrepreneurs setting up units in new places after the labour costs in the Surat area have gone up. Hence, the stickiness of these factors is questionable.

The threat of imitation of low labour costs is present due to the non specialised nature of the workforce. If the other Asian economies such as China get access to raw diamonds, they could probably cut and polish them at equivalent costs. Moreover, if the developed economies are able to come up with laser machines that can cut small diamonds too, then the Indian advantage could well become irrelevant. Moreover, De Beers controls most of the diamond trade in the world. Even after having such a significant share in the world's trade of cut and polished diamonds, Indian bargaining power with the cartel has been extremely low. This dependence could act as a hold-up and be a major source of diversion of value. On the other hand, cutting and polishing small diamonds captures a small part of the value chain. While the value addition decreases from a fancy cut to double cut to single cut, India primarily trades in the single cut variety. This slack again dissipates the value that could have accrued to India (refer Table 10). The jewellery segment, inspite of being higher in the value chain, still does not capture a large part of the value which is due to branding and distribution.

The factors that provide advantage to India in this industry are not sticky, scarce or appropriable. The sustainability of India's competitiveness in this industry is also questionable.

In the case of leather and leather products, cheap labour again provides the key competitive advantage in this industry. While this advantage could be untradeable, it is again neither specialised nor durable. Other developing economies have the same advantage as India and the factor that provides the competitive advantage is not sticky. Imitability of the factor of advantage through adequate training is possible. Moreover, substitution through automation reduces the scarcity levels of the factor. While the Indian productivity (refer Table 12) stands at around 9 sq. ft. per worker-hour, the relevant figures for Brazil and Italy are 16 and 50 respectively. This has been largely made possible through automation of processes. Hence, labour displacing techniques have made the factor relatively unscarce.

Weak environmental regulations provide another source of advantage. However, with increasing global consciousness, pressure is mounting on developing economies to conform to environmental norms. Regulatory changes could act as hold-up in this industry thereby reducing the value available. At the same time, India operates low in the value chain with shoes selling at $40 (refer Table 11) in the market fetching only $10-15 for the Indian manufacturers. Thus appropriability is again an issue for the Indian industry. The sources of advantage are unsustainable in this industry too. Both the cheap labour and weak environmental regulations are not sustainable in the long run.

In the case of software, the cheap labour (refer Table 13) in this industry is more specialised but not durable. Although specialised institutes such as IITs provide world-class training, increased demand for computer professionals has seen the wages rising sharply in the last few years. The immigration requirements and anti-body shopping regulations in developed countries have contributed to untradeability of these factors. However, real factor specialisation in this industry is yet to come in the form of

understanding of business processes and knowledge of software engineering techniques rather than simply coding. Hence, the factors of advantage are quite non-sticky.

While the threat of imitation is limited to the training requirements, substitutability is a major issue. Labour displacing technologies and strategies have led to reduction in the scarcity values of cheap labour. CASE tools enable software to develop software while high levels of standardisation and power to user has helped customisation by the customer herself. Hence, it is obvious that the scarcity value of cheap labour in the software industry is gradually reducing through innovations driven by the developed economies.

Most of the value in created in the market specifications and design stage of a software. Approximately half of the value is created in these steps. Coding and testing account for a mere 35% of the value which is being tapped by the Indian industry. This slack has been responsible for dissipating a large part of the value. Hence, even in the software industry where the cheap labour is more skilled in nature, it seems that the competitive advantage is unsustainable in the long run.

It seems that India's competitive position is under attack and is unsustainable in the long run. In all the selected industries, cheap labour is the source of advantage. While the labour is semi-specialised in software, it is practically unskilled in garments, leather and jewellery. This has been the major barrier to the stickiness of these factors. A major source of threat for the durability of the cheap labour is the impact of the exchange rate movements in the Asian economies on the international cost comparisons. At the same time, labour displacing technologies have led to generic substitution in most of these industries leading to a dissipation in the value. Finally, in all these industries, the Indian focus on a small part of the value chain has reduced the value available. Specifically, jewellery, garments and leather are final consumption goods and marketing and distribution form a significantly high proportion of the value chain. This really has two effects: 1) the value appropriable to Indian industries goes down; 2) the reduction in

importance of labour costs in these industries reduces the sustainability of the advantage offered by cheap labour.

Obviously, the next question that comes up is: What can India do ? What is the strategic response that would help India to build sustainable advantages in these sectors ? The next chapter tries to explore strategic responses of Indian firms that would help to create long run sustainable positions in these industries.

4. Strategic Response

In this section we explore the understanding of the sustainability of the existing competitive advantages of India to look for appropriate strategic responses. One of the propositions is: the sources of advantage of India in the selected industries is not in coherence with the global dimensions of competition. Ghemawat and Patibandla (1997) address the domestic market structure issues of competitive advantage i.e. technology, production organization and domestic demand in detailed manner. Therefore we focus on a few issues of sustaining advantage and moving up on value chain relating to international markets and relevant marketing response. A part of the analysis draws from the framework proposed by Korwar (1997) which looks at the global dimensions of competition and tries to relate them to the available sources of advantages. The issues of distribution and branding are then evaluated in a greater detail.

Dimensions of Competition:

The first question that needs to be asked when formulating global strategies is: What are the dimensions of global competition ? Indian industry seems to be under the impression that cost is a significant lever in the global markets in these industries and a sustainable position in the world markets can be built around this advantage. Three of the selected industries - garments, leather products and jewellery - are final consumption goods and are predominantly fashion driven. The corresponding low value items - textiles,

finished leather and diamonds - are cost driven and that is what India been historically focusing on. Moving up on the value chain seems to require a totally different set of capabilities to compete in the international markets. Let us take the example of the textiles and garments business to explore the dimensions of competition.

The textiles business is still driven by low cost and quality to a large extent. This is especially true of the greys segment which the Indian companies have entered into. However, the garments business is a totally different ball game altogether. A look at the major success stories around the world: Levis, Benetton etc. indicates that the industry is predominantly "fashion driven". What does this mean for the garment manufacturers ? The crucial dimension of competition becomes speed. This is a reflection of the ability of the firms to respond to the changes in fashion quickly. Typically, US and EU have two major seasons in clothing and the garment manufacturer is left with a couple of months to do market research, design garments, test market them, manufacture them and finally distribute them (Korwar 1997). An associated requirement that comes with this is that of reach. The ability of these firms to reach distant markets, in an efficient and speedy manner becomes extremely important. It is not only important to have reach in terms of distribution but also for the purpose of sensing the market for fashion trends and picking up market information.

Finally, quality poses another important challenge. This not only means the ability to produce high quality goods but also convince the buyers that India can produce high quality goods. Often, this is extremely difficult and Indian firms have taken the short cuts of sticking to certain kinds of garments which are not fashion-driven. For example, in the ladies segment, where Indian garment exports are concentrated, Indian industries have traditionally focused on the low value skirts, blouses etc. which are for daily wear and not really driven by fashion. While this obviously reduces the demands on Indian firms, this simplification comes at a great cost of low per unit value realisations of the exports.

The jewellery and leather products industries present similar challenges: speed, reach and quality. The strategic response of the Indian firms in these industries has mostly been to enter the low value segments rather than develop the capabilities to succeed in a fashion-driven segment.

However, the software industry is slightly different from the above three industries. The software industry can again be divided into two major components: packaged software and customised software, with Indian companies typically operating in the second segment. The packaged segment poses different challenges for the mainframe and the PC market. While the knowledge of the hardware system and experience with working on it becomes the critical factor in the mainframes, the PC packaged market resembles final consumption goods inasmuch that the speed to market and reach become crucial.

On the other hand, the customised segment is significantly different from the above. The real challenge in this segment is to understand the business processes of the customer industries and design and develop customised packages for them. Korwar (1997) uses the term "credibility" for this challenge. This obviously needs closeness to the customer which Indian companies have shied away from. Except in a few cases like Infosys and a few other large firms, the typical response of the Indian firms has been to enter the low value added segment of coding and testing which can either be done offsite or through body shopping.

The challenges that the world markets pose need to be seen in conjunction with the available advantages and sources of leverage for the Indian firms. The basic advantage of the Indian firms lies in cheap labour and cheap raw materials (the case of cotton) as brought out in section 2. The real question then becomes: How does one leverage on these existing set of advantages to address the global challenges and become globally competitive ?

The generic competitive (global) strategies would be similar for the three consumption good industries: garments, leather products and jewellery. However, they would be different for the software industry for the different kind of challenges that this industry poses.

The consumption goods industry situation is one where the advantage is in terms of availability of cheap factors and the challenge is speed, reach and quality. The final product is very sensitive to fashions and fast changing consumer preferences need a very small response time. This, alongwith the poor infrastructure in India, necessitates the finishing to be located close to the markets. This would help to respond quickly to the fast changing consumer needs and preferences. However, the advantage in terms of cheap labour need to be exploited at the same time. This necessitates the initial part of the manufacturing to be located in India where the access to cheap raw materials and/or labour could be capitalised. This really translates into a modified joint venture strategy where the Indian firms need to establish a joint venture in the target markets for finishing and distribution while the production of the base components would be carried out by the Indian firm in India (Korwar,1997).

The software industry is different inasmuch as the crucial challenge is credibility while the advantage in the form of cheap technically-trained labour remains the same. This situation calls for a strategy which would allow Indian software industry to develop credibility over time. The only way to develop this credibility is to gain access to the foreign markets, not for coding or testing, but for actually designing based on the understanding of the customer's business. This translates into a strategic alliance with a foreign company involved in designing through the supply of trained people. The crucial requirement in this case is that the Indian company should get a chance to interact with the customer especially at the developmental stage.

Distribution Strategy:

The issue of distribution becomes extremely relevant especially in the case of the consumption goods as most of the value is concentrated in this segment. Appropriate distribution strategies would help to reduce the hold-up and slack in the system and prevent dissipation of value. The options for the Indian industry are many; the choice essentially being in the extent of closeness to the consumer. On one end are systems like trading houses where the trading house needs to undertake all the activities that relate to distribution. This has its shares of advantages and disadvantages. Besides not having to worry about the distribution, another advantage lies in the ability to access markets with non-economic sizes. However, the major disadvantage of this method is the inability of the Indian industry to understand the market and the customer. Market feedback is practically absent and the Indian industry is literally at the mercy of the trading house. This is compounded by a low value realisation from the trading house. The other end of the spectrum involves setting up your own distribution system and your own sales force. While this clearly allows complete control over the marketing and distribution system and allows for significantly higher value realisations, the challenge is in understanding the market of the target country and investing in fixed and sunk costs.

Between these two systems are a number of options such as retailer chains, marketing agencies and commission agents. There is no easy answer to this question. While it is much simpler and safer to follow the first option, that distribution strategy is associated with a strategic dependence on other parties, especially in a marketing and distribution intensive industry. The key to compete in these product-markets is an understanding of the market coupled with an ability to respond quickly. The only way to develop this is through the hard way. One can choose to start with an option of marketing agencies which would allow the Indian exporter to understand the market, or one needs to think of innovative methods of distribution to retain control over the distribution and

marketing. However, one thing is very clear: exporting to trading houses would not help to build any of the sustainable advantages in the long run.

Branding Strategy:

The other issue that is related to the distribution is the branding strategy. While building a brand is very expensive, takes a lot of time and is very risky, it provides with a significant power to the manufacturer. While building brands may not be so relevant in the case of commodities, benefits in the case of fashion-driven goods are many. As in distribution, it is the difficult option that helps to bring a sustainable advantage.[1] Branding also requires a very clear understanding of the customers and market and has to be aided by a vast reach and quick response time. Thus a successful branding strategy really hinges on a successful distribution strategy.

When one talk about a distribution and branding strategy, it is important to realize that differentiated goods are priced to the market and the product characteristics may have to be different for different markets (for example, left and right sides steering system of automobiles). So what does it mean for the Indian firms ? It requires investing in sunk costs in developing differentiated products for specific developed country markets: sunk cost means once incurred a firm cannot easily sell off its assets, visible or non visible. Withdrawing from a specific market means, a firm has to write off those costs. The sunk cost model (Dixit and Pindyck, 1994, Krugman 1989] indicates that in the case of differentiated manufactured goods, it is not enough for the firm to offer a high-quality product at a reasonable price. Instead, a firm that wants to tap these markets needs to investing substantial resources in adapting its product to the foreign market and developing a marketing and distribution network. Together with the initial investments, it

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[1] While branding could be difficult, some Indian firms have done it: Mahindra's "Willie", "Shahnaz Hussain", "Taarika" [Korwar 1997] are some of the examples.

is also required of the firm to have the ability to cope with the uncertainties of exchange rate movements and other forms of uncertainties in international marketing.

Investing in sunk costs for exports involves the issue of '*commitment*' (Ghemawat, 1991) which poses certain advantages and disadvantages (inertia). Advantage is once a firm incurs sunk costs, knowing it cannot retrieve them, fights till the end to retain its market position even taking losses for considerable period of time. This, in turn, can make a firm competitive over a period. A firm should be willing and has the ability take losses in the beginning: similar to Japanese firms taking losses for a considerable period of time in developing a market for their goods in the U.S.. The disadvantage is that sunk costs can make a firm prone to inertia i.e. not wanting to take the risks of developing a differentiated goods and thereby sticking to cost-advantage strategy which is not sustainable in the long run. The inertia will be more in the context of uncertainty caused by highly volatile exchange rates. As differentiated goods are priced to the market, price it charges can not be changed every time exchange rate changes because of competition from local firms and firms from other countries.[2]

It is obvious that the Indian sources of advantages are misaligned with the dimensions of global competition. The real challenge is to get close to customer, understand his/her requirements and serve him/her with a small response time. This calls for strategic alliances on part of the Indian industry to compete successfully in the international markets. While this strategy could work in the short run, it is essential that Indian firms are able to develop brands and have control over their distribution to develop the advantages that would help them to be competitive in the long run.

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[2] In India's case, in the recent years a few firms such as Titan in watches and Ranbaxy in drugs and pharmaceticals have taken the bold step of developing branded products in the international markets with a considerable success.

5. Conclusion

The Indian comparative advantage, atleast in the selected industries, lies in factor endowments such as labour, which are not advanced. At the same time, the existing competitive industries have evolved as "islands of competitiveness". These sources of advantages are not sustainable in the long run, as they are not sticky, scarce or appropriable. Moreover, the sources of advantage are not aligned with the global dimensions of competition.

The notion of quality of advantage is proposed by the authors. This is based on two important dimensions of the source of advantage: ability to provide dynamic advantage and the appropriability of the advantage. While cheap factors tend to provide static comparative advantage, more advanced and specialised factors tend to provide a more dynamic advantage. From the supply side, this involves investment in technology, skills and quality control and from the domestic demand side increase in consumer incomes, tastes and lifestyles etc. The translation of competitive advantage into a sustainable one and higher value-generation requires an effective international marketing strategy, which we have focused on as the previous studies of Ghemawat and Patibandla (1997, 1998) have analysed the domestic market structure conditions.

The appropriability of a source of advantage indicates the extent to which value can be extracted out of the advantage. For example, cheap labour can help to provide advantage in a significantly small part of the value chain in the selected industries (about 20-30%), while marketing and distribution capabilities could help to increase the appropriable value significantly. The real challenge then is to align the sources of advantage with the key global requirements of understanding the customer and reaching her with a small response time, the latter being more applicable to the final consumption goods. What does this translate into for the Indian industry ? An increased focus on advanced sources of advantage, increased customers contact and increased investments in marketing and distribution. This implies that firms' have the ability and willingness to invest in sunk costs

of developing and marketing products in developed countries. Highly volatile exchange rates could discourage firms to invest in sunk costs for international marketing by increasing uncertainty.

Table 1: Indian Exports

						Rs. crores	
	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97	CAGR
Total	44042	53688	69749	82673	106353	117525	21.69%
Gems/Jewellery	6750	8897	12532	14130	17644	16843	20.07%
Textiles/Garments	11569	14441	17126	22268	26795	30375	21.30%
Leather/Leather Products	3128	3700	4076	5057	5861	5517	12.02%
Software	33	27	71	173	272	203	43.81%

Source : Foreign Trade. CMIE. November 1997

Table 2: Exports of Textiles and Garments

						Rs. crores
	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Total	11569	14441	17126	22268	26795	30375
Textiles	6148	7510	9014	11963	14500	17080
Cotton yarn	3203	3911	4821	7014	8619	11052
Natural silk yarn	350	401	399	428	445	430
Manmade yarn	821	1079	1335	1928	2511	2450
Woollen yarn	74	113	157	190	209	356
Others	1700	2006	2302	2403	2716	2792
Ready Made Garments	5421	6931	8112	10305	12295	13295
RMG Cotton	3754	5156	6173	7856	9454	10505
RMG Silk	290	280	260	364	348	266
RMG Manmade	1034	1087	1221	1436	1740	1779
RMG Wool	105	145	184	285	275	321
RMG others	238	263	274	364	478	424
% RMG	47%	48%	47%	46%	46%	44%
% Cotton	60%	63%	64%	67%	67%	71%

Source : Foreign Trade. CMIE. November 1997

Table 3: Exports of Gems and Jewellery

					USD	millions
	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Total	2987	2934	3272	4139	4681	5447
Diamonds	2641	2500	2868	3649	4021	4693
Gold jewellery	203	304	286	367	486	567
Coloured gemstones	116	104	94	99	141	147
Others	27	26	24	24	33	40
% jewellery	7%	10%	9%	9%	10%	10%

Source : Foreign Trade. CMIE, November 1997

Table 4: Exports of Leather and Leather Products

						Rs. crores
	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Total	3128	3700	4076	5057	5861	5517
Finished leather			848	1201	1242	1059
Leather goods	1984	2512	1793	2130	1213	872
Leather garments					1383	1494
Leather footwear	1144	1188	1435	1726	2023	2092
% Finished Leather	0%	0%	21%	24%	21%	19%

Source : Foreign Trade. CMIE, November 1997

Table 5: Exports of Computer Software

		Percentage
	1990-91	1995-96
Professional services	90	48
On site	18	19
Off site	72	29
Packages	5	12
Consultancy	0	26
Data Processing	0	10
Others	5	4
Total	100	100

Source : NASSCOM

Table 6: Cost Comparisons of Cloth Production

					USD/sq.ft
	Brazil	India	Korea	Thailand	USA
Raw material	0.273	0.161	0.243	0.241	0.22
Manufacturing cost	0.322	0.344	0.282	0.266	0.386
Total	0.595	0.505	0.525	0.507	0.606

Source: ITMF, 1993, Zurich

Table 7: Productivity Adjusted Cost Comparisons (Indexed)

Country	Cost
Germany	100
India	41
Korea	26
China	24

Source: KSA study

Table 8: Destination of Garment Exports

					Million pieces / USD Million			
	Jan - June 96		Jan - Dec 96		Jan - Jun 97		Jan - Dec 97	
	Qty	Value	Qty	Value	Qty	Value	Qty	Value
Total	641	2542	1185	4792	663	2407	1225	4537
US	129	708	238	1329	130	726	240	1361
EU	305	1065	538	1919	317	996	559	1795
Norway	5	17	7	28	4	16	7	25
Canada	25	92	44	163	27	92	46	163
Non quota	177	660	358	1353	185	577	373	1193
% quota	72%	74%	70%	72%	72%	76%	70%	74%

Source: VANSCOM

Table 9: Average Unit Values of India's Apparel Exports to USA

				US Dollars
	1991	1993	1994	1995
Coats/Jackets	6.15	8.2	10.5	10.8
Gents Shirts	5.2	6.3	7.1	7.12
Ladies Blouses	3.5	5	5.6	4.7
Ladies Dresses	7	10	12.4	11.02
Ladies Skirts	5.4	6.14	6.7	5.2
Total	4.75	6	6.42	6

Source: Apparel Export Promotion Council

Table 10: Value Addition in Diamond Exports

					USD	millions
	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Imports	1882	2185	2562	2792	3274	3382
Exports	2500	2868	3649	4021	4662	4235
Value addition	618	683	1087	1229	1388	853
% value addition	33%	31%	42%	44%	42%	25%

Source: Express Investment Week. 1998

Table 11: Cost Structure in Leather Footwear

	GBP Pounds
Leather and other material	6
Labour	2
Overhead	1.5
Profit	0.5
Total	10
Market price	25

Source: Korwar. 1997

Table 12: Productivity in Leather Manufacturing

	sq.ft./worker hour
Italy	50
Germany	30-35
Brazil	16
India	9

Source: Korwar, 1997

Table 13: Software Industry Cost Comparison (Indexed)

Country	Programmer	Analyst
USA	1164	1124
Japan	1293	1185
Germany	1351	1196
France	1135	1307
Britain	781	1287
Mexico	652	658
India	100	100
Russia	80	84
China	75	80

Source: The Economist, 1994

Table 14: Domestic Software Market by Activity

	1995
Turnkey Projects	45%
Packages	35%
Consultancy	8%
Data Processing	4%
Training	8%
Total	100%

Source: Ghemawat and Patibandla, 1997

Table 15: Software Market Size and Growth by Geography

	USD billion	CAGR (1987-90)
	Market Size	Growth Rate
Total	152	27%
USA	55	11%
Japan	24	38%
FRG	14	54%
UK	8	31%
France	11	32%
OECD	130	22%
Non-OECD	23	101%

Source: EXIM Bank Occasional Paper #20, 1992

Table 16: Software Market Size and Growth by Activity

	Market Share	Growth Rate
Customised	34%	15%
Processing services	30%	19%
Packaged	30%	24%
Systems management	6%	26%

Source: Bhatnagar and Jain, 1991 and NASSCOM, 1989

Table 17: Destination of Computer Software Exports

						Percentage
	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
USA	27.3	29.7	27.5	32.9	31.0	34.0
Germany	13.3	13.1	12.5	11.6	12.2	11.4
UK	10.1	10.8	9.8	9.7	9.9	9.5
France	6.5	6.4	7.0	6.1	7.1	7.0
Netherlands	3.7	4.0	4.6	4.1	4.4	4.1
Others	39.1	36.0	38.6	35.6	35.4	34.0

Source : Foreign Trade, CMIE, November 1997

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