

1. DESCRIPTION OF THE CLUSTER

The sports goods industry cluster of Jalandhar is a classic example of transplanted cluster, where a major segment of an existing cluster shifted lock stock and barrel (here the entrepreneurs, the workers and even the suppliers) to a new location due to some extraneous reasons (here political). The origin of the sports goods industry in India can be traced back to Sialkot (Now in Pakistan), which was the sports goods production centre in pre-partition days. The birth of the modern sports goods manufacturing industry can be traced back to the turn of this century in the North-West region of pre-1947 India. The sports goods industry had to wait for nearly half a century after the birth of railways as the modern sports became known, even to the Indian elite, only after the British influence on Indian Society increased.

History

Cricket, tennis, hockey and football were the games which were introduced by the Englishmen in the army. With the increase in British presence the demand for the sporting hardware too increased. The elite and then the middle class Indians subsequently followed suite. Those were the days when the import of goods from England took weeks and the imported sports goods were out of reach of the average Indian as the cost of transportation was very high.

Sialkot (now in Pakistan) was found to be most suitable place as it was in the center of Punjab, and Uttar Pradesh was not far away. It was also suited to the sports industry because it was situated at the foothills of the mountains and was best place to grow trees needed for wood to make cricket bats and hockey sticks. The place also had good craftsman who could be trained for manufacturing these items. It started off with a British colonel suggesting Gainda Singh Oberoi, a local wood dealer, that he manufacture tennis racquets out of mulberry, then used only as a domestic fuel. This was how the first factory- Uberoi Limited – was set up in 1888 in Sialkot. And thus, the industry came to Sialkot. It was India's debut in hockey in the 1928 Amsterdam Olympic that gave the industry a high boost. Sialkot started making hockey sticks as well as footballs and the industry flourished until the partition in 1947, checked its boom.

With the division of the nation, entrepreneurs belonging to one community decided to shift from Sialkot (which became part of Pakistan) to India. The workers of the Sialkot industry belonging to the same community also migrated along with the entrepreneurs. Initially the migrants settled in Batala in Indian Punjab, which was nearest to Sialkot and close to mountain where the wood needed for sports items could be grown. Subsequently, according to the resettlement plan of the Government the entrepreneurs and their workers settled in Jalandhar. The City was found suitable for the Industry, for its location near the foothills of the Himalayas which assured a regular supply of coniferous wood and existence of a traditional leather market, which again assured regular supply of leather, the two major raw materials for the Industry at that time. It goes to the credit of a handful of entrepreneurs to build the industry from scratch and find avenues for marketing their products. A section of the Industry settled in Meerut in U P, where also the wood and leather were available in plenty. The added advantage was proximity of Meerut to Delhi, which emerged as a large market for sports goods.

A new home

Jalandhar is an important City of Punjab located in the doaba region (between the two rivers, Satluj and Beas). Along with its twin town of Jalandhar Cantonment, it is strategically located between the two important industrial cities of Ludhiana (70 Kms) and Amritsar (60 Kms), it is location of two other important SME clusters of Hand Tools Industry and leather Industry. There are also a good

Environment

number of units making rubber based items like Hawaii Chappals. The strong export base of Ludhiana as well as continuous migration of a large number of local youth to the developed countries surely provided a Philip to the growth of export markets for the sports goods industry. The strong built of the natives supported by a robust agriculture and agro based productions led to a good affinity to sports. Location of the headquarters of Armed and Para military forces in the region and good support by some local large companies and also by the State Government provides the environment for keen interest of local population in sports. These naturally helped in the development of a thriving local market for sports goods.

The Sports Goods Industry is located traditionally in two localities in the central part of the town, Basti Nau and Basti Sheikh. With the growth of the Industry it has also spread to adjoining areas of Basti Daneshmandan, Nakodar Road etc. The job workers of the industry, who are important elements of the production system and whose predecessors migrated with the entrepreneurs from Sialkot are settled in Bhargav Camp and Basti Daneshmandan, adjacent to the above areas. Entrepreneurs who set up modern units with mechanized production systems, subsequently shifted to the Industrial Area, fringe areas located on the highways to the City and the Surgical and Sports Goods Complex. However the network of the traditional business process is so strong that even these units have their office or some production facilities in Basti Nau and Basti Sheikh, the traditional locations.

Geography

The case of the Sports and Surgical Goods Complex may be a classic example of the strong gravitation of the traditional SME clusters. Set up by the Government of Punjab in the seventies, the hey days of industrial growth of Punjab, the industrial estate was expected to serve the need for expansion of the Sports Goods industry and provide basic infrastructure for shifting of the industry from the unplanned locations within the town. While the growth oriented and larger among the local units planned to move to the new location, the universe of smaller and micro enterprises could not arrange or risk the funds needed for the shifting of their units to the new locations and shied away. Even the Pioneers to the Complex, very soon found the distance from the traditional locations (about 10 Kms) is a major hurdle for the smooth production, which needed intense transactions with the job workers, sub contractors and traders. Today the Complex houses about a dozen larger mechanized Sports Goods units with the rest of the area occupied by other industries. These units justify their location to the need of larger areas for growth, lesser dependence on the traditional business process and development of efficient systems to transact with the job workers. In fact most of these units are manufacturer of non traditional items like moulded plastic and rubber goods, protective equipments and sports shoes, which need little of the traditional skills and the traditional materials. But in spite of all these they have some presence in the traditional locations to liaise with the cluster players.

The Gravity of Tradition

The exact number of firms in the Jalandhar sports goods cluster is difficult to enumerate as in most of the traditional clusters. The official registrar of industrial firms, the District Industries Centre (under the Directorate of Industries of the State Government), has 1235 firms registered as Small Scale Industries as on 31st March,2002. The details of categories, investment in plant and machinery, production and employment, as per the DIC records are given in the table below.

Size, investment & production

STATISTICS ON THE SPORTS GOODS INDUSTRY OF JALANDHAR

(As on 31ST March, 2002)

S. no.	Name of the Industry	NIC code	Number of units			Employment (No)		
			Urban	Rural	Total	Urban	Rural	Total
1	Sports Goods	3851	554	141	695	3567	798	4365
2.	Shuttle Cock	3851	122	27	149	910	250	1160
3.	Football	2909	304	70	374	2645	532	3177
4.	Leather Sports Balls	2939	17	0	17	80	0	80
5.	TOTAL	-	997	238	1235	7202	1580	8782

Name of the Industry	Investment (in million Rupees)			Production (in millions Rupees)		
	Urban	Rural	Total	Urban	Rural	Total
Sports Goods	70.5	6.1	76.6	1876.6	65.5	1942.1
Shuttle Cock	1.2	0.3	1.5	91.0	31.0	122.0
Football	6.0	7.2	13.2	321.5	51.0	372.5
Leather Sports Balls	4.3	0	4.3	6.5	0	6.5
TOTAL		13.6	95.6	2295.6	147.5	2443.1

(Source: District Industries Centre, Jalandhar)

But the actual number of firms may be quite different as a large number of micro-enterprises and sub contractors remain unregistered due to the inability to complete the formalities and the fear of caught in the Tax net. On the other hand many larger firms get registered as multiple SSI units to avail the various fiscal benefits. Again the household job workers for the Industry, like the football stitchers, net weavers and racquet gutters, remain unrecorded as though an important segment of the Cluster, they do not come under the definition of industry. The number of such household may be nearly 4000 as already 3000 football stitching households have been identified. The traders, an important actor of the cluster also remain un-enumerated.

Same may be said about the investment in Fixed Capital in the Cluster. As most of the machines are fabricated locally or by small machine manufacturers, their value is difficult to estimate. Again under valuation of the plant and machinery, particularly by the larger unit to remain within the definition of Small Scale Industries and avail the attendant benefits are quite common. In case of the Jalandhar cluster some over valuation of the Fixed Capital by the smaller units cannot also be ruled out as this help in getting higher Working Capital limits from the Banks.

Again getting a reliable estimate of the production of the Cluster is difficult. Even veterans of the industry do not like to hazard any guess. The figures mentioned in the DIC data are those declared by the registered units and the actual figure must be much more than Rupees 2443 million as mentioned above. From the analysis of market, as given in a subsequent Chapter, the production of the Cluster may be around Rs. 4000 million including the production of a large scale unit located in the cluster.

2. PRODUCTS OF THE CLUSTER

Sports Goods is an umbrella term which include any item used for sports and leisure activities. As mentioned by an industry veteran, from walking sticks to sophisticated aerobatic

aircrafts, every thing come under 'Sports Goods', as walking is a recognized sport as is aerobatics. A reputed British directory mention about more than 1000 items as Sports goods and the harmonized code of the Ministry of Commerce, Government of India, include more than 200 items of sports goods. The traditional products of sports goods industry of Jalandhar can be classified into the following categories on the basis of the major raw materials:

- Wood : Hockey Sticks, Cricket Bats and Cricket Wickets, Carrom Boards
- Synthetic fabrics : Volleyball, Football and Covers, Rugby Balls and all types of protective equipment,
- Leather : Cricket and Hockey Balls, Boxing Gloves and other Soft Leather goods.
- Rubber : Bladders and Tennis Balls Basket Ball and other Inflated Covers.
- Metal : Badminton & Tennis Rackets, Fitness equipments, weight Lifting equipments, Trophies, Medals,
- Cotton : Sports Nets, Sports Hosiery and other sports wear.
- Feather : Shuttle Cocks.

With diversification and expansion of the product range during the last few decades and use of synthetic materials, it would be appropriate to classify the products in the following sub sectors based upon product differentiation:

A. Inflatable Balls

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|-----------------------|-----------------------------|
| 1. Footballs | 7. Tennis balls |
| 2. Soft leather goods | 8. Rugby balls |
| 3. Bladders | 9. Hand balls |
| 4. Water Polo balls | 10. Punch balls |
| 5. Base balls | 11. Golf and Billiard balls |
| 6. Volley Balls | 12. Net balls |

B. Sports Equipment

- | | |
|---------------------------------------|-------------------------------------|
| 1. Cricket equipment | 11. Metal Trophies and medals |
| 2. Hockey equipment | 12. Lawn and Table Tennis equipment |
| 3. Badminton, Tennis & Squash Rackets | 13. Rolling skates |
| 4. Children's playing games and toys | 14. Skipping ropes |
| 5. Shuttle cocks | 15. Weight lifting equipment |
| 6. Exercise and Gymnastic equipments | 16. Health & Fitness equipment |
| 7. Sports nets | 17. Club equipment |
| 8. Carrom boards | 18. Playground equipment |
| 9. Chessman and Chess boards | |
| 10. Athletic equipment | |

C. Sports Wears

1. Shirts, trousers, track suits
2. Ties, bags and badges
3. Sports shoes

D. Sports Protective Gears

1. Protective equipment Arm & Leg guards, Head guard, Chest guard
2. Shin Guard
3. Helmets
4. Hand gloves
5. Boxing gloves and boots

Value wise the most important product of the cluster are inflatable Balls which probably has nearly 50% share of the total production. Next important items are Cricket bats, Cricket equipments, Badminton Racquets, Hockey Sticks etc. The products in the last two categories above, which are not considered as basic sports goods items, are showing the highest growth potential and major diversifications and new investments in the Jalandhar sports goods cluster are taking place in these areas.

3. MANUFACTURING – PROCESS, TECHNOLOGY & INPUTS

Skill based production

The process of manufacture in the Jalandhar cluster is still predominantly manual and highly skill based. The importance of skill in the Industry could be realized from the fact that all of the sub contractors, most of the micro entrepreneurs, and many of the owners of the larger units are themselves highly skilled persons and personally produce/supervise the production process to maintain product quality. For example, owner of one of the reputed manufacturer of badminton shuttle cocks, personally inspect and weigh each of the shuttle cock made by the unit. Similar cases may be found in the units making Cricket bats, Hockey Sticks etc. The reason again is the minimal use of machines by the Industry. In fact, excepting common machines like Band Saws, Circular Saws for wood working and Power Presses for cutting punching etc. other machines are rarely used by the firms of the cluster.

The notable exceptions to the above are the rubber and plastic goods manufacturers. The units producing moulded items like Basket Balls, Tennis Balls, Shin Guards, plastic Toy items etc. use automatic and semi automatic moulding machines for moulding of rubber items and plastic injection machines for producing moulded plastic items. As mentioned earlier these firms are moving out from the core cluster locations as they have little commonality with the traditional business operations.

The interesting feature is in the traditional items, the age old manufacturing process is so efficient and cost effective that they still overrule the machine. For example, some of the leading producers tried with imported stitching machines for footballs but have found the hand stitching process not only cost effective but of better quality also. Similarly, firms making Cricket Bats are aware about availability of automatic bat making machines in the advanced countries but not yet convinced about the efficiency and effectiveness of such machines. The risk involved with the considerable investment in such machines may be a dithering factor but surely not a controlling issue.

The modernization in the manufacturing process has come with the innovation in design and attendant use of new materials. For example, advent of the rubber moulded inflatable balls has made the process fully mechanized and made the traditional skill redundant. A lesser example is the design of metal racquets for Badminton, Squash, Tennis etc. which has brought

Modernisation with new designs

the use of drilling jigs, powder coating, stove enamelling etc. A table on the change in the traditional manufacturing processes with the change in design and material for some important products of the Jalandhar cluster is given in the table below:

Name Of Item	Prevalent structural Raw Material	Current manufacturing process	State of the Art Material	Relevant technology	Properties
Badminton, Tennis And Squash Rackets	Aluminium Pipe,	Drawing of the pipe, Drilling of gutting holes, bending to shape, joining of ends, fixing of handle, painting, labeling, gutting	Modular Graphite Fiber composite	Moulding of the complete frame in automatic machines.	High Equilibrium, High Strength To Weight Ratio
Golf & Skiing Equipment	Wood And Steel	Bending, forming ,machining, Heat treatment, grinding	Titanium Boron & Titanium Graphite	Special forming techniques, powder Metallurgy, sintering in environment controlled furnaces	Improved Fatigue, Strength
Hockey Sticks	Mulberry Wood & Cane	Boiling of the wood, bending for forming the blade, hand forming of the handle, assembly of the stick, finishing etc.	Graphite fibre reinforced composite	Moulding of the complete Stick in automatic machines	Durability Light weight, rigidity
Shuttle Cocks	Cork Bottoms & Feather	Cleaning, cutting and sorting of feather. Shaping of the cork, drilling of holes, fixing of feathers etc.	Nylon	Machine moulding of the complete Shuttle cock	High Durability, accurate balance and flight
Core of Tennis Balls	Natural Rubber	Mixing of the rubber, molding of the halves, joining of the Halves	Butyl Rubber, Nylon	Moulding of the integral core by blow moulding	Low Air Permeability, Low Loss Of Pressure
Fitness Equipment	Heavy Gauge Steel Square Tubes & Pipes	Drawing, bending, welding of pipes, machining of fittings, assembly, painting etc	Ultra-Light And Precision Aluminium	Assembly of special sections, powder coating	Durable & Ultra-Light In Weight
Cricket Ball cores	Cork, wool etc.	Forming of the core halves, fixing of the two halves , hand winding of the wool cover, long drying in the open	Synthetic resins	Moulding of the complete ready to use core	High Durability, reduction of the processing time
Play Ground Posts & Boards.	Hardwood & Steel	Cutting, finishing of the board, bending, welding of the steel post, assembly, painting etc.	Fibre Glass	Moulding of the sections, assembly	TransparencyDurability
Roller Skates.	Metal sheet, plastic moulded wheels	Fabrication of the body, fixing of wheels ,strapping etc	Fibre Glass/graphite composites	Machine moulding of the body and the wheels, assembly	Light weight, effortless movement& Durability

The state of the art material is given in the last column which when adopted by the industry will bring another radical change in the technology scenario and also in the business process of the cluster, affecting all cluster players.

Another important aspect of the technology of the cluster is the innovation of the process. Whenever some new design or material came in vogue, the cluster based firms tried to adopt the same with the minimum change in the existing process or equipment. One example is the Hockey sticks. With the change in the playing techniques and use of artificial grounds like astro turfs, use of stronger and lighter sticks were needed and Graphite moulded sticks were introduced to the international markets. As these sticks were costlier than the conventional wooden sticks made of mulberry and beyond the reach of the average Indian player and the technology needed huge investment in plant and machinery, again, beyond the capacity of the traditional manufacturers, a judicious combination of the two were made. Instead of solid wood, the blade of the stick was made from a sandwich of plywood and wood to make it light and also fit for the astro turf. To make the stick stronger graphite rods were used in the handle in place of Cane, the traditional material. The resultant product was value for money for the typical Indian player and is still successfully competing with the composite sticks.

Process innovations

Similar adaptation is found in the innovation of other traditional items like Racquets and shuttlecocks. With the increase of the popularity of the metal racquets over the wooden ones, the cluster based units adopted the metal fabrication technology with minimum mechanization and use of jigs and fixtures. As the Aluminum section of required shape and size were not easily available, common domestic curtain rods were drawn to shape in the locally fabricated draw benches. As proper finishing was essential for market acceptance, ancillaries were set up for powder coating of the racquets. Subsequently, when attractively painted racquets appeared in the market, stove enamelling units were also set up.

The history of process innovation for shuttle cocks is more interesting. With the globalisation of the economy and lowering of tariff barriers under WTO regime, the cluster faced a stiff competition from shuttle cocks imported from China, which outdone the local product both in quality and price. Undeterred from the threat, the leading cluster based manufacturers decided to make a trip to China to understand their manufacturing process. They found that the raw materials available in China are superior and cost effective and their production methods also very efficient, the final assembly of the materials to make the shuttle cock is not foolproof and cannot produce uniform quality. The entrepreneurs decided to import the materials from China in the pre assembly condition and use their skilled labour for manual assembly of the shuttle cocks. The resultant products were of better quality and overcame the competition at least in the higher end market. That the industry is now facing a new competition from the imported synthetic moulded shuttle cocks, is another issue.

The adaptability of the cluster based entrepreneurs and their machine fabricators has made manufacturing of advanced items like moulded inflatable Balls and injection moulded items like protective equipments viable at a fraction of the investment and production capacity of their counterpart in the advanced country. Naturally, these gave the cluster players cost advantage and better production flexibility over their overseas competitors. Almost all machines are locally fabricated copying from the machines of the reputed companies (Ludhiana a repository of such fabricators is only an hour away) and the entrepreneurs are using the skill of the Diemakers to finish moulds which otherwise need CNC machine tools costing tens of million rupees.

The above show that the Cluster is a thriving and dynamic one so far the manufacturing techniques are concerned. But it does not mean that the Business process is efficient enough to meet all technology needs. There are serious gaps in technology needed for making competitive products both for the domestic and export market. Identified technology gaps in the important products of the cluster are given in the following table-

Technology gaps

Product	Technology Gaps	Advantage
Footballs and other types of stitched inflatable balls	1. Simultaneous cutting of panels from a sheet 2. Fixtures for easier and uniform stitching	1. Better shape, less wastage 2. Uniform quality
Cricket Bats	1. Proper seasoning of the wood 2. Machine cutting of dovetails 3. Sandwich/ synthetic handles 4. Hydraulic pressing of the wood	1. Uniform quality 2. Productivity 3. Maneuverability 4. Better strength
Hockey sticks	1. Machine finishing of blades 2. Synthetic handles	1. Productivity 2. Maneuverability
Racquets	1. Mechanized drilling and forming 2. Improved finishing and labelling	1. Productivity 2. Acceptability
Cricket Balls	1. Stronger single piece cores 2. Mechanized stitching	1. Longer life 2. – do -
Moulded items	1. Accurate moulds 2. Better control of the process	1. Acceptability 2. Uniform quality

The technology gaps mentioned above are crucial for the survival of the respective products, which in turn are the staple items of the cluster. Again proven technologies are available for the above in some part of the world, about which at least the leading units are well aware. The real problem for the technology upgradation of the cluster is the entrepreneurs still keep their technology a closely guarded issue and do not want to discuss the same with anyone. The absence of the exchange of information among the cluster players is the main cause for the delay in technology upgradation of the cluster. Cases for both the success and failure in process innovation are kept as secrets so they could not create the desired demonstration effect among the other units.

Quality Assurance

Quality Assurance and product testing are the other weak areas of the manufacturing process. Testing of the products are almost absent more so due to the non-existence of Standard Specifications for most of the items and confidence of the user on his own assessment. Actually almost all sports persons of some standing have their own idea about their sports equipments. It has been learnt that some cricket players of international standing have their own specifications about their bats. Of course the international controlling bodies of each sports have their own specification on the dimensions, weight and in some cases about the material of construction of the equipments to be used in the respective game, but for the functional test the reliance is more on the field trials.

Noted exceptions are Footballs. FIFA, the international body for the game has drawn out detail specifications for the Balls to be used in tournaments and it also certifies manufacturers as producers of Balls to FIFA standards. Even today only a few firms of Jalandhar have their in house facility for testing of footballs as per the FIFA standards and their is no Test House to certify the products as per the standard, though Footballs worth of Rs. 600 million are exported from Jalandhar every year. That the Footballs supplied by the Cluster are not found suitable for tournaments by the international body and are mostly used for recreational games and 'Children play', is a different issue.

Need of Common Testing Facility

It has been learnt that firms, who want to test their Footballs tested as per the FIFA standard are getting it done from overseas Laboratories at huge costs. Keeping in view the Testing needs of the sport goods industry, State Trading Corporation, a trading house under the Government of India, had set up a Test House about a decade back in Jalandhar but the facilities remained unutilized. While the Industry complain that the required expert manpower were never posted at Test House, the local STC management opine that the Industry was never interested to utilize the facilities as they knew most of the product will not stand to the specified tests. The current situation is the testing equipments are nestling cozily within their covers in the spacious Test House hall of the local STC office. A common testing facility for the Industry was also set up by the Punjab Government named the Quality Marking Centre for Sports Goods. While it provided some testing services to the Industry in the past, today it is lying in a dilapidated condition, one of the reason for which may be the obsolete facilities of the center.

Sports Protective Equipments are the second category of items where common testing facilities is immediately needed. These items have a good share in the export from the Industry and what is more important, is showing a healthy growth rate against the stagnant overall performance of the sport goods sector. While the Jalandhar cluster has quite a few units specializing in the various protective gears, particularly, Cricket and Hockey protective items

CE certification for protective gears

and shin guards for football players, there is no common testing facility. The immediate threat is that the Governments of the advanced countries and particularly European Union which is one of the most important importer of the item, is imposing compulsory testing of the item. Since 1994, the EC has imposed legislation on personal protective equipment, which has affected the exports of the small Indian manufacturers. For example, protective equipment such as Shin Guards has to pass stringent quality tests and requires to have the CE (Conformity European) certification. Without CE marking, Indian products will find it difficult to enter and/or sustain their market in EU. Such certification facilities had not been available in India until recently and the equipment had to be sent in six sets to Europe, the testing of each set costing about \$ 500. However, Export Import Bank of India (Exim Bank) which provides grant/finance for product/process certifications including CE marking is providing grant upto 50% of the cost incurred (75% for SSI units) for the certification.

Besides testing of the finished products, testing of the raw materials and bought out components is an important but hidden need of the Industry. The manufacturers of footballs and other types of stitched inflatable Balls source their main raw materials the PU/PVC sheets and the backing fabric from various suppliers, both domestic and foreign and for the quality of the

Testing of raw materials

item they rely on their 'feel'. So it is not surprising that often an entire lot of finished Footballs are rejected due to the poor quality raw materials. The interesting thing is at least two local institutions, the regional center of Central Leather Research Institute and the Textiles Department of Regional Engineering College have adequate facilities for the testing of fabrics, leather and other cotton/ synthetic fibre based items used in footballs and other types of balls including Cricket and Hockey Balls.

Apart from the lack of awareness among the majority of the cluster based units about the facilities available, the other problem is no standard specification available for the materials

Need for Standards

to be used in sports goods. As mentioned in an earlier paragraph, for most of the sports goods no technical Standards have been brought out by the

concerned international bodies. Though FIFA, the international body for Footballs, has issued elaborate Standards for the functional Tests of Footballs, it is silent on the specifications for the raw materials and consumables. So to assure quality of the incoming materials internal specifications has to be developed for the cluster. Exactly the same thing has been done by units of the Cluster, who has obtained ISO 9000 certification. Testing samples of such lots of fabrics and leathers, which gave the final product acceptable functional performance, to the standard tests used for testing of leather for foot wears, they have prepared their acceptance specifications for the incoming materials. Needless to mention they saved a lot of money by avoiding use of sub- standard material, which will ultimately cause rejection of the finished product. What is needed is development of such specifications for the whole cluster by some common facility and demonstrate the cluster based firms their utility.

Status of raw materials

The raw materials used by the sports goods industry are as diverse as the products of the industry. There is an adage in Army that ‘Ordnance’ is everything from pin to plane. Same thing could be said about the materials for the sport goods industry. In the chapter on the Products of the Industry, the products have been classified into a few groups on the basis of the raw materials used for brevity. The actual situation is quite different. For example at least six types of natural and synthetic fabrics are used in the manufacturing of Footballs and the leather used for Cricket balls is quite different from the leather used in Boxing gloves. Again, Threads are one of the most common raw material for sports goods but remain invisible. Even a reputed cluster based supplier could not count the types and grades of Threads used by the Industry. An illustrative list of raw materials used in the manufacturing of important products of the Jalandhar cluster are given in the following table –

Sr. No.	Item	Raw Material
1	Cricket Bat	English Willow, Kashmir Willow, Cane, Glue Rubber Insulation, Rubber Grips, Thread, Cotton Tapes, Stamping Foil, and Labels.
2	Hockey Sticks	Mulberry, Cane, Tape And Towel, Glue, Gum Copal, Thread And Labels,
3	Wooden Skii	Hickery and Mapple Wood, Glues, PVC Sheets And Polyethylene, Steel Strips and Protective Lacquers and Labels.
4	Soft Leather Goods	Cowhide, Sheep Skin, White Convas, Plastic Cloth, Cotton, Rubber, Spikes, Finger Tips, Thread, Cane and Buckles and Labels.
5	Inflatable Ball	PU/PVC cloth, Cotton and Polyester fabrics, Rubber, Threads, Paints and Chemicals,
6	Solid Leather Balls (like Cricket balls, Hockey balls)	Leather, Corkwood, Kapok, Rubber, Wool Worsted, Nylon, Cotton Yarn, Stamping Foil, Varnish and Enamels.
7	Wooden Rackets	Wood (Ash, Hickery, Sycamore, Mahogany), Nylon Gut, Natural Gut, Glues, Lacquers, Leather, Textile and Labels.
8	Aluminium Rackets	Aluminium Pipe, Gut And Powder For Coating, Paint, Labels
9	Sports Hosiery	Wool, Cotton, Staple, Rubber Thread, Embellishment and Label, Acrylic Cloth, Terrycot, Polyester Fibre.
10	Shuttle Cocks	Cork Bottom, Label, Duck and Hen Feathers.
11	Table Tennis Table	Sheesham Wood and Steel Pipes.
12	Tennis Ball And Billiard Ball	Celluloid or Similar Plastic Material.
13	Fitness Equipment	Cast Iron, Steel Pipes, Tubes, Leather and Cloth for Covering.
14	Gymnastic Equipment	Wood and Steel Pipes and Pig Iron.
15	Polo Balls	Bamboo.

16	Golf Equipment	Wood and Steel
17	Play-Ground Equipment	Steel Pipes, Plastic and Acrylic Steel for Boards.
18	Helmets	ABS, Nylon 6.
19	Skipping Ropes	Leather, Cotton, Rubber.
20	Athletic Equipment	Aluminium , Brass, Steel and PU Leather.
21	Bladders	Natural Rubbers and Stabilizers
22	Chess Board/Men	Wood, PVC and Ply
23	Carrom Board And Strikers	Wood, PVC and Ply
24	Protective Equipment	Leather, Rubber and Latex Foam,
25	Dumbbells	Pig Iron
26	Chest Expander	Wood Handle, Soft-steel Wire, Hard Wire.
27	Sports Nets	Cotton and Nylon
28	Weight-Lifting Equipments	Steel Rod and Steel Weight.
29	Sports Shoes	Upper Leather, Insole Leather, Rubber Soles, Foam and Adhesives

While a detail description of even only the major raw materials used by the Industry with their availability, quality and substitute status will itself be a separate volume, the status of the few strategic materials for the Jalandhar cluster is as follows -

A large number of local units are using locally tanned leather. Buffalo leather and cow leather have broken grains leading to seepage and loss of shape of the product. This leather is mostly sold in the domestic market. The leather obtained from dead corpse is generally of inferior quality to the leather obtained from slaughter animals. For good quality leather balls, full chrome cow leather is being used by manufacturers. A number of local factories (Jalandhar has an important cluster of leather industries) are engaged in making this type of leather.

Leather

Synthetic leathers are now used for making of stitched inflatable balls like Footballs, Volleyballs, Rugbyballs etc. completely replacing natural leather due to their better water resistant properties and cost competitiveness. While the PVC is used for the cheaper varieties of Balls, the PU is used as the cover material for the superior balls due to its excellent functional characteristics. While PVC sheets of acceptable qualities are available indigenously, only imported PU sheets are used by the industry as material of required quality are not available in the domestic market. Realising the importance of PU leather for boosting India's export of inflatable balls, the Government of India has allowed import of PU leather under OGL, however the user industries, particularly the smaller ones complain about non availability of the material readily and also high price charged by the suppliers partly due to the high tariff but mainly exploiting the shortage of the material. Before liberalization of the economy when the material was canalized, the local branch of State Trading Corporation (their efforts towards the industry has been mentioned in an earlier paragraph), maintained a stock of PU sheets for ready supply to the user industries but that has been discontinued long back. Bulk buying/import of the material will surely ensure lower price and ready availability and for this a consortia approach is needed to be encouraged among the cluster based firms.

PU and PVC synthetic leathers

A variety of wood starting from ordinary Mango to exotic Willows, Ash and Hickory are used in the cluster. Mango, Sheesham wood & mulberry wood is locally available. English willow, ash wood, beech wood is imported which is allowed under OGL. Kashmir willow is also procured by all possible means even after imposing ban on its export from the State of Jammu and Kashmir.

Wood

The user firms opine that the ban on the export of Kashmir willow, which is the

best indigenously available material for making Cricket Bats should be lifted by the Jammu and Kashmir State as it is not serving any purpose but encouraging smuggling of the wood out of the State and increasing the price.

The import of corkwood for use of cricket and hockey balls is canalized through STC. Though the quantity of this vital raw material required is very small. It is felt by the Industry & Trade that manufacturing units may be allowed to import corkwood under the OGL. The PU cork bottom for shuttle cocks is also locally available. The best quality of cane as required for the handles of Hockey Sticks come from Andaman and Nikobar. The administration has banned the export of cane from the territory. In view of this, the industry is facing an acute shortage of cane and has to meet their requirement through un-authentic sources that too after facing much difficulty.

Cork Wood and Cane

Feathers

Feathers are important raw materials for shuttle cocks. Goose feathers are imported. These are also available in India. Besides, Hen feathers are also available locally. Cut and processed feathers are now also imported from China.

Iron and Steel

Iron and steel includes graded cast iron, spring steels and other precision square steel, round steel tubes and pipes etc. There is no problem in procuring and supply of all these materials locally.

Cloth

All types of fabrics i.e. cotton, acrylic, terrycot, polyester are required by the Industry, the largest use being as backing materials for Football covers. These are available indigenously and there are sufficient local suppliers. However, leather cloth and windsheet cloth is allowed to be imported under the OGL also.

Nylon Gut

Thick and good quality nylon gut, thread, tapes are locally available. Hi-sheep gut is also locally available. However, multi-coloured nylon gut is imported from Japan. On the whole, there is no problem in obtaining this material.

Rubber and Rubber Chemicals

Latex rubber and butyle rubber are available locally. rubber is also supplied by the Rubber board, Kottayam (Kerala) which has one depot at Jalandhar for supply of rubber to industrial units of Punjab.

Cotton Material and Thread

It is locally available in abundance of required quality.

Aluminium

Aluminum sections required for making Racquets are not available locally. Cluster based units informed that M/s Jindal Aluminium Company Limited, Bangalore is the only company in India Manufacturing special aluminium pipes for rackets. But at present, generally, this raw material remains in short supply. Ultra-light precision aluminium pipes required for high quality Racquets are to be imported these are not indigenously available.

Brass and Copper

These raw materials are locally available of the required quality in abundance.

New materials

Raw material substitutes such as carbon fibre, carbon graphite, fibreglass, modular graphite, titanium boron and titanium graphite are not available in India easily. The requirement is entirely imported.

Sports goods components and accessories are available locally as per quality requirement.

Other materials

Cheap quality felt is available locally. However, turf of good quality and synthetic turf are allowed to be imported under OGL. Synthetic resins are indigenously available as well as imported materials are also available in the market.

Labels are very important marketing tools. Though they have no functional use, products with attractive labels improve the market value a lot. Though every kind of packing material and labels are available locally, much improvement in their design, material and transfer technique are needed. For example, the manufacturers of badminton racquets opine that though the quality of the Racquets made in the cluster are comparable to those imported from China, the latter have a higher demand due to their superior finish and attractive labels.

Labels and Packing Materials

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From the above it is also evident that there are very little interaction of the user industries with the supplier of raw materials. For even high volume items like PU leather used in Footballs the indigenous producers have not shown any interest to produce the material of

Dialogue with suppliers

required quality, mainly due to their ignorance about the highly fragmented demand from the small and tiny units and the fear of unsure loyalty of the large units. Similar is the case for Aluminium sections used in Raquets. Due to non availability of the indigenous material, the sports goods units are forced to use imported materials and incurring additional costs making them uncompetitive to the overseas products both in domestic and export markets. At the same time the possible indigenous producers of the materials are losing an important market for their product. A regular dialogue between the producers and users of the raw materials will surely help in understanding the requirements of the Industry both quality and quantity wise and development of the supply chain. The need for developing consortia for bulk purchase of the imported materials has already been discussed.

But the problems with the inputs do not end with what mentioned above. New and exotic materials are replacing the traditional materials everyday. And equipments of these materials are having high demand in developed countries, due to their excellent use value and in spite of their high cost have already made the traditional items redundant in the export market. Materials like Carbon/graphite reinforced composites and metals like Titanium were developed for super sonic fighter Jets and have superb weight to strength ratios. Dream materials for

Sourcing of new materials

Engineering Industry, they are common materials in high quality Hockey Sticks, Raquets, ski and skating equipments, as given in the Table above. Kevlar, originally developed for Bullet-proof vests has also become a state of the art material for the sports goods. Needless to mention they are imported and as they have a high value component in the product, export of such items have been uncompetitive. Without sourcing such materials indigenously, it may be impossible to export the products. And already countries like Taiwan and China is dominating the international market for such high value products, relegating India to supplier to the lowest of the markets for sports goods in the developed countries.

In this connection some anomalies in the Exim policy are also cited. Cluster based firms mention about higher duties on the components of sports goods than on the finished products. This has caused import of the finished product cheaper than the components thus discouraging manufacturing of the item. It has been reported that one of the largest manufacturer of Shuttle cocks of Jalandhar has stopped production of the item and started import of the item from China and market here. With the lowering of the tariff barriers under the WTO regime more and more of such cases are expected to happen if some corrective are not taken. It has also been reported, that under invoicing and smuggling of the items imported particularly from China are also causing unequal competition to the local Industry.

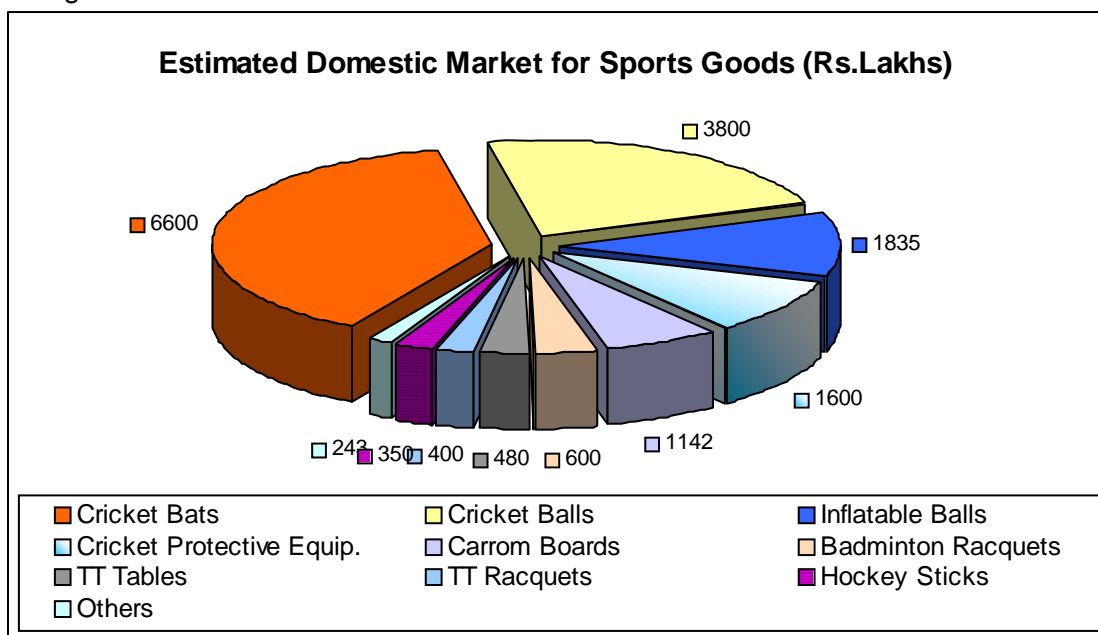
Policy matters

3. MARKET AND MARKETING SCENARIO

Determination of the market size of Sports Goods is again is not an easy task. The market for Sports Goods is distinctly divided in two segments, the domestic market and the export market. The product profiles for the two market are widely different and even the suppliers also. A regular exporter from Jalandhar cluster has little interest in the domestic market, basically due to his pre occupation with the export market and even the important suppliers to the domestic market do not show much interest in direct export basically due his product profile. The rigours of the export legalities and delivery schedules also deter the suppliers to the domestic market who are not equipped to deal with the legal niceties of Letter of Credit. Stories are abound about firms who tried to dabble with the export market without proper legal backing and in the course incurred heavy losses. It is not the case that there is no bad customer and payment hold up in the domestic market but it is said that the amount of risks much less than export market. It is also not the case that experienced exporters do not face payment risks. There is a recent case where a multinational company gave a huge order for a particular item to some leading sports goods exporter of the cluster and slipped out without taking delivery and making payments by quoting fine prints in the Letter of Credit. The real situation is the that nature of the export market is such that only firms having a critical mass can survive the risks and also make handsome profits, kind of which not available in the domestic market.

A clear divide of the Market

The domestic market for the sports goods is so fragmented that no one want to guess any risk about the size of the market. The most reliable data is available from a Study of Exim Bank, which gave the figures for the domestic market for important categories of sport goods in1997-98 as given in the chart below:



The total domestic sports goods market was approximately Rs. 1705 Millions. The items having largest share in the market are Cricket Bats and Balls, which including the Cricket protective equipments constitute almost 70% of the domestic market. Not surprisingly, as Cricket has become the most favorite game in the country, relegating erstwhile popular games like Football and Hockey to distant second and third position. In fact promotion for all other games are mainly being done by the institution like Army, Paramilitary Forces and Government agencies like Sports Authority of India., (SAI). And as the domestic market is highly price sensitive and the rural market, which has emerged as the high growth market for Cricket Equipments, cheaper variety of the items constitute the volume.

The domestic market

Even the most knowledgeable cluster players could not guess the current domestic market for the sports goods, but the unanimous opinion is the market like the export market is almost static and demands for some items like Cricket Equipments may have increased at the cost of items like Footballs, Raquets etc. Some of the players in the domestic market fear a reduction in the supply by the domestic industry during the last few years due to considerable import of Badminton Racquets and shuttle cocks from China and preference of the high end market for imported items. Again, interest to newer kind of games like Bowling, Pool etc. by the urban youth, equipments for most of which are imported has also affected the supply to domestic market. The Jalandhar cluster also suffered due to increase in the demand for health and fitness equipments, which are not the core competence area of the cluster, at the cost of traditional items.

However, in its characteristic style the cluster has braced up to face the emerging challenges in the market. Taking the advantage of proximity of Ludhiana, the biggest cluster of Cycle parts, quite a few entrepreneurs has started production of health and fitness equipments like Joggers, Cycles etc. Again utilizing the skill of the traditional leather cluster of Jalandhar, quite a few entrepreneurs has started manufacturing of Sports Shoes. Again, the Knitwear cluster of Ludhiana has provided the logistic support for the diversification to Sportswear like Tracksuits etc. by some cluster based firms. And today the two last mentioned items are having the highest growth rate and new investments in the Cluster.

Some reliable estimates of the export market are available from the Sport Goods Export Promotion Council of India, an autonomous body under the Ministry of Commerce, Government of India. The export figures for the last few years from India with break up of the major items are given in the table below:

(Export figures in Million Rupees)

Item/Year	1997-98	98-99	99-00	00-01
Inflatable Balls	1152 (47.88)	1255 (50.66)	1022 (44.31)	1023 (41.58)
Bladders	47 (1.95)	48 (1.95)	62 (2.67)	40 (1.63)
Hockey Sticks	67 (2.77)	60 (2.44)	62 (2.7)	52 (2.1)
Protective equipment for Hockey	24 (0.98)	34 (1.39)	21 (0.92)	21 (0.87)
Cricket Bat	154 (6.38)	154 (5.73)	132 (5.73)	147 (5.73)
Cricket and Hockey Balls	71 (2.94)	68 (2.75)	68 (2.95)	62 (2.51)
Protective Equipments for Cricket	225 (5.96)	223 (8.98)	244 (10.56)	292 (11.90)

Indoor Games (including Carrom and Chess)	104 (4.33)	84 (3.37)	78 (3.39)	75 (3.04)
Boxing Equipments	122 (5.06)	147 (5.92)	180 (7.82)	186 (7.52)
Fishing Equipment	125 (5.31)	100 (4.04)	94 (4.08)	90 (3.66)
Total	2407 (100)	2478 (100)	2307 (100)	2472 (100)

The figures in bracket indicate percentage of total export (Source – SGEPC)

It may be noted that the export figures are almost static for major items of export along with the overall export figures. Accurate figures for export from the Jalandhar cluster are not available but it is estimated that about 60% of the All India export are from Jalandhar. Again the manufacturing strength of the cluster is in the areas of inflatable balls, Cricket Bats and protective gears which are the major exported items. It is projected that produce of the cluster have around 50% share in the export of these items with Meerut, the sister cluster providing the rest. The share of the major items in the export basket is also almost static, with Inflatable balls constituting almost 50% of the basket, with all other items at a long distance. The only items which are showing a noticeable growth are Sportswear and Protective Equipments, though they are not considered as core sports items. Though the share of Jalandhar cluster in the export of these items are not known and these are not the traditional items of the cluster, it is surely an upcoming product of the cluster, keeping in view the new investments and diversifications being observed.

Export market

The distribution of the country wise market for the sports goods exported from the country are given in the table below:

Export figures are in Million US\$

Country/year	1999-2000	2000-2001	Percent change over last year	Share of total export (%)
United Kingdom	16.43	14.48	-11.89	26.75
United States	6.71	7.59	-13.11	14.03
Australia	8.29	7.4	-10.74	13.68
Germany	2.67	3.39	26.97	6.27
South Africa	2.81	2.30	-18.15	4.25
France	2.34	1.93	-17.52	3.57
Italy	1.46	1.64	12.33	3.02
Canada	1.09	1.62	48.62	2.99
Netherlands	1.55	1.44	-7.1	2.67
Poland	0.90	1.33	47.78	2.18
Paraguay	-	0.65	100	1.19
Iraq	-	0.6	100	1.1
Spain	0.74	0.46	-37.84	0.84
Belgium	0.26	0.44	69.23	0.82

Source – SGEPC

Country wise share

Again it may be observed that the country wise share is also near static with the United Kingdom as the largest market with USA and Australia coming next. Block wise the EU is the largest buyer. The area of concern is the overall export is showing a downward trend in the above major markets. The silver lining is there is a upward trend in the export to

discerning markets like Germany, Canada and Italy and penetration in some new countries in the developing world. Though the trend is for the all India figures, it may be also applicable to the exports from the Jalandhar cluster. Among the emerging markets Africa and South America are important but both the market suffer from the risk of uncertainty and fraud. However, leading exporter of the Cluster think that these markets are good hopes. The reason for the stagnant export lies in the narrow band of operation of the firms of Jalandhar cluster, or for that matter by the Indian exporters of sports goods. Due to slow or negligible transfer of advance technology, firms of the cluster could not produce sophisticated high value items, described earlier, and at the middle and lower end more and more market being gained by countries like China, Indonesia etc. due to their mass production capacities and cheap labour. An indulgent Government and freedom from regulations are quoted as other reasons for the success of the above countries. In fact it is feared that these countries particularly China, is going to overcome the shortage of manual skill in the production with the use of machines and plastics. It has been reported that China has already developed machine stitched inflatable balls lowering the coist of production significantly and their onslaught in the market for Badminton Racquets has made the cluster based manufacturers defensive even in the domestic market.

While direct transfer of automatic production technology may not be useful for the cluster as mentioned in the chapter on technology, hybridization of the present skill based operations with the advanced technology will surely improve product acceptance in the export market and also competitiveness in the domestic market. Comparison of the performance in the export market with Taiwan, which has a high share of the global market for sports goods may appear absurd and realistic comparison with China may not be possible due to unavailability of data. But next

Benchmarking Pakistan

neighbour Pakistan can surely be benchmarked more so because Jalandhar and Meerut, the two dominant clusters in the sports goods bear a legacy to Sialkot, the most important sports goods cluster of Pakistan. Despite the dominance of inflatable balls in the exports from

India, its share in the global market is not significant. Pakistan has the largest share with 75% of the market followed by China and Taiwan. India accounts for a minuscule 2.5% of the global market. When this is the position of our strong item in the global market, the situation regarding other items need not be elaborated. Given below the comparative performance of two countries in the export of sports goods:

Country	India's export (unit value)	Pakistan's comparative export (unit value)
Germany	1	7.29
UK	1	1.17
France	1	10.96
Italy	1	5.07
Spain	1	13.43
Netherlands	1	8.11
Belgium	1	34.37
Austria	1	18.8
Sweden	1	12.95

Denmark	1	0.00
Finland	1	0.24
Ireland	1	1.13
Portugal	1	9
Greece	1	14.02
USA	1	6.54
Japan	1	8.17
Canada	1	0.08

As Inflatable balls are considered as the core competence area of Jalandhar cluster, the issue of its lagging far behind Pakistan in the world market for the items was posed to a number of cluster based firms, large, medium and small. The following reasons were cited:

- i) The units there get regular supply of quality material like PU.
- ii) The skill and productivity of the labour is better
- iii) Full support is provided by the Government

In fact no other reasons could be cited for the production of an item which basically involve cutting and manual stitching. But there must be some strength in the marketing techniques also.

The marketing system of Jalandhar cluster is as personalized as the production system. Both for the domestic and export market the cluster based firms rely on personal contacts and personal knowledge. For that reason every entrepreneur big or small make regular trips to the target market to collect orders and also to keep personal contact with the buyers. And the market related information are taken to be top secrets.

Marketing system

The marketing system of the Jalandhar cluster may be segmented into four. I) Over the counter sale, ii) marketing to the distant markets through personal visit & iii) marketing to the visiting buyers and iv) Supply to the Institutional buyers.

The core cluster location, Basti Nau has a big market for over the counter sale. Almost every cluster based firm has some presence in the market either through own shop/office or through dealers. While the large units having manufacturing units outside the location has offices or distributors in the cluster, smaller cluster based units sell directly from the unit. Tiny skill based manufacturers, basically sub contractors sell through the larger units.

The unique feature of the cluster is there are very few pure traders or pure manufacturers in the cluster. Every firm produce at least one item but sell all items. The reason is simple. Till a firm makes an item it cannot compete with other manufacturers by procuring it from the market. And as orders for the sports goods always come in assortments each firm has to supply them though it is impossible for any firm to produce all even the important sports goods, due to their varied technology and skill requirements. So the universal motto of the cluster is 'make one and sell all'.

There are a few pure Traders in the market who basically sell those sports items which are not the core products of the cluster, for example Board Games and Table Tennis equipments where there is a local demand (for basket supply by the cluster based manufacturers) and there is

some transactional leverage. The main buyers in the over the counter market are local buyers or rather buyers from the northern India, both large consumers and Traders. They come check the product quality and bargain the rates in a Bazar environment. This segment has a significant share in the domestic market of the Cluster.

Most of the out station buyers, particularly from far away areas like Southern and North Eastern part of the country, deal on one to one basis. Most of the local firms, particularly the non - exporters, have their pocket clients, basically outstation dealers, who provide them regular business. The local suppliers make regular visits to these buyers and their details are kept as closely guarded secrets. While the buyers are aware about the core competence areas of the suppliers, they give orders for basket of sports goods, which they need and the supplier supply the basket with their own product and rest bought from the market. So there is an enormous sub contracting in the cluster. Again most of the local firm specialize in marketing to a particular location and personally nurture that market through regular visits. Many of the local units have even opened retail outlets or marketing offices in their pocket markets, particularly in the southern part of the country. Again this segment has a important share in the domestic market of the cluster

Personalised marketing

Basically two types of buyers come to the Cluster market. One and the majority group come from the Northern part of the country, for Bazar buying as described above. They are well aware about the market and source their product at the best bargain. The other group are generally from small outstation and far flung markets which the local firms consider to be too small to nurture by personal visits. Coming from the smaller markets with a small shopping list, they generally anchor to some known firm, again for basket supply and also to get some Credit. Though their purchases are not very significant, the linked local firm, consider them to be pocket markets and closely guard them during visits to the Cluster to prevent market poaching by their competitors.

The sports Bazar

Another important segment of the domestic market of the clusters are the Institutional buyers. Armed Forces, Paramilitary Forces are bulk buyers of the sports goods. At the Government of India level, Sports Authority of India (SAI), is a major buyer. At the State Government level, the Sports Directorates are important buyers. While the segment is considered to be significant, it is considered to be beyond the average firms due to the size of the orders and the extent of follow ups needed to get the orders. Again many of the large manufacture exporters of the Cluster, consider the market, though big but unattractive, due to the low profit margins and high transactional costs. It has been reported that a handful of firms from the Cluster has specialized in the market and also block entry of other firms in the segment. Needless to mention they actually produce a fraction of the order received and source the rest from the cluster based firms, mainly the tiny and micro enterprises.

Institutional buyers

The export market of the cluster is again highly personalized where the Exporter personally keep close contact with the buying firms. For this purpose regular visits are made by the Chief Executives of the exporting firms of the cluster, to the important importing countries. Again, many of the local exporter maintain offices, in the important markets, particularly U K and USA. As the details of the buyers are kept closely guarded secrets and loyalty of the professional executives cannot be guaranteed, even in the larger exporting firms the export related information are dealt by the family members. Even the foreign offices are run by some of the family member and there is no dearth of volunteers in this country of Non –resident Indians.

Export marketing

The size of the export market of the Jalandhar cluster could be guessed from the figures of the Sport Goods Export Promotion Council as mentioned in an earlier paragraph. Considering a 50% share in the export basket, the export from the cluster could be taken as Rupees 1250 million out of the total reported export of Rs.2472 million reported by SGEPC. However, sources from Exporters claim the export figures are double the amount as many exporters from the Cluster are not member of SGEPC (already more than hundred firms are) and many exports are not reported. On the final analysis it can be assumed that the export from the Cluster hover around Rs.2000 million and as reported earlier with little overall growth during the last few years. However the exports are not static as there are significant inter segment transfers. Already Sportswear has replaced Inflatable Balls as the leading item in the export of sports goods from the country. The Amber light for the cluster is that the items which are showing a positive trend in export are not the core competence areas for the cluster and if major restructuring of the production base is not carried out, Jalandhar may soon loose its position of highest exporter of sports goods in the country. As mentioned earlier, some initiation in this regard has been taken but the pace is not sufficient for the rapid change in the export market.

A direct outcome of the personalized nature of marketing by the Exporters, are near absence of cooperation in marketing. Every Exporter from the cluster consider the information about their clientele and the export price as top secret. Though often they travel in a group to a country or a Fair, there is no consortia approach and the price or product negotiations held with the buyers are not divulged to the group members though otherwise they are staying and eating together. The advantage goes to the Buyer as agreed by some exporters. They bring the price to the rock

Lack of Cooperation

bottom by taking the advantage of the absence of exchange of data among the members of the group and eagerness of all to accept the entire order(the supply of an order, whatever big it may be is not a problem due to the widespread outsourcing and sub contracting prevalent in the cluster). The situation is not unique in Indian context as in most of the traditional SME cluster these kind of isolation and secrecy in marketing is maintained to some how get some order in a highly competitive and stagnant market.

Absence of brand promotion

The fact is that this kind of approach is beating the Jalandhar cluster in the export market. Though the exporters from the cluster do not mention about a consortia approach by the exporters from China and Pakistan, they agree that the exporters from these countries do not easily reduce their price in their bargain with the buyers and successfully resist non tariff barriers from the importing countries. It appears without some kind of consortia approach such behaviours will not be forthcoming. Another weak point of the Jalandhar cluster is almost no exporter exports in his brand name. While important players in the global market for sports goods like Adidas, Spalding, Nike, Puma etc. source their products from the Jalandhar cluster, the local industry have never tried to promote their brands at least in the developed market. The result is they are forced to supply at a near uneconomic rate with little concern for quality or reputation. This kind of sub contracting in the international market also keeps most of the cluster based firms insulated from the changes in the business environment in the international market like insistence on fair trade practices and quality certification by the importing countries as the buyers generally take care of these things.

Non - tariff barriers

First of such changes affected the cluster based exporters a decade back when implementation of Quality Systems were insisted by many buyers. The cluster based players rose to the occasion, albeit late and slowly started implementing the Quality Systems. Today quite a few local firms have ISO 9000 certification. The second hurdle came a few years back when major buyers threatened

stoppage of import from the country on the issue of use of Child labour. The Industry of Jalandhar cluster again rose to the occasion and floated an NGO, Sports Goods Federation of India with the support of ILO, and Government, to identify and eliminate child labour from the sports goods industry of Jalandhar. The positive efforts of the SGFI has been acknowledged at the international level and declaration of its members about non use of Child Labour are accepted with all seriousness. The above show, as characteristic to a dynamic cluster, the Jalandhar cluster rises to the threats successfully but as there is no proactive action, in the course faces a jolt which puts it a few steps behind. Such kind of attributes explain well why the export from the cluster is near stagnant and could be easily diagnosed to absence of networking in the Export market. The next barrier looming before the cluster is the insistence on following of fair trade practices and compliance of social; norms by the suppliers, by some advanced countries.

The personalised nature of marketing by the cluster based firms is also manifested in the near absence of agents, market promoters and other middle men in the export market of the Cluster. It appears the Exporters operate mainly based on their prior knowledge of the market and feed backs received from their own offices. It is not known if any market survey has been conducted at the cluster level and it is highly improbable as such exercises are beyond the capacity of average exporters and there is no concept of networking. It is a different issue that there is not much need of such things when one is basically working as sub contractors to a limited group of international brands. And that market is also not without threats. Firms from the dominant

Absence of market Research

Exporting countries like Taiwan has already fanned out to countries like Indonesia and Philippines, where the labour is cheap and abundant, to set up sports goods industry and their products will unleash a cost war in the markets for the traditional export items of the Jalandhar cluster. If the Industry want to shed its image as supplier of traditional, lower end of the market, non - professional items, rigorous market surveys are needed to be carried out the niche areas and emerging markets and develop the relevant capacities. Engagement of marketing consultants, and they can be afforded only by networks/consortia will also help the Exporters in planned market promotion. In the current environment of sub-contracting in the international market, common brand building appears to be a far cry, but for maintaining unit value realization and market share this is the only long run option.

SGEPE

The only support at the Institutional level for the promotion of exports of sports goods comes from the SGEPC. Besides sponsoring 'market survey's from time to time, it also provides market information to its members through its news letter. The problem is targeted to the entire sports goods industry of the country, they are not highly focused and do not contain in depth analysis of the specific product segments which are of importance to the Cluster based firms. SGEPC also sponsors participation of the Industry in specialized fairs for sports goods like International Trade Fair for Sports Equipment and Fashion, (ISPO) Munich and Super Show Fair at Las Vegas. The Council also sponsors one man sales cum study teams to foreign markets and the facility was availed by about a dozen exporters from the Jalandhar cluster during 2000 2001.

4. OTHER IMPORTANT FACTORS:

Finance

One surprising aspect of the cluster is that finance has not been mentioned as a bottleneck by any cluster player. While the current stagnancy in the market and technology may be cited as the reason for the poor demand for funds, it is also a fact that the cluster basically operates with own funds. Other reasons cited for the low demand for Bank finance are the high cost of Bank loan and the low fixed capital base of the majority of the firms. The latter factor is important. As most of the operations are skill based,

there is almost no machine worth the name, even in larger units and the ratio of fixed and working capital is very low for almost all firms. A notable exception are the newer units producing moulded plastic based items. But again as mentioned before these units also mostly rely on the locally fabricated machines again to keep the cost of production low. Unavailability of sufficient fixed capital for the collateral purpose is a factor for lower off take of Bank loan by the cluster based units.

Of course the exporters avail of Bank loans for financing the export operations but they have also not mentioned finance as a major issue. It appears that the highly interlinked business operations and close relations with both the suppliers and buyers have made the cluster operate with minimum aggregate working capital and relying more on own fund to minimize the cost of operations. While the Indian Manufacturing sector, particularly the small sector always complain about the paucity of Bank loan as the primary reason for the poor performance of the sector, the case of the Jalandhar sports goods cluster is completely different.

One underlying fact behind the reluctance of the cluster based firms to go for leveraged operations is the conservative mindset of the entrepreneurs. As mentioned in the history of the cluster most of the entrepreneurs migrated together from Sialkot and at least the older generation still maintain that solidarity. To them making cheap and selling cheap is the motto of business. 'Debt' and 'Defaulter' are still taboo and while the other two local clusters of Leather and Handtools are often accused of financial irregularities, the sports goods cluster is almost clean in this respect. Even the Bankers have not much complain about the financial disciplines of the cluster based firms, a rare feature in the industrial scenario of India.

Reasons for low leverage

The issue had to be analysed at length as the low leverage of the Cluster has on the one hand has given it the competitive strength by lowering the cost of production, but on the other hand has inhibited modernization and mechanization of the cluster. In fact motivating the able cluster based firms to adopt state of the art technology through institutional finance may be a key issue in upgrading the cluster to a producer of sports goods for the high end of the market.

The issue of infrastructure again does not appear to be key issue for the cluster. The affinity of the cluster player to the traditional areas of concentration has been mentioned before. The industrial complex set up by the Punjab Government did not have much taker as it was quite at a distance. However, now firms going for diversifications like Sport Shoes etc. and new technologies like plastic moulded items are going out of the cluster to the fringe areas of the town. While space in the traditional areas is scarce, and Cluster Associations demand for a new industrial complex, it appears there will not be much shifting of productive activities to a new area at least for the traditional items till all levels of the core cluster players are shifted to the new location. Recently the State Government has commissioned a Study for the feasibility of setting up a Special Export Zone at Jalandhar. While it may be feasible keeping in view the requirement of the other clusters of Jalandhar, from the sports goods cluster only the larger exporting may move out that also to produce new range of products.

Infrastructure

The road, rail and telecommunication system is one of the best in the country and the power supply position is also highly satisfactory in Indian standards. The situation is expected to improve further with the privatisation of the Electricity distribution system.

Human Resources Development

Human Resources development is one of the most neglected area in the cluster. There is almost no systematic training system, on or off job for the workers in the cluster. As the prevalent manufacturing system is skilled based manual operations, the traditional training method is helper to semi

skilled to skilled worker. While this may be OK and most cost effective for the traditional system of production, it provides no scope for inclusion of new techniques and technologies. While innovation is a continuous phenomenon, improvement is a casualty in the cluster. As need for systematic training goes hand in hand with infusion of new products and technologies, the cluster players will probably not feel the gap in HRD till new products and techniques are introduced in a big way. Again that day may not be far away if the cluster is to survive the onslaught of the foreign products in the liberalized tariff regime. And even for operations like stitching of Balls, introduction of new tools and techniques are required to improve the product quality to international standards.

Quite a few Institutions in the town have facilities for training in related skills like stitching of garment, shoe making, carpentry etc. but they mention almost no demand from the sports goods industry for trained manpower. While the basic reason has already been explained, it is also a fact that the training curricula and methodology of these institution are quite dated and will not introduce any improvement in the existing production system of the cluster. So there is the need to develop at least a few institutions to provider of trainings in improved techniques for making of sports goods.

For the supervisory staff also technically qualified people are not much in demand in the cluster. Only the producers of new items like sports shoes and moulded items need and employ technically qualified persons. However firms who have gone for ISO 9000 certifications employ qualified persons for the quality assurance areas. Professionally qualified Managerial staff are almost absent in the cluster as entrepreneurs themselves manage the entire show. Even providing technical and managerial training to the next generation is very rare in the cluster though the Punjab Technical University is in the vicinity.

Among the Government machinery the Tax administration and Labour Welfare Department appear to be important for the cluster. While complains about the Central Tax authorities are rare, the rigid approach of the State Sales Tax administration is widely criticized. While Tax evasion may be widespread, the Tax authorities also appear to be short of imaginative approach. The labour welfare department had taken a quite dynamic role in the efforts of the cluster to meet the challenges arising out of the child labour issue as mentioned earlier.

**Government
machinery**

Business Development Services Providers have important contributions in the growth and development of an industry, but they are nearly absent in the Jalandhar sports goods cluster. Private Consultants and Development technologists from the suppliers are plenty in the adjacent two clusters of Leather and Hand Tools but simply not visible in the sports goods cluster. The reasons are not very difficult to find. With a skill based manufacturing process in which the entrepreneur himself has sufficient expertise and a highly personalized marketing system, the BDS providers has really little to offer in the areas of technology and marketing, the two most common services needed by the Industry in general. It is also a fact that the latest technology in sports goods are so specialized that persons or institutions having adequate knowledge in them are rare to find. And same is the case for Market related information, both for domestic and export market.

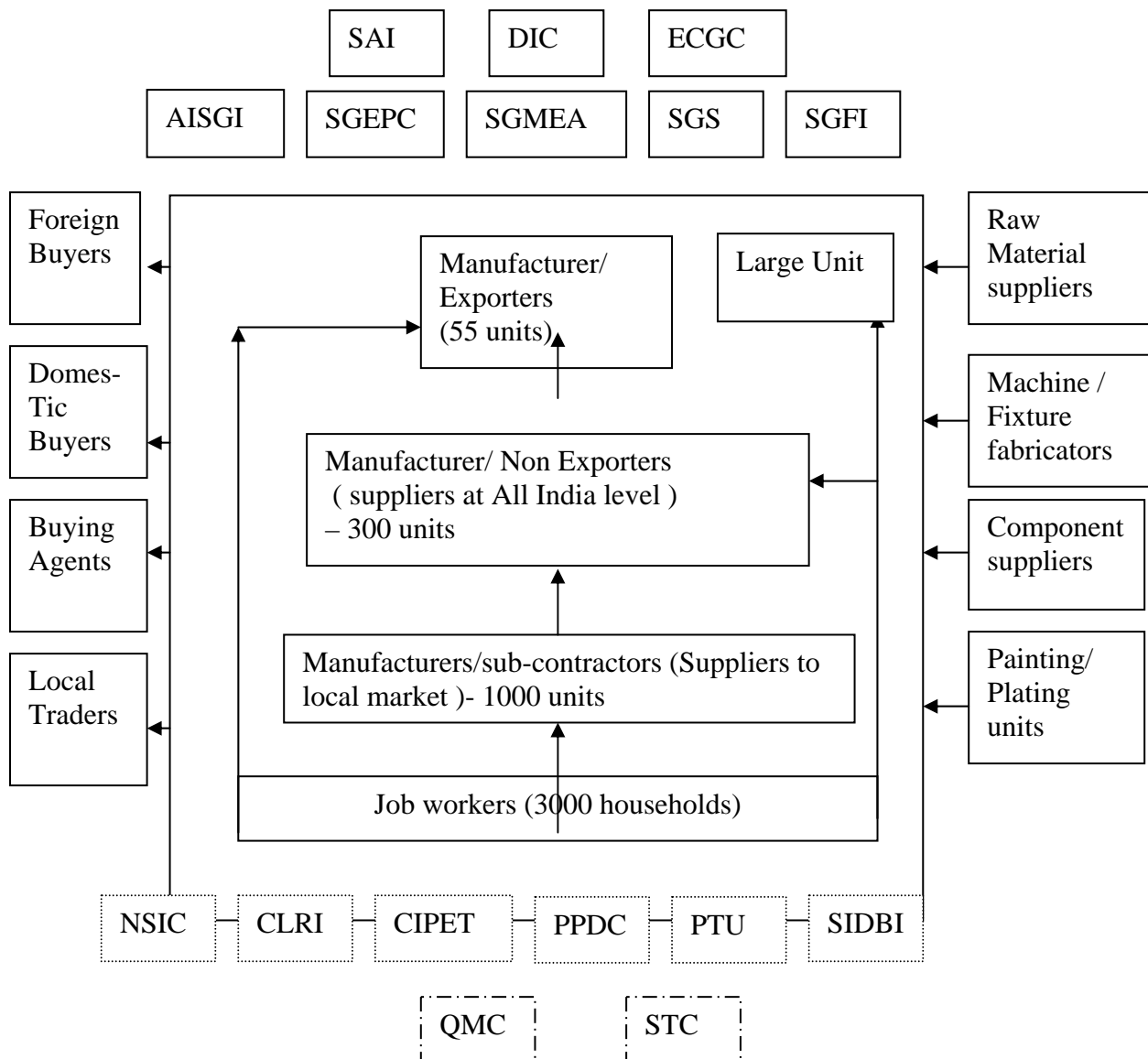
**BDS
providers**

The institutions in the vicinity of the cluster, as shown in the cluster map with dotted lines could provide important services to the cluster particularly ion the areas of product development and training but have little interactions with the cluster actors basically due to the ignorance of both sides about the need and competence of the other. In fact institutions set up basically for other clusters like the Central Institute for Hand Tool, Jalandhar could provide important services for the development of tools etc. for the modernization of the production process.

Of course the larger exporting units are availing services of the expert institutions like Footwear Design and Development Institute, Noida and at least one local firm had taken the expertise of the Punjab Technical University for product development. But these are exceptional cases and the institutions mentioned are not typical BDS providers who come to the doorstep of the firms to sell their services. Again the same group of firms availed services of consultants to implement ISO 9000 Quality systems, but these were basically one time affair and the outstation consultant probably could not find sufficient business opportunities so that they can set up a shop in the cluster. The exporters also engage consultants in the foreign market to develop new business and markets.

The only agency which is providing real BDS services to the cluster is SGS as detailed in the next chapter. But they have also kept their services limited to Certification of the products as 'Child Labour not used' to promote acceptance in the advanced countries. Though enhancing the market for the cluster based products, indirectly, through their present services, SGS has not initiated services related to their core competence areas of product and process quality assurance in the cluster, probably not finding adequate market.

5. CURRENT CLUSTER MAP OF JALANDHAR SPORTS GOODS CLUSTER



There are quite a few categories of players in the Jalandhar sports goods cluster. While some of them are involved in the production chain other are providing various supports in the business process. In the production system there is a hierarchy of players, particularly for the production of stitched inflatable Balls, the most important product of the cluster. And of course there are the raw material suppliers, basically agents of manufacturers located outside the cluster and the provider of services like Powder Coating, Painting, Packaging etc. There are also a number of institutional players who are providing various services to the business operations of the cluster. Some other institutions in the vicinity could provide business development services to the Cluster but at present are not committed, basically due to lack of information and networking. These are shown by dotted boxes in the cluster map

6. CLUSTER ACTORS

The core cluster actors are those firms, which are directly involved in the production and delivery system of the cluster. These are the elements, which keep the cluster live and functioning by playing their roles in a highly interlinked production system. These players could be categorized according to the functions carried out by them and probably from the law of economics come into a hierarchy with the larger firms at the top and the tiny micro enterprises at the bottom with an upward flow of the materials. These category of players are described below

There is one large scale unit in the cluster. Established in the year 1961, almost since the settling of the cluster in its present location, the unit is the largest manufacturer and exporter of Inflatable balls in India. It claim a installed capacity of 3.2 million balls per annum. The company has an in house designing and printing facilities to print customized logos on the Balls and it has also developed special customised packaging for balls. They also have an in house R&D facility for development of improved products. With almost all facilities in house the Company has little interaction with the other core cluster actors excepting probably the job workers (Ball stitchers). But again these workers may be sufficiently engaged by the Company, making them captive workers for the Company. However, being at the leading edge of the technology, the Company surely act as a trendsetter for products and technology for the cluster.

**Large
manufacturer**

The most dominant group of firms could be identified by their considerable export of sports goods. Though there are more than 100 members of the Sports Goods Export Promotion Council from the cluster, the number of regular exporters may be around 50 who are also members of a Association of sports goods exporters

**Manufacturer –
Exporters**

(Sports Goods Manufacturer and Exporters Association). With main interest in export, these units produce Inflatable Balls, Cricket Bats, Cricket Protective Gears etc. which are the traditional export items from this Cluster. With higher production capacities and well laid out factories, these firms constitute the top level of the hierarchy in the business process of the cluster. Some of these firms have adequate testing facilities to assure the quality of their products and many have been certified to ISO 9000 standards. Product diversifications and technology upgradation in the cluster generally originate from these firms and they are the pioneers in starting Sports shoe export. Moulded inflatable balls are another new product introduced to the cluster by these units.

The next category of players as per their importance in the Cluster, are the Suppliers to the Domestic Market. Number of these firms could be estimated to be around 300 from the membership of an Association of these firms (Association of Indian Sports goods Industries).

Size and output wise these units are smaller than the Exporters and as their main market is the domestic buyers, their product ranges are also different. Many of these entrepreneurs are themselves highly skilled in manufacturing of some product and that is the core competence of that particular firm. Many of them still personally supervise quality of each product turned out by the firm. Due to their personal approach to Marketing, these entrepreneurs make regular visits to their 'pocket' markets. Often these firms supply to the larger manufacturer-exporters, enabling them highly flexible manufacturing capacities. These firms generally do not export, basically due to the reason that do not have sufficient capital base to take the risks involved in export and also human resources for the legal formalities. However, some of these firms are occasional exporters and member of SGEPC.

Manufacturer suppliers to the domestic market.

Micro- enterprises and sub contractors constitute the mass of the cluster. Basically one man show, these firms are characterized by the personal manufacturing skill of the owner, who often is a regular worker. However, firms of this category, who produce Stitched inflatable Balls, engage a large number of Job workers for stitching of Balls. These firms operate as sub contractor to the above category of firms and many have very good order position due to their reputation in the market and skill. Basically producer of single item, these micro enterprises do not go for much direct marketing due to limitation of resources and manpower. However they have regular over the counter buyers, who are aware about their product quality. Concentrated mainly in the core cluster locations (Bast Nau and Basti Sheikh) and other sub clusters located in the nearby areas, these firms are difficult to enumerate. Most of these firms do not get registered with the DIC due to the fear of coming into the Tax net. Already 3000 of such micro enterprises making only Stitched balls have been identified by SGFI, and their total number may be near 4000.

Micro- enterprises and sub contractors

Coming at the bottom of the echelon are this category of cluster players who provide the skilled labour to the cluster. Again these job workers may be divided into two sub categories, those who work in the firms and factories of the above categories and those who function from their home. While employing skilled workers at job rate is universal in the cluster, due to its characteristic manual skill based production method, the household job workers are entirely engaged in stitching of Footballs only. Already 10,000 such household workers have been identified by SGS, an agency engaged in certification of firms regarding the non use of child labour in the production of sports goods.

Job Workers

Again the number of the job workers working in the premises of the previous three categories of firms, are considerable. They are the dominant number within the near 9000 workers in sports goods industry as mentioned in the DIC data and again, as only unskilled labour and white collar workers like Clerks, Accountants etc. are employed by the cluster based firms as wage workers and their number generally go unreported or grossly understated to avoid liabilities under the various Statutory Acts for labour welfare. However, these players have very limited control over their roles as they function basically as wage worker excepting that their daily earning depend entirely on their efficiency and also effectiveness in production (a defective product means less earnings). However having the scope to increase their income by increasing productivity, these persons are always in search for improved techniques and a large number of sub contractors and micro entrepreneur of the cluster originate from this category.

Other players in the cluster are the raw material suppliers, the traders, provider of services like Painting etc., the buyers and institutions who are providing various services to the cluster. As

mentioned earlier, the traders are conspicuously absent in the cluster due to the very low transaction cost in the cluster. However there are some trading units who supply items which are not produced in the cluster, to the cluster based suppliers to the domestic market to supply the basket of sports goods to the out station customers. So they are more like suppliers to the cluster than traders. Again outstation buyers are also not very visible in the market as the cluster based entrepreneurs themselves make regular visits to their pocket markets. Some smaller buyers from the outstation market and the retailers from the nearer north Indian cities of course regular visit the market but they do not have much importance in the operations of the cluster. Again buyers from the overseas customers of the exporters regularly visit the cluster but their activities are limited to inspection of the facilities and products of the firms with whom already some negotiations have been completed by their parent firm. However it has been learnt that these buyers provide some technology inputs as they also visit firms of competing countries like Pakistan.

Other players

The raw material suppliers provide natural as well as man made materials needed by the cluster players. While the important natural material, wood, come from the nearer areas, the manufactured items mostly come from the places like Delhi and Mumbai, though there are a few local units for making PVC cloth, an important item for making stitched inflatable balls. Besides selling the material the suppliers provide almost no technical support to the firms. Nor the original producers show any interest to develop materials needed by the cluster as proved by the fact that even after half a decade of introduction of PU as the cover material for inflatable balls, the material of required quality are nor available indigenously. The situation is in stark contrast to the services provided by the suppliers of Chemicals to the cluster of Leather Industries located almost adjacent to the sports goods cluster through their fleet of permanently posted technologists. Is the reason the leather industry has more discernible buyers and has to maintain quality to their needs or the complacency of the sports goods industry with the imported products and negligence of the Indian raw material suppliers to this uncertain market? It appears the answer is both. But the most important reason is surely the absence of wider dialogue between the raw material suppliers and the cluster based firms to discuss the problem areas.

Raw material suppliers

Special mention must be made of the suppliers of Packing and Labelling material. Though these items do not have much functional value, they highly enhance the market value of the sports goods. Even professional players like attractive labels on their sports equipments to improve their appearances and club logos and other designs are quite common on the inflatable balls. Though the cluster players mention about satisfactory supply position of the items the quality of the labels appear to be very poor. It appears the typical cluster based firms are not very concerned about the problem, other wise good quality transfer labels are available in the country. The same may be said about the Packing materials. The importance of these items in the international market could be realized from the fact that the only sports goods producer in the organized sector of the cluster is having in house facility for labeling and packing materials. The situation is almost similar regarding the provider of Painting and other surface finishes. It is said that the cluster based firms lost their market to the Chinese Badminton Racquets mainly due to their superior surface finish and labelling.

Packing and Labelling

Institutional players in the cluster are the Industry Associations, the Government agencies and development Institutions. There are also some other Institutions, which though not involved in the cluster at present, could provide valuable services to it. The Government agencies like

District Industries Centre and Labour Welfare Office basically has regulatory roles but can also make valuable contribution in the promotional activities. The District Industries Centre do registration of the Small Scale Industries (the current definition is industries with investment upto Rs.10 million in plant and machinery). These registered units get some benefits like priority in providing Bank loan, power connection etc. Still most of the micro enterprises shy away from the registration, till compelled for getting Bank loans etc. as they fear the documentation will bring them under Tax net and under the supervision of various 'Inspectors'. The DIC also operate Government Self Employment Schemes, under which young job workers of the sports goods industry could get loan for setting up micro enterprises. The Labour Welfare Office is entrusted with the function of verifying implementation of various labour related laws by the Industry. In the Jalandhar cluster they have a special importance due to the issue of use of child labour raised in some developed countries.

Institutional players

Among the Government supported promotional bodies for the sports goods industry, Process and Product Development Centre for Sports and Leisure Goods, Meerut and Sports Goods Export Promotion Council, New Delhi, are most important. The Sports Goods Export Promotion Council (SGEPC) is an apex body established by The Ministry of Commerce, Government of India, for the promotion of exports of sports goods. Its members comprise about 200 leading manufacturers and exporters of sports equipment of all disciplines. With the Head Office at New Delhi, the Council has a Branch office at Jalandhar to facilitate exports from the cluster. SGEPC claims to have created confidence among overseas importers by providing a kind of third party guarantee. It tries to play the role of an intermediary between the foreign buyers and the domestic manufacturers. The council also enables participation of Indian companies in the annual international trade fairs like ISPO (Summer fair) at Munich, Germany and Super Show in Las Vegas USA. It arranges the Indian stalls for the participants who enrol with it, with the help of the respective Indian consulates. The Council also conducts market surveys of the export markets and sponsor Sale cum Study teams to the overseas markets. The Council also efforts to arrange scarce raw material for the sports goods industry and was able convince the Administration of the Andaman and Nicobar to partially lift the ban on movement of 'Cane' an important raw material for Cricket and Hockey bats for the exporters. SGEPC also brings out a monthly newsletter. The SGEPC also maintains a data bank on the export of sports goods from the country.

SGEPC

Process-cum-Product Development Centre for sports and Leisure Goods, Meerut (PPDC) was established by the Government of India to improve the quality of sports goods through quality control and standardisation to meet national and international standards and also to make the industry competitive. Since its inception, PPDC has tried to improve the quality of existing products, develop new products for the export market and providing common facility services and training to the industry. The PPDC provides a regular common facility service to the user industry through its workshops set up in the field of mechanical engineering, leather processing and carpentry, besides testing facilities through its testing laboratory. PPDC also has a documentation centre for the sport goods industry. However, it must be mentioned that at present there is not much linkage between the PPDC and the Jalandhar cluster.

PPDC

Small Industries Service Institute, Ludhiana, (SISI) an agency under the Government of India for providing Techno Managerial support to the Small Scale Industries, is also providing technology and human resource development services to the Jalandhar cluster. SISI conducts technology upgradation studies and managerial and entrepreneurial development programmes. Recently it has conducted a detailed Study Report on the sports goods industry.

SISI

CIPET Central Institute for Promotion of Plastic Engineering and Technology (CIPET), is an autonomous body under the Government of India, engaged in the development of Plastics and Plastic moulding. The headquarter of the Institute is at Chennai but a regional center of CIPET is located in Amritsar. Again, its existence is almost unknown to the Cluster players. With more and more use of plastics in the sports goods, the Institute can play a major role in the development of new products and use of new materials by the Cluster.

Another Government institution whose activities have strong linkages with the Cluster is Sports Authority of India (SAI). As the nodal agency for the promotion of Sports in the country, SAI has a large number of Sports Development bodies under its domain, who could play a great role in standardization of sports goods in the country. However today the importance of SAI to the Cluster is limited to a large institutional Buyer of sports goods.

QMC & STC Two other government promotional Institutions for the Sports Goods Industry presently in a redundant condition are the i) Quality Marking Centre for Sports Goods and ii) Branch office of State Trading Corporation. The Quality Marking Centre for sports goods was set up by the Government of Punjab to provide product testing and certification services to the sports goods industry. But the routine testing facilities available in the QMC has not been found useful by the Industry and today the it is taken to be almost closed. The State Trading Corporation set up a Branch Office in Jalandhar in the 1970s to undertake export of the products of the local clusters including sports goods. It also had a plan to stock scarce imported canalized items fro supply to the Exporters. In the eighties STC also set up a Test House for the Testing of Sports Goods. Today the Testing Equipments are lying idle basically due to the lack of interest of both STC and the Industry to use them.

Industry Associations are important forums of the cluster based firms. The main Associations of the cluster are i) Association of Indian Sports Goods Industries (AISGI), ii) Sports Goods Manufacturer and Exporters Association (SGMEA) and iii) Sports Good Federation of India (SGFI). The SGMEA is mainly a body of the top exporters from the cluster and membership of the Association has also been kept restricted to about 50 firms. The Association publish a bi- annual Journal 'Vision' which provide good information about the latest trends in the world market for sports goods. SGMEA also provide forum to the member to discuss their export related issues with the concerned Government Agencies,

Industry Associations

The AISGI is a body of mainly firms supplying to the domestic market. AISGI claim a membership of more than 300 cluster based firms. As the nature and demand pattern of the domestic market is completely different from the export market and the size of the firms are also different, there is almost no commonality in the function of the above two Associations. AISGI also tries to help its members to recover delayed payments from outstation customers. There are two other important local Associations, i) The Exporters' Association and ii) the Sports and Surgical Goods Complex Industries Association, in which some of the cluster members. However as these Associations has members from other local Industries also they are not focused to the sport goods industry.

The main current function of both SGMEA and AISGI is following up with the Government on various Tax related issues and statutory Laws for the Industry. None of the Association provide technology support or market related services to its members. While the SGMEA call regular meetings of its Governing body, the AISGI is not much functional in this regard. It appears a lot

of ice breaking; both at the level of Executive as well as members are required in both the above Associations to enable them to become thriving institutional network for the sports goods cluster.

Other Institutions in the vicinity of the cluster, which could provide important Business Development Services are i) Dr. B.R Ambedkar National Institute of Technology, Jalandhar, (NIT) ii) Regional Centre of Central Leather Research Institute, Jalandhar, (RECLRI) and Training Centre on leather garments of Khadi and Village Industries Commission (KVIC). The

Other Institutions

Department of Textiles Technology, NIT has a well equipped laboratory for the testing of all types of fabrics and a well endowed faculty. The department is capable and also interested in taking up development projects, particularly for the development of synthetic fabrics used in sports goods like footballs, protective gears etc. The RECLRI also has a well equipped laboratory for the testing of leather which again could be used for the testing of fabrics used by the sports goods industry. The Centre is having a training center for making of leather garments which again could be utilized by the cluster based firms for skill development in stitching of sportswear and protective gears, the two most upcoming items in the export market for sports goods. The Training Centre of KVIC could also be used in providing skill development training to the workers of the sports shoe industry, an item having high growth rate in the domestic market. As mentioned earlier a lot of new investments and diversifications are being made in sports shoe units in the Jalandhar cluster.

Among the specialized financial institutions Export Credit Guarantee Corporation (ECGC) is providing excellent support to the cluster. It provides insurance from the financial risks involved in Exports to the sports goods manufacturers. This is providing a great impetus to the sports goods exporters to venture into the new markets of Africa and Latin America. Small

Financial Institutions

Industries Development Bank of India (SIDBI), the development Bank for the Small sector could also help in the modernization of the sports goods cluster through its various products. The Bank can also play a role in the Entrepreneurial development of the cluster. The National Small Industries Corporation, (NSIC) provides a host of services like Machines on Hire purchase, exposure to export market etc. Recently, NSIC has opened an office in Jalandhar. It could be benefic for the modernization of the sports goods industry.

SGS is an international Company providing services in the areas of Quality Management and Certification. It has one of the few accredited Laboratories for sports goods. In Jalandhar Cluster SGS is providing an altogether different but important service. The problem of child labour in the stitching of inflatable Balls has been mentioned before. The propaganda on the issue in the developed countries had reached such a proportion that it seriously threatened the export of

SGS

Footballs from the cluster. The Cluster rose perfectly to the problem and showing exceptional cohesion set up Sports goods federation of India (SGFI). While SGFI initiated corrective measures to guide the child labours to schools, the industry approached SGS to certify non use of child labour particularly for the export market. Involvement of a reputed organization like SGS in the assurance of non use of child labour has helped the industry to a great way to reestablish its products in the export market. In a systematic effort the local office of SGS along with SGFI has identified more than 6000 regular sites (mainly households) for the stitching of inflatable Balls in Jalandhar and its vicinity. The exporters are to get their stitching jobs executed at these sites which are regularly served by the Inspectors of SGS to assure non use of child labour.

7. ANALYSIS OF BUSINESS PROCESS

Networked production

The business process of the cluster has been discussed in detail in the previous chapter. The strength of the cluster lies in the synergy of activities of the core players, in the production chain. The productive networking of the firms catering to the domestic or export segment, with the sub contractors and job workers give a highly flexible production system enabling the cluster to supply large orders within a limited period at a competitive price. Again the intimate supply networking has reduced the transactional costs so minimal that pure Trading in the finished goods is not a viable activity in the cluster.

Low leverage

A unique feature of the cluster is low intake of institutional finance. Though the exporters and to some extent the suppliers to the domestic market go for Bank loan for working capital requirements, the off take is kept at the minimum due to the high cost of bank loan. While new projects are fewer than expected, keeping in view the need of product diversification and process modernization to beat the competition and also to penetrate new markets, projects with high loan component are rare. It appears the core strategy of the cluster actors is to keep the cost of production minimum and to retain the market share by competitive price. The approach will be natural as the cluster caters mainly to the low end, highly price sensitive segment of the market, both domestic and export.

Unavailability of know how

Another reason behind the conservative investment policy of the cluster players is availability of proven know how is rare for the state of the art product. There is no indigenous source of such technologies and the cost of foreign know how, if available, is considered to be prohibitive. Again, there is not much information about the market size. All these produce a very uncertain picture before the entrepreneur about the future of a new project and probably desist him from going for diversification and modernization projects. And the few entrepreneurs who venture for the risk try to minimize the exposure by using non standard products and equipments and self acquired know how. Other reason for the reluctance to go for highly leveraged project appears to be ethical. The cluster based firms still have very strong social relations probably from the days of migration from Sialkot and publicity as a debtor or defaulter is considered to be social degradation.

Weak marketing

A dichotomy of the cluster is unwillingness of the players, particularly the exporters, to exchange information about market, though they maintain very close social relations. The reason is not very difficult to understand. Any firm here can supply almost any item, by making it through the job workers at a reasonable cost. The fear of the players about poaching in their niche markets by other players are justified in the sense that any firm is ready to supply anything as they could be easily procured. Again due to the same reasons the firms are not willing to exchange information about technology upgradation.

unavailability of market projections

A direct spin off of the secrecy maintained about market related information is unavailability of market projections. The resistance of the cluster based firms to share information make any projection of the domestic market near impossible and the last reliable information available is about five year old. It appears the cluster based firms are also not interested in market surveys as they are satisfied about their personal knowledge about their niche markets. The situation is near identical for the export market also. While some studies are conducted by the SGEPC, they remain limited to the

quoting of global data and analysis of the trends in the export from the country. For the in - depth analysis of the product or country based markets detail information from the actual exporters are required which appears to be not forthcoming.

The adverse effects of the above on the performance of the cluster, is already visible. The demand for the products of the cluster is stagnating and instead of gaining new markets, the cluster is loosing existing markets due to the introduction of superior products by the competitors, both in domestic and export market. In the present environment it is not possible for any SME to develop market and technology alone and networking of the production system only cannot sustain the Cluster in this global village where new products are coming everyday and countries like China are invading the market with enormous marketing muscles. The only way for survival of the Jalandhar cluster to develop marketing networks and networks to develop technology on the basis of mutual trust and confidence.

Need for networks

The household job workers of the cluster are currently much under focus due to productive and social reasons. The majority of these workers are women doing stitching of footballs and the bulk of the estimated 10 – 15 million Balls produced in the cluster, per annum are stitched by these segment. These players generally do not have direct interaction with the first two categories of firms above and mainly get their order from the Sub Contractors. While the quality of the final product depends to the extent of 40% to their operation (the rest 60% on the quality of the material and other operations), they work purely with their family learnt skill and the only equipments currently in use are needles and finger guards. So it is not surprising that the Cluster has remained exporters of Balls of promotional and recreational purposes with only one or two unit certified to the FIFA standard for tournament quality Balls.

Job workers

Another issue affecting these category of workers and ultimately the whole cluster is use of Child Workers. Being household workers with 'below the poverty line' income level there is always a tendency in the adult job workers to involve the children of the family in the gainful activity of Football stitching. In search of immediate additional income, these households think training the children in their traditional activities will be more useful than sending them to the schools. When this issue was blown out of proportions in the developed countries by the interested circles, there was a strong resentment against the use of the products made by the Child workers and the sports goods industry faced the threat of complete stoppage of export. The excellent initiatives taken by the cluster players to eliminate the problem of child labour and rise over the problem has been detailed below against the institutions involved in the activity.

Problem of Child labour

Reality Tree of some important problems or undesirable effects are given below. The export market is very important for the cluster and stagnation in the export and lesser unit value realization is of serious concern to the cluster. While on the technology front the unavailability of a Test House and know how for product diversification may be identified as the root cause, the absence of a consortia approach and market studies are the major causes for the market expansion. A separate reality tree has been developed for the items where the market of the cluster are being seriously threatened. And within a period of few years the country has become a net importer of Racquet items from a net exporter. Unavailability of technical support for product upgradation and state of the art materials may be identified as the root causes for the weakness of the cluster based products. The problems in the domestic market has been shown in a separate reality tree. The

Reality Tree

causes are nearly identical to those identified for the major products. The problems of the process and product development has been analysed in a separate Reality Tree.

While unavailability of the required materials and support for product and process development, lack of the market data and lacuna in the policy measures has been identified as the root causes of the maladies being faced by the cluster, the root of the root causes may easily identified as the absence of a effective common forum. Reluctance of the cluster actors

Building of social capital

to share market related information and exchange technological achievements has seriously impaired the capacity of the cluster to meet emerging challenges in these areas. Again a unified face of the cluster could have helped it to achieve support from the Government. The excellent synergy that could be developed by the cluster actors is showcased in the Child Labour issue. The initiatives taken by the SGFI with the close support of its members helped it to effectively tackle the ticklish issue and achieve international recognition. It appears while the cluster can gear up to fight the fire, it remains lax to avoid it. Building the capacities of the cluster level Associations take initiatives in this regard is the prime task.

8. SWOT ANALYSIS

A. Strength of the cluster –

1. Skill – A highly skill based production system with everyone starting from the entrepreneur to the workers of the firm having competence in at least one item.
2. Flexibility – A highly flexible production system, where the jobs are widely sub contracted and both large and small orders could be efficiently executed without a large in house work force.
3. Networked production – The strong network among the suppliers of the raw materials the firm, the sub contractors and the job workers gives a strong production system with minimum transaction costs.
4. Personalised marketing - The characteristics of the cluster is personal marketing by the entrepreneurs. Sports goods include a wide range of products and natural materials like wood are used. Personal contact of the entrepreneurs with the buyers created niche markets for them.

B. Weaknesses of the cluster-

1. Individualistic marketing - A direct fallout of the personalized marketing approach of the cluster based firms is unwillingness of the entrepreneurs to share market related information. This has led to an individualistic style of marketing with no coordination with other entrepreneurs. Often this has led to strong internecine competition in the export market, leading to acceptance of low prices for the products.
2. Traditional production system – The manual skill based method of production is still dominant in the cluster. There are not much efforts to modernize the production system and introduce state of the products/
3. Absence of BDS providers – The entrepreneurs mainly rely on their personal knowledge, for taking decisions about modernization or going for new markets. Accordingly growth of each firm

mainly depends on the information base of the entrepreneurs. Non reliance on the expertise of the professional consultants has seriously affected growth of the cluster.

C. Opportunities in the horizon –

1. Growth of the world market - The world market for sports goods are showing a healthy sign of growth with increase in health consciousness and leisure activities.

2. Demand for new types of products – Even in the domestic market demand for products like health equipments is increasing and sports wears and sports shoes are becoming fashion statements. Proximity to the bicycle and knitwear clusters of Ludhiana, and the adjacent leather/ footwear cluster of Jalandhar would facilitate development of a supply base of the above items.

D. Imminent Threats -

1. Emergence of China - China has already emerged as an important supplier for sports goods in the international market and it operates in the same market segment of cheaper low end products. It has also penetrated in the domestic market and posing serious challenges to the market share of the cluster.

2. Obsolescence of the products – The design of the sports goods even for age old plays like Badminton and Hockey are rapidly changing and plastics and composites are replacing the traditional metal and wood. The cluster based firms are still producing the traditional products, which may become obsolete in the near future.

3. Emergence of social issues - Social issues and fair trade practices are being given more and more weightage in the developed countries. With traditional production system the cluster based firms may not be observing all norms laid out for fair trade. This may lead to restriction of markets in the developed countries.

4. Emergence of other centres – The core competence of the sports goods cluster of Jalandhar is the highly skill based production and a networked production system. With the emergence of machine fabricated items, these competences of the cluster has become redundant and mechanized production facilities near large markets like metros are producing competitive products. With this trend the cluster may soon loose its competitive advantage and consequently, market.

9. INTER INSTITUTIONAL LINKAGE MATRIX

The inter institutional linkages are shown in the matrix below. The number in each cell indicate the extent of cooperation between the linked institutions. 1 indicates non existence of any cooperation and 5 indicates the ideal situation.

	AISGI	SGFI	SGMEA	PPDC	SAI	SGEPC	DIC	ECGC
AISGI	0	1	1	1	1	2	2	1
SGFI	1	0	4	1	2	4	3	4
SGMEA	1	4	0	2	3	4	3	4
PPDC	1	1	1	0	2	2	1	1
SAI	1	2	3	2	0	3	1	2
SGEPC	2	4	4	2	2	0	2	4
DIC	2	3	3	1	1	3	0	1
ECGC	2	4	4	1	1	4	1	0

It may be noted that besides the two Associations SGFI and AISGI, no other institution has developed necessary linkages for synergies with the other institutions. Again institutions shown in dotted line in the cluster map have not been included in the matrix because at present they have no interaction with the cluster. The linkage of PPDC, Meerut, the only expert institution in the area of development of sports goods in the country, with the local institutions is currently very poor.

10. Strategy for Development

From the analysis of business operations and Reality Tree of the prime problems being faced by the cluster, following areas could be identified for intervention to facilitate growth of the cluster.

- i) Widening of export market
- ii) Standardisation of the products
- iii) Development of domestic market
- iv) Improvement of production processes
- v) Product diversification

Sports goods industry in India is export oriented. Though the exact size of the domestic market is difficult to estimate, it is sure that export is the largest market for the Industry. In the Jalandhar cluster also export is the prime activity both value and technology wise. However the export market targeted was the low value, high quantity recreational items. While this may have suited the cluster based firms due to the low cost of production and also inability to meet the quality requirements of the high end market for sports goods. But the situation is fast changing with the entry of China and other developing country in the same segment of market and the cluster is facing a stagnant export market. They are beating the cluster in the game of high volume, low cost production. The best strategy for the Cluster at this juncture would be to follow the path of Pakistan, which has already established itself in the high end market for quality sports goods, particularly, footballs.

Widening of export market

So far the most important market for the cluster is Europe and America, most importantly U K and USA. While product quality is needed to be improved to increase penetration in these markets, there is also need for identification of new markets in the countries of developing world. This will also suit the core competence of the cluster for making high volume products for the lower end of the market. While SGEPC is providing support to the exporters to explore new markets, the efforts are so far limited to individual level. When China is entering the global market as a monolithic behemoth, and even for countries like Pakistan where cluster level Associations are spearheading the marketing drive, what success could be achieved at the individual level could be well imagined. However till now there is no efforts by the cluster players for joint marketing. The interesting point is while the cluster based firms maintain very close social relations due to historical reasons, they are highly secretive about market related information.

explore new markets

While the reasons behind such behaviour have been explained elsewhere, the need of the hour is a consortia approach. The secrecy maintained by the exporters about their buyers and contacts in the traditional markets of Europe and USA, may be justified by the time and money invested by the individual firms. But for new markets the cluster based exporters should develop consortia, both for creating

Export consortia

confidence in the buyers and also overcoming competition by the joint marketing capacity and resources of the consortia. This will also help Government agencies like SGEPC to support the exporters more effectively.

Product Standardisation

Standardisation of the products, particularly of stitched inflatable balls, valuwisethe single most important product of the cluster is of immediate need. This is more so because balls are the single majority item in the basket of sports goods exported from the country. As mentioned earlier the balls exported from the cluster are mainly for the promotional and recreational segment of the market. The balls are not considered to be of professional quality. However with the increasing competitions from countries like China, Indonesia etc. in this segment, the cluster needs to target the market for high value professional quality balls. While in neighbouring Pakistan a large number of firms produce footballs conforming to FIFA standards, the number is dismally low in India. And to cater to the high end, high value market the products of the cluster should also reach such standard.

While the process of manufacture is similar in both the countries, non availability of accredited testing facilities has been identified as a major hurdle for product Standardisation. Important exporters from the cluster and some other quality conscious firms have in house testing facilities for Balls, But for acceptance in the international market, Third Party certifications from reputed agencies are needed. As there is no such facility in the country, at present, the balls are sent abroad for testing, which costs a lot. Availability of a accredited testing facility in the cluster will not only create confidence about the product in the international market, but also provide the necessary feedback to the suppliers about their product quality.

Accredited Test House

Domestic market development is another important need of the cluster. While value wise the export market may be smaller than the export market, the majority of the cluster based firms are dependent on the domestic market, where some major changes are taking effect. As mentioned earlier the domestic market for sports goods has a completely different complexion than the export basket. While football is the king of export market, the domestic market is dominated by products like Cricket gears, Badminton equipments etc. Of late fitness equipments are also showing a high growth rate. While the Government is providing support to the exporters, there is almost no institutional support for developing the domestic market. Already with the onslaught of cable TV, sports has taken a back seat as a leisure time activity and the suppliers to the domestic market report a shrinking market.

Domestic market

The situation has been further complicated by the entry of foreign suppliers like China with the opening of the market. With their improved manufacturing system and high production capacity, Chinese exporters are providing attractive products to the Indian users which are well accepted. In fact they have seriously threatened the market of the cluster in Badminton equipments. It is expected in the near future synthetic alternatives for many traditional sports goods will be brought to the Indian market seriously threatening the market for the cluster. Under this situation systematic development of the domestic market is of dire need of the cluster.

What probably needed is to launch a campaign to make the users particularly the institutional buyers aware about the products of the cluster and their advantages. Development of a common brand at least for the Indian market need also to be targeted. The variance in the quality of the imported products, as often reported, need also be propagated. Institutional buyers like Army, Paramilitary Forces etc. are

Marketing Campaign

important for the cluster due to their bulk purchases and need also to be cultivated further. SAI is probably the largest civilian consumer of sports goods. While some of the cluster based firms are regular suppliers to SAI, a better interaction may further widen the market.

And all these could be delivered through marketing networks only. The individual efforts of the cluster based firms for developing niche markets need to be synergised through marketing networks. The promotional campaigns could probably be best launched by the cluster based Associations which can also promote the word Jalandhar as a prelude for developing a common brand. With this approach, it will also be possible to garner some support from the Government for the promotion of the products of the cluster.

Marketing networks

The story of Chinese invasion of Indian sports goods market reinforces the need for improvement of the production processes. The mechanized production system of the Chinese suppliers and the better finish and labeling of the products made them attractive both quality and cost wise to the Indian consumers. And what has been claimed by the cluster actors, the finishing rather than the functional properties has beaten the Indian producers.

Process modernisation

For the export market surveys conducted by the SGEPC indicate the need is to produce synthetic based state of the art design of sports goods for which modern facilities are to be established. Development of diversified product ranges are also being stressed, to cater to the discernible needs of the western countries. While setting up of modern production facilities may be a good prescription for the sports goods industry in general, their applicability in the Jalandhar cluster should be decided with caution. As explained at length earlier, the core competence of the cluster is a highly skill based production system and the low cost of production through elaborately networked production process. And all these advantages will be lost with a modern mechanized production system. There may also be no need of the cluster as the entire process will be in house with new material, new technology and new skill all alien to the cluster.

Which way

It appears the pragmatic path for the cluster should be Hybridization of technology. Wherever needed the cluster should adopt modern production facilities and state of the art materials, it should retain its networked production method based on traditional skill. In fact the same approach has been adopted by quite a few cluster based firms. The case studies for Hockey Sticks with state of the art components and Shuttle Cocks with Chinese components, only support the above strategy. However, some mechanisation of the process is urgently needed. For forming of wood and metal used widely in sports goods special purpose machines and fixtures are needed to be developed. Similarly, facilities are needed for production of world class Labels, Stamps and Packaging materials. Modern facilities for services like Seasoning of timber and Painting and Finishing of the goods are also needed to improve the product appeal.

Hybridized process

A problem in this regard is the tendency of the entrepreneurs to make even the machines rather than buy. While this helps to keep the investment level low with consequent reduction of the cost of production, the product quality becomes the first casualty. As opined before, complete mechanization may not be the correct approach for the cluster but best available machines are needed in the cluster in the areas as mentioned above. And the best approach may be to motivate the cluster player to set up separate units for providing these services and also sell them as these do not appear to be the priority areas for the basic producers. For this purpose interaction of the

Ancillary services

suppliers of such machines with the cluster actors are also needed to prove their utility. Coordination with the financial institutions for funding the projects are also needed.

As many of the special purpose machines are not readily available, they are required to be developed within the cluster. As R&D are not possible in house by the small firms due to the cost and risk involved, common facility is needed for such activities and some public funding for setting up the facility will enhance the process a lot. The R&D center is needed to be set up in the cluster itself, as earlier efforts to develop these machines in far away Government

R&D center

Institutions did not bear much result. Day to day coordination is essential for product and process development and for that the facility should be set up in the cluster itself like the Test House. In fact the Test House which is of immediate need may be set up first and subsequently developed to a R&D center. The establishment could be kept lean by installing only essential facilities and networking with the other institutions located in Jalandhar and also at Ludhiana, which is a major center for engineering with a large number of support institutions.

Another area where the R&D Centre will be of use is the development of state of the art materials like Composites, sandwiched fabrics etc. While production of these items may need

Development of new products & materials

sophisticated technology and considerable investment, the minimum economic capacities may also be too large for the cluster. But the Centre may develop exact specification for the material needed and then locate producer of such items and assist them to develop the material needed by the cluster. With the thrust on product development and process modernization, the R&D center would also be a harbinger for developing prototypes for the new sports goods. With all stress on the product quality and process modernization, the cluster cannot remain complacent with the existing range of products in a dynamic world. So product diversification should be a continuous phenomena and the cluster should develop products with synergic links. While sports shoes may fit ideally in the product basket of sports goods, its inclusion in the cluster will not utilize the core competence of the cluster. So a judicious diversification plan keeping in view the market demand, material availability and above all the core competence of the cluster is needed to be developed and the R&D center may be the ideal agency for that.

Other areas where the cluster need systematic support are regular interaction with the raw material suppliers for development of appropriate material, development of BDS providers for technology as well as market development and regular interactions with Government for policy level support. As mentioned earlier almost no interaction with the manufacturers of the raw materials happens in the cluster to discuss problems in quality. The basic reason may again be fragmented approach. Individual units particularly the larger ones may be interacting with the suppliers but that does not enlighten the cluster. What is more important, the manufacturer also does not get a correct idea about the total demand of a particular item so that can be developed. This is the reason why even products like PU and Aluminium sections, which are produced in the country, are not available as per the requirements of the cluster. Initiatives by the cluster based Associations are required for holding regular dialogues with the raw material suppliers.

BDS providers are important change agents for the development of an Industry. They are simply not visible in the cluster. While one reason may be developing expertise technology and market for the diverse range of products called sports goods is difficult, the reliance of the entrepreneurs on their own knowledge also eliminates any role for the BDS provider. But with the introduction of plastic moulding and need for better surface finish and labels etc. technology

consultants will have a great role in the coming days. Again, for developing new export markets, engaging market consultants will be the most cost effective approach. However, as in the current mindset of the cluster actors the utility of the BDS providers is doubtful, some financial support in the initial stage for availing their services may be beneficial. Quality consultants will also be of great help to introduce quality systems in the cluster based firms but at present only a handful of firms are equipped for that.

Regular interaction with the Government agencies for removing hurdle in the growth of the cluster cannot overemphasized. At present, the cluster based Associations have occasional interaction with the Government but mainly on Tax issues. Again, these are held in crisis situations. What is needed is regular periodic meeting with the Government authorities to discuss problems in a pro active manner so that there is sufficient time for corrective action. A comprehensive action plan for the development of the cluster for propagating at the Government level is needed to be developed and all these could be best done through the cluster level Associations.

11. VISION STATEMENT

From the discussions held with the various cluster actors, the current vision of the cluster may be stated as:

The cluster will endeavour to retain its position as leading supplier of conventional sports and leisure goods in the domestic market and increase its share in the global market for sports goods, particularly stitched inflatable balls for recreational and leisure time use, while providing maximum value for money to the user.

With the implementation of the proposed strategy for development, the above vision is expected to be re oriented and the vision statement under the shifted paradigm may be:

The cluster shall be the **prime supplier** of sports goods of the **world standard**, both for recreational and **tournament** use in the domestic market and increase its share in the global market for sports goods **by at least 50%** in the next five years. Both the above targets will be achieved through improving the product quality, adding **new products to the basket and penetrating new markets, through consortia** while providing maximum value for money to the user and following the **fair trade** norms.

The highlighted features appear to be beyond the current dynamics of the cluster and are expected to be achieved through the Action Plan as described below.

12. ACTION PLAN

The Action Plan for the development of the sports goods cluster of Jalandhar could be divided in to the following segments:

- a) Capacity Building of the Industry Associations
- b) Measures for Product Standardisation
- c) Development of Marketing Consortia
- d) Formation of Networks for Technology Development
- e) Capacity Building of the Training Institutions
- f) Introduction of Fair Trade Practices

The main two industry association of the cluster, AISGI and SGMEA (SGFI has not been considered as its present mandated is only to eliminate the problem of child labour in the cluster) are presently engaged in activities related to the modification of Tax structure,

amendment of statutory laws and finance related issues. The reason is these are the areas which affect all cluster based firms and leads to quick consensus as every one knows an united face is the only means to force the Authorities to listen to them. To develop the cluster to a dynamic self sustaining one, these Associations need to be enabled to act as the mouthpiece, common arm and also think tank of the cluster.

The common problem of both the clusters are, they do not have appropriate staff to work on the issues of common concern and the office bearers are busy entrepreneurs who hardly find time for such activities. So the immediate need is to facilitate both the Associations to employ full time staff to take care of the enhanced activities of the Associations as per the Action Plan with professional interest. These persons will also be the nodal point for formation of the Networks for market and technology development. Another important activity of them will be to develop some regular communication system within the members through newsletter etc. and with the other stake holders through Publications and Website. Maintaining an efficient information center in the aegis of the Associations will be another important task of the executives. Besides the staff the Association will also need logistic support like proper premises, Computers, Furnitures, Telephone lines etc.

The present communication system within the members of these Associations is very poor. The Annual General Meeting and Emergency Meetings to discuss the crisis issues are the only occasions when the members can interact. A regular Newsletter will be a efficient media for the members to interact and communicate their opinions. The appropriate means of communication with the stake holders will be Periodicals and website. While a well laid periodical will enhance the image of the Association among the stake holders and may be a good marketing tool, an website will be a very cost effective tool. The proposed information center will compile all relevant information about the cluster which will be disseminated through the news letter. Though in the current environment the members of the Associations may not agree to part with their market related data, with the confidence building measures proposed, they may slowly come out to share their information with other members and this will ultimately lead to setting up of sub contract exchanges for free flow of market related information among the members.

Formation of the Market and Technology related Networks will be another important initiative. For effective negotiations with the existing buyers, developing new markets and diversification of the product, the Networks are proven tool. With the limited trust among the cluster actors about market related activities and varying interest about product and market segments, these networks may be visualized as small coherent group of firms having common interest. While the life of the initial networks may be short in the current environment, say, for participation in a fair or negotiating with a institutional buyer, they may continue with ripple effects. The Associations as common ground of meeting may be the ideal launching pad of the networks with the association executives as development Agents (NDA). Similarly networks for the product development, Technology upgradation and quality management among firms of common interest will facilitate such activities.

BDS providers have a major role in enabling and functioning of the networks. At present they are absent in the cluster. So identification of appropriate consultants and introduce them to the cluster will be an essential component of the network building exercise. As export is the main market of the cluster, export consultants will be very useful for the cluster. The real problem will be the location of technology consultants for the cluster. The processes of the cluster are highly specialized and locating a person outside the cluster (or for that matter its sister cluster at Meerut) will be difficult. As the acceptability of the local expert may be doubtful, a foreign consultant will be the ideal choice. He may also be a nucleating agent for the networks.

The most important task of the associations will be setting up the proposed Test House for sports goods. While the necessary funds may be available from Government, the commissioning and running of the facility will be the responsibility of the cluster based institutions as per the policy. In the present scenario this appear to be a very tall order for the associations. It is expected the networks will facilitate in setting up the Test House as this will be an important requirement to penetrate the high end of export market and justify product upgradation through technology development. Again, for justifying the need of the test house to all stake holders, a feasibility report from a reputed agency will be a must. Again involvement of an international consultant of repute will assist in getting the necessary accreditation of the Test House. It is expected that the proposed R&D center for the sports goods in the cluster will emerge out of the Testing Centre as demand for Technology and product design will intensify with the growth of the cluster.

Training of the cluster actors to meet the need of advance knowledge for the growth of the cluster will be part of the intervention strategy. At present the cluster actors do not feel the need of any training of them or their workers. But with the introduction of new products and advance technology new type of skill will be required in the cluster and the traditional method of in house training may not be useful. Even for the existing processes like stitching of Balls, new fixtures and machines are expected to be introduced. All these will need retraining of the existing workers and what is more important training of the fresh workers to the cluster. While quite a few of the cluster based institutions could be identified for conducting the training programmes, a lot of homework are needed to be done. For example, the current training programme of garment stitching is to be recast for skill development in making of protective equipments and gloves. Similarly an ordinary course of Carpentry is to be restructured for training in fabrication of wood based sports goods. All these will need close cooperation of the cluster actors and training institutions. Requirement of external consultants may not be needed but availability of foreign expertise will surely infuse fresh ideas in the training programmes.

Short listing of the institutions for conducting the training programmes at this juncture may not be useful as this will depend on the emerging training need and the willingness of the Institutions to provide them. Most of them have their own mandate and will agree to introduce new programme only when they are convinced about their marketability. The NGOs may have an important role in the training programmes particularly for the Ball stitchers. Mostly located in the fringe areas of the town, these job workers, predominantly women are needed to be trained on site. This is technically feasible as in the foreseeable future Ball stitching will remain a manual exercise, only some fixtures and tools could be introduced to improve productivity and quality. For mobilizing the large mass of stitchers (total number 20,000?) NGOs will have an important role. Again as conventional training institutions may not be interested in providing such type of training and even may not have the required expertise the NGOs could be of help. For this purpose some funding is required for empowering the NGOs for conducting the training programmes. Again the training institutions may also need fund support for equipping them for conducting the training programmes.

The NGOs will also be effective tools for implementing fair trade practices in the cluster. SGFI is already is doing a commendable job for rehabilitation of child labours and its efforts are needed to supported by funds from Government and multilateral agencies like CARE. As the task is too much for a single institution, other NGO should be encouraged to join the programme.