10.1 Industry Cluster

An industry cluster can be defined as group of related firms, industries or suppliers and various institutions located at a particular place. Alfred Marshall gave the first clear description of industry clusters and conducted a study of the Lancashire Cutlery Industry and Sheffield Steel Industry and noted down that there was a tendency among the specialized companies to cluster together in such a way that it produced geographic concentration of activities which he called Industrial Districts. Marshall observes how “…… great are the advantages which people following the same skilled trade get from near neighboring to each other…”. The agglomeration of similar or related firms generates a number of external economies which lead to decrease in the cost for cluster producers. Such economies include a group of specialized workers, easy availability of suppliers and quick transmission of new knowledge. The concentration of similar firms attracts and obtains benefits from a group of labour possessing common skills. The risk of individual worker is less by locating at a place where lots of employment opportunities are available. Further, the group of firms present in the cluster motivates the suppliers to locate at a place where readymade market is available. There is quick dissemination of ideas and knowledge as the ideas can easily move from one firm to another.

Location experts redefined the ideas given by Marshall that the firms benefit being located near other firms. They explain two types of external economies; localization economies (economies from proximity to dissimilar firms, especially firms in same industry) and urbanization economies (benefits from proximity to dissimilar firms, especially firms in other industry).

However, it was only in 1990’s that the interest in concept of clusters was enlightened when Michael E. Porter conducted a global study of world’s most successful businesses and found that firms from one or more nations achieved astonished success in particular industries. The author elucidated cluster as a geographic concentration of
interconnected companies and institutions in a particular field. Porter (1998) explained that clusters include:

1. Linked industries and other entities such as suppliers of specialized inputs, machinery services and specialized infrastructure.
2. Distribution channels and customers, manufacturer of complementary products and companies related by skills, technology or common inputs.
3. Related institutions such as research organizations, universities, standard setting organization, training entities and others.

Clusters not only reduce transportation cost and boost efficiency but improve incentives and create collective assets in the form of information, specialized institutions and reputation amongst others. Clusters enable innovation and speed productivity and growth. They also ease the formation of new businesses (Porter, 1998). The horizontal and vertical association amongst the firms present in the cluster provides the benefit of specific infrastructure, reduced transaction cost, large access of the market, rapid innovations, availability of cheap and skilled labour.

The presence of a large number of competitors in the cluster motivates all the firms to take notice of each other’s action and try to adopt the best strategy to face the competition. Buyers become more sophisticated as they expect a lot of attention from the supplier and because of this, the supplier is required to provide the best services to its customers. Due to the presence of number of institutions in the cluster who are using same skills, same technology and same inputs, more and more education institutions, Government bodies, new firms and new institutions become part of the cluster. With the development of the cluster, the resources start moving from the firm that cannot employ those resources effectively to the firms that can employ the resources efficiently. Suppliers located in the cluster provide cooperation with the industry’s research and development efforts. Further, the customers present in the cluster provide the possibility of transferring the information about new needs and technologies and demanding extraordinary goods and services. The concentration of domestic rivals, suppliers and customers help the city or region in becoming a unique environment for competing in the market. The presence of information flow, mutual reinforcement and visibility present in
the environment gives a meaning to the observation of Alfred Marshall that in some places, the industry is in the air. Further the presence of Government and various industrial associations ensure various benefits which cannot be available to the firms if they are located in another area.

10.2 Industry Clusters in India

Clusters have been in existence in India for centuries and are famous for their products at both national and international level. Clusters represent the socio economic heritage of the country where some of the towns or contiguous group of villages are known for specific product or range of complementary products (Singh, 2010). It is estimated that there are around 7000 clusters in traditional handloom, handicrafts and modern SME industry segments (Foundation for MSME Clusters, 2007). These clusters are in following typology:

<table>
<thead>
<tr>
<th>Type of Clusters</th>
<th>Number of Clusters</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Manufacturing</td>
<td></td>
</tr>
<tr>
<td>SME</td>
<td>1122</td>
</tr>
<tr>
<td>Micro Enterprises</td>
<td></td>
</tr>
<tr>
<td>Handloom</td>
<td>495</td>
</tr>
<tr>
<td>Handicraft</td>
<td>3084</td>
</tr>
<tr>
<td>Total</td>
<td>4701</td>
</tr>
</tbody>
</table>

(Source: Policy and Status Paper on Cluster Development in India, Foundation for MSME Clusters, 2007)

In addition to above clusters, it is estimated that there are about 2500 unmapped rural industry clusters in India (Ministry of Commerce and Industry, Government of India, 2011). The clusters of some selected industries in some areas are indicated below:-
<table>
<thead>
<tr>
<th>Product-Group</th>
<th>District-Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>Woollen and Cotton Hosiery</td>
<td>Tripur, Ludhiana, Calcutta, Delhi</td>
</tr>
<tr>
<td>Sports Goods</td>
<td>Jalandhar, Meerut</td>
</tr>
<tr>
<td>Hand tools</td>
<td>Jalandhar, Nagpur</td>
</tr>
<tr>
<td>Automobile Industry</td>
<td>Gurgaon</td>
</tr>
<tr>
<td>Electronics</td>
<td>Noida, Bombay, Pune &amp; Bangalore</td>
</tr>
<tr>
<td>Rubber Goods</td>
<td>Jalandhar</td>
</tr>
<tr>
<td>Woollen Shawls</td>
<td>Amritsar and Kulu</td>
</tr>
<tr>
<td>Glass and Ceramics</td>
<td>Khurja &amp; Farukkabad</td>
</tr>
<tr>
<td>Bicycle Parts</td>
<td>Jamnagar &amp; Ludhiana</td>
</tr>
<tr>
<td>Domestic Electrical Appliances</td>
<td>Bombay, Delhi</td>
</tr>
<tr>
<td>Wall Clocks</td>
<td>Morvi</td>
</tr>
<tr>
<td>Diesel Engine &amp; Parts</td>
<td>Kolhapur, Agra, Rajkot, Coimbatore &amp; Ghaziabad</td>
</tr>
<tr>
<td>Brassware</td>
<td>Moradabad</td>
</tr>
</tbody>
</table>

These clusters contribute 60 percent of the manufactured exports from India. Some of them are so big that they manufacture 70 per cent to 80 per cent of total production of that particular product in India (Gulati, 1996). For example, Tripur, a small town in Tamil Nadu contributes 80 per cent of the country’s cotton hosiery exports. Similarly, Panipat produces 75 per cent of total blankets produced in India. In the same manner, Ludhiana in Punjab contributes 95 per cent of the country’s woolen knitwear, 60 per cent of India’s bicycles and 85 per cent of sewing machines produced in the country. Ludhiana is also known as Manchester of India. Agra, which is famous for foot wears, has 800 registered and 6,000 unregistered small scale units and it is producing approximately 150,000 pairs of shoes per day with a daily production value of 1.3 million dollars and exports worth US $ 60 million per year (Russo, 1999).
10.3 Sports Goods Industry of India

The Sports Goods Industry of India is spread over the length and breadth of the country. It is located in Jalandhar, Meerut, Delhi, Gurgaon, Agra, Mumbai, Moradabad and Kolkata. The roots of Sports Goods Industry of India are in Sialkot, Pakistan. In 1947, when the partition of the country took place, many of the skilled Hindu craftsmen migrated to Indian part of Punjab and settled in Jalandhar where one of the major sports cluster is now located. Later on some of the migrants shifted to Meerut. The industry is located largely in Meerut and Jalandhar. The sports goods industry is mainly concentrated in the cottage and small scale sector. The industry is highly labour intensive and provides employment to weaker sections of the society.

10.4 Sports Goods Cluster at Jalandhar

Jalandhar is an important city of Punjab located in the doaba region. It is located between two rivers i.e. Satluj and Beas. It is also situated between two important cities of Punjab i.e. Ludhiana (70 kms) and Amritsar (60 kms). Jalandhar is also a city of location of two important clusters of Handtools and the Leather Cluster. Apart from these two clusters, Sports Goods Cluster is also located at Jalandhar. Today more than 50 per cent of India’s export of sports goods is from Jalandhar alone (As per the records of Sports Goods Export Promotion Council, Delhi). The emergence of sports goods cluster of Jalandhar can be divided into two parts:-

(a) Sports Goods Cluster before Independence
(b) Sports Goods Cluster after Independence
(a) **Sports Goods Cluster before Independence**

The origin of sports goods cluster of Jalandhar can be traced back to Sialkot (now in Pakistan). Prior to partition of the country, Sialkot was the sports goods production centre. Sialkot is located in the foothills of Himalayas. The wood required for manufacturing of sports items was available in large quantity. The credit for introducing sports in India goes to British army. The British people were interested in playing games. The sports goods industry started in Sialkot, when a British man broke his tennis racquet. A local person Mr. Ganda Singh Uberai, a clerk in army was asked to get it repaired. Mr. Ganda called a local artisan to repair the racquet. The man did a perfect job and sports goods industry came into existence. The first sports goods manufacturing firm was Uberai Ltd. which was established in 1888 at Sialkot. This firm was the founder of sports industry in India (Sharma, 1990, p.16). Only racquets were manufactured on small scale till 1895. With the passage of time and with the spread of education in India, various European games like cricket, badminton and squash gained popularity in Indian educational institutions and encouraged the production of sports goods related to these games (Sharma, 1990, p.16). The product range further expanded to include cricket and hockey balls, footballs, polo sticks etc. By that time, many workers got training in Uberio Ltd. and started setting up their own units. By the time of partition, Sialkot had earned a reputed name as manufacturer of sports goods. In 1946-47, sports goods worth Rs. 3 crore were exported from this centre and industry was estimated to employ 40000 to 45000 workers directly and indirectly (Pandit, 1985, p116)

(b) **Sports Goods Cluster after Independence**

In 1947, due to partition of the country, Sialkot became a part of Pakistan. The entrepreneurs belonging to one community decided to shift from Sialkot. The workers belonging to that community also migrated along with the entrepreneurs. Initially these migrants settled in Batala in Punjab, which was near Sialkot and close to the hills where the wood required for manufacturing sports items could be grown. But as per resettlement plan of Government of India, these people shifted from Batala to Jalandhar. Jalandhar was found to be suitable place for manufacturing sports items due to its location near the
foothills of Himalayas which assured regular supply of wood and further the presence of leather cluster assured regular supply of leather. At Jalandhar, both the raw materials required were easily available. Some of the migrants shifted to Meerut, where both wood and leather were available. The migrants located at Jalandhar started manufacturing of sports items and Jalandhar flourished as a cluster.

Jalandhar industry is located traditionally in two localities, Basti Nau and Basti Sheikh. With the growth of industry, many firms have started their units in the adjoining areas of Basti Danishmandan, Nakodar road etc. The workers working in the industry are settled in Bhargav camp, Gandhi camp and Basti Danishmandan. Now entrepreneurs have started setting up modern units in Surgical and Sports Goods Complex and Industrial area, located on the highway to the city. However the network of traditional business process is so strong that even these firms have their offices in Basti Nau and Basti Sheikh- the traditional location.

The Sports Goods Cluster at Jalandhar is facing many problems, which threatens its existence. Therefore, there is a need to find solution to the problems faced by this sector. Jalandhar was a big exporter of sports goods all over the world but now various other countries have taken this market and sale of its products is declining. Some of the problems are due to input prices and low labour productivity. There is a need to study and analyze the problems of this cluster in order to strengthen the competitiveness.

10.5 Objectives of the Study

The main objective of the study is to examine the growth and problems of Sports Goods Cluster at Jalandhar. With this main objective, the study has the following specific objectives:

1. To study the emergence of Sports Goods Cluster at Jalandhar.
2. To identify the factors determining the growth of Sports Goods Cluster at Jalandhar.
3. To review Government policies and support for Sports Goods Cluster at Jalandhar.
4. To explore the problems of Sports Goods Cluster at Jalandhar.

5. To suggest a model for future competitiveness of the Sports Goods Cluster.

10.6 Sampling

As per the records of District Industries Centre (under the Directorate of Industries, Punjab), there are 742 sports goods manufacturing firms registered as Small Scale Industries as on 31st March, 2010. District Industries Centre (DIC) used to categorize the firms on two basis, i.e Urban and Rural.

Firms which are located in the urban area with population more than 20000 are grouped under urban category and the firms which are located in the rural area with population less than 20000 are grouped under rural category. This classification has been followed by District Industries Center, Jalandhar.

As per the records of DIC, number of firms in the sports cluster at Jalandhar can be categorized as:

<table>
<thead>
<tr>
<th>No. of Firms</th>
<th>Urban 596</th>
<th>Rural 146</th>
<th>Total 742</th>
</tr>
</thead>
</table>

(Source: District Industries Center, Jalandhar)

In 2006, an Act named as the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 has been passed. According to this Act, SSIs are classified on the following basis:

Micro Enterprises: It includes firms where investment in Plant and Machinery is less than 25 lacs.

Small Enterprises: It includes firms where investment in plant and machinery is from 25 lacs to 5 crore.

Medium Enterprises: It includes firms where investment in plant and machinery is from 5 crore to 10 crore.
But no such categorization of the firms has been made by DIC. After 2006, it has started recording the data for new registered firms on the basis of above category but for the old firms which are registered before 2006, no categorization has been made.

For the purpose of present study, the population of 742 firms was considered in total and 20 per cent of the population was studied. The data was collected from 150 firms and sample was divided into two parts: Micro and Small enterprises. There are no medium and large firms in the cluster. Only micro and small scale firms are located in the cluster (DIC, Jalandhar). The distribution of the sample is as under:

<table>
<thead>
<tr>
<th>Firms Criteria</th>
<th>Firms</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of micro enterprises</td>
<td>105</td>
<td>Investment less than 25 lacs</td>
</tr>
<tr>
<td>Number of small firms enterprises</td>
<td>45</td>
<td>25 lacs – 5 crore</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>150</strong></td>
<td></td>
</tr>
</tbody>
</table>

Convenience sampling was adopted to collect the data.

10.7 Data Collection

The data has been collected at two levels:

1. Secondary Level
2. Primary Level

1. Secondary Level

At the secondary level, concentration was on literature survey and studying the experience of various researchers in Indian and International clusters.

For collection of literature, various sources had been used. A lot of information was collected from books, journals, magazines, newspapers and Government publications. The local offices of UNIDO and Sports Goods Manufacturers and Exporters Association (SGMEA) provided a lot of unpublished material. Project managers of
UNIDO provided information on their field experience. The libraries of Guru Nanak Dev University, Ratan Tata, Faculty of Management Studies, Delhi University, Management Development Institute were found to be very useful.

The office of District Industries Center, Jalandhar provided information about the firms in the cluster, employment, production and investment made by them.

Sports Goods Export Promotion Council provided data on export of sports goods from all over India especially Jalandhar. Various associations like Sports Forum, Sports Goods Foundation of India (SGFI) and Association of Indian Sports Goods Industry (AISGI) provided a lot of information about the present status of the industry and problems faced by them. Internet was also accessed to collect a lot of useful material. Various websites were visited to collect latest information on clusters.

2. Primary Level

At primary level, the data was collected through a specially designed structured questionnaire. Before designing the questionnaire, it was proposed to visit the cluster to understand the present status of cluster. Ten firms were visited, three were exclusively serving domestic market, three were exclusively serving international market and four firms were dealing in both domestic market as well as international market. The visit provided a lot of information on their production process as well as functioning of the cluster. To have a broader outlook of the cluster, the office bearers of the local associations (SGMEA, SGFI, Sports Forum, AISGI) and support institutions (UNIDO) were also contacted. This interaction with the firms and associations provided an insight to frame the questionnaire.

The questionnaire was divided into two parts. First part was designed to study the structure of sports goods cluster at Jalandhar. Questions were asked to get information about their level of investment, sales, marketing strategies, networking mechanism, research and development and support of the Government.

Part II of the questionnaire was designed to identify various factors determining the growth of sports goods cluster at Jalandhar. A set of 25 statements have been
developed to study the factors determining the growth. Five point Likert scale was used where respondents were asked to rate each statement from strongly disagree to strongly agree. Factor Analysis is applied to find out small number of uncorrelated variables and to replace the large number of correlated variables.

The data was collected at two levels:

**Level I**

At this level, the researcher started collecting the data. The number of firms visited for the present study was 150. Both qualitative and quantitative information was required for the present study. The data was collected from December 5, 2009 to December 30, 2010. The firms were contacted with a letter of introduction. Personal investigation method was used. Each firm was visited by the researcher herself. The owners of firms were personally contacted to get information on all the aspects. Apart from collecting information on the basis of questionnaire, long discussions were undertaken to get more and more information. The initial response of the firms was very discouraging. Some of the firms out rightly rejected to provide information. The acquaintance with industry associations especially SGMEA and SGFI proved very helpful. In some cases the staff of SGMEA accompanied the researcher to these firms. The interviews were conducted with the owner of the firms. Most of the interviews were carried out at the factory premises. One or two interviews were also conducted at their retail outlets. On an average three to five firms were covered in a day.

**Level II**

The interaction at this level was with industry associations, office bearers of support institutions and experts in the clusters. This interaction provided a lot of qualitative information. The aim was to get the detailed information on the evolution, history, networking, innovation, present status and competition of the cluster. The leaders of the associations and the project managers were contacted. The venue of the interview was the office of these associations. In Jalandhar cluster, five industry associations are located. These associations are:
i. Association of Indian Sports Goods Industry (AISGI)
ii. Sports Goods Manufacturer and Exporters Association (SGMEA)
iii. Sports Goods Foundation of India (SGFI)
iv. Sports Goods Export Promotion Council (SGEPC)
v. Sports Forum

These associations act as a mediator between the Government and the cluster. It provides information to the firms regarding new Government policies and on the other hand, provides information to the Government about the problems and requirement of cluster. The interaction with the office bearers provided information about the functioning of cluster, networking pattern of the firms, problems faced by various firms, Government policies designed for the cluster, recommendations for the growth and development of cluster etc.

10.8 Data Analysis

Data has been analyzed by using Factor Analysis. The Principal Component Analysis through Orthogonal rotation with Varimax method was used for extracting the factors and the number of factors was finally chosen on the basis of Latent Root Criteria.

10.9 Results and Discussion

The study reveals the following points:

(I) Profile of Firms in the Cluster

Many of the firms in the cluster have been established since independence of India. The business is carried out by the next two or three generations of the founder. The cluster is family owned and most of the firms are either sole proprietorship or partnership firms. The partners of the firms are either family members or friends. It is found that majority of firms in the cluster produce one or more items but sell all the sports goods against which orders are received. The number of firms that produce all the items by themselves is very less. The main reason is that in case of the sports goods, orders are
usually received in assortments and are seasonal in nature, each firm has to supply as per the orders received, but it is not always possible for them to produce all the goods within their premises and firms, procure the goods required from other firms located in the cluster. Every firm manufactures some of the products, while sell all the sports goods by procuring it from the market.

(II) Production

The process of manufacturing is highly skilled and maximum production is done manually. Most of the owners are highly proficient and they personally supervise the manufacturing work carried out in the firm. Some of them are highly specialized that in case of the shortage of labour, they themselves produce the goods. Most of the entrepreneurs do not want to take the help of any outside agency and this tendency has resulted in the absence of Business Development Service providers in the cluster.

(III) Investment

Majority of the firms have made investment below 25 lacs. Majority of the firms are still using labour intensive methods and old machinery for production. Most of the firms are satisfied with their present status and they do not want to adopt changes and upgrade technology.

(IV) Factors of Production

The cluster is facing acute shortage of raw material. The firms engaged in the production of cricket bats are facing massive problem of availability of wood. For production of good quality bats, English Willow or Kashmir Willow is required. English willow is imported from England but the cost of bat produced is much higher than the price which consumers are willing to pay. The Kashmir Willow is of the same quality as the English Willow but is required to be purchased from Kashmir. The Jammu and Kashmir Government has restricted the sale of Willow from the state in order to promote
its domestic market. But Jalandhar cluster is facing problem due to this restriction as they are unable to get the required Kashmir Willow.

For a better and competitive product, it is necessary that raw material should be tested before its use. Majority of firms do not go for testing of quality. They test the raw material only when their customers demand quality certificates. The big exporters have in house testing labs but they rely on their expertise for testing raw material. They are of the opinion that merely by inspecting the raw material, they become aware of the quality of the products. This non-testing of quality has directly affected the competitiveness of the cluster.

The Jalandhar cluster is facing acute shortage of skilled labour. The sports goods industry is highly skilled industry where 80 per cent of the work is done manually. The cluster is unable to find skilled labour easily. Further due to seasonal nature of demand for sports goods, when the demand increases during a specified season, the workers are not easily available in the cluster. In order to fulfill the demand, the firms have to pay more wages to the workers available leading to increase in the cost of production.

Jalandhar cluster is facing the big problem with regard to power. There are long cuts of electricity which leads to dependence of the firms on the generators. The cost of production by using generators is much higher than the cost of production by using the power supplied by the Punjab Government. Many of the small firms are unable to afford this extra cost that leads to the delay in delivery and affects the competitiveness of the cluster.

(V) Finance

It is found that the cluster is operating with its own funds and firms are not facing any problem with regard to availability of finance. It can be due to the high rate of interest on loan but the main factor contributing to lesser problem of finance is low fixed capital base of the majority of firms. As most of the operations of the firms are skill based, the requirement of fixed capital is low and the firms generally go for their own sources.
(VI) Marketing

The cluster is dealing in both the domestic as well as the international market. It is seen that the marketing structure of Jalandhar cluster is more or less personal. Whether the firms are supplying goods to the domestic market or the international market, they rely on their personal contacts and experience. Most of the entrepreneurs make regular trips to their target market to collect latest information and to maintain personal contacts with the customers. In order to have sale in domestic market, retail outlets have been established. The exporting firms have established their regional offices in the major importing countries. The exporters regularly visit their importing countries.

(VII) Networking

Efficient working of the cluster requires cooperation amongst the elements of the cluster. From the field survey, it is observed that few firms located in Jalandhar cluster cooperate with the other firms only up to limited extent i.e sharing of machines, training of manpower, collective purchase of raw material but firms do not cooperate with regard to marketing related activities. The information obtained out of personal contacts is not shared with the competitors. Every firm considers the information obtained about its client and the export prices as a top secret. They do not think about the benefits incurred because of the co-operation and joint action.

To overcome the resistance of the firms in sharing information, industry associations are required. In Jalandhar cluster, five associations are located. The associations are actively working in the cluster. They provide lot of information to the firms with regard to the new technology, innovation etc. These associations act as a mediator between the Government and the cluster. It provides information to the firms regarding new Government policies and on the other hand, provides information to the Government about the problems and requirement of the cluster. Majority of the firms in the cluster are the members of the industry associations.
(VIII) Innovation, Research and Development

It is seen that majority of the firms in the cluster still do not understand the importance of research and development. Only big exporters have in house facility of research. But many small firms do not go for research as they are of the opinion that research only leads to increase in the cost of product. Till today Jalandhar cluster does not have its own patents or any new product development. The amount on research is not spend on the regular basis. Firms allocate funds on research and development only when they require. Further the amount to be spent is not fixed.

(IX) Government Policies and Support

In the study, various Government policies and support for the sports goods cluster of Jalandhar are reviewed. It is found that a number of policies have been designed by the Government for sports goods cluster of Jalandhar. These policies are:

i. Dereservation of sports goods for small scale industry
ii. Market Access Initiative Scheme
iii. Market Development Assistance Scheme
iv. Duty Free Import Scheme
v. Focus Product Scheme
vi. Focus Market scheme
vii. Duty Drawback Scheme
viii. Duty Entitlement Passbook Scheme
ix. Capital Subsidy Scheme by Government of Punjab

The Punjab Government and the Central Government have designed various policies for growth of sports goods cluster at Jalandhar. But as far as the cluster is concerned, it is found that some firms are not even aware of these policies. Some firms reported that sometimes Government announces various policies but are never implemented. For example, one per cent freight subsidy was declared by the Government of Punjab but this subsidy has never been given to the firms. Some firms reported that there is lack of
awareness among the various Government departments. Sometimes concerned
departments are not aware about the schemes announced by the Government. It is found
that most of the policies are to promote the exports of the products but there is absence of
any policy for the promotion of sports goods cluster. As far as domestic market is
concerned, it is found that only one policy is framed by Government of Punjab for the
providing incentives to domestic players. It is observed that the exporters are satisfied
with the incentives provided by the Government but domestic players are highly
dissatisfied with the role of Government. The sports cluster of Jalandhar is facing
problem of implementation of Value Added Tax (VAT). VAT is exempted by
Government of Uttar Pradesh but Government of Punjab has implemented VAT on sports
cluster at Jalandhar. The result is increase in cost of products of Jalandhar cluster in
comparison to the products of Meerut cluster and has affected the competitiveness of
cluster. The Government should exempt VAT for Jalandhar cluster. The cluster is facing
tough competition from China. The products imported from China are inexpensive and
well finished. The customers prefer to purchase Chinese products than Indian products.

(X) Factors Determining the Growth of the Cluster

The study finds out various factors determining the growth of the cluster. A set of
25 statements have been developed to study the factors determining the growth. Five
point Likert scale was used where respondents were asked to rate each statement from
strongly disagree to strongly agree. Factor Analysis is applied to find out small number of
uncorrelated variables and to replace the large number of correlated variables.

Total five factors have been extracted which collectively account for 76.973 per
cent of total variance. The percentage of variance explained by factors separately varies
from 27.419 to 6.600 and communalities range from 0.973 to 0.432. The formation of
these five factors is explained as:

Factor – I: Cluster Development Policies

It highlights a dynamic approach. This factor revealed that for the growth of
cluster, fast action by the Government, special benefits by the banks, change in subsidy
rate, availability of researches institutes or universities, test house, availability of raw material, skilled labour, setting up of special economic zones, specialized public sector services, awards by the Government and revision of export policies is required.

**Factor-II: Inter firm Interaction**

This factor advocates planning and sharing of goals among the competitors, benefits of locating the firm in the cluster, favourable Government policies, presence of leader firm and equal incentives by the Government to sports cluster with regard to other clusters located in India.

**Factor-III: Locational Advantage**

This factor highlights the importance of location, availability of sources of raw material, machinery and training programmes organized by the Government in promoting the growth of the cluster.

**Factor-IV: Collective Action**

It advocates the presence of industry associations. Various trade fairs and buyer seller meet organized by the industry associations are found negatively loaded on the factor. It is found that majority of firms are of the opinion that they are not going to get any benefits out of these trade fairs and buyer seller meets. Their old personal relations with the buyers are sufficient to carry out the business.

**Factor-V: Other Parameters**

It highlights the availability of bank finance and active rivalry in the cluster.

It is found that five factors are determining the growth of sports goods cluster at Jalandhar. Cluster Development Policies, Inter firm Interaction, Locational Advantage,
Collective Action and other parameters (availability of bank finance and active rivalry in the cluster) are various factors which determine the growth of the cluster.

10.10 Proposed Model to Improve the Competitiveness of Sports Goods Cluster at Jalandhar

The proposed model to improve the competitiveness of the sports goods cluster at Jalandhar is displayed in Figure 10.1. The competitiveness of sports goods cluster is determined by the five major components i.e. factors of production, competition, demand conditions, networking and innovation. Along with these factors, support of Government and business development services providers ensures effective working of the cluster. All these factors within the cluster are interlinked and type and degree of relationship between them are shown.
Figure 10.1 Proposed Model to Improve the Competitiveness of the Cluster

Factors of Production

Demand Conditions
Presence of business development service providers

Sports Goods Cluster at Jalandhar

Competition

Networking

Innovation

Government

Competitive advantage of sports goods cluster at Jalandhar

222
In the above, arrow indicates that the availability of all factors support the sports goods cluster at Jalandhar as a system and double direction arrow indicates the interconnection of all the factors. The single direction arrow indicates the presence of support services like Government and business development service providers to ensure efficient and smooth working of the cluster. The presence of all these determinants within the cluster can help in enhancing the competitiveness of sports goods cluster at Jalandhar and lead to regional development. The following section explains these determinants and the contribution of these determinants to the success of the cluster.

1. Factors of Production

The competitiveness of the cluster is determined by the availability of factors of production within the cluster. There is nothing more than the required inputs to compete in any industry (Karkkainen, 2008). The presence of sufficient resources ensures smooth working of the cluster.

With regard to factor condition, every region has its own strengths and weaknesses, but the competitiveness depends upon the efficiency with which factors have been utilized.

2. Demand Conditions

Another important determinant for competitiveness of the cluster is demand of the product. Porter emphasized more on demand in domestic market rather than demand in foreign market as firms are aware about domestic market more than foreign market and react to there demand more quickly. The increase in the demand of the firms product motivate them to adopt new technology with less fear that all the facilities will be utilized Demand condition directly affects the performance of the cluster as firms start moving from producing low quality and imitative product or service to innovation and differentiation (Kakkainen, 2008). The pressure from demanding and sophisticated consumer motivates the firm to improve its performance with regard to existing as well as future needs. Porter explained that foreign market did not provide all these benefits but it is the local demand that makes the firm competitive.
3. Competition

Competition and rivalry within the cluster directly affects its competitiveness. The presence of competitors within the cluster leads to innovation and continuous improvement (Porter, 1990). Before formulating any strategy, the firms always consider the reaction of the competitor located at the same place. The presence of rivalry generates imitation. The presence of large number of competitors in the cluster motivates all the firms to take notice of each others’ action and try to adopt the best strategy to face the competition. As domestic firms are visible to each other, success on the part of one showed that further development is possible in the local circumstances (Davies and Ellis, 2000).

4. Networking

Firms within a cluster can work together to co-evolve for the purpose of enhancing the competitiveness and adapting to the environmental change (Niu, 2010). Networking helps firms to exchange information to overcome threats and weaknesses of the cluster, improve its strength and avail the opportunities. It helps the firms in fulfilling those objectives which they can not achieve in isolation. The joint action and cooperation between the firms help the cluster in becoming competitive.

Presence of industry associations also played a pivotal role in bringing all the firms under a common roof and encourage the members to work together to achieve competitive advantages. These associations help in creating horizontal network between the firms and initiate joint action so that firms can overcome the constraints faced by the cluster.

5. Innovation

In the present changing environment, cluster has to face stiff competition from both domestic and foreign market. Innovation helps in coping with the changing national as well as international business environment. It is an important element for enhancing the competitive advantage and ensures the growth and development of the cluster. For a cluster to be competitive and productive, it is necessary that firms within the cluster undertake various efforts to innovate new products and ideas. The introduction of new
product or design within the cluster helps in facing competition and leads to growth and development of the cluster. Clusters provide a fertile environment for the firms to enhance their capacity to innovate. Clusters are seen as an important driver of innovation (Bail, 2008, p.21). Chesbrough (2003) explained that clusters are well aligned with the modern approach of open innovation which suggested that innovation is not created by individual firms but is created in dynamic environment where competent organizations and skilled labour interact in constructive and complementary way to disseminate existing knowledge and generate new ideas and products. The firms located in the cluster are more prone to innovation due to existence of various research institutes, demanding customers, suppliers of raw material and machinery, skilled labour and sharing of information with other firms.

6. Presence of Business Development Service Providers

Another initiative that can strengthen the competitiveness of sports goods cluster of Jalandhar is the presence of business development service providers in the cluster. This initiative begins with the analysis of the type of assistance required by the firms. It requires deep understanding of the constraints and weaknesses of the cluster, likely threat in the future and the potential of cluster to face such constraints and threats.

7. Government

The final element for the growth of cluster is the Government. The presence of responsive, effective and organized public sector helps in building an efficient cluster. Government, through its policies helps in creation of new clusters or strengthening the existing cluster. Government can help the cluster to limit or eliminate barriers to the growth. Government should develop new policies to enhance the innovative capacity of each firm and create an environment that promotes innovation. Various initiatives should be taken to establish various research institutes and universities where new ideas, products and designs can be developed. Measures should be taken by the Government to
increase interaction and cooperation between firms and research institutes with regard to development of new product.

   The Government should promote cluster based development policies, where each policy should be designed according to the requirement of individual cluster. Government should not frame a single policy for all the clusters in the country but different policies should be designed for different clusters as each cluster is unique and has its own problems and constraints. Further, Government should encourage all the cluster actors to collaborate with each other and work together. Various training programs should be organized by the Government for the workers working in the cluster.

   Porter (1998) suggested that Government should promote the formation of cluster and establish centre of range of services in training, design, product and marketing to increase the competitiveness and innovation capabilities of the clustered firms.

10.11 Recommendations

Jalandhar cluster is surrounded by multiple problems, but, when we consider the relevance and importance of the cluster in Punjab; effective steps need to be taken. The present study proposes the following measures:

1. Human Resource Development

   From the survey, it has been learnt that the cluster is facing the shortage of skilled labour. Further most of the firms do not give training to their workers. As the need of the industry is to adapt modern technology, workers are required to be trained for handling the machines. Most of the firms in the cluster resist providing training to the workers because they don’t want to bear the cost of training. The public sector in association with private sector should establish specialized training institutes to cater the needs of the cluster.

2. Antidumping Duty on Imports

   The cluster is facing tough competition from China. The goods imported from China are inexpensive with fine finishing. The customers prefer to purchase Chinese
products than the domestic products. The Government should impose antidumping duty on sports goods imported from China. It can lead to the equalizing of price of products of both the countries.

3. Easy Availability of Factors of Production

The regular supply of raw material is one of the important factors contributing to the productivity of an industry. Jalandhar cluster is facing scarcity of Kashmir Willow. The Government of Jammu and Kashmir has banned the movement of clefts from the state. The cluster has to be dependent either on local wood or English Willow for production of cricket bats. Use of local wood does not lead to production of quality products acceptable in international market where as use of English Willow increases the cost of production. For effective growth of other sports goods clusters of India, the restriction of Kashmir Willow should be removed by the Government of Jammu and Kashmir.

The supply of power in the Jalandhar cluster is creating a lot of problem for the firms. There are frequent power cuts and firms are required to use diesel generators. Industrial units should be given continuous power supply at least during the working hours.

4. Networking of Firms

Network of firms within the cluster helps in improving the performance and growth of the cluster. But this element of networking is not found to be active in the cluster. One can not pressurize others to work in collaboration with the competitors but the firms in the cluster can be convinced by providing information about the benefits which they can enjoy by becoming a part of the network. Various seminars, conferences can be organized to provide information regarding benefits of the networks. Apart from it, various associations can enhance the information sharing between the firms. Organizing regular meetings, participation of the cluster in various trade fairs and exhibitions can increase the level of information sharing within the cluster. It is seen that the firms become members of the associations but they do not actively participate in the
working of the association. Role of each member of the association should be clearly defined so that each member participates in the working of the association.

5. Need for a Common Platform

It is found that there are too many associations in the cluster. Many firms are found to be a member of more than one association. It is advisable that all the associations should be merged to formulate a single association which will cater to the demands of the sports cluster. It can help in providing a single platform for the cluster as well as Government to discuss various issues. Further a regular communication system should be developed by the associations i.e. schedule for meeting should be fixed so that regular interactions between the members can be enhanced.

It is found that the associations do not have enough staff to work on various issues. The office bearers of the associations are the entrepreneurs who are busy in their normal course of work within their firm and do not have much time for the activities of the cluster. There is an immediate need of the full time professionals to be appointed within the associations for enhancing the activities of association and in turn that of the cluster.

Further, a regular publication or journal should be published by the association to disseminate the latest information to the cluster players.

6. Promotion of Domestic Products

While purchasing the sports equipments, various agencies like Sports Authority of India, Central Government, State Government etc, should give preference to Indian sports equipments. All the tournaments which are held in India should be required to purchase products of Indian brands only.

Most of the firms in cluster do not go for advertising their products due to high cost of advertising. DD sports, a national channel for sports goods should encourage more advertising on their channel by advertising Indian sports equipments at concessional rates.
7. Redefining the role of SGEPC

The Sports Goods Export Promotion Council has been established by the Government of India with the objective of promotion of export outside India. The council is providing services to a handful of exporters which are registered with the council. There is a need to redefine the role of council by providing services to all the firms engaged in the manufacturing of sports goods irrespective of the fact that the firm is an exporter or not.

8. Initiatives by the Government

It is seen that many firms in the cluster are not aware about various policies framed for the sports industry. In order to ensure that the benefit of the policies should reach the firms for which these policies are designed, the Government should prepare a database of the firms. Though the information about the registered firms is available with District Industries Center but a number of unregistered firms are also present in the cluster. Government should try to track all those unregistered firms. The services of local associations or Central Statistical Organization can also be availed for such purpose.

An information center should be established by the Government under Cluster Development Programme where all the latest information relating to technology, innovation, raw material should be available. This information should be provided to each firm in the cluster so that they become aware of the latest innovations.

A number of trade fairs and exhibitions are organized in various parts of the world. Sports Goods Export Promotion Council is providing a help to various exporters for the participation in the sports fairs. But this support is provided to its registered members. But a number of small units don’t participate in such exhibitions. The Government should provide subsidy to these small scale concerns so that they can also participate in such trade fairs.

It is seen that in the international tournaments all those sports equipments are used which are certified by international federations. But fee for such certification is very
high which every firm is not able to pay. The Government should provide subsidy in the
cost incurred by the firm to obtain the certificates.

9. Setting up of Special Economic Zone

The Jalandhar cluster should be declared as the Special Economic Zone. Declaration
of cluster as the Special Economic Zone will help in promotion of exports. A large
investment from domestic as well as foreign market will be attracted. The infrastructure
facilities can be easily developed leading to up-gradation of existing technology and easy
adoption of innovations. A better infrastructure will attract new firms leading to creation
of employment opportunities.

10. Establishment of Business Development Cell and Research Institutes

A Business Development Cell should be established in the cluster where at least
some full time professionals should be appointed. These professionals should work on
collection of latest information in the international market. The cell can be funded under
Sports Goods Export Promotion Council or Cluster Development Scheme by
Government of India.

Various research institutes or universities should be established that can help the
cluster in enhancement of the research activities. Apart this, the Department of Industries,
Government of Punjab, should help the cluster in getting assistance about the innovations
from other research institutes located outside the cluster.

11. Exemption of VAT

VAT is applicable in Jalandhar but not in Meerut. The result is that the cost of
products of Jalandhar cluster is more than that of the cluster of Meerut. The Government
of Punjab should exempt VAT in the Jalandhar cluster also so as to improve its
competitiveness.
10.12 Conclusion

The roots of sports goods cluster at Jalandhar are in Sialkot, Pakistan. After partition of the country in 1947, many entrepreneurs and workers who were engaged in manufacturing of sports goods and equipments shifted from Sialkot to Jalandhar. For manufacturing sports goods, wood and leather were mainly required and at Jalandhar both type of raw material was easily available. The migrants started manufacturing sports items and Jalandhar flourished as a sports cluster.

Jalandhar cluster is dealing in both domestic and foreign market. About 50 per cent of total exports of sports goods are from Jalandhar alone. The cluster is engaged in manufacturing of almost all types of sports goods and equipments. The cluster is highly skilled based and labour intensive and is providing employment to weaker section of society especially women.

These days, the cluster is facing a number of problems. These problems have adversely affected the functioning of the cluster and it is not able to sustain its position in the market. The sales are declining, firms are facing losses. They are shifting their business from manufacturing to retail. The need is to study and analyze the problems of the cluster in order to strengthen the competitiveness.

The present study has proposed a model to improve the competitiveness of the cluster. It suggests that the availability of the factors of production, networking, Business Development Service providers and support of Government is required for the smooth working of the cluster.