



Marketing Management

Elixir Marketing Mgmt. 61 (2013) 16697-16704

Elixir
ISSN: 2229-712X

Conceptual Framework for Development of Industrial Cluster in Virudhunagar District -Special Focus on Safety Matches

S.Santhzakumar¹ and R.Jeyaraman²

¹Department of Industries and Commerce, Govt. of India, Virudhunagar District, Tamilnadu, India,

²Centre for Entrepreneurship Development, Tamil Nadu, Arasaradi, Madurai-625 016.

ARTICLE INFO

Article history:

Received: 3 June 2013;

Received in revised form:

24 July 2013;

Accepted: 28 July 2013;

Keywords

Industrialization,
Methodology,
Characteristics,
Industrial cluster,
SMI.

ABSTRACT

Industrialization is a path taken by many developing countries to increase national welfare; Industrialization process is various between countries inherently depending on policy options applied by respective government. As industrialization proceeds, the natural resources diminishes and labor wage increases, while at the same time lately industrializing countries emerge, new approaches are required to reshape the competitiveness of Indian industries Economic, and industrial clusters have become in the last years the object of a new economic theory that has proved important for regional and even national (porter, 1990) development. This paper outlines a methodology, characteristics that are derived from the special features of Safety Match industry (SMI) clusters. The paper described the process that is behind the creation, the continuous development and the success of the Safety Match industry clusters and aims to emphasize those particular features which define and Match industry clusters and separate it from another type of industrial cluster.

© 2013 Elixir All rights reserved

Introduction

Industrial and economic clusters have emerged as a special form of spatial organization in economics theory regarding organisations efficiency based on their geographic locations, networks and relations. The concept and its economic benefits have been firstly described by Marshal in its papers regarding “industrial districts”. Marshals’ vision, the cluster is an agglomeration of companies that operate in the same industry sector in a well defined and small geographical area, which in most cases and at that time was an urban area, The Marshal model takes into consideration only the economic relation between cluster companies as reduced transportation and transactions costs, access to more resources, a pool of qualified work force and access to information. Despite the initial analysis, the cluster model that has been identified in the last decades, based on the analysis of modern clusters, is more complex than that. Competitiveness studies started to focus on geography in the early 1990s, when MichaelPorter introduced the importance of proximity and clusters for competitiveness, and stated theprimary role of the region or the city, which become a source of competitive advantage and unique environment for competing in the industry (Porter, 1990; 1998). The special focus was given to handmade safety match manufacturing sector. One of the main objectives of such is to suggest a vision for the future and draw strategic plan for undertaking various development activities within the cluster. Yet another reason for conducting the study again is to measure and suggest the type of intervention necessary for improving the overall status of the handmade safety match manufacturing sector in Tamilnadu. Clusters are an alternative organisation of the value chain, promoting both competition and cooperation; without competition, a cluster will fail.. High quality physical infrastructure will maximize the efficiency of logistics, well-educated personnel will positively impact the productivity of

services and a court system that resolves disputes fairly and rapidly will facilitate operations.

Literature Review

But specific enquiries into Indian small-firms as proactive innovators are not entirely absent. Pillai (2001) looked at rubber footwear clusters and pump manufacturing clusters in South India specifically for their technological capabilities, though findings especially for the former were not very promising in terms of innovation. A very good overview of more such studies on innovation in small-firm clusters is provided by Basant (2002); and a compilation of studies on innovation strategies and capabilities in clusters and traditional industries is also found in Das (2005). Another highly-acclaimed review of literature on innovation in small-firm clusters is Bell and Albu (1994), with its broad geographical spread and coverage. But one notable work in the context of our empirical study is Bhavani (2002). It is particularly useful since it slices the process of technological change in small-firms into three components: transformational (plant and machinery, tools, components, accessories, materials and products), organisational (plant layout, materials management, work allocations, production schedules and quality management) and informational (means of communication with external agents as well as ways of storing, processing and exchange of information). This classification clearly shows that the *informational component of technological change* must be analysed individually, in order to effectively understand informal learning and adaptation by small-firm low-tech clusters to prescribed innovations, even in traditional industries.

Scope of the study:

The scope of the study is to find out the present condition of handmade sector. The aim of the study is to obtaining a comparative analysis of safety match cluster with regard to the working, effectiveness and dynamics of the cluster. It is also meant to identify the factors impeding the smooth functioning and growth of the cluster. The main core of this approach is to

Tele:

E-mail addresses: dicsanthakuma@gmail.com, info@cedin.org

© 2013 Elixir All rights reserved

identify the right tools and techniques and to apply these inputs to achieve quicker development in the handmade safety match manufacturing sector. These will help many ways to improve their capacities and capabilities to fight against the competitions emerging from the mechanised sector.

Objective:

This document aims to present the status of the industry and hence points of intervention of safety match clusters in Tamilnadu.

- Study the present status and relative position of the match industries in Virudhunagar District.
- Bring out an improvement in the overall quality of the product
- Asses the Raw material flow and its impact of cost pattern, creating of common Raw material bank etc.
- Identify the critical areas of interventions for promoting the handmade sector under cluster mode.
- Study the post-acquisition aspects including Creation of common utility centres and common marking, common branding, soft linkage, etc.

Data Collection Method

For this study both Primary and Secondary Data were used, Review of Secondary Data sources relating to safety match industry and to major end-use industries; the major sources accessed include publications of associations and related sites.

Primary Research through limited but focused in nature in all. Apart from the informal interaction that has taken place during the visit to the cluster, the idea was to identify the existing critical and draw concrete plan for filling the gaps.

Cluster Development in India

The Ministry of Micro, Small & Medium Enterprises laid special emphasis for development of clusters and launched a scheme for technology up-gradation and management called UPTECH in 1998. Although it was having a cluster based approach for development of MSEs, it was mainly technology-focused comprising of a diagnostic study, setting-up of a demonstration plant and organising workshops, seminars, etc. for quicker diffusion of technology across the cluster of small enterprises. In August 2003, the scheme of the Ministry of Micro Small and Medium Enterprises was renamed as Small Industry Cluster Development Programme (SICDP) and made broad based by adopting a holistic pattern of development of the cluster encompassing marketing, exports, skill development, setting up of common facility centres, including technology upgradation of the enterprises, etc. SICDP guidelines were comprehensively revised in March, 2006 making the cluster programme more broad-based by facilitating substantial economies of scale in terms of deployment of available resources in the medium to long term. The overnment of India's assistance under the scheme was enhanced upto Rs.8 crore per selected cluster to support soft as well as hard intervention, including setting up of a common facility centre

History of the safety match industry

Safety matches industry has made rapid strides over the years. It is an important and essential item used by the common man and much of the demand is met by the production from small and tiny safety match units. It is one of the industries creating mass employment opportunities to more than 2.5 lakh persons, both directly and indirectly in rural and semi urban areas. The safety match manufacturing units are housed in south India at the tune of 95%. A large number of units are in handmade sector.

Safety matches manufacturing in INDIA are of the standard type with wooden veneer or cardboard boxes and wooden splints. Generally, the type of safety can be classified into three

1. Wooden matches / Match Box Veneer
2. Card Board Match Box
3. Wax Matches / Match Box

Each safety match box contains 40 to 50 splints. Other types of matches produced include promotional safety matches containing 10 to 20 sticks and fancy advertisement matches made to the buyer's specifications. Basis of raw materials the level of production and process is slightly variance.

In the period of 1950's Lucifer Match Industry and Bharat Match Industry, the first and the foremost unit of South India which was established in Sivakasi. It was faced a very tough time between 1965 to 1975, and there was a scarcity for raw materials and red phosphorus. Hence in 1971, the red phosphorus processing units were started in Sivakasi and spread over to the neighbourhood Sattur and Kovilpatti.

Structure of the safety match cluster

The structure and relative position of the safety match industry reveals the fact that they are pyramid in nature and having 4 tiers.

The tier I is dominated by mechanized sector. There are 4 Mechanized units in Tamilnadu. Of which 3 are in Virudhunagar District. The total production of this sector is estimated as One Crore bundles.

The tier II, 140 semi mechanized or partially mechanized units are at present functioning in this sector. The strong presence of such small scale safety match manufacturing units are witnessed in this tier. It was reported that semi or partially mechanized units are mostly concentrated in Sivakasi, Kovilpatti, Kazhugumalai regions.

The tier III, is being dominated by traders cum manufactures. The presence of middleman exploits the handmade sector. The trader cum manufactures act as a middle man and outsource the end products at a very nominal price and sell the products in different brand names at a higher prices.

The tier IV, The handmade/cottage sector involves totally manual operations and produces less than 75 million match sticks per year and is household based at about 2 lakh workers both directly and indirectly in India. A number of operations in the production process can be easily undertaken at home.

Major problems faced by the handmade safety match cluster

The safety match Cluster is well known for cheaper and mass production. The status of this cluster reveals the presence of strong skilled female-dominated workers at the bottom. This industry is now in the grip of few leading small and semi mechanized manufactures and traders. Soaring prices of Raw material is the hindering factor. It has increased many folds and is to depending Kerala for sourcing this raw material.

Production Related Issues

Non-uniformity in quality of the products manufactured is a major problem faced by the handmade sector. Whereas the product manufactured by the organized small and semi-mechanized units are unique in nature. Due to obsolete technology and handmade operation mostly by the family members or by unskilled labourers, the productivity level is very low. The sector has relatively low export orientation. It is the protected domestic market that has been largely targeted till date. Replacement demand is an important component. As illustrated, the entire sector is being dominated by groups of companies and it is in the thresh hold of big 18 groups. Procurement of raw material has posed serious problem to the

handmade sector. The organized units used to procure almost all the raw materials directly. The customers do not have any perception on brand image. The technology adopted by the handmade sector is so simple and the technology involved in all the stages. The machine made sector is illegally encroaching the handmade sector. It is reported that the mechanized units are indulged in illegal trade practice. This sector is unused to supply the semi finished products.

Marketing:

Marketing being very weak, while at the time there is increase in the cost of raw materials, marketing control need to be re-established for these clusters.

Technology:

The modernised technology and technical skill development are very limited, and more to the self-experimentation at their own risk is the current status of this largest employing industry segment, there is also an evolution of monopoly, Oligopoly possible in the current trend over next few years.

Finance:

The main cause of such development is the investment capability by this sector. The capital investment in less than Rs.2 Lakhs per firm, whereas in the case of mechanized and semi mechanized sector the per capital investment is in plant and machinery is Rs.65 Lakhs.

The internal governance of this sector is through simple associations, at enterprises level it is like a micro enterprise or a cottage industry.

The association has little strength as the industry is under performing to its capacity, both of employment and production levels, which is the survival of a firm in this sector, due to competition from modernized firms.

Cluster vision targets and strategy

Cluster Vision: To enhance the production capabilities of the handmade sector by encouraging growth concept to achieve cent percent consistency in quality and mass production and to make it a member of global supply chain by improving product quality standards, technology up gradation, skill development, creating networks and linkages with international Business Support Organizations and support institutions.

Common Branding: Most of the small scale industries are end up with poor marketing support. The very survival of SME products need brand loyalty and marketing penetration. Collective market initiatives are the prime mover to promote common brand for achieving niche market for the cluster products. In order to create brand awareness, it has been proposed to launch a unique brand for the product being produced by the consortia. Such a swift move will guard the small players and augur the brand acceptability among the customers.

Formation of Raw material Bank: The Consortia led purchase will provide an opportunity to achieve higher economic scale of procurement at cluster level. Such a set up will support the members and non members of the cluster to establish backward integration with input market strongly with collective bargaining. Creation of such Raw material bank is a pertinent effort which will support the cluster groups to augment the quality of raw material at a competitive rate and facilitate to build the buffer exclusively for the benefit of the cluster members. Such an initiative will help the cluster players to reduce the cost of production and will also support to reduce the strain on preserving the raw material in a go down with all security which is beyond the reach of the small players.

Cluster financing: Cost of credit is the single most determinant of the profit margin. The timely availability of finance has infused confidence among the players. The Indian Overseas Bank is their Banker. Being the cluster partner, IOB has extended liberal financial support to the SPVs to extend marginal money support to establish the CFCs.

International Networking: The Safety match cluster starts to establish functional linkages with government and non Government service providers for sourcing and out sourcing the business opportunities for ensuring global-web-business. The cluster has already made a stride in this regard.

New product Development: The safety match product is presently used as essential Medium/product to ignite the fire. There is a greater need to change the perception of the safety match usage. New products can be conceived based on ultimate usages of the product. Product innovation, development and, diversification play a significant role in creating adaptive capabilities and technology up gradation for increasing the competitiveness within the industries and at all technological levels. Keeping this in mind, effects have already been taken to evince idea on "Usage of safety match and alternative mechanism for protecting the environment" for the benefit of the Cluster members. The objective of the workshop was to disseminate information on alternative measures available for strengthening the safety match Cluster by encouraging paradoxical shift in production from Low Value Added product to high value added goods manufacturing by Cluster Actors.

Quality Enhancement: The cluster offers single window solution to its customers. The location and cluster co-operation are the inner most strength of the cluster. Injection of new technology and adoption and abortion of modern management system will enhance the quality of the cluster products. The pursuit of success depends on combined production base. The combined production base is embedded with spectrum of value added services likely to be offered with available sources within the cluster.

Conclusion

The handmade match industry provide employment to over 2.5 lakhs both directly and indirectly in the drought prone districts of Virudhunagar, Thuthookudi and other districts like Tirunelveli and Vellore in Tamilnadu. The cottage industry was overjoyed when the Union Budget 2004 doubled the excise duty on the mechanized units. An incentive of two paise per handmade match box is necessarily warranted to enable them to equal the cheaper production cost of the mechanized units. Although there exists good scope to capitalize the synergies and potentialities available in the cluster, factors like price oscillation, poor modernization efforts, lack of product diversification, quality improvement process, designs, low attraction for fresh investments, testing, absence of an integrated marketing approach, hesitancy for change to modern needs, over-dependence on traders have adversely affected the growth and development of this sector should be promoted under cluster mode. There are tools and effective progressive

Innovations and new designs made out of research, setting up of Quality Testing Centres, creating awareness about the developments taking place elsewhere and evolving measures to mitigate shortcomings, are to be taken seriously to project the interest of the industry in domestic and global markets.

All the above difficulties faced by the above sectors can be nullified by forming consortium in six places Sattur, Kovilpatti, Kalugamalai, Virudhunagar, Srivilliputhur and Gudiyatham. By forming consortium can easily meet the market demands arising

from both local and International by providing branded matches with good quality. Moreover, upliftment of handmade sector and Industrial growth for the Nation is also possible.

References

- [1] A. Marshall, Principles of Economics, 8th edition, London, Macmillan, 1920.
- [2] M. Porter, "Clusters and the new economics of competition," *Harvard Business Review*, 76(6), pp. 77–90, 1998.
- [3] Safety Match Cluster – Intervention and new initiation under MSE-CDP, Shri A Muthuvezhappan, IES, Deputy Director EI, MSME-DI, Chennai
- [4] Altenburg, T., and J. Meyer-Stamer (1999). "How to Promote Clusters: Policy Experiences from Latin America," *World Development*, 27(9), 1213–1230.
- [5] Berry, Albert and Mazumdar, D. (1991), "Small-Scale Industry in the Asian-Pacific region", *Asian-Pacific Economic Literature*, 5(2), 152-68
- [6] Berry, A., E. Rodriguez, and H. Sandee (2001). "Small and Medium Enterprise Dynamics in Indonesia," *Bulletin of Indonesian Economic Studies*, 37(3), 363–84.
- [7] Basant, R. (2002) 'Knowledge Flows and Industrial Clusters: An Analytical Review of Literature', Working Paper 2002-02-01, Indian Institute of Management, Ahmedabad, India, also Working Paper Series 40 at East West Centre, Hawaii
- [8] Bell, M., and Abu, M. (1999) 'Knowledge Systems and Technological Dynamism in Industrial Clusters in Developing Countries', *World Development*, 27(9): 1715-34
- [9] Bhavani, T.A. (2002) 'A Study of Technological Change in the Small Enterprises of a Developing Nation: Analytical Framework and Empirical Examination', Institute of Economic Growth, Delhi University, India
- [10] Informatica Economică vol. 15, no. 2/2011 IT Clusters as a Special Type of Industrial Clusters Catalin BOJA Academy of Economic Studies, Bucharest, Romania
- [11] E.M. Bergman, Cluster life-cycles: an emerging synthesis, In: Karlsson, C. (Ed.), Handbook of Research on Cluster Theory, Handbooks of research on clusters series. Edward Elgar, Northampton, MA, pp. 114–132, 2008
- [12] M. Porter, "Location, competition, and economic development: Local clusters in a global economy," *Economic Development Quarterly*, vol. 14, no. 1, pp. 15-34, 2000.
- [13] C. Ketels, "The development of the cluster concept – present experiences and further development," *NRW conference on clusters*, Duisburg, Germany, 2003.

Clusters influence competition by increasing local productivity, by driving the pace and direction of innovation and by stimulating the formation of new businesses. A few decades ago, input costs were the main driver of competitive advantage, and locations with a special endowment, such as a natural harbour or cheap labour, generally enjoyed a decisive and lasting comparative advantage. In the contemporary economy, competition is much more dynamic and competitive advantage rests increasingly on making a more productive use of resources, which requires continuous innovation.. A cluster allows each member firm to benefit as if it had a greater scale, or as if it had joined formally with others, without the sacrifice of its flexibility. Social and cultural aspects were less emphasized in Porter's approach; he nonetheless underlined the facilitated access to information flows in clusters, resulting from sustained personal relationships and community ties fostering trust.

The safety match manufacturing units are concentrated in South Tamilnadu and Gudiyatham in North Tamilnadu. A cluster diagnosis on pilot basis was conducted in Virudhunagar,

Sattur, Kovilpatti, Sivakasi regions wherein 80% of the safety match manufacturing units are concentrated. A diagnostic study of a cluster helps in laying down the broad patch for initiation of cluster intervention. The special focus was given to handmade safety match manufacturing sector. One of the main objectives of such is to suggest a vision for the future and draw strategic plan for undertaking various development activities within the cluster. Yet another reason for conducting the study again is to measure and suggest the type of intervention necessary for improving the overall status of the handmade safety match manufacturing sector in Tamilnadu.

Scope of the study:

The scope of the study is to find out the present condition of handmade sector. The aim of the study is to obtaining a comparative analysis of safety match cluster with regard to the working, effectiveness and dynamics of the cluster. It is also meant to identify the factors impeding the smooth functioning and growth of the cluster. The main core of this approach is to identify the right tools and techniques and to apply these inputs to achieve quicker development in the handmade safety match manufacturing sector. These will help many ways to improve their capacities and capabilities to fight against the competitions emerging from the mechanised sector.

Methodology:

In brief, the methodology involved the following activities:

1. Review of Secondary Data sources relating to safety match industry and to major end-use industries, the major sources accessed include publications of associations and related sites.
2. Primary Research through limited but focused in nature in all. Apart from the informal interaction that has taken place during the visit to the cluster, the idea was to identify the existing critical and draw concrete plan for filling the gaps.

Objective:

This document aims to present the status of the industry and hence points of intervention of safety match clusters in Tamilnadu.

@ Study the present status and relative position of the match industries in Virudhunagar District.

@ Bring out an improvement in the overall quality of the product

@ Asses the Raw material flow and its impact of cost pattern, creating of common Raw material bank etc.

@ Identify the critical areas of interventions for promoting the handmade sector under cluster mode.

@ Study the post-acquisition aspects including Creation of common utility centres and common marking, common branding, soft linkage, etc.

Handmade safety match industry in tamil nadu management summary

This section of the industry has come down from nearly 10000 organizations to less than 5000 organization over the last 2 decades owing to competitive factors. Following sections give the abstract understanding of the industry and its status. For easier understanding of references there are 4 Tiers in this industry.

The safety match manufacturing units are found clustered in Sattur, Kovilpatti, Sivakasi, Virudhunagar and Srivilliputhur regions in South Tamilnadu. There are around 3537 units in Tamilnadu.

The cluster depicts the presence of strong skilled especially female-dominated work force at the bottom and rich traders cum manufactures in the middle and strong presence of semi and partially mechanized units and fully automated units at the top.

The entire sector is being dominated by groups of companies which are headed and controlled by the market leaders. This units in this sector used to manufacture with the ceiling level of 25 bundles per day.

Over dependence on traders: Procurement of raw materials have posed serious problem to the handmade sector. The organization procure all the raw materials directly from the manufacturers. Hence there is no intervention and interruption of traders in the business operations.

Technological changes the improvements from the present level will gear up the productivity and conserve the deficiency of raw materials and advanced technology would lead to hike up the business opportunities.

Secondly, some of the units by joining together can go for common business opportunities by introducing automation of projects for common benefits. Intervention of an induced investment and technology will act as a common utility or servicing centre wherefrom other units functioning in this growth centre can also use these opportunities.

The products are sold in the market through the intermediaries such as traders, alternatively semi mechanized manufacturers can buy these produces through their own distribution system.

Marketing, Technical & Financial Support System

Marketing:

Marketing being very weak, while at the time there is increase in the cost of raw materials, marketing control need to be re-established for these clusters.

Technology:

The modernised technology and technical skill development are very limited, and more to the self-experimentation at their own risk is the current status of this largest employing industry segment, there is also an evolution of monopoly, Oligopoly possible in the current trend over next few years.

Finance:

The main cause of such development is the investment capability by this sector. The capital investment in less than Rs.2 Lakhs per firm, whereas in the case of mechanized and semi mechanized sector the per capital investment is in plant and machinery is Rs.65 Lakhs.

The internal governance of this sector is through simple associations, at enterprises level it is like a micro enterprise or a cottage industry.

The association has little strength as the industry is under performing to its capacity, both of employment and production levels, which is the survival of a firm in this sector, due to competition from modernized firms.

Product Market Scope:

The product market scope is very high; Consumption of match has gone up from 4 match sticks per day to 12 per day and annual per capital consumption has gone up to 26, amounting to about 31.2 Billion match boxes in India per annum; export potential excluded.

Cluster Performance

The financial performance of the cluster is poor when compared to the financial performance of the other tiers. Thought it constitutes 17250 as against XXXXXX of the total industry, it produces only XX% of the overall industry produce per day. The employee is having lowest income. The profit per firm or box level is also skewed.

Strategies, organization, capabilities

Current strategy is to sell to traders and intermediaries are the semi mechanized sector, as a well. The future strategy is to

have cluster approach for gaining competitive strengths and the future plan under cluster model is to utilize the skills and produce more than other tiers.

Production Distribution:

By clustering is expected to establish a common center for splints and head composition mixing, boxing, label printing and the integration job to be done at cottage or at the firm level. Distribution to be attempted as direct to consumers, create own identity in the market.

Support systems:

(For marketing, technical, financial services)

A sector is in poor financial status, it was not possible to attract efficiency, hence it was very hard to market to consumers, acquire more technical skills and access to R &D solutions. A small individual firm don't have access to financial instruments from banks.

By Cluster mode with each of the territories ie. Sivakasi, Sattur, Kovilpatti, Srivilliputhur, Virudhunagar and Gudiyatham the majority of the tiny units shall be benefited by having access to get financial assistance such as Government grants, loans and also internal collective funds.

Governance

Ability to respondent challenges

Challenges faced are raw material costs, market access, productivity, brand quality, product variations, modern technology and finance. Public relations is available in abundance.

Role of firms, institutions, Government

Firms have already come together farming consortium companies and are ready to implement the cluster strategies for improving competitiveness. The Government and financial institutions come forward to extend their support for the cluster based growth model for the clusters.

Analysis of Business Segment:

(Trends, Technologies, Competition)

Trend Summary:

The Indian match industry grew enormously. Government policies protected Indian Safety matches by the high tariffs on imported products. A decade back, there were more than 10,000 units in this sector.

Due to the technology intervention, which would increase the competitiveness of this sector, even a small technology intervention will bring notable changes in this sector. The total cost invested in mechanization of safety match industry is the tune of Rs.1.30 Crore. It is suggested at Sattur, Kovilpatti, Kazhugumalai, Virudhunagar, Srivilliputhur and Gudiyatham.

The common facility service centre will support this sector in achieving mass and also quality production. The quality consistency is very much required for assessing the export potential. This will also support the member to withstand the competition.

The safety match industries are yet to capitalize the synergies prevailing. The units have to restructure their present set-up and consolidate their position for their very survival. The forward integration of product will benefit this sector. However, this requires further opening up of the market, the industry has to become 'demand driven' for which a lot of "Trade off" is required in the buyer's market. The problem area of weak linkages should be noted down, the industry to be upgraded so as to make them competent players.

If the urgent need to establish backward linkages with the Raw-Material Market. The raw material sources are solely dependent upon the wealthy traders for orders.

Formation of marketing consortia in this sector would strengthen the market reach of smaller players apart from the cost benefit that they would get from joint marketing approach.

Printing of common magazine containing information about a product or service is very important to get the customers throughout the country. The initiatives to be undertaken to strengthen their competitiveness is to form a consortia.

A public sales offices in the growth centre and integration of all the growth centres through Network Development Agents and opening sales centre across the country.

Common dealership

Common branding

Common advertisement

Hosting of common website

Joint participation in Exhibitions

Unique and common pricing

Unique sales proposition for this product

All the above facts, the sectors can be nullified by forming consortium in six places Sattur, Kovilpatti, Kalugumalai, Virudhunagar, Srivilliputhur, and Gudiyatham. By forming consortium can easily meet the market demands arising by providing good quality matches. Moreover, upliftment of handmade sector and industrial growth for the Nation is also possible. Hence it is submitted that it is essential to create common facility centre to accelerate their capacity and utilize their capabilities.

History of the safety match industry

Safety matches industry has made rapid strides over the years. It is an important and essential item used by the common man and much of the demand is met by the production from small and tiny safety match units. It is one of the industries creating mass employment opportunities to more than 2.5 lakh persons, both directly and indirectly in rural and semi urban areas. The safety match manufacturing units are housed in south India at the tune of 95%. A large number of units are in handmade sector.

Safety matches manufacturing in INDIA are of the standard type with wooden veneer or cardboard boxes and wooden splints. Generally, the type of safety can be classified into three

1. Wooden matches / Match Box Veneer
2. Card Board Match Box
3. Wax Matches / Match Box

Each safety match box contains 40 to 50 splints. Other types of matches produced include promotional safety matches containing 10 to 20 sticks and fancy advertisement matches made to the buyer's specifications. Basis of raw materials the level of production and process is slightly variance.

In the period of 1950's Lucifer Match Industry and Bharat Match Industry, the first and the foremost unit of South India which was established in Sivakasi. It was faced a very tough time between 1965 to 1975, and there was a scarcity for raw materials and red phosphorus. Hence in 1971, the red phosphorus processing units were started in Sivakasi and spread over to the neighbourhood Sattur and Kovilpatti.

The Pioneer Group of Industries inaugurate the Potassium chlorate factory on a limited concern basis by enlisting shareholders and suppliers of materials, increased production and mass employment opportunities to more people.

Industrial Scenario

Safety match is a reserved item for exclusive manufacture in small scale sector. The match production in India is classified into three sector categories:

1. Mechanized large-scale sector
2. Semi-mechanized
3. Handmade sectors

The third category is largely located in rural areas.

Mechanized Sector:

It can be further classified into fully automatic and semi Automatic Non Mechanized Sector. The match units that produce matches only by labour are include under non-mechanized sector. Under Non Mechanized sector, the small scale and cottage units are included.

Cottage Sector:

Cottage Match factory is one that produces not more than 3600 match bundles per year and does not use machine for production.

Small Scale Match Factory:

The small-scale match factory is one that produces matches using labour and having no limit on production

The mushrooming of safety match industries have witnessed after 1920's. In the year 1922 Government of India imposed a high rate of import tax on foreign matches which attracted Rs.1.50 per gross of boxes at that time. Match productions are usually measured in boxes. Each match box contained approximately 60 match sticks initially, new standards mandate that each box contain 50 sticks. In handmade sector the technology is very easy and conventional.

The industry as a whole directly and indirectly employs an estimated 2.85 lakh people. The handmade/cottage sector involves totally manual operations and produces less than 75 million match sticks per year and is household based at about 2 lakh workers both directly and indirectly in India. A number of operations in the production process can be easily undertaken at home.

Present profile of safety match industrial cluster in south India

Safety match is an important role plays between the people. The demand for this product is directly proportionate to the growing population. Though, there are different medium for lighting the fire, the demand for this product is ever increasing. The major share match production in this country emerged from South Tamilnadu.

The safety match manufacturing units are found clustered in Sattur, Kovilpatti, Sivakasi, Virudhunagar, and Srivilliputhur regions in South Tamilnadu.

Structure of the safety match cluster

The structure and relative position of the safety match industry reveals the fact that they are pyramid in nature and having 4 tiers.

The tier I is dominated by mechanized sector. There are 4 Mechanized units in Tamilnadu. Of which 3 are in Virudhunagar District. The total production of this sector is estimated as One Crore bundles.

The tier II, 140 semi mechanized or partially mechanized units are at present functioning in this sector. The strong presence of such small scale safety match manufacturing units are witnessed in this tier. It was reported that semi or partially mechanized units are mostly concentrated in Sivakasi, Kovilpatti, Kazhugumalai regions.

The tier III, is being dominated by traders cum manufactures. The presence of middleman exploits the handmade sector. The trader cum manufactures act as a middle man and out source the end products at a very nominal price and sell the products in different brand names at a higher prices.

The tier IV, The handmade/cottage sector involves totally manual operations and produces less than 75 million match sticks per year and is household based at about 2 lakh workers both directly and indirectly in India. A number of operations in the production process can be easily undertaken at home.

Industrial cooperative societies

The first match industrial co-operative society was formed in 1962 and registered with Department of Industries and Commerce. Every society is managed by a Board of Directors. The societies are procuring raw material at competitive rates from the various sources and distribute them to the member tiny units on credit against securing share capital subscribed to the society. Further, societies pay excise duty from their own funds on behalf of tiny units without charging any interest. The societies act as service providers and involved in marketing the products produced by the member units. Co-operative societies created common brand awareness. It created a niche market for the tiny and handmade sector. The co-operative service societies have already created a strong market base in Delhi, Haryana, Rajasthan, Himachal Pradesh, Punjab, Chandigarh, Andhra Pradesh, Gujarat and Uttar Pradesh.

Melting down of industrial co-operative movement:

The melting down of industrial co-operatives in the early 90's unhealthy competition, over crowding and intervention of vested interest in the day today activities has affected the functioning of these societies. The high defaultation and outstanding payment is the another reason for the downfall of the societies. As such the various reasons societies are not proactive in their operation. It led to overfilling of stock in the co-operative warehousing.

Problems faces by the societies:

1. High raw material price
2. Low profit margin
3. High accumulation of outstanding
4. Competition from mechanized sector
5. Sale price of mechanized and handmade matches are more or less equal.

Protective and proactive role of Government:

Indian Government policies have played an important role in protecting and promoting the match industry. Protective tariffs, differential excise duties and sales tax exemption are some of the mechanisms used by central and State Governments to develop the industry.

Protective Tariffs:

Government of India had first imposed a high rate of import tax on foreign matches, and this tax was later confirmed as a protective tariff and attracted a number of new entrepreneurs. So imports dropped by 50% within five year period.

Production Process:

The technology of match making is relatively simple and involves a number of stages as the manufacture the entire process of match making takes place under one roof from log to match.

Processing timber logs into outer and inner box veneers and splints is the first stage. This process requires power operated machines but these can be simple. Box making comes next and is done both by machine as well as manually. Labeling and packing comes next once the side painting gets dried up. Accurate standards of quality and safety have been adopted by the Indian Standards Institution such as Splints used must be of good quality.

Raw Material Flow

Cost efficiency plays a significant role in developing the overall business operation. The system of procurement and outsourcing of raw materials. In the safety match industry the material flow is being decided by multi channel. The mechanized and semi mechanized units used to procure the raw material from direct channel.

Proactive role of service co-operative societies in the bank formation task

It is well known fact that the contribution of service co-operative societies is well recognized. The asset has already been created in this set up. Such societies are existing in Sattur, Kovilpatti, and Gudiyatham. The service co-operative societies can work as facilitator and active service providers.

Major problems faced by the handmade safety match cluster

The safety match Cluster is well known for cheaper and mass production. The status of this cluster reveals the presence of strong skilled female-dominated workers at the bottom. This industry is now in the grip of few leading small and semi mechanized manufactures and traders. Soaring prices of Raw material is the hindering factor. It has increased many folds and is to depending Kerala for sourcing this raw material.

Production Related Issues

Non-uniformity in quality of the products manufactured is a major problem faced by the handmade sector. Whereas the product manufactured by the organized small and semi-mechanized units are unique in nature. Due to obsolete technology and handmade operation mostly by the family members or by unskilled labourers, the productivity level is very low. The sector has relatively low export orientation. It is the protected domestic market that has been largely targeted till date. Replacement demand is an important component. As illustrated, the entire sector is being dominated by groups of companies and it is in the threshold of big 18 groups. Procurement of raw material has posed serious problem to the handmade sector. The organized units used to procure almost all the raw materials directly. The customers do not have any perception on brand image. The technology adopted by the handmade sector is so simple and the technology involved in all the stages. The machine made sector is illegally encroaching the handmade sector. It is reported that the mechanized units are indulged in illegal trade practice. This sector is unused to supply the semi finished products.

Cluster Vision Targets And Strategy

Cluster Vision: To enhance the production capabilities of the handmade sector by encouraging growth concept to achieve cent percent consistency in quality and mass production and to make it a member of global supply chain by improving product quality standards, technology up gradation, skill development, creating networks and linkages with international Business Support Organizations and support institutions.

Strategy:

A combination of short and long term strategies has to be adopted to achieve the above targets for development of handmade safety match cluster.

Short term Activities:

Short term activities will focus on soft interventions in the cluster. The main focus will be on creating awareness and drawing line of action and long term activities for development of cluster.

Future Cluster Map:

The future cluster map shows the entire working of the cluster once various facilities are in place and the institutional

linkages are established to provide continuous support on design and product development, testing and quality control and other inputs.

Conclusion

The handmade match industry provide employment to over 2.5 lakhs both directly and indirectly in the drought prone districts of Virudhunagar, Thuthookudi and other districts like Tirunelveli and Vellore in Tamilnadu. The cottage industry was overjoyed when the Union Budget 2004 doubled the excise duty on the mechanized units. An incentive of two paise per handmade match box is necessarily warranted to enable them to equal the cheaper production cost of the mechanized units. Although there exists good scope to capitalize the synergies and potentialities available in the cluster, factors like price oscillation, poor modernization efforts, lack of product diversification, quality improvement process, designs, low attraction for fresh investments, testing, absence of an integrated marketing approach, hesitancy for change to modern needs, over-dependence on traders have adversely affected the growth and development of this sector.

Innovations and new designs made out of research, setting up of Quality Testing Centres, creating awareness about the developments taking place elsewhere and evolving measures to mitigate shortcomings, are to be taken seriously to project the interest of the industry in domestic and global markets.

This sector should be promoted under cluster mode. There are tools and effective progressive mechanism are available to increase the capabilities and capacity of this sector.

The forward integration of product will benefit this sector. However, this requires further opening up of the market. The major critical areas of intervention have been identified in this diagnostic study. The problem area of weak linkages should be properly reduced with a view to make this sector as global player.

It was found that the issues and needs related to marketing of products by handmade and mechanized sectors are different. The handmade sector does not adopt any proper marketing mechanism.

Yet another factor compelling the formation of marketing consortia is poor focus on marketing and poor market reach. Most of the handmade units are facing acute marketing problems.

Printing of brochure is very important to get the customers from any part of the country. The other initiatives to be undertaken to strengthen their competitiveness is to form a consortia.

All the above difficulties faced by the above sectors can be nullified by forming consortium in six places Sattur, Kovilpatti, Kalugamalai, Virudhunagar, Srivilliputhur and Gudiyatham. By forming consortium can easily meet the market demands arising from both local and International by providing branded matches with good quality. Moreover, up liftment of handmade sector and Industrial growth for the Nation is also possible. Hence it is submitted that it is essential to create common facility centre to increase their capacity and utilize their capabilities.

Definition of A Cluster

@ A Cluster is a geographic concentration of firms and their various service providers

@ A Cluster is defined by

- A product/product range (same or similar)
- And a place (Name of a city, town, Village)

@ A Cluster :

- Does not involve a complete industry or a sector
- Must not be equated to an industrial park development concept

The Indian small scale industries scenario:

- 3.57 million Small Scale Industries across 7,500 products spread over the country
- 3.50 Small Scale Industries and 2000 artisans clusters contribute to 60% of exports
- Clusters provide natural agglomeration for wholesaling of support in the diversified panorama of individual needs, individual market pools and specific socio-economic context for the Small Scale Industries

Why cluster development?

- Enables to reach out to many units at a time
- Provides environment for mutual learning
- Emerging from the felt-needs of the beneficiaries
- Self-Sustainability for continuous support
- Clusters provide unique opportunity to address specific needs with specific solutions
- Clusters provide economics of operation of scale
- Increased impact and widening support from other support institutions
- Satisfies the needs of foreign buyers

Why cluster development requires state intervention:

- Cluster development is a long-term phenomenon with lower gains visible to short to medium form
- Common facilities and programmes need State's effort
- Gains when they occur, are for sharing across the cluster

Methodology of cluster development

- Selection of a Cluster
- Selection of a Cluster Development Agent
- Diagnostic study
- Trust building
- Preparation of action plan for intervention
- Approval of budget and further leveraging funds
- Implementation by trust building between Cluster Actors and CDA; Between Actor and other Actors
- Monitoring and evaluation
- Handing over and exit

References

- [1] A. Marshall, Principles of Economics, 8th edition, London, Macmillan, 1920.
- [2] M. Porter, "Clusters and the new economics of competition," *Harvard Business Review*, 76(6), pp. 77-90, 1998.