Abstract - The Sri Lankan textiles and apparel industry has played a major role in the country's development. However, this sector's competitiveness is decreasing due mainly to labor costs. As with the country's economic development, the new sources of competitive factors need to be strategically developed. The purpose of this study is to explore what constitutes country's competitiveness in the global apparel market after losing its labor competitiveness and how country effectively achieves it.

This study employs Porter's diamond model as a theoretical framework. Along with the theoretical model, this study employs extensive literature reviews, examples of successful firms, and questionnaires with field practitioners in the Sri Lankan apparel industry.

Beginning with Porter's four determinants new sources of competitive advantage factors are suggested for the evolving industry. Utilizing Strengths and weaknesses assessment, the future directions and solutions for the industry with the identified new competitive factors were suggested.

Keywords - Advanced factors, Apparel industry, Basic factors, Competitiveness, Diamond model

INTRODUCTION

In a fully globalize market, the competition is fierce and different to what has been experienced so far by all the players global apparel market. The apparel supplier’s market is now been replaced by a consumer’s market where the consumer demands products according to their preference [1]. Traditional order qualifying factors price, quality and on time delivery are only be entry qualifications to enter the global market where as order winning criteria for today is innovativeness, design, quick response and flexibility [2]-[3]. Today, with the global recession consumers ask more value for less money [4].

Therefore building competitive advantage to satisfy new consumer demand is essential in the new market. Being the largest contributor to the Sri Lankan economy for last few decades, Sri Lanka apparel industry should cultivate its competitive advantage in order to be sustainable in the global apparel market. Traditional low labour cost advantage is now moved to other countries such as Vietnam and Bangladesh causing decrease in contribution of apparel industry for national economy mainly in terms of the employment [5]-[6]. Therefore, knowing what constitutes new sources of competitive advantage and how these factors could be generated is critically important to set a future direction for Sri Lankan apparel industry.

The purpose of this study is to explore new factors for country’s competitiveness in the global apparel market after losing its labor competitiveness and how country could effectively achieve it.

The study employs Porter’s diamond model as a theoretical framework [6]. Along with the theoretical model, this study employs extensive literature reviews, examples of successful firms, and ten interviews with field practitioners in the Sri Lankan apparel industry. The ten interviewees were selected from leading Sri Lankan apparel and all were at the rank of factory manager or higher. The surveys were conducted from January 2006 to August 2007, in western province, Sri Lanka. The questions included general firm information, the firm’s challenges/successes, and future goals. In depth interviews were carried out one hour in length and taped, with the interviewee’s permission, for further analysis.

This study consists of three stages. Beginning with Porter (1998) diamond model, sources of competitive advantage factors are analyzed under the present scenario of Sri Lankan industry. The second stage provides the new sources of competitive factors in relation to present state of Sri Lankan apparel industry and the third stage provides future directions and solutions for the industry to cultivate the identified new competitive factors. The unit of analysis for this study lies in the Sri Lankan apparel industry as a whole, not individual.

II. ASSESSING THE COMPETITIVENESS OF SRI LANKAN APPAREL INDUSTRY USING PORTER’S DIAMOND MODEL

A. Factor Conditions

The factor conditions with respective to the Sri Lankan apparel industry can be discussed under the five different headings according to the Porter’s diamond model.

1. Human Resources

It is evident that cheap labor for production, which was the main advantage for Sri Lanka, is no longer being crucial in achieving competitive advantage. There are other countries such as Vietnam, Madagascar that are emerging with lower...
labour costs in the region. Apart from the rising labour wages, the average productivity of the Sri Lankan worker is also lower compared with other competitive nations such as China [5]. The rising cost of labour will act as a negative factor for Sri Lankan apparel manufacturing industry.

The skill level of Sri Lankan workers as a positive factor when considering the apparel manufacturing industry. Sri Lanka has a highly trainable work force in the Asian region that has much higher literacy rate which is similar to the developed countries [7].

Considering the motivation level of the workers, to work in the apparel manufacturing industry at the operator level, it should be noted that having apparel industry is the major employment provider for Sri Lankan economy there is a motivation in joining of female workers, to the industry. But due to the poor social attitude, the motivation level of continuing their jobs decreased.

Modern management practice in apparel manufacturing industry considers employees as a valuable asset. Most of the organizations have a good level of employer-employee relationships. Instead of labour unions the apparel manufacturing organization in Sri Lanka has workers' councils, which are named as JCC (Joint Consulted Councils). [8]

3. Knowledge Factors

The knowledge required for apparel manufacturing industry to remain competitive in the global trade of apparel can be classified as knowledge in design and product development, technical knowledge and market knowledge. In a given country, knowledge resources exist in universities, government research institutes, private institutions or private research facilities.

Sri Lankan government universities are currently providing the knowledge workers in the areas of technical and design knowledge required for the apparel manufacturing industry. Knowledge workers in the area of marketing are also provided by the private institutions. These can be taken as positive factors when considering the Sri Lankan apparel manufacturing industry. On the other hand industry today lacks with market knowledge as not much market researches are carried out related to Sri Lankan apparel industry. Industry is also not much concern about the research and development activities as well most of the apparel manufacturing organizations are not involved in marketing activities.

4. Infrastructure

Sri Lanka is having much advantage on the infrastructure conditions against other apparel manufacturing countries in South Asia mainly due to its strategic location. Present expansion in Bandaranayake air port at Katunayake and also newly suggested port at Hambanthota area will provide positive initiatives towards the transportation infrastructure as input/output port for apparel exporters.

Also the efficiency in customs procedures complement each other in minimizing transit periods for shipments involved in international trade have made Sri Lanka more internationally competitive.

The rates of telecommunication charges (IDD rates) are clearly cut down for certain countries (USA/UK) with the use of new technology internet calling. This is a major advantage for Sri Lankan apparel industry as most buyers are concentrated in US & EU countries [11].

The cost of infrastructure facilities such as electricity and water remains higher in Sri Lanka providing negative factor conditions to the Sri Lankan apparel manufacturing industry [12]. Zero import tariffs for raw materials, equipments and machinery, which are imported for the use of Sri Lankan apparel manufacturing industry, will remain as positive factor. Also zero VAT structure introduced by the Sri Lankan government for the export industry is another positive consideration [11].

5. Capital

Considering the investment policies in Sri Lanka it was evident that Sri Lanka provides positive facilities towards foreign investments. These investments provide the capital requirements needed for apparel manufacturing industries as well as raw material industries.[11]

Also there are banks and other financial organizations which provide special loans schemes and financial benefits for
the apparel industrialists. However according to the discussion had with the SME sector representatives, finance remains as a negative factor in upgrading their technology needs.

B. Demand Conditions
Considering Sri Lankan local apparel industry the demand conditions are not up to the level required to be competitive in the apparel manufacturing industry. Sri Lanka does not have much fashion conscious/ brand conscious consumers when compared with its export markets such as EU or USA. Therefore it is difficult for the apparel industry to do proper forecasting on upcoming fashion trends as well as to find directions in making innovative products by observing the local demand conditions. The standards or the quality level is not very high when compared with the foreign consumer in US and EU.

On the other hand local consumer desires are not very anticipatory with foreign consumer desires due to the heavy difference of the culture and the economy level. According to one representative from reputed apparel manufacturing organization who participated in the discussion survey, pointed out that due to this industry loses a valuable input which normally helps to develop and fine-tune the products. Local demand condition makes very low level of input to market information about the consumer requirements in new product development.

C. Related And Supporting Industries
Considering the apparel industry the related and supporting industries comes under categories of product and service suppliers. When it comes to the product suppliers, raw material suppliers such as fabric, accessory suppliers and machinery/ equipment suppliers need to be considered. Even though the amount of local raw material suppliers consider as a weakness for the apparel manufacturing industry, the growth of local raw material suppliers as well as equipment suppliers in recent years due to foreign direct investments can be given as a positive initiative.

The service suppliers for the apparel manufacturing industry can be given as IT solution providers such as saber technologies, CAD/CAM solution providers such as DMS technologies are of importance. Washing, finishing and various other service providers who support in enhancing value addition of the final product is also act as strength for the Sri Lankan apparel industry. Various buying offices available in Sri Lanka to support the apparel manufacturers in coordination with the buyers, logistics companies such as cargo and courier operators such as DHL and evergreen in delivering sample packages in sample approval process act as other supportive industries for apparel manufacturing organizations.

Since most of the apparel manufacturing organizations are lack in their capabilities in designing, development and marketing, there is a much demand for a centralized design and product development centers, which supports SMEs. Therefore centralized design and development agencies may have an important role as supporting service for apparel manufacturers in Sri Lanka, who are not capable of having their own design and development centers.

On the other hand since most of the Sri Lankan manufacturers have lack of knowledge in foreign markets as well as data on fashion forecasting, there is an emerging demand for a supporting service in the area of marketing research and fashion forecasting agencies.

For the promotional purposes, it is better to have promoting or advertising agencies to promote the Sri Lankan apparel industry.

D. Firm’s Strategy, Structure, And Rivalry
When considering the Sri Lankan apparel industry from the very beginning the Sri Lanka’s comparative advantage remained at the low cost. As mentioned under literature survey the reason for moving the industry in to developing countries is also under the given reason of low labor cost.

This makes the sense that Sri Lankan apparel industry has adopted the cost leadership strategy which is not sustainable in long term.

Since the industry was under quotas for about 30 years most of the Sri Lankan manufacturing organizations have not taken steps in building own competitive advantage in order to differentiate themselves from the competition. Since they were secured their market place under the quota system they did not want to take steps forward to remain competitive.

However when looking at the present scenario with the removal of quotas Sri Lankan apparel manufacturers should adopt differentiation strategy where they should focus on delivering a product which is differ from other similar category products catered by other competitors. In order to do that they should concentrate themselves in different differentiation factors which they are capable enough in providing such as ethical factors, quick response, innovative designs etc.

III. New Sources Of Competitive Factors For Sri Lankan Apparel Industry

Reference [14] divide the factors discussed under the diamond model as basic factors versus advanced factors, or generalized factors versus specialized factors. A basic factor is known as inherited, such as low cost labor, while advanced factors are known as which need to be developed, such as highly skilled and educated personnel [7]. He suggested that competitive advantage based on basic or generalized factors is
unsophisticated and can be taken off by another competitor, whereas advanced or specialized factors are more sophisticated and build more strengthen competitive advantage for an industry. Therefore traditional competitive factors vs new competitive factors for Sri Lankan apparel industry can be given as in Table 1.

<table>
<thead>
<tr>
<th>Porter’s determinants</th>
<th>Traditional competitive advantage factors</th>
<th>New competitive advantage factors</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Factor conditions</strong></td>
<td>Basic factors: such as unskilled labor and raw materials</td>
<td>Advanced factors: Access to skilled human resources such as design, technical and marketing expertise. Specialized factors such as production and process technologies.</td>
</tr>
<tr>
<td>Demand conditions</td>
<td>Local consumers who Demands functionality and availability of apparel items</td>
<td>Access to consumers demanding higher levels of needs</td>
</tr>
<tr>
<td>Related and supporting industries</td>
<td>Presence of back-end suppliers. (e.g. raw materials Producers)</td>
<td>Presence of internationally Competitive front-end industries. Colabarative service related activities with customers/suppliers. Organizations that promote modern technologies in handling global sourcing and management (e.g. EDI)</td>
</tr>
<tr>
<td>Firm’s strategy, structure and rivalry</td>
<td>Cost leadership</td>
<td>Differentiation - Differentiation through more ethical product. -Differentiation through lower lead time. -Differentiation through high quality product -Differentiation through innovative designs. -Differentiation through Customer relationship management</td>
</tr>
</tbody>
</table>

Source: Reference 14, Modified using survey data

IV. STRATEGY FORMULATION FOR SRI LANKAN APPAREL MANUFACTURING INDUSTRY UNDER NEW COMPETITIVE FACTORS

A. Strategy Formulation: Expand the Factor Conditions

Sri Lanka should concentrate on high service related skills in the areas of design & product development, marketing, material sourcing, and inbound/outbound logistics. To facilitate these requirements steps needed to be taken in country level for train and educate the respective resource personnel.

Government should ensure that the education system related to Textile and apparel is outstanding to cater the above requirements. Procedures need to be made in order to link the Sri Lankan universities with the Sri Lankan apparel manufacturing industry to adopt the specialized needs of the industry. This can be facilitated by establishing knowledge transfer from foreign universities where the above mentioned areas of education is highly adopted.

When consider the organizational level strategies, the apparel manufacturing organizations need to concentrate more on their Human Resource Developments (HRD). Government should support the investment towards the human resource development through encouraging organizational investments in HRD through elimination of taxing the training benefits.

Through building good relationships with the apparel retailers, apparel manufacturing organizations would be able to get the training benefits in the areas of design, product development and material sourcing, in which the apparel retailers are more experienced in carrying out those activities for years.

B. Strategy Formulation: Expand the Demand Conditions

Moving in to new markets, where Sri Lankan apparel manufacturers are capable enough in selling their products under their own brand name will allow apparel manufacturers to capture the future demand to certain extent. Presently the preferential access to India and Pakistan provide under ILFTA and PSLFTA facilitates to Sri Lankan apparel manufacturers to penetrate in to these markets easily. Targeting more fashion conscious consumers in the respective markets will allow Sri Lankan manufacturers to capture the market trend to certain extent as well as will allow them to provide full service from design to delivery of the product.

C. Strategy Formulation: Expand The Related And Supporting Industries

1. Backward Integration

Considering the Sri Lankan situation, due to the higher capital requirement and due to the unavailability of local raw material base (Cotton, Wool etc.) having local textile mills to meet the total requirements needed for apparel manufacturing industry is a difficult task even though it is noted that even with less backward linkages, the apparel industry in Sri Lanka has contributed significantly.
Therefore expanding possibilities of raw material base through internationalization is very important. The expansion of regional raw material base will allow Sri Lankan apparel manufacturers to reduce the lead time in raw material procurement as well as the shipping cost. Here, the government support is an important factor to facilitate integrative approach among the south Asian countries, especially India and Pakistan to make a collaborative approach in facing the challenges of global apparel trade. Since India and Pakistan are major raw material suppliers in the world this initiative will provide a better opportunity for Sri Lankan apparel manufacturers. The collaborative approach facilitated by government will also provide apparel manufacturers to source higher quality raw materials, which meet the requirements of apparel retailers.

2. Forward Integration

Providing full service is a demanding factor in present apparel trade. Through the industry survey it was evident that most of the Sri Lankan apparel manufacturers are not in a position having their own design and development units as well as marketing units. Therefore centralized design and product development centers including material sourcing is an emerging supporting industry for the apparel manufacturers. Establishment of centralized centers to provide full service will be a great opportunity for SMEs.

To facilitate this, government support is a major factor. Government should facilitate in building up these design centers and to make proper coordination in between the SMEs and apparel retailers. At the initial stage foreign designers, technical expertise can be hired from other countries in order to make the process streamline and to let local designers to work with them. Traditional buying office concept can be provide more service to the apparel manufacturers as well as to the apparel retailers.

Another weak point of Sri Lankan apparel manufacturer in providing full service is the lack of market knowledge. This area was lacking in well reputed apparel manufacturers in Sri Lanka according to the discussion survey. Therefore the knowledge on market trends and fashion forecasts is an important factor in the present environment. This should be initiated as a centralized unit where the information related to the market trends and fashion forecasts need to provide to apparel manufacturers. Building up own fashion forecasting units with market research agency at the apparel retailer’s company will be a major positive factor towards this requirement. Collaborative partnerships with foreign based fashion forecasting agencies is another step that can be facilitate by the government or any centralized trade association unit in Sri Lanka.

3. Encourage Value Addition through Supporting Industries

Due to the fact that most of the preferential access to markets are given under Rules of Origin criteria based on the value addition in Sri Lanka it is very much beneficial in opening up of supporting industries which add value to the products catered. Finishing, dyeing and washing industries together with printing and embroidery are major industries which Sri Lanka needs to be concentrated on as supporting industries for apparel manufacturing organizations.

This will open up two main opportunities for the apparel manufacturers other than preferential access. First is that this will allow Sri Lankan apparel manufacturers to add more service to the apparel retailers since these supporting industries will facilitate the Sri Lankan designers to create new, innovative ideas for the design and development of new products. Facilitating research and developments in the areas of washing, printing, graphic designing etc will make Sri Lankan designers to participate in the new product development process in collaboration with foreign designers in apparel retailer’s country.

Secondly this will allow apparel manufacturers to cater for apparel retailers who demands small batch orders with quick response. That is by keeping inventories of grey fabrics imported can be quickly printed or dyed and finished according to the apparel retailer needs.

Government should improve benefits to facilitate FDI for these supporting industries in order to gain the advantage of foreign investors.

4. Encourage Information Communication Technology Providers/ Manufacturing Specific Technology Providers

Information communication technology is a major requirement in present apparel market. This facilitates the rapid information flow internally as well as externally to integrate the whole apparel supply chain. Supply chain integration is known as a major competitive factor in today’s apparel market since apparel supply chain consist with various dispersed activities in different areas of the world. The availability of the specific technology for the apparel manufacturing is another important factor for the apparel manufacturing organizations.

Therefore industries which provide these facilities should be opened up in Sri Lanka. Introducing new suppliers in the above areas is important in order to identify new technologies is very important. It will help the manufacturers to get up to date information about the new technologies available. These will allow Sri Lankan apparel manufacturers to be matching up with their apparel retailers.

D. Strategy Formulation: Expand The Firm’s Strategy, Structure & Rivalry

To be sustainable in an industry, firms should adopt a strategy whether to be cost competitive or differentiation.
Unfortunately there is no strategy development in most of the apparel manufacturing organizations in Sri Lanka. However it should be noted that organizations need to think long term. Otherwise they will continue as “cut and sew entities”, a position that would not be easy to defend in the new competitive environment. Since Sri Lankan apparel manufacturing industry is losing its advantage over lower cost, it is better to formulate a strategy in differentiation.

Identifying the most appropriate ‘Differentiation factors’ is a factor to be considered by the apparel manufacturing organization through investigating strengths and weaknesses of Sri Lankan apparel manufacturers.

V. CONCLUSION

When the Porter’s diamond model was applied to the Sri Lankan apparel manufacturing industry it was noted that the industry’s competitive advantage lies more in specialized factors such as service related skills, demanding related and supportive industries, and differentiation strategies such as innovative designing, ethical and eco perspective etc. Sri Lanka should thus need to place greater emphasis on education and training of service related skills such as Material sourcing, Quality control, inbound and outbound logistics, marketing & design and to encourage the establishment of centralized centers where domestic apparel manufacturers can share market knowledge and offer more integrated solutions to prospective apparel retailers.

Therefore it should be noted that a key objective of government is to strengthen the capacity of private sector to deal effectively with rapid change and growing competition in order to capture the trade opportunities that are being created through improved market access. Also government should support in the emergence of qualified expertise and the adoptability of the workforce, improve the country’s infrastructure conditions on essential business services, Stimulating collaborative innovative processes, negotiating improved market access on textile and clothing products etc.

VI. LIMITATIONS AND FURTHER RESEARCH

If there were better responses from the apparel manufacturing organizations, the study would have been much more successful, since it may give more accurate results for generalization.

Further research could be done in assessing the capabilities of South Asian region under the Porter’s diamond model in order to observe how Sri Lankan apparel industry could be positioned in the South Asian regional context in order to expand the factor conditions, demand conditions, related and supporting industries and Firm’s strategy, structure and rivalry in order to be competitive in the global apparel trade.

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