

# Innovation – The need of the hour



Innovations have been a steady process all over the world during last couple of decades. What we have been experiencing in the form of excellent quality fiber and fabrics with ultra-modern machines and equipment is the result of concerted and timely innovations. Also, the processing machines have attained extraordinary quality standards incorporating precise computer controls, to give very high quality fabrics with finest texture on account of extensive research and development at global level.

Global textile industry and its yarn spinners, fabric weavers and processors have to be in a highly competitive mode in the global marketplace — one in which quality, customization and technological innovations are likely to play ever-more significant roles. Overall innovations and capacity building will thus have to be aimed at giving the much desired boost to world economy.

## CHINA AND INDIA IN FOCUS

China and India are the top two major textile producers in the world. The proceeds from textile and apparel exports have contributed greatly to the economic development of both the countries. Millions of jobs are created in the related sectors. The continuous development of the textile industry is thus vital to both countries' socio-economic health. Interestingly, textile enterprises in China and India have adopted quite different business models and have followed divergent growth tracks.

It should be pointed out that technological innovations do not always refer to automation or hi-tech. Sometimes enterprises may simply reorganize production procedures to increase the workers' productivity or bring in innovative strategies to develop the talents and skills of the work force. Structural and organizational changes are innovations too which could become imperative under certain specific circumstances.

Every country has its own unique experience in undertaking innovations as well as in establishing and developing new business models in which the factors of cost, productivity, quality, technology and design are adjusted according to market demands and the enterprises' capacity. These improvements may be based on upgrading hardware, but often they are just the result of better management of the existing technology. The booming Chinese and Indian textile and apparel industries show us detailed, multi-faceted technological developments in their specific historical and social contexts.

It is worth mentioning that Chinese companies are specializing in reducing the cost to a very competitive level, not only by means of **cheap labor**, but also through **mass production** and **high productivity**. In fact, the average wage of Chinese workers is higher than that of Indian workers. While a Chinese textile worker earns normally \$100 per month, an Indian worker is usually only paid \$70 per month. However, the Chinese companies cut the costs even lower than their Indian and other competitors through mass production and returns-to-scale of the economy. The biggest factories in India look like lightweight players in China.

### For example, the largest spinning company in India,

Vardhman Group has a capacity of 500,000 spindles.

In contrast, the largest Chinese spinning company, Weiqiao Textile, is running 3,000,000 spindles. The largest weaving company in India, Arvind Mills produces 110 million meters of denim and 30 million meters of fabric per year, while Weiqiao Textile has a capacity of 157 million meters of denim and 844 million meters of fabric in total. On an average, **the size of Chinese textile companies is five times larger than that of the Indian ones**. It is not just size but the innovative ideas at all levels have brought Chinese textile industry to its present status.

Apart from management, the external conditions in India are not friendly to mass production

Table-A

S. No.	Country	Company	No. of Spindles
1	India	Vardhaman	500000
2	China	Weiqiao	3000000

Table-B

S. No.	Country	Denim in million mtrs	Fabric in million mtrs
1	India	110	30
2	China	157	844

### Chinese Advantage for Productivity

The World Textile Congress 2015 has given us an opportunity to critically examine factors which give an advantage to Chinese Textile industry so as to imitate the same, of course with discreet adaptability, by other nations. Following are the three major factors in this regard:

- i. workers are much more disciplined and work more intensively

- ii. Heavy Investment in modern equipment to boost productivity. According to the International Textile Manufacturers Federation, between 2000 and 2010 over 55% of spinning machines and over 68% of weaving machines delivered worldwide went to China.
- iii. Capacity building is encouraged by the Govt.

### **INDIAN ADVANTAGE**

Although Indian companies are not able to beat the Chinese in terms of cost and productivity, their strength is in small batch orders and customization. Other factors are:

- i. Small orders are not attractive to them,
- ii. The rearrangement of working positions in a big factory may cause bigger costs, or the unused capacity may cause larger loss of opportunity cost.
- iii. The English-speaking Indians have the advantage of communication with Western customers, and that is important for customized products
- iv. Most of the Indian textile enterprises have a longer history and better management than the Chinese companies.
- v. Most of the Chinese enterprises have no more than 30 years of history and are still striving to standardize their manufacturing procedure and quality control because their expansion has been so fast.
- vi. Most Indian companies are quite experienced in maintaining high quality and have an established control system.
- vii. Customized products bring more profit.
- viii. The Indian companies are satisfied with their high-margin manufacturing.

### **BUSINESS MODELS**

Actually in both China and India the cost-conscious and the profit-conscious models exist. Although focusing on reducing cost, the Chinese companies do not forget to pursue more value-added products and profit. On the other hand, Indian companies also introduce new machinery and enhance management to improve cost-efficiency. After the devastating Cultural Revolution (1966-1976), there were few engineers and skilled workers left in the urban textile industries and even fewer in rural areas. Because of the lack of skilled workers, experienced engineers, and qualified designers, these enterprises could do little to improve technology or fashion design. Their development is rather based on the efficient organization of mass production, promoting productivity and reducing cost.

From the middle 1980s to the early 1990s, when the foreign orders arrived, Chinese manufacturers had neither modern machinery, nor technology strength, nor communication capability. Thus, their only option was to add an element of innovation so as to use their advantage of a highly disciplined workforce and concept of mass production in order to compete with other players in the field through astonishing productivity and cut-throat prices.

Further, the conscious and concerted efforts of the Chinese government in respect of innovative infrastructure construction, including road construction, power, and water supply development, provided the fledgling textile enterprises with substantial support that came from lower production and transportation costs. Although the strategies of Chinese textile and apparel companies have changed a lot since then, established business models and existing customer groups still largely influence the direction of the companies' technological development. Through a long period of market operation, Indian companies have relatively established market networks and regular customer groups

### **Technology Improvement and Adaptation**

The aforementioned characteristics describe the general trends of technology management in the textile and apparel companies in India and China so far. In specific development phases and concrete enterprises, more varieties of innovative approaches and strategies can be observed.

In the age of information technology, ERP (Enterprise Resource Planning) and CRM (Customer Relations Management) software systems have been introduced to the textile and apparel industries in both countries in a big way. Some of the Indian textile entrepreneurs, owing to their higher education and better understanding of technology, even set up their own ERP/CRM companies several years ago as a strategy of business diversification.

In comparison, the situation in China appears to be much more complicated and needs multi-level technological adaptation.

**First**, international ERP software companies like SAP and Oracle are too expensive for low-profit textile and apparel companies. The software produced by these international companies is not suitable to the unique business models and corporate backgrounds of local Chinese enterprises.

**Second**, for many companies, there is no need for an overall ERP/CRM software. These companies are primarily interested in managing the crowded manufacturing sector and raising production efficiency. Therefore the ERP software often is introduced together with (semi-)automated machinery. This actually avoids the problem of incompatibility of hardware and software too.

**Third**, the application of the ERP software means restructuring the company organization as well. For a few entrepreneurs, the major advantage of ERP software is not that it promotes productivity, but that it provides a chance to standardize the whole manufacturing process and modernize the enterprise structure. Standardization becomes the target of the managers because it significantly reduces the risk of accidents and lays the groundwork for further development.

### **NETWORKING**

Being aware of the fact that technological advancements are essentially taking place all over the globe and innovation is a continuous process, there is a dire need to establish efficient net-working across the globe to mutually share the results of research and developments in all areas of textile industry. This will help us to have even the most advanced technology available around the world and accelerate global progress of innovations in textiles through cooperation and goodwill.

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