Pharmaceuticals: Productivity & Efficiency Benchmarking

In this section various productivity & efficiency parameters that are critical to achieve competitiveness in the manufacturing sector have been studied along with the progression of India vis-à-vis competing countries on the competitiveness protocol.

Detailed benchmarking results are formulated below:

Cost Structure

Cost structure encompasses all the expenses that a firm must take into account when manufacturing and selling a product.

Part of China's competitive advantage comes from the operating environment (lower interest rates, access to power and other infrastructure) and government aid (cheaper land, government funding). This has enabled Chinese manufacturers to benefit from economies of scale.

China is also better endowed with raw materials such as phosphorous, potassium and sulphur, so it can produce bulk drugs at 10% of the cost in developed countries

India is relatively weak in fine chemicals and relies on China for its imports. Further, there is lack of availability of critical raw materials like urea, hydrazine hydrate etc. for which India has to rely mainly on imports from countries like Korea and China. This increases the raw-material cost for Indian enterprises.

Moreover, India does not have enough indigenous capability for manufacturing analytical instruments and has to rely on imports which further leads to increase in the cost. As far as China is concerned they have the required capability to manufacture the analytical instruments.

India is also weak in biopharmaceuticals products. It depends on Chinese imports for many of the biotechnology and fermentation based products. On the other hand, China produces over 20 biopharmaceuticals products and is strategically developing its Biotechnology segment and is the only developing country participating in genomic research.

Productivity

According to International Research Journal, the pharmaceutical industry in India is grappling with high level of attrition of 30 to 35%. Globally the rate of attrition in pharmaceutical industry is only 10 to 12%[13]. High attrition rates effects the overall productivity of the company. Moreover, the attrition rate in R&D is further higher which affects the overall research and invention work in a company.

In 2011, the R&D spends of the top five companies was about 5% to 10% of revenues. This ratio is still way below the global average of 15% to 20% of sales.[13] Due to lack of required investments and innovation, the drug discovery process is further hindered. Due to Inadequate R&D Infrastructure, the technological development in generics APIs or formulation has been limited to cost-effective process

[13] D&B Analysis

development. This impacts the overall value addition and thus overall labor productivity of the pharmaceuticals sector.

Process Time

Process time is a very important parameter for competitiveness as it is indicative of the overall time a firm uses for production and reach to the target market. Countries which are able to achieve faster turnaround time and have quicker time to market will enjoy competitive advantage in the market.

Indian stands at a point of disadvantage in terms of average time to production as well as average time to market as compared to the competing countries. The former is lower because of several reasons like: Less working hours in India, inconsistency in raw material availability, high dependence on imports, lower labor productivity, inconsistent power supply and fragmented nature of pharmaceuticals industry.

Average time to market is higher in India because of delay in custom clearance of exports and documents preparation. China takes very little time to arrange for customs clearance for exports as well as imports. Since India has to rely on imports for some of its key raw materials, a small delay in delivery of imported raw material to the factory could delay the entire production process.

Quality Accreditition

Quality accreditation is an important parameter for competitive advantage as it would enable a firm to increase its market reach. Most of the buyers use quality accreditation as a parameter to evaluate a supplier and in some cases has a mandate to buy only from firms with desired accreditation. Further, quality accreditation has direct impact on productivity as it would require tightening up of processes and giving away inefficiencies.

India is signatory to the WHO certification protocol on the quality of pharmaceuticals products and has therefore accepted the WHO-GMP standards as an integral part of the standards for export of pharmaceuticals products. As per arrangement, WHO-GMP certification is granted by the office of the DCGI (CDSCO) and State FDAs.It is estimated that at present about 800 units are certified by CDSCO for WHO-GMP production. There are about 10,000 plus pharmaceuticals SME Units in the country; hence the number of firms with certification is less as compared to global standards. China's State Food and Drug Administration (SFDA) has been making constant efforts to upgrade quality of drugs produced in China. A new set of Good Manufacturing Practices (GMP) in China came into effect in March 2011, which upgrades drug quality standards of the country at par with international standards, thereby making Chinese drug companies internationally competitive.

System Improvement

This section examines the extent of innovation and technology being employed by the firms which would lead to overall improvement in production systems and have direct impact on productivity and ensure sustainability of the same in long run. Various parameters that are compared in this section are: Investment in research & development and investment in training & development of employees.

The estimated investment on R&D by major Indian pharmaceutical companies is around 8.7% of their turnover. But as a percentage of total production this works out to only 4.4% of the total production. Compared to R&D investment in the developed markets like USA, where R&D works out to be 8% of the total turnover, the Indian investment is quite low. Major reason behind this is the emphasis of Indian companies on generic production. The industry's total R&D budget is comparatively very small as compared to the global competitors. This also leads to such problems as concerning recall of drugs. In fact, individual R&D budgets of many US companies probably amount to much more than the cumulative budgets of all the companies in India.

Business Leadership

Effective business leadership is a critical element in any organization and impacts the overall organizational culture and plays a part in productivity of the organization. Various parameters that will be compared in this section to measure business leadership are: Proficiency of top managers (measured by educational capabilities) and Experience of the top management.

India fares well in terms of manpower in pharmaceutical industry. Although molecular biologists are in short supply, there are a number of talented chemists who are equally as important in the discovery process. India's wealth of people extends benefits to another part of the drug commercialization process as well. With one of the largest and most genetically diverse populations in any single country, India can recruit for clinical trials more quickly and perform them more cheaply than countries in the West.

Around 8% of the people employed in the sector have PhD. and M.tech. degrees and around 25% are graduate engineers. However, as per the industry, the demand of quality professionals has not been well supported by the supply of quantity manpower. Hence, there is necessity to expand higher education in pharmaceutical and certain areas.