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# Biotech-drugs to drive India's cold chain supply market

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**The Industry**

India's integrated cold chain industry is composed of a combination of surface storage and refrigerated transport, growing at a CAGR of ~20 percent in the last three years.

The Indian cold chain market is estimated to be worth $8 billion and is expected to touch $13 billion by 2018. Out of the $8 billion, less than $2 billion is shared by the biotech and pharmaceutical industry.

Currently India roughly has about 6,300 cold storage facilities. Under the 12th Five Year Plan (2012-2017), the Department of Pharmaceuticals has asked for the assistance worth Rs 50 crore ($9.2 million) for setting up cold chain facilities across India.

**The Trends**

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The Indian cold chain market is dominated by private players and is highly fragmented in which about 3500 plus players are present. It is anticipated that cold chain market in India will get more organized with the entry of large private players in this arena.

Globally, the focus now has shifted from increasing the production to better storage and transportation of goods. Cold chain now has become an integral part of the supply chain management for the storage and transportation of temperature sensitive goods. Utilization of cold chain logistics includes both the cold storages as well as refrigerated transportation and is used to increase the shelf life of food produce and other goods.

Talking about emerging opportunities in the cold chain supply market, Prof. Anju Bharti, Maharaja Agrasen Institute of Management Studies, who has conducted a research study on the industry said, "Vaccines require the support of temperature controlled environment right from the point of their initial stage of production to their final distribution. This indicates the unexplored potential for both domestic as well as the international players which are present in the cold chain management system."

Currently the market value for temperature controlled vehicles which are deployed for the transportation of pharmaceutical products is more than $3.8 million, which is likely to reach at around $17.1 million in the next five years.

Entry of organized players, consolidation and cooperation between the organized and unorganized players, and increasing focus on quality and efficiency are seen as emerging trends said Mr Rajesh Agarwal, Ã¢â?¬?director, Crystal Logistic Cool Chain.

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**The Challenges**

Numerous interruptions in the supply chain result in temperature-sensitive drugs remaining too long in the open-air loading dock and can result in the loss of drugs worth millions.

Lack of sensitivity at the driver's level, poor infrastructure and various requirements at each state border coupled with no-entry restriction in most metros makes the refrigeration equipment stress when ideally not required, laments Mr Agarwal.

"The existing facilities are outdated and poorly maintained. Lack of awareness and availability of technically qualified people to support efficient operations, lack of pre-cooling and storage facilities, dearth of refrigerated carriers, fragmented supply chains, poor scarce application of latest tools and technologies are major impediments," expressed Prof. Bharti.

According to Prof. Bharti, construction of cold storages requires high-tech engineering services, whereas in India currently, cold storages are being constructed and operated by people who do not have any formal education in engineering and design.

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"Across the country, there is no standardization in construction and equipment of the cold storages. The practices are rather localized and based upon erroneous concepts of heat transfer and principles of cold storages resulting in substantial extra spending in construction and regular loss of energy," she opined.

Lack of electricity, power supply and other supporting infrastructure are a major challenge in setting up cold chain facilities.

The creation of a cold chain infrastructure is a capital-intensive project, which requires a substantial amount of investment. "The investment risk is too large to be borne by any single player because of the low utilization of capacity in the initial phase," Prof. Bharti stated.

State initiatives are adopting the public-private partnership (PPP) model. For instance, Karnataka has set up cold storage facilities by partnering with Karnataka State Agricultural Produce Processing and Export Corporation Limited (KAPPEC) and Ken Agritech in food sector.

Warehousing projects usually get delayed or do not get commissioned due to land acquisition issues and regulatory clearances. Here the PPP model can play a significant role in easing the whole process.

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**Attracting Investments**

Indian laws already allow foreign direct investments (FDI) in cold chain infrastructure to the extent of 100 percent.

"There has been no interest in foreign direct investments in building cold storage infrastructure. Experts claim that cold storage infrastructure will become economically viable only when there is strong and contractually binding demand from organized retail," Prof. Bharti said.

Venture capitalists and private equity funds are excited about this space especially after the run that was witnessed on Snowman Logistics.

In recent years, India's domestic cold chain industry has undergone both consolidation as well as expansion of capacity as with companies like Gati, Dev Bhumi, MJ Logistics and Crystal. There has also been an increase in the presence of international companies in India's cold chain industry such as Kuehne+Nagel and Gateway Distriparks.

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Mr Agarwal said that there is a demand-supply mismatch, and thus competition is not intense in this industry. "Everyone coexists in the system. However there is a price war for the pharma and biotech customers as margins from this sector is high," he added.

**The Opportunities**

Although the recent move on allowing FDI for cold chain industry has received a cold response, experts believe that the industry will grow significantly as multi brand retail is no longer a distant dream. "The foreign companies will vie for a share in this market. Cutting edge technology and right partnership will help the companies create a position for themselves in this market," predicted Prof. Bharti.

Organized warehousing companies are based in metros. However, the unorganized are present in tier III and IV cities. "An interesting point to note here is that 41 percent of cold chain warehouse capacity is in Uttar Pradesh," noted Mr Agarwal.

In August 2014, Menzies Aviation Bobba, which operates cargo terminal at Kempegowda International Airport (KIAL) in Bangalore opened an exclusive 'Pharma Cold Zone' for handling pharmaceutical products.

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The Mumbai International Airport (MIAL) has already installed four new cold rooms for pharma cargos, and has trained handling staff to ensure adherence to standard operating procedures.

Organization of Pharmaceutical Producers of India (OPPI) has tied up with Delhi International Airport (DIAL) to overhaul and add to the existing cold chain facility.

Real time temperature monitoring on a mobile phone is the latest technological advancement made, and this was a biggest concern of those in this space.

"For now, implementation of Goods and Services Tax (GST) should be what the government of India should focus on. Infrastructure will take time and we see the government moving in the right direction," said Mr Rajesh optimistically.

**Major Players**

- Amar Cold StorageÂ
- Brahmanand HimgharÂ
- ColdExÂ
- ColdStar Logistics
- Crystal Logistics Cool Chain
- Dev BhumiÂ
- Gateway Distriparks
- FHEL
- Fresh and Healthy EnterprisesÂ
- Future Supply Chain SolutionsÂ
- Gati
- Gubba Cold StorageÂ
- KelvinÂ
- MJ Logistic Services
- OOCL Logistics IndiaÂ
- Radhakrishna FoodlandÂ
- Snowman Logistics
- TCI XPS Cold Chain