

Competing successfully in Indian Specialty Chemicals Industry

India's strong position on the critical success factors for the specialty chemical industry could help it emulate the success story of Europe in a similar structural framework. However specialty chemical companies in India must address four key dimensions in their strategy: innovation to meet local needs, channels for effective customer interface, leadership in evolving sustainability trends and leveraging upstream chemicals supply; say Dr. Alexander Keller of Roland Berger Strategy Consultants, Pratik Kadakia and Abhishek Nigam of Tata Strategic Management Group

Global chemical industry, esp. specialty chemicals, moving east

The chemical industry has in the past traditionally grown in the developed countries of the West and Japan. However changing market dynamics over the last 10 years has resulted in global chemical production moving increasingly to Asia (ex-Japan) from the West, as indicated by the gain of 13% points share gain between 1997 and 2007. (Refer Fig. 1)

This trend is likely to continue in the future as growth in the chemical industry in Asia unfolds. Specialty chemicals, a segment with higher than

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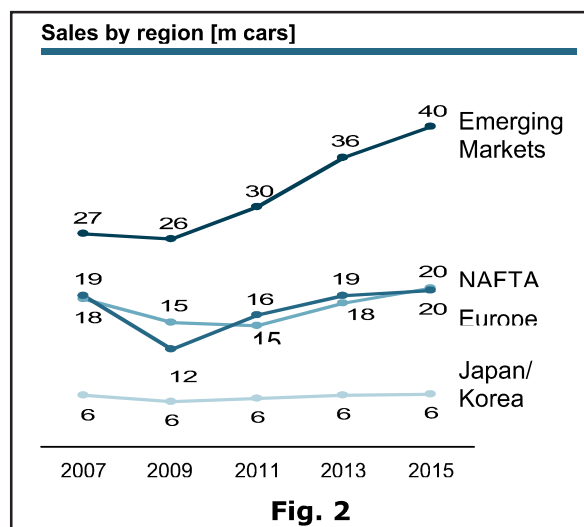
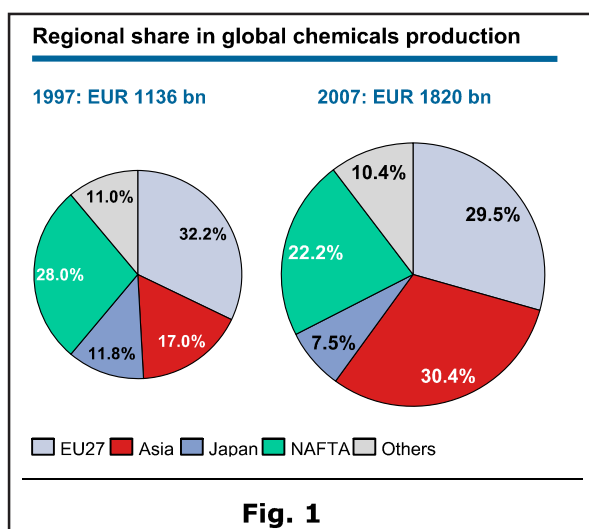
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average overall chemical industry growth rate and by definition closer to the customer industries like automotive, construction and others, are a key contributor to this changing global scenario. Some of these key consumer industries are becoming more and more important in emerging countries in Asia. This trend is reflected in the significantly higher growth of key consumer

industries like automotive in emerging markets vis-à-vis in developed countries of West and Japan. (Refer Fig. 2)

Beyond the growth of the customer industries requiring additional volumes of specialty chemicals, the local chemicals production replacing imports also contributes to the growth in these countries.



India: A potential global specialty chemicals hub

The specialty chemicals market in India (including knowledge chemicals as active ingredients in agrochemicals and pharmaceuticals) has the potential to grow at a rate of ~15% p. a. to reach USD 40 billion by FY 2014. This growth potential is significantly higher than the overall chemical industry projected growth rate for the world at ~3% p.a. or even that for India at ~10% p.a.

Growth in the Indian specialty chemicals industry is driven largely by robust domestic demand with exports based growth in select segments. Local demand for specialty chemicals in India will continue to grow, driven by three main factors. Firstly, key consumer industries e.g. textiles, automotive, construction, etc. are expected to grow at rates higher than the overall GDP. Secondly, emerging customer needs across consumer industries call for products with higher quality/ increased performance products e.g. wrinkle free textiles, reflective glass, cement admixtures, etc. Finally, manufacturing processes need upgrading leading to

process and equipment upgrades in many industries e.g. textile, paper, electronics, cosmetics, plastics

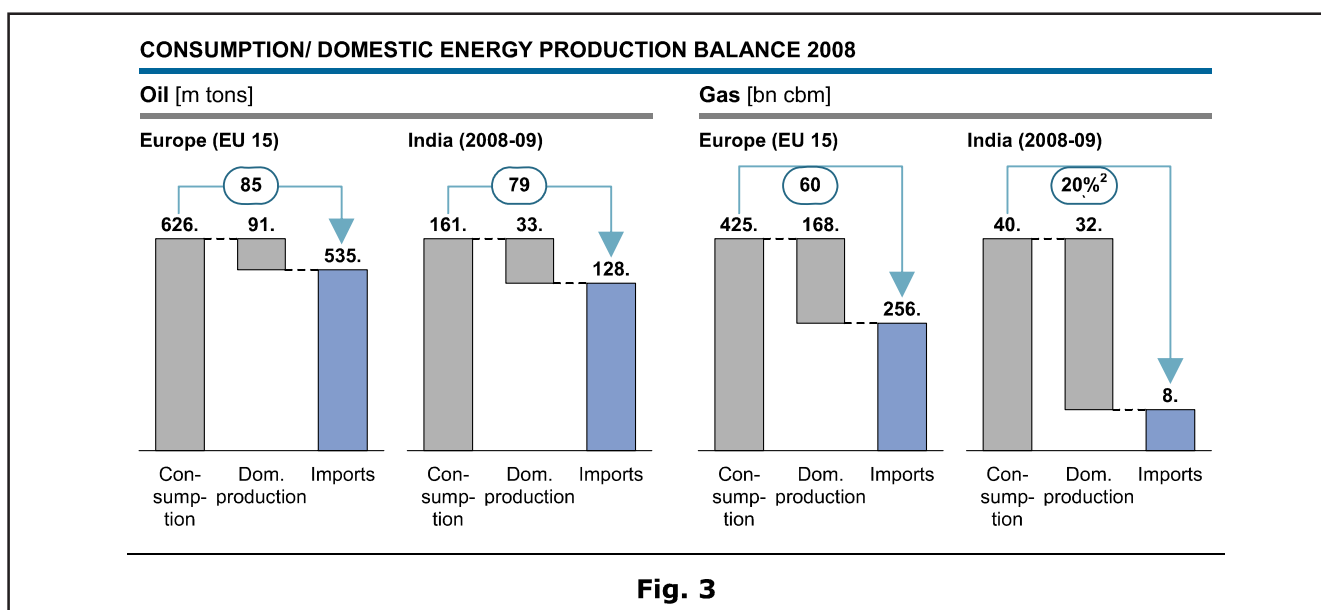
European specialty chemicals industry: A similar growth story

The growth potential of Indian specialty chemicals becomes all the more convincing, when we take a look at the evolution of European chemicals industry. Faced with a similar structural framework of limited carbon based feedstock availability, (Refer Fig. 3) European chemical industry developed the specialty chemicals segment which has a much lower dependence on raw materials than base chemicals. Today specialty chemicals production catering to both strong domestic market and exports is worth ~EUR 150 billion (~10 times the size of Indian specialty chemical industry) and accounts for around 40% of the total chemical sales in Europe. India could very well emulate the strong position of specialty chemicals industry as witnessed in Europe under similar structural framework conditions.

India's strengths aligned to achieve success in specialty chemicals industry

If a quantum leap in production and marketing of specialty chemicals is to happen in India, let us review the critical success factors (CSFs) in the business and how India fares on each of them?

- *Critical size of domestic market:* The recent growth witnessed in the consumer industries has created a large domestic market in excess of \$20 billion. This now provides the much needed critical size to the domestic industry for large scale investments. Import substitution will lead to additional growth in the future. Critical size in the demand industry supports critical size of local chemical markets as well and makes local production interesting for national and international players
- *Customized application development:* India is a unique market with its own distinct needs where customized application development is perhaps the single largest critical success factor.



Whether it is supplying innovative products to support India's emergence as a small car hub e.g. plastic body panels to reduce weight or providing products to support burgeoning demand for ultra-low cost housing e.g. quick setting concrete; companies with the ability to meet the distinct local needs exactly have a clear advantage.

- **Strong R&D capabilities:** A large pool of qualified scientists and supportive Intellectual Property (IP) protection framework help create strong R&D capabilities as has been demonstrated recently with emergence of India based global R&D centers of several chemical MNCs including Dow, DuPont, GE, etc.
- **Established process know-how:** A strong technical manpower base of skilled engineers and proven cost-efficient process know-how are readily available. For example, frugal engineering or '*jugaad*' that Indians have demonstrated amply in cost effective processes and plants for Active Pharmaceutical Ingredients (APIs), etc. is now a subject of study in the West.
- **Availability of reliable and competitive feedstock supply:** Finally establishment of chemical clusters including Petroleum, Chemicals and Petrochemicals Investment Regions (PCPIR) with government support has created suitable docking points for the Indian specialty chemicals industry. Already chemicals/ petrochemical majors like Total, Saudi Aramco, Shell, Exxon Mobil, Borealis and Itochu Singapore have evinced great interest in participating in these PCPIRs. For example, in case of Dahej PCPIR, INEOS is exploring options to manufacture and supply

catalysts not only to its anchor tenant OPaL (ONGC Petro additions Ltd.) but also to its other clients in Eastern part of the world.

In summary, India's strong position on each of the CSFs for specialty chemicals business forms the basis of the strong and sustained growth.

Emerging discontinuities: Opportunities to change global industry landscape

As we discuss access to a sizable and growing market and strong position on CSFs, specialty chemical companies in India must take into consideration the emerging technological / market discontinuities that have the potential

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to become game changers in the specialty chemicals landscape.

Developments in nanotech/ biotech in consumer industries are throwing up new opportunities. For example, development of nano-tech based smart delivery systems for pesticides/ fertilizers and architectural coatings containing nano-particles could revolutionize the landscape of respective consumer industries. Breakthroughs in catalysis using nano-tech could significantly alter automotive engines/ refineries.

Increasing concern over sustainable growth and consequently rising preference for environment friendly products is generating possibilities for companies to create green leadership and reducing environmental footprint. For example, consumer preference for products such as bio-polymers and diesel with fuel additives which not only

increase fuel efficiency but also cut down the emission of greenhouse gases could have far reaching implications for the industry.

Exploring these opportunities can become a unique opportunity for Indian chemical companies not only to fight existing (international) competition by matching the performance of their products but to create new products and businesses that can become internationally competitive thus creating significant export opportunities.

Competing successfully in Indian specialty chemicals industry

Given India's potential to emerge as a global specialty chemicals demand and production destination, strong position on CSFs and opportunities presented by unfolding discontinuities; what could companies do to compete successfully? Detailed strategy formulation has to be done specifically by each company. We present here some factors which every successful company must address in formulation of a winning strategy. (Refer Fig. 4)

1. Innovate and adapt products/ services to meet local needs

Emerging trends in consumer industries call for development of unique local products/ solutions based on understanding of Indian customer. For example, automotive industry requires chemicals/plastics to support emergence of India as a low cost small car hub and green-tech features. Creating products to support growing demand for ultra low-cost housing projects and green buildings is critical for the success of construction chemical companies. Likewise demand for environment friendly crop-protection

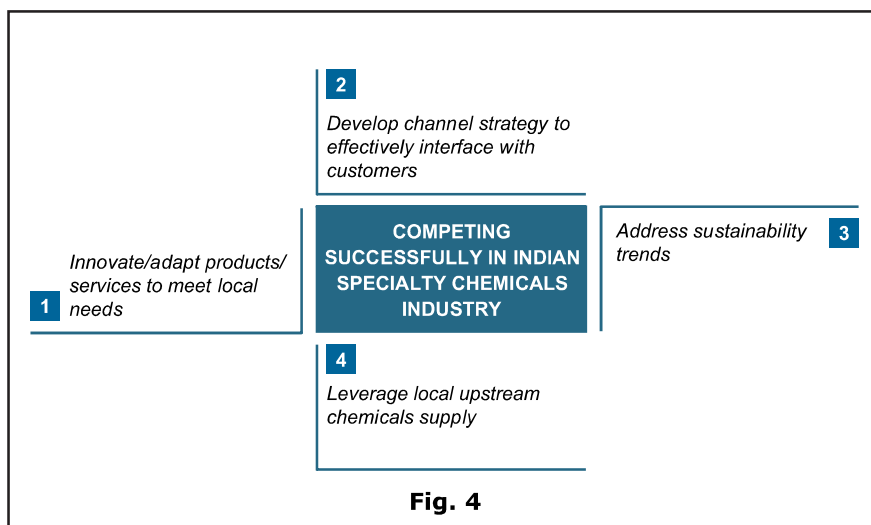


Fig. 4

solutions/GM crops and processed food creates new opportunities for agro-based chemical companies. Growth of renewable energy sector is increasingly creating new customer segments for chemical players.

2. *Develop channel strategy to effectively interface with customers*

Another key factor which determines the success of any chemical company in the near future is the effectiveness of its channels to interface with and service its customers. Companies globally have employed innovative approaches like establishing new web-based channels or leveraging distribution network of complementary products to reach out effectively to their customers. An effective channel strategy would not only benefit through increased understanding of customer needs but also help capture increased value and establish control over a

business asset of increasing strategic significance. In particular in specialty chemicals understanding needs of its B2B customers and providing respective services in a cost efficient way is a crucial part of a successful strategy.

3. *Address sustainability trends*

‘Green Transformation’ is becoming a mantra of increasing significance for chemical companies in a business environment with unprecedented levels of awareness for sustainable growth. An integrated approach across the value chain including procurement, product design, manufacturing process and marketing along with adequate

reporting and risk management at each stage is becoming critical. Companies could not only create value through green product/ process innovation but also generate end consumer pull through ingredient branding in ‘green products’. Companies that establish recognized ‘green leadership’ among all stakeholders would have a distinct first mover advantage over their competitors.

4. *Leverage local upstream chemicals supply*

A developing chemical industry producing raw materials and intermediates is providing a solid backbone for the Indian specialty chemicals segment. Strong governmental support for establishment of petrochemical clusters (PCPIRs) and further development of specialized intermediate producers is creating a favorable scenario. Chemical companies need to leverage these opportunities for creating sustainable base for their growth.

The sizable growing domestic market and limited availability of carbon based feedstock point towards development of knowledge-based specialty chemicals as the most logical way forward for India’s chemical industry.

In conclusion, the sizable growing domestic market and limited availability of carbon based feedstock point towards development of knowledge-based specialty chemicals as the most logical way forward for India’s chemical industry. Specialty companies in India could revisit their respective growth strategies to factor in all the four dimensions mentioned above to effectively participate in and drive this growth story.