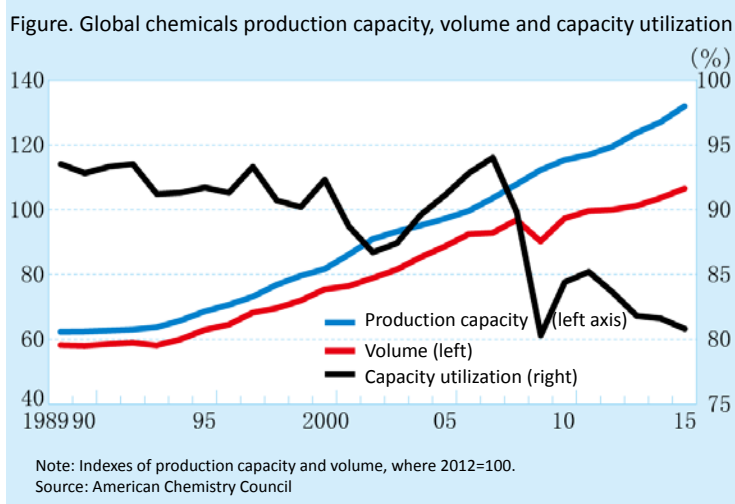


## CHEMICAL COMPANIES APPROACHING END-USER MARKET FOR SURVIVAL

Tomohiro Makita  
Industrial Studies Dept. I, Mitsui Global Strategic Studies Institute

The 20th century was the era in which the chemical industry boomed with the help of the petrochemical industry, and succeeded in creating products with multiple functions that had not been found in previous products. It successfully developed one material after another and created new markets; however, as the markets expanded and more producers appeared, those products soon became generic, resulting in a vicious circle of market saturation, oversupply, and price declines.

Also, in developed economies, as chemical products have long been widely perceived as materials, it is no longer possible to expand the market in terms of quantity. So the chemical industry has looked to emerging markets or specialty chemicals with higher functionality for growth opportunities. But as China and the Middle East have increased their production capacity faster than demand has grown (see Figure) and companies in those emerging nations have acquired technology rapidly, market saturation or product generalization are more likely to occur. Against this background, the specialty chemicals business is no longer an exception, in that competition is getting fierce and technological advantage alone cannot guarantee their competitiveness.



Yet, there are still many European chemical majors that retain their various specialty chemicals businesses. Many of them dare not decide the target by product or market for its growth potential, rather they choose segments where they can build better relationships with clients and make these into their core businesses. As a means to strengthen the relationship, they promote joint development of technology or products, or customized production of high performance items. Moreover, some even invest their corporate resources and design a new business model to come closer to end-users so as to ensure proximity to client companies. Those tactics are worth taking into account for other chemical firms as a means to ensure their market dominance and survival. The following are typical examples of such efforts.

### GERMAN EVONIK INDUSTRIES: EXPLORING CONSUMERS' NEEDS AND WANTS FOR HAIR-CARE PRODUCTS

Looking at the world's hair-care product (shampoo, conditioner) market, the global players rank high: Procter & Gamble (the US) has over a 20% share, followed by Unilever (British-Dutch) with some 10%, L'Oreal (France)

and Henkel (Germany), and the rest of the many local makers, whether by country or region, are vying for small shares. Consumer needs worldwide for hair-care products widely vary by ethnicity, hair type, environment or lifestyle. In addition, along with the rise of income levels in emerging economies, consumer needs for product quality is ever growing. Hence, the local makers vigorously try to grasp consumers' specific needs and release new items one after another, and around 10,000 new products are coming onto the market every year. Under such circumstances, the global leader, P&G, has been shedding around 0.5% of its market share every year since 2013, and FY2016 saw it closed with a 1% YoY market share decline (Annual Reports 2013-16). It reflects the increasingly severe competition and a lot of makers struggling for tiny shares of the fragmented hair-care products market.

Evonik Industries of Germany is a chemical major, centered on its specialty chemical business with 22 different segments. Its Personal Care business line produces surfactant (an active ingredient in hair-care products) and hair protectant, and supplies them to both global and local makers of hair-care products regardless of their business scale.

Evonik not only supplies those products to hair-care product makers to meet their needs, but also conducts research on their own to grasp consumers' specific needs by region, and reflects them in product development. For example, when they found out that the hair of ethnic Africans is susceptible to damage for various reasons and thus there is a strong need for a repairing agent, the company opened a laboratory nearby Johannesburg, South Africa, to conduct research on an appropriate formulation to satisfy specific local needs. And it did not stop at only ethnic Africans, as it also conducts R&D for African American consumers. While in Brazil, where the market is set to surpass the US', in addition to the ingredient formulation laboratory in suburban Sao Paulo, Evonik also opened a hair laboratory in 2015. Observing the fact that Brazilian women tend to like their hair long, wash it on average twice a day under the humid climate, and for that they have to spend some time on hair-care, the company is committed to developing products which can make their hair smooth and easier to comb. At their hair laboratories worldwide, in addition to the development of new active ingredients, they conduct sensory testing by using real human hair to examine subtle changes caused by different formulation of ingredients, so as to reflect the results in the development of new products.

Evonik has over 100 kinds of active ingredients for hair-care products which are made public, and based on the consumers' needs researched and analyzed in each region, they customize the formulation of ingredients for every client. They also support makers in developing products which could satisfy market needs, so that makers can reduce the time needed for product launch. Their success is particularly evident in emerging economies with growing consumer demand, where their careful response to clients' needs is thought to help local manufacturers gain a share in the hair-care products market.

---

## **DUTCH DSM: SETTING UP PREMIX PLANTS ACROSS THE WORLD TO MEET SPECIFIC NEEDS FOR FEED ADDITIVES**

Using additives in animal feedstuff helps promote growth and ensure the health of livestock, and eventually makes a difference to profitability of livestock farming. As farmers' needs for feed nutrients vary depending on their livestock species or farming locations, meticulous compounding is required, and recently more and more farmers' demands for tailored products are growing.

At Dutch DSM, the nutrition segment makes up more than 60% of both the sales and profit of the entire group, among which the animal feed additives and human food additives/supplements are their flagship items. They

produce a variety of nutrients from vitamins, carotenoids, enzyme to minerals, and are taking around a 30% share of the global market of these products. DSM is the only company in the world capable of manufacturing all the 13 essential vitamins. Their feed additives are used not only for livestock including poultry, swine, cattle and sheep, but also for aquaculture and pet animals.

In this segment, it is remarkable that around 60% of their sales comes from premix of multiple additives for feed, while they also provide customers with single kind of additive. To this end, in addition to additive production factories, they operate 44 premixing plants worldwide to deliver premix products to feed suppliers or directly to large-scale farmers.

Among the industry, some companies are specialized in premixing additives, while downstream feed suppliers have also premix business. DSM stands out for being the only firm that deals with both production and premixing of feed additives. Equipped with both functions, they can accurately blend additives to the optimal formulation, and also swiftly respond to changes in demands of feed suppliers and mega-farmers. Moreover, as people are more aware of food safety, they can gain stock farmers' trust in the traceability of feedstuffs for their consistent operation of production through premixing. Thus, they have succeeded in obtaining customers' trust and confidence both in supply and quality, and increased their loyalty as a result. For the future, DSM has investment plans to build and extend premixing plants across the borders. An example of this and their approach to more downstream clients is in the Chinese market, where they are developing new premix products for medium-scale pig farmers (500 or less) whom they had not dealt with previously.

---

## MARKET-BASED APPROACH TO BOLSTER COMPETITIVENESS

What those two companies above have in common are their originally strong capability of product development and also their wide range of product lineups of active ingredients or base materials for customized products. By taking advantage of these, both companies have built laboratories or premixing plants globally with the aim of understanding and responding to the various needs of their end markets. Thereby, one was able to directly help its clients develop hair-care products and the other to properly meet feed suppliers' needs, and so they have both successfully gained their customers' confidence and kept a closer relationship with them.

The examples of these two firms prove that the key factors for maintaining the profitability of a specialty chemical business are that they have not merely ended up extending their product lineup, but that rather they have also offered specific solutions to each of their client's needs, so that they could earn greater loyalty from customers and make enough profit to cover the cost associated with such meticulous customer care without being trapped in a race-to-the-bottom price competition.

To date, the chemical industry has been committed to exploiting a particular market by upgrading technology associated with the product. They have also pursued products with higher functionality which could meet clients' demand and conduct R&D to that end. Yet, in order to overcome severer competition in a saturated market, as witnessed in other business sectors, some chemical firms are beginning to reflect end-users' needs in their businesses. Such an approach should be adaptable to the other specialty chemical segment, giving direction to evolving a business model in the chemical industry.