Agility and adaptability are keys to the future

IESE's Philip Moscoso and Alejandro Lago suggest new ways to make supply chains more flexible, in order to match supply and demand more efficiently.

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Most consumer goods companies have made attempts to improve the performance of their supply chains.

Most initiatives have been aimed at delivering goods and services to customers faster and at lower cost, with consumer goods companies enthusiastically embracing "lean" and "just-in-time" approaches.

As such, most supply chains have been designed and built to manage stable, high-volume flows.

However, such models may not be well equipped to cope with some of the big business challenges of the future.

In "Enriching Supply Chain Capabilities in Consumer Goods Business: From Cost and Speed to Agility and Adaptability," Philip G. Moscoso and Alejandro Lago of IESE Business School explore how supply chains need to be adapted in order to meet the challenges of the future.

Challenges ahead

An increase in market competition generally leads to such phenomena as increased pressure on prices and promotions, higher product customization, shorter product life cycles and demand volatility.

While costs will remain an important supply-chain objective in the years to come, companies need to balance those cost concerns with greater flexibility and responsiveness.

How else will they navigate a future that portends rising uncertainty in demand, growing calls for customization, better customer service, exposure to natural disasters and faster technological advancements?

Higher levels of volatility in commodity prices, exchange rates and government regulations will add to this climate of uncertainty.

Given that tackling many of these trends actually leads to conflicts between them, winning on all supply-chain battlefronts will be all but impossible.

Typical strategies such as moving production from one low-cost country to an even cheaper one, or increasing levels of outsourcing, have made it more difficult to deliver adequate customer service.

These strategies have often increased companies' exposure to external factors, such as government regulation and exchange-rate volatility.

Agility vs. adaptability

One of the key success factors of supply-chain management is flexibility, which the authors map in a 2x2 matrix of objectives: on the temporal axis, they differentiate between agility and adaptability, and on the object axis, between product and process flexibility.

Agility. This is the capability to respond quickly to sudden changes in demand or supply or any other type of supply-chain requirement or disruption.

Companies must be able to offer the right types of products and customize them as required (product flexibility).

But they also need to be able to produce the right amount with an appropriate lead time (process flexibility).

To do that, they need to offer high levels of consistency and quality in the production and delivery of goods, while also reacting swiftly to supply disruptions.

Adaptability. This is the capability to adjust the supply chain to longer-term changes and requirements, whether structural shifts in the markets, products or technology.

Companies must launch new products in a shorter life cycle, as well as adapt nimbly to new markets or service requirements (product flexibility).

They must also adapt supply to minimize the impact of fluctuations in, for example, local exchange rates, labor costs and trade barriers (process flexibility).

Improving flexibility

When working toward this set of flexibility objectives, the authors recommend that managers approach the problem at three levels. For each, they provide examples for agility and adaptability improvements.

- *Single System or Resource.* This could be an operator or a machine, and the focus is on traditional flexibility issues, such as utilization, work-in-progress levels (agility) and continuous improvement (adaptability).
- *Single Supply-Chain Stage.* An example could be different factories serving a global market, with the question of product or geographic specialization of these factories. It could also involve exploring the potential of product modularity, in which customization starts with a unique product platform. Here the question is in which stage to allocate the flexibility, among the different resources.
- *Multi-Echelon Supply Chain.* This addresses the issue of flexibility along the different supply-chain stages, e.g., supplier, distributor, wholesaler. Here the interesting questions could be where to situate the supply-chain capacity or inventory buffers.

A case in point

To illustrate their recommended approach, the authors use the case of a premium leather-goods manufacturer.

Most of the demand for the company's products came from its own stores, as well as third-party points of sale.

The supply was provided by its own factories, as well as several external suppliers.

Factories received materials from the procurement department, and delivered final products to the supply-chain and logistics departments.

Factories were organized around three areas. The first was the control and cutting of leather. Material was then sent to the preparation section, from which it was then dispatched to the

assembly and sewing area. Each factory specialized in different product categories.

As a result, the factories were regarded as having very strong product know-how but rather weak performance in terms of responsiveness to market demand and productivity.

The company decided to redesign its supply chain. Managers analyzed performance with respect to the flexibility objectives outlined above, from which they were able to make a number of improvements.

After an implementation period that took between two and three years, the company was able to improve its on-time fulfillment substantially, reduce lead times by more than 40 percent and increase productivity by three times.