VALUE CHAINS IN A POST-COVID WORLD

EXECUTIVE WORKSHOP

EVENT SUMMARY | JUNE 2021
EVENT HIGHLIGHTS

On June 3, 2021, the Value Chain Innovation Initiative at Stanford Graduate School of Business hosted the executive workshop Value Chains in a Post-COVID World. Close to 70 academics and industry leaders attended the event.

Speakers at the workshop agreed the COVID-19 pandemic accelerated existing trends and has forced organizations to re-examine their supply chains and the resources they devote to them. Unexpected customer demands emerged during the pandemic, leading companies to adopt new business practices and make supply chain changes likely to continue beyond COVID. And companies that have physical assets in their supply chains, such as trucks and warehouses, will rethink whether and how they use them as automation technology improves and the need for human labor declines.

The following summary highlights some of the ideas presented at the workshop.

HOSTS

Hau Lee
Thoma Professor of Operations, Information, and Technology
Codirector, Value Chain Innovation Initiative
Stanford Graduate School of Business

Haim Mendelson
Kleiner Perkins Caufield & Byers Professor of Electronic Business and Commerce, and Management
Codirector, Value Chain Innovation Initiative
Stanford Graduate School of Business

Barchi Gillai
Associate Director, Value Chain Innovation Initiative
Stanford Graduate School of Business
DASH TO DELIVER

Prior to the pandemic, customers accepted a two-to-five-day wait for deliveries of their online orders. During lockdown, though, consumers increasingly demanded next-day or even same-day delivery, especially of groceries and other essentials. To receive items quickly, many were also willing to go to a local store to pick up their online orders. This new demand for speed prompted retailers to reduce transit time by using local stores to fulfill orders for pickup or shipment to nearby customers.

Even with the pandemic now subsiding in the U.S., retailers are continuing that practice as customers still want their online orders fast. “Retailers are using time-in-transit as a competitive weapon,” said Alan Amling, a Distinguished Fellow at the University of Tennessee and chief executive of advisory firm Thrive and Advance.

Using local outlets as mini distribution centers that keep fulfillment close to the customer, companies are having to rethink how they move more goods from their main warehouses to scattered stores. Some online-only sellers, too, are putting small distribution hubs in population centers. Amazon, for one, is building more local “delivery stations” in suburbs and other densely populated areas to allow more one-day and same-day shipments to more people.

RETAILERS RETURN

Thousands of retailers folded during the pandemic. But new stores are now emerging and reaffirming the need for physical brick-and-mortar locations despite the popularity of online ordering. A physical store “makes the brand more tangible to the customer,” said Courtney Hawkins, vice president of retail at The RealReal, an online consignment store for luxury goods. In-store pickup itself can extend the shopping experience, as many customers picking up their online order will purchase other items while they’re in the store, added Hawkins.

Stores that function simultaneously as a small fulfillment center, shipper, pickup station, and a shop for in-person customers add complexity to a retailer’s supply chain and to its overall business. For instance, managers must consider how to balance a store’s need for large or frequent deliveries from main warehouses with the need to control inventory carrying costs and labor expenses.

STAYING SUSTAINABLE

During the pandemic, individuals consumed and discarded huge amounts of material: surgical masks, single-use food packaging, cleaning wipes, and medical waste. Post-pandemic, customers are re-focusing on sustainability and demanding that companies employ environmentally sensitive and socially responsible practices at all stages of the supply chain.

Companies are using ever-advancing technology and data science to try to meet those demands. Brant Matthews, vice president of global strategic procurement at spice maker McCormick, noted that using IoT (“Internet of Things”) systems to gather data on factors like soil quality, water usage, and pest control can help farmers manage their crops efficiently and sustainably. McCormick also works to address “sustainability pain points” of farmers around the world, such as vanilla growers in Madagascar who need financing.

SUPPLY CHAIN IS SEXY

Supply chain matters became “sexy” during the crisis, with managers working directly with infectious disease experts and medical professionals, said Régine Honoré Villain, chief supply chain officer at Ochsner Health System, a non-profit health care network in Louisiana. Like many medical centers, Ochsner facilities encountered shortages of masks, gloves, and other personal protective equipment during the pandemic and looked to its supply chain staff for help.
Villain and her staff tracked and analyzed usage patterns and inventory levels of equipment in Ochsner’s hospitals and health clinics and used that data to forecast upcoming needs and funnel supplies to locations that needed them most. To simplify its supply chain, Ochsner bypassed distributors to negotiate directly with manufacturers in Asia, South America, and the Caribbean.

With that experience under its belt, Ochsner is itself now entering the manufacturing business, creating a joint venture with a partner to produce surgical gloves and other medical supplies at facilities in Louisiana. “The idea of vertical integration became very real when we realized that it was so much rigmarole trying to get products across the world,” said Villain.

TECHNOLOGY RISES

Technology, especially IoT systems, continues to improve in virtually every industry, helping to smooth the physical movement of goods. Shipping ports, for example, sometimes with hundreds of gateways and terminals dotted with ships, cranes, and trucks moving thousands of containers, increasingly use IoT setups to track movements to increase transparency and efficiency, said Adam Plumpton, Cisco’s vice president of product operations.

Improving automation technology is also allowing cranes and other equipment to be autonomous. Automation combined with wireless communications allows these ports to operate around the clock with the safety and reliability that shipping ports require, added Vikas Butaney, general manager of IoT at Cisco.

Likewise, in the trucking industry, autonomous trucks can travel longer distances without breaks and allow more-predictable scheduling, thus improving efficiency and speed within a supply chain. Those advantages ultimately reduce the costs of labor, insurance, and other items, said Ophir Samson, senior director of business development at self-driving vehicle company Aurora.

YET HUMANS STILL ULTIMATELY RULE THE ROOST

Even while technology steadily improves to allow companies to automate many tasks, humans will remain essential, especially in a crisis. “In the pandemic, machine learning and artificial intelligence platforms failed; they fell into a state of shock,” said John Sicard, chief executive of Kinaxis, a supply chain software firm.

The limitations of technology underscored the notion that organizations will always rely on human judgement. “Artificial intelligence and machine learning lack context, collaboration, and conscience,” said Anne Robinson, Kinaxis’s chief strategy officer.

For instance, long-haul trucking companies in the future might use autonomous trucks for monotonous trips on long stretches of interstate highways while employing human drivers for drives into crowded urban areas that an autonomous truck can’t navigate.

IN CLOSING

Speakers agreed that organizations learned the strengths and weaknesses of their supply chains during the pandemic and developed strategies that will likely continue. Technology, including wireless technology, IoT systems, and automation, will keep improving. And companies will have opportunities to improve their logistics and value chains even further while recognizing that ultimately, human decision-making will still provide the most creative and sustainable solutions.

Learn more about the Value Chain Innovation Initiative at www.gsb.stanford.edu/vcii.