

## AMAZON.COM: SUPPLY CHAIN MANAGEMENT<sup>1</sup>

*Ken Mark wrote this case under the supervision of Professor P. Fraser Johnson solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.*

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On January 31, 2018, the market capitalization of Amazon.Com Inc. (Amazon) hit \$702 billion, the highest level ever.<sup>2</sup> When its fourth-quarter results were released on February 1, 2018, Amazon showed a 30-per-cent increase in revenues, to \$60.5 billion for the quarter, and net income for the quarter had increased by 150 per cent, to \$1.9 billion.<sup>3</sup> From its start as a venture looking to build “earth’s largest bookstore” in 1994, Amazon was now one of the most valuable companies in the world, and founder Jeff Bezos was the richest person on earth.

In 2018, Amazon had an online store that sold its own products and listed products for sale by more than two million third-party sellers.<sup>4</sup> Since its founding, Amazon had added more than 30 store categories, ranging from electronics to furniture, selling millions of different products and making an estimated 1.2 billion domestic customer shipments in 2017.<sup>5</sup> Amazon Web Services, the company’s on-demand cloud-computing service, generated \$17.5 billion in sales in 2017. Amazon Prime Video had become a leader in video-streaming services, with original-content series and movies that rivalled the offerings of Netflix. Its Echo devices, powered by the artificial-intelligence assistant Alexa, had more than 30,000 skills and could be used to control smart-home devices. The popular Kindle e-reader boosted sales of Amazon e-books. Amazon had increased its number of brick-and-mortar stores with the acquisition of Whole Foods Market (Whole Foods) in 2017. It had also opened AmazonFresh and Amazon Go grocery stores, as well as Amazon bookstores.

With total shipping costs that exceeded \$21 billion in the most recent fiscal year,<sup>6</sup> the company was taking steps to gain greater control of its supply chain—a strategy that could eventually put Amazon in direct competition with United Parcel Service of America Inc. (UPS) and Federal Express Corporation (FedEx). In recent years, it had expanded into ocean freight forwarding, opened an air cargo hub, built a truck fleet, and established a parcel delivery network.<sup>7</sup> The company offered its third-party sellers fulfillment services called Fulfillment by Amazon (FBA), which provided transportation, warehousing, picking, packing, shipping, customer service, and returns for products sold through its website. The company’s latest initiative, Shipping with Amazon, was a new service for any business offering package delivery to customers, regardless of whether they sold products on the Amazon site.<sup>8</sup>

From a standing start, Amazon—with 566,000 employees (referred to as “Amazonians”)—had become more valuable than Walmart Inc. (Walmart), the world’s largest retailer. However, given the broad variety and volume of products Amazon was selling through a range of formats, a key challenge for the

company's founder and chief executive officer, Jeff Bezos, was how to structure Amazon's supply chain to support the company's strategy and growth objectives. What supply chain capabilities would Amazon need as its business model continued to evolve?

## THE RETAIL INDUSTRY

Total U.S. retail sales were estimated at \$5.1 trillion in 2017,<sup>1</sup> of which e-commerce represented approximately \$450 billion.<sup>9</sup> U.S. e-commerce sales were forecast to reach \$640 billion by 2020.<sup>10</sup> Globally, retail sales were projected to reach \$27.73 trillion in 2020,<sup>11</sup> and e-commerce's share was expected to increase from 10.2 per cent in 2017 to 15.5 per cent in 2020.<sup>12</sup>

Amazon was the world's largest online retailer and a competitor to traditional retailers, such as Walmart and Target Corporation (Target) (see Exhibits 1 and 2). By comparison, Walmart had generated an estimated \$11.5 billion from e-commerce sales in the fiscal year ending January 2018, representing a 44-per-cent increase over the previous year.<sup>13</sup> Walmart had been working to catch up to Amazon; it had purchased the online retailer Jet.com for \$3.3 billion in August 2016 to augment its Walmart.com site.<sup>14</sup> As an indication of Amazon's lead in the e-commerce space, Target had generated \$706 million in e-commerce sales for the second quarter of 2017, an annualized run rate of \$2.8 billion.<sup>15</sup>

### Traditional Retail Supply Chain

The standard supply chain for retailers such as Walmart, Target, and Tesco PLC (Tesco) was driven by the orders retail buyers placed with suppliers, who coordinated the delivery of goods for sale. A significant portion of general merchandise was manufactured in Asia, and in 2016, U.S. retailers imported \$479 billion of goods from China.<sup>16</sup>

Deciding what to place on shelves was a significant task for a store that could have more than 100,000 different items. Category buyers were responsible for selecting and pricing merchandise. Large retailers had approximately 40 categories, including housewares, toys, and fashion. A buyer normally set the assortment plan from quarter to quarter, accounting for changes in customer demand due to seasonal events such as Christmas, Easter, and back-to-school sale periods. In order to clear out inventory to make room for new product for the next season, retailers used a variety of approaches, including price discounts or markdowns, selling product to discount stores such as Nordstrom Rack, or returning goods to suppliers. It was estimated that end-of-season markdowns and discounting cost U.S. fashion retailers an average of 30 per cent of revenues.<sup>17</sup>

Since the 1990s, retailers had partially offloaded the responsibility for category management to category captains—key supplier partners with the capabilities to analyze, review, and plan the assortment recommendations for product categories such as toothpaste, shaving products, and cough and cold medication. At Walmart, for example, there were 40,000 suppliers; this included just 200 strategic suppliers, such as large consumer packaged goods firms Procter & Gamble Company and General Mills Inc.<sup>18</sup> Retailers provided suppliers with access to sales, inventory, and other data in real time, using online information portals such as Walmart's Retail Link network. Analysts working for suppliers downloaded and reviewed this data and then brought their recommendations to category buyers, who had the final say over approving these assortment recommendations, called "planograms."

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<sup>1</sup> U.S. retail trade statistics were broadly based and included retail stores, food services, and automobile dealership sectors.

It was often challenging for small and medium-sized businesses to sell products to large retailers. First, it was difficult to secure meetings with buyers, who were likely to stay with proven product assortment plans and less likely to devote shelf space to unproven new items. It generally took six to eight months for new products to be added to shelves, as assortment plans were developed and current merchandise was phased out.

Retailers and large suppliers tended to outsource a large portion of their logistics needs, starting at the suppliers' factory gates and ending at retailers' distribution centres (DCs). They relied on third-party logistics providers and freight forwarders to ensure timely shipping and delivery of goods, which could involve a combination of marine, rail, and truck transport. Goods were shipped in bulk—in container loads—from supplier factories and then consolidated, broken apart into cases, and stored. Retailers shipped mixed batches of cases from their DCs in full trucks to stores. At the store, employees placed the goods in inventory in the backroom warehouse, re-stocking shelves as required. While money was collected from customers immediately, payments to suppliers were generally made in 30 to 60 days.

Retailers had to deal with one final logistics piece after the product was sold: the returns process. Retailers worked with manufacturers to determine how best to handle returns. This service was often outsourced to firms such as FedEx Supply Chain and Optoro Inc.

The retailing boom in the United States, which started in the 1950s, had left the country “overstored”—with too much retail capacity in relation to demand—and consumer traffic in malls had been declining steadily since 2014.<sup>19</sup> The *Wall Street Journal* noted that the United States had more than five times the gross leasable retail space per capita than the United Kingdom and that, in 2018, U.S. retailers were on track to close more than 8,600 locations, which would eclipse the number of store closures during the 2008 recession.<sup>20</sup>

## AMAZON.COM

In 1994, Jeff Bezos quit his job as vice-president of D.E. Shaw, a Wall Street investment management firm, and moved to Seattle, Washington, to start Cadabra, Inc., which he later re-named Amazon.com (Amazon). He started to sell books online because books were low-price items with a large variety of categories.

Amazon went public in May 1997, raising \$54 million on the Nasdaq stock exchange.<sup>21</sup> Its online retail store grew in the years after the dotcom boom ended, a period during which there were few, if any, serious competitors. Starting in 2000, Amazon allowed third parties to sell on its site. It also acquired other online booksellers, such as Bookpages Ltd. in the United Kingdom and Telebook Inc. in Germany, and rebranded them as Amazon sites.

Amazon moved beyond books in an attempt to broaden the appeal of its online store, buying online retailers specializing in various niche markets. A few of these included drugstore.com, Diapers.com, Audible.com, and Zappos.com.

To attract more users, Amazon started offering a service called Amazon Prime for a flat fee of \$75 per year in 2005. Prime offered members free two-day shipping on eligible items, access to Prime Video and Prime Music, and free online books.<sup>22</sup> In about 5,000 cities and towns, Prime offered customers free same-day and one-day delivery for more than one million items. In selected areas, Prime offered two-hour deliveries on tens of thousands of items through its Prime Now hubs.<sup>23</sup> As of April 2018, there were over 100 million Prime members, who spent an average of about \$1,300 a year on Amazon's website, significantly more than