

# **An Analysis of Supply Chain Best Practices in the Retail Industry with Case Studies of Wal-Mart and Amazon.com**

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## **Introduction**

Wal-Mart and Amazon.com dominate the mass merchandising and internet retailing segments of the retail industry. How do Wal-Mart and Amazon.com sustain and reinforce their competitive advantages in these highly competitive, low-margin retail industry segments? The answer lies in supply chain management. This research is the retail contribution to Phase One of the Supply Chain 2020 Project at MIT. We focus on the strategies, operating models, networks, and supply chain processes that currently constitute excellent supply chains in the retail industry. Data for this thesis is gathered through a literature review and interviews with industry experts, including consulting firms, technology providers, third-party logistics firms, partner companies, and academic sources. There are two research areas for this paper; retail industry analysis and company case study analyses of Wal-Mart and Amazon.com. The case study analysis portion begins by stating Wal-Mart and Amazon.com's positions in their respective industry segments. Then we discuss and analyze each case study company's supply chain strategy, design, and processes. With an understanding of each case study company's supply chain in place, an analysis of supply chain strategy linkage with business strategy is performed. Finally, we discuss the commonality and transferability of Wal-Mart and Amazon.com's supply chain practices within the retail industry and across other industries.

## **Retail Industry and Company Case Study Scope**

The retail industry has an extremely broad scope. Therefore it is necessary to reduce the scope of the analysis to specific segments of retail. This thesis focuses on two segments of the retail industry, mass merchandising and internet retailing. In order to perform a deep analysis of both general merchandising and internet retailing, the leading company in each of these sub-segments is analyzed. According to annual revenues, the leading general merchandise retailer is Wal-Mart and the leading internet retailer is Amazon.com. This paper analyzes each of these companies.

Wal-Mart and Amazon.com service customers through different distribution channels. Wal-Mart primarily services customers through physical retail locations and Amazon.com services customers through an online storefront with distribution provided by Amazon.com and partner distribution centers, as well as third-party companies. The supply chains that support these different business models inherently require different supply chain strategies, designs, and processes. Thus, this paper is not intended to compare the excellence of Wal-Mart and Amazon's supply chains relative to one another. Rather, the aim of this paper is to identify the key components of excellent supply chains that support physical mass merchandise retailing and internet retailing environments. We

will identify these components through case studies of Wal-Mart and Amazon.com to understand how their supply chains reinforce their competitive business strategies.

## **Retail Industry Overview**

The majority of the retail industry overview focuses on mass merchandise retailing within traditional and internet channels, where the case study companies reside. The major executive summary topics covered for mass merchandising and internet retailing are financial statistics, industry trends and drivers, and supply chain challenges and opportunities.

### ***Retail Financial Statistics***

Based on the S&P General Retail Industry report that was released in May 2004, retail sales in 2003 equated to \$3.40 trillion. The industry experienced a 5.4% growth from 2002, which was associated mostly with the growth in sales of luxury goods and discounted goods. Retail Industry growth from 2002 to 2003 can be attributed to luxury retailers and general merchandising or discount retailers. Wal-Mart is the world's largest retailer in terms of revenue.

Within retail, internet retailing has grown in conjunction with the emergence of the internet in the mid 1990's. Internet retail consists of multi-channel retailers that operate physical retail stores as well as an online channel and "pure-play" internet retailers that only sell products through websites. Forrester notes that from 1997 to 2002, online retail sales grew at a 97% compound annual growth rate (CAGR). This growth is reflected in the increase in sales from \$2.4 billion in 1997 to \$72.1 billion in 2002. The top five products in terms of percentage of online sales to overall retail sales are computer hardware/software, books, tickets, music/video, and consumer electronics. Despite aggressive revenue growth, profitability has been an issue for internet retailers. A Shop.org and Forrester Research study shows that in 2001 only 56% of internet retailers had positive operating margins. Profitability is improving as shown by 79% of internet retailers showing positive operating margins in 2003 (Rubin, 2003). Amazon.com is the largest pure-play internet retailer in terms of revenue.

### ***Retail Industry Trends and Drivers***

The major retail industry driver in retail environments is customer behavior. In mass merchandising and internet retailing, customers require that a wide selection of products is available at a reasonable price. In response to customer expectations, retail supply chain trends are primarily associated with inventory management and supplier and retailer relationships to support on-shelf availability at a reasonable cost. The increasing competitiveness of the retailing environment, especially for mass merchandisers, has created an environment with very low profit margins. The response to lower profit margins are more efficient operational processes as well as lower inventory levels to aid in cutting overall supply chain costs. Additionally, collaborative efforts have become a higher priority in all areas of the retailing business to globally optimize vendor to retailer supply chains. In order to offer the most competitive price, retail companies, especially

mass merchandisers, are competitively using their supply chains to reduce costs to the company itself and price to the final consumer.

Drivers and trends specific to internet retailing are increasing internet retail growth, leveraging brand awareness, maintaining competitive pricing, and strengthening supply chain partnerships to improve selection and availability of products. Internet retail is growing, and companies like Amazon.com are establishing brand loyalty. In response to this growth, internet retailers have to respond with supply chains that are scalable to respond to increased demand. Additionally, due to the transparency of prices and the ease of switching associated with internet browsing, internet retailers must support product availability of a wide range of products at competitive prices. In response to this driver, Amazon.com employs a three-echelon inventory system where orders may be filled by Amazon.com's distribution centers, wholesalers and suppliers, or other third parties. Additionally, Amazon.com has partnered with a number of other internet retailers to cross-promote product lines.

### ***Retail Supply Chain Challenges***

Like many industries, a major retail industry supply chain challenge is ensuring that the right products get to the right places for the lowest costs. In retailing environments, providing on-shelf availability of product is a critical success factor. Empty shelves represent lost revenue to retailers as well as suppliers. The challenge lies in the balancing the cost of having stock available with the cost of having inventory in the pipeline. The opportunity is increased revenue across the entire supply chain and retention of customers. Collaboration efforts between trading partners have arisen as a response to the challenge of providing on-shelf availability while controlling costs. Supply chain concepts, such as vendor managed inventory (VMI), co-managed inventory (CMI), and collaborative, planning, forecasting, and replenishment (CPFR) attempt to link trading partners together more deeply. Silo-management and local optimization desires at the expense of global supply chain optimization need to be overcome in order to allow for successful inter-company collaborative efforts.

Internet retail introduces a number of supply chain challenges. Customers expect unlimited product selection and availability at the lowest price. In response to those expectations network design factors regarding the location, number, and characteristics of distribution facilities are critical to the success of internet retailers. Within internal facilities, designing facilities and processes to support the internet retailing order profile of a large number of orders with a smaller volume per order is a challenge in containing costs to support profitability. Additionally, with a need to provide product availability of a wide range of products, inventory segmentation within Amazon's internal distribution network and within its network of partner inventories and third-party sellers presents a challenge. Finally, balancing service options to customers with costs is a challenge in providing differentiated service while attempting to aggregate orders to leverage scale and reduce fulfillment and transportation costs. Each of the retail and internet retail supply chain challenges are discussed within the context of the Wal-Mart and Amazon.com case studies discussed below.

## Case Study Analysis

The following section discusses Wal-Mart as a mass merchandising case study and Amazon.com as an internet retailing case study. The case study industry position portion provides a brief company overview with a discussion of each company's business strategy and relative position in their respective retail industry segment. Additionally, detailed analyses of both Wal-Mart and Amazon.com's supply chain strategies, designs, operating models, supply chain processes, and improvement initiatives are conducted.

### Wal-Mart Case Study

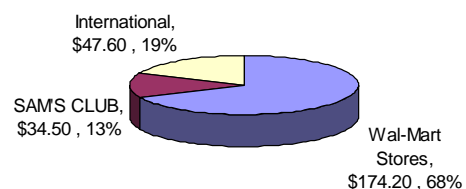
Wal-Mart is considered a mass merchandiser and is the top retailer in the world in terms of annual revenue. Wal-Mart's business strategy is to provide "Every Day Low Prices" or EDLP for all of its products and services. Wal-Mart does not guarantee the lowest prices in the market. However, they do guarantee that their overall prices are consistently lower than most retailers. Other retailers utilize promotions to temporarily lower prices below those of Wal-Mart. Another strategy that Wal-Mart has followed since its inception is to build Wal-Mart stores in smaller communities. The advantages of this strategy are lower infrastructure investment costs and lower wages to set up mass merchandise stores in those communities. The disadvantages of being in small communities are the inbound and outbound distribution costs and convincing suppliers to support stores that are out of their distribution network.

In January of 2004 (end of their 2003 fiscal year) Wal-Mart reported approximately \$256 billion in revenue, making it the highest grossing retailer in the world. The 2004 10-K Form reports that Wal-Mart employs approximately 1.5 million people. Wal-Mart's three business units are Wal-Mart Stores, SAM'S CLUB, and their International retailing business. Within

Wal-Mart Stores, there are three different types of retailing facilities; Discount Stores, Supercenters, which include general merchandise and a full line of grocery, and Neighborhood Markets. SAM'S CLUB was conceived as a modification of the European hypermarket, and sells products in bulk quantities. In the International business unit, Wal-Mart has grown through

mergers and acquisitions. Through its different business units, Wal-Mart aims to provide a wide variety of products under one location for a low price. This thesis focuses on the supply chain process for Discount Stores only.

**Figure 1 Segmented Revenue by Business Unit (in millions)**

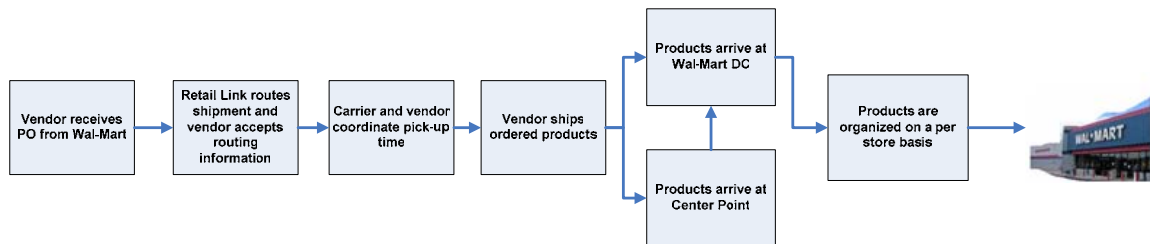


### Wal-Mart Supply Chain Network and Processes

Wal-Mart operates 1478 Discount Stores in the US and has a store presence in all 50 States. Wal-Mart's US supply chain network has 90 distribution centers (DC) total, with each holding particular product segments and product types. Wal-Mart utilizes a private fleet for short-haul shipments, which include some inbound and all outbound

transportation from DCs. According to Wal-Mart's 10-K Form, 20% of shipments are made directly from vendors to Wal-Mart Stores and 80% of store replenishments go through the DC process. When each Discount Store orders products from vendors, the orders are aggregated by vendor in order to take advantage of risk pooling, allowing vendors to only forecast aggregated store demand instead of individual store demand. Wal-Mart uses a system called Inforem to automate their replenishment process for their retail stores. The following figure is a general overview of the flow of products from vendors to Wal-Mart stores.

**Figure 2 Wal-Mart Replenishment Process Overview**



After vendors receive orders from Wal-Mart, Retail Link, a proprietary supply chain visibility tool, takes the vendor ship point information and determines a routing schedule based on cost. If products are not being shipped directly to stores, the two possible destinations are either to a Wal-Mart DC or to Wal-Mart center points. Center points are facilities that deconsolidate full truck loads from vendors and aggregate those products with products from other vendors for outbound distribution to Wal-Mart DCs. This is done to lower transportation costs and better utilize assets through achieving scale on inbound and outbound transportation. From the DC, products are then sent to Wal-Mart stores. The three types of replenishment processes that Wal-Mart utilizes are explained in more detail in the following section.

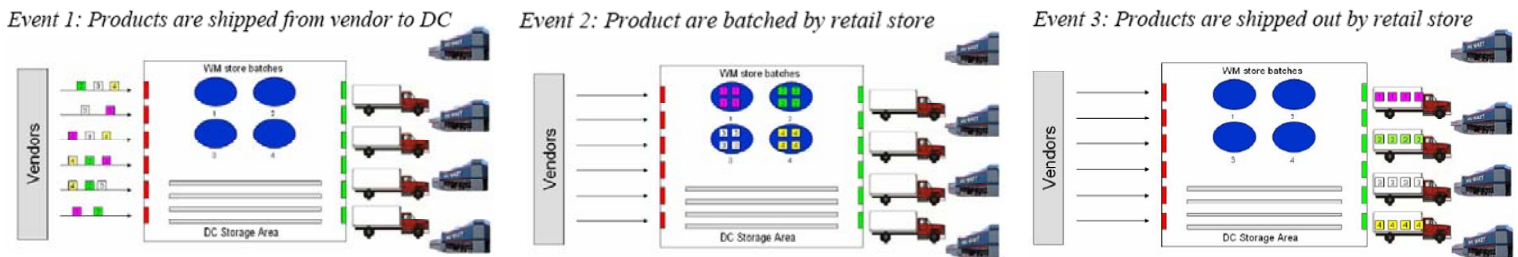
### **Wal-Mart Replenishment Processes: Warehouse, Assembly, Direct-to-Store**

In the warehouse replenishment process, products are first stored at the warehouse level and then distributed to different retail stores. This is a relatively standard retail supply chain process, where vendors deliver products to retailer warehouses, products are stored in inventory until requested by retail stores, and orders to replenish stores are fulfilled from distribution center inventory. The types of products that go through the warehouse replenishment process are products that are in high demand and have high margins. In other words, on-shelf availability for these products is very important to Wal-Mart, and thus safety stock inventory is required.

In the assembly replenishment process, products flow through the supply chain via a modified form of crossdocking. Products arrive at the DC pre-allocated for specific stores and are batched for delivery to those stores. In other words, the assembly process is similar to the warehouse, except that the assembly process does not require that products are stored in inventory. The product types that flow through the assembly replenishment process are products that are not highly demanded with low price margins. With these characteristics, there is no need for a high safety stock level or a need to store a staple stock of this inventory in the DC. Wal-Mart is currently evaluating initiatives to

extend the assembly process to a larger portion of its product line, which is discussed later in this summary as a Wal-Mart supply chain initiative. The following diagram shows how products flow through distribution centers via the assembly process.

**Figure 4 Wal-Mart Assembly Process**



The last replenishment process for Wal-Mart stores is shipments directly from vendors to stores. Products that are shipped directly from vendors are done so for various reasons. Generally, the products that flow through this type of replenishment process are products that are not easy to store and are highly demanded. For example, dog food is highly demanded, requires significant shelf space, and attracts rodents. This process allows Wal-Mart to better utilize DC storage space and allow high velocity product to flow through the supply chain directly to retail stores. In order for this process to be successful, Wal-Mart and its vendors must collaborate intimately with one another to ensure that all Wal-Mart stores are stocked to meet customer demand.

## Wal-Mart Supply Chain Initiatives

With the reputation of always aiming for supply chain cost reduction in support of its EDLP strategy, Wal-Mart is continuously launching supply chain initiatives and transformations. The major supply chain initiatives discovered through industry expert interviews are applying the pick-to-pallet process to discount stores, implementing post-receipt allocation for outbound distribution process, applying changing the replenishment processes for products with different profiles.

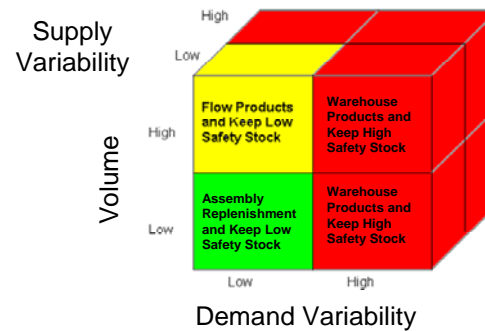
Pick to pallet is a replenishment concept used for Wal-Mart's perishable goods, where each pallet that is delivered to a retail outlet contains items that belong to one aisle. This process is being considered for implementation in discount stores in order to reduce in store shelf replenishment costs.

In post-receipt allocation, stock keeping units (SKUs) that flow through the assembly process are not dedicated to stores until they have been received into the DC. Previously, if demand changed during the lead time that it took products to be delivered from vendors to stores, the amount of inventory allocated to each store did not change. With post-receipt allocation, a reallocation of inventory takes place when products arrive at the DC. This is a method of postponement that allows Wal-Mart to have more flexibility to ensure the proper allocation of inventory to stores, supporting on-shelf availability and preventing inventory overages. It is not until the products are received and an analysis is done as to where the SKUs are needed most, that the products are batched for outbound distribution to stores.

A shift in the product flow according to product and demand profiles is depicted by the cube to the right. By shifting the replenishment processes based on volume, supply variability, and demand variability, the overall level of safety stock and inventory in the system will be reduced. Under this new paradigm, most of the products that are high in volume, which is the general characteristic for Wal-

Mart products, will theoretically continuously flow into the stores at a frequent rate.

**Figure 5 Process Differentiation Based on Product Characteristics**



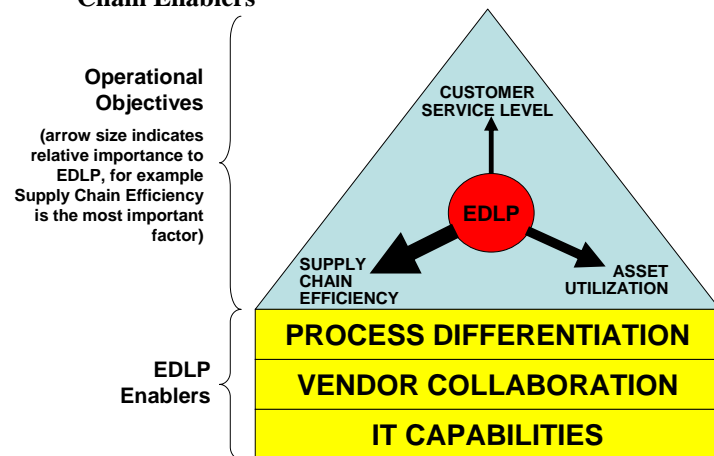
### **Wal-Mart Business Strategy and Supply Chain Strategy Linkage**

As mentioned previously, Wal-Mart's overall business strategy is to provide Every Day Low Prices (EDLP) to customers. Wal-Mart's supply chain strategy supports its business strategy to ensure on-shelf availability of a variety of products in a convenient location at low prices. Wal-Mart's operating model based on efficient flow-through distribution processes supports the business strategy, through finding a balance between customer service levels, supply chain efficiency, and asset utilization. The supply chain enablers of EDLP are capital investments that facilitate vendor collaboration, which then supports differentiation in supply chain processes. The capital investments, such as the private fleet and IT investments, aid in cutting costs within the supply chain. Retail Link is a supply chain visibility tool developed to facilitate supply chain partner collaboration. Wal-Mart invested \$4 billion to develop this application (Arnold & Fernie, 2000). The three major functions of Retail Link are to store data, to share data with vendors, and to aid in shipment routing assignments. Wal-Mart's continued investment in IT is seen through its RFID initiatives. Wal-Mart is currently driving the adoption of RFID technology through supplier mandates. RFID promises the next generation of barcode technology to provide automated data capture to further streamline Wal-Mart's processes and vendor compliance initiatives. In addition to technology, trust and cooperation are essential for Wal-Mart to develop collaborative relationships with vendors, such as vendor managed inventory (VMI) and co-managed inventory (CMI). In order to persuade vendors to make decisions and take actions that are beneficial to Wal-Mart, Wal-Mart has made their profitability and business strategy attached to the performance of their suppliers. Therefore, suppliers are expected to continuously improve their supply chain and organization because their business with Wal-Mart is for the most part, essential to their survival. Through its IT capabilities, private trucking fleet, and vendor-retailer collaboration efforts, Wal-Mart is able to apply differentiating supply chain processes to its products. Wal-Mart's segmentation of products into warehouse, assembly, and direct-to-store replenishment processes shows their understanding and dedication to ongoing operational efficiency and innovation, while maintaining or improving service.

The diagram on the following page graphically depicts the three factors discussed above, within the context of the Wal-Mart Operating Model. Wal-Mart's distribution

**Figure 6 Wal-Mart's Strategy and Supply Chain Enablers**

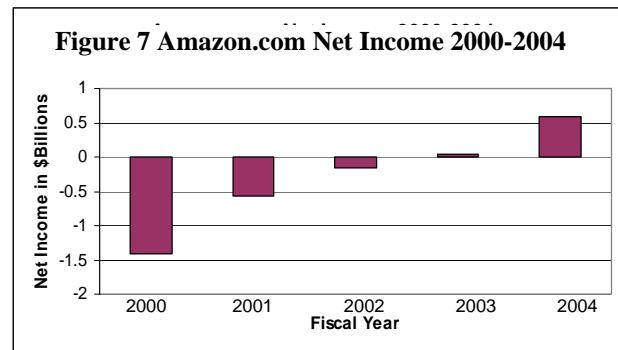
processes can not be copied effectively without developing the integrated capabilities that Wal-Mart has in place. The integrated nature of Wal-Mart's investments, operational efficiency, collaboration and compliance, and culture comprise a supply chain strategy that supports the EDLP business strategy to create lasting competitive advantage.



### **Amazon.com Case Study**

Amazon.com started as an online bookseller, but has expanded into a wide variety of media, electronics, and other general merchandise categories in support of its business strategy. Amazon's 2003 Annual Report states that their mission is to offer "Earth's biggest selection" and to be "Earth's most customer-centric company, where customers can find and discover anything they want to buy." Specifically stated, their business strategy is to "offer customers low prices, convenience, and a wide selection of merchandise."

Amazon.com's revenue grew from \$2.72 billion in 2000 to \$6.92 billion in 2004. Amazon has also seen an improvement in net income during this period, with net income going from negative \$1.41 billion in 2001 to \$588 million in 2004. Net income for 2004 is inflated by a one-time \$233 million deferred tax asset due to previous operating losses. As of the fourth quarter of 2004, Amazon employed more than 9000 people. The two major business units by which Amazon.com financial metrics are segmented are North America and International. In 2004, 56% of revenues were from North America, and 44% of revenues were from the International business unit. As of 2004, Media accounts for 74% of overall sales. Electronics and other general merchandise and Other revenues account for 24% and 2% respectively.



### **Amazon.com Operating Model, Supply Chain Network, and Processes**

The pure-play internet retail model uses a website as a virtual store through which products are sold to customers. There are several variations to this model that Amazon.com utilizes to support its strategy. The Amazon.com as seller model is a model where a user places orders through the Amazon.com website, or the website of a Syndicated Stores partner, and Amazon.com is responsible for the technology, inventory, and fulfillment of the order. An example of a Syndicated Stores member is Borders.com.

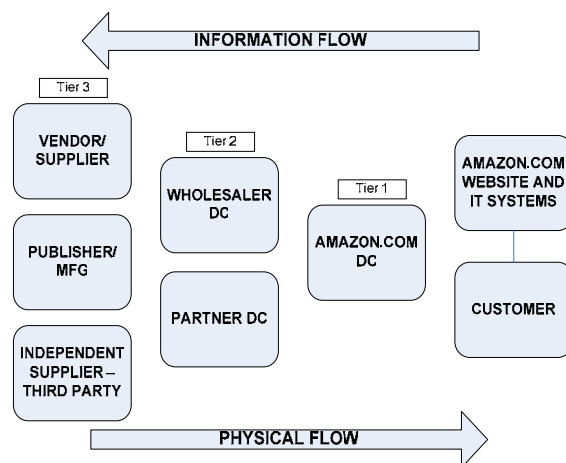


The Amazon.com as intermediary model, comprised of its Merchants@ and Marketplace programs, utilizes third-party sellers to own inventory and distribute products to customers. The Merchant.com program represents Amazon.com as a full-service e-commerce provider, where Amazon.com provides technology and fulfillment services for other retailers. The retailers remain responsible for merchandising and maintain ownership of inventory in Amazon.com distribution centers. An example Merchant.com customer is Target.com. These operating model variations allow Amazon.com to offer a wide selection and product availability through one or more of its models, while containing operating costs.

As a pure-play internet retailer, Amazon.com has zero retail outlets. All sales are generated through the virtual stores created by the Amazon.com website and affiliate websites. Amazon.com operates eight leased distribution centers throughout the United States. Location decisions are made based on proximity to customer concentrated areas and tax implications. Processes in Amazon.com's distribution centers vary by the product mix in the facility. Products that are easily sortable and conveyable are stored in highly automated facilities. Most of the items in the media product category fall into the sortable, conveyable category as products are relatively small, have a small variation in dimensions, and can easily be transported on conveyors and sorted by people or equipment. Products that are large or have irregular dimensions are stored in less automated facilities. Amazon.com operates a number of transportation hubs that they refer to as injection points. Amazon.com aggregates orders at a DC level that are going to heavily concentrated customer areas, and contracts lower cost long-haul carriers to deliver products to transportation hubs. In the hub, orders are routed to parcel carriers who are responsible for last-mile delivery. This process creates economies of scale and lowers overall transportation costs. A final part of their supply chain network is the utilization of supply chain partners to deliver orders directly to customers. These partners include book distributors, publishers, manufacturers, and independent third-party sellers. Shipments from these partners bypass the Amazon.com internal distribution center network.

Amazon.com has competed on selection with traditional retailers since its inception. Amazon.com is able to support this selection through its multi-tier inventory network. The first tier within the supply chain network is the Amazon.com distribution center network. Traditional retailers require product to be available at retail stores to achieve a sale. Amazon.com is able to aggregate inventory through distribution centers and partner inventories to provide a wide selection of products. The second-tier in the inventory model is composed of wholesaler and partner DCs. This tier includes drop shippers such as Ingram Book Distributors, Baker and Taylor, and other book distributors. This

**Figure 8 Amazon.com Multi-Tier Inventory Model**



prevents the Amazon.com customer from experiencing a stock-out for an item that Amazon.com carries but currently does not have in its own stock, and also allows Amazon.com to offer items that it does not carry in inventory. Publishers, manufacturers, vendors, and third-party sellers comprise the third-tier in the Amazon.com multi-tier inventory model. Products sourced from these entities enable Amazon.com to improve margins, as Amazon.com is not responsible for inventory or fulfillment, thus the incremental cost to fill the order is very small. The graphical representation of Amazon.com's three-tier inventory model is shown to the right.

### **Amazon.com Supply Chain Initiatives**

This section highlights some current initiatives and research that Amazon.com is supporting to drive continuous improvement in its supply chain. Initiatives include improving the costs associated with order sourcing, driving efficiency and capacity improvements in distribution centers, and leveraging their scale and service window to reduce costs.

Currently, when a customer orders from Amazon.com, the website integrates with Amazon.com's order sourcing engine to determine real-time which warehouse should ship the order. Research is currently being performed to determine the savings associated with re-evaluating the sourcing decision in a one to two-day window. The re-evaluation provides more data over which to optimize the solution aimed at lowering transportation costs through minimizing the number of packages shipped. Sophisticated operations research models and IT capabilities need to be developed to implement these decisions at scale to reduce fulfillment and transportation costs without compromising the promised delivery date to the customer.

Improving operations performance through efforts to model more efficient storage techniques, sortation mechanisms, and capacity planning is another initiative. Processes to perform more effective SKU and order profiling for more efficient outbound processing and capacity planning have recently been the subject of research. Additionally, analyzing the outbound distribution process to determine the optimal picking and sortation strategy based on product and order profiles aims to further improve operational efficiency and improve margins.

An ongoing Amazon.com initiative is creating and leveraging scale within its supply chain through batching, which results in reduced fulfillment and transportation costs. Amazon.com offers customers the option to self-select the level of service they desire. Free shipping is an option on most orders over \$25. The customer tradeoff is a longer delivery lead time. Amazon.com leverages this increased lead time to better plan distribution processes and transportation to batch orders for efficient picking or transportation hub processing.

### **Amazon.com Business Strategy and Supply Chain Strategy Linkage**

Amazon.com's business strategy is to compete on selection, convenience, and price. Amazon.com's operating model variations, multi-tier inventory network, and efficient distribution center processes support Amazon.com's strategy of selection, convenience, and price. Amazon.com's primary supply chain focus is in providing customer service excellence through product availability and self-selection of service.

The combination of customer service, supply chain efficiency, and asset utilization allows Amazon.com to provide the service and convenience on which they compete at a competitive price.

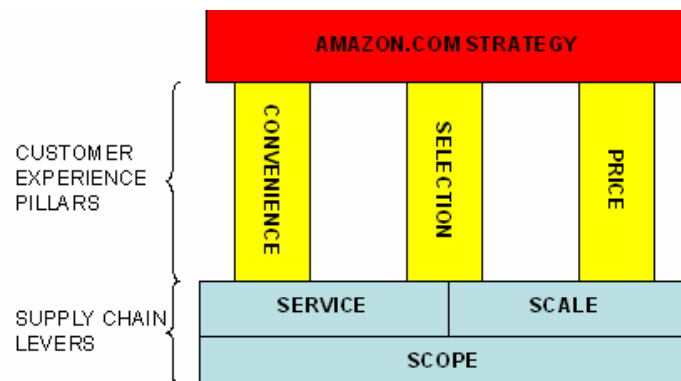
Amazon.com leverages scale, scope, and service windows to support their operational goals of product availability, efficiency, and asset utilization in support of the Amazon.com business strategy. Unlike traditional retailers, Amazon.com does not have the opportunity for scale in fulfillment and transportation on a per order basis. This requires Amazon.com to be innovative in developing initiatives and refining processes to leverage scale. Amazon.com creates picking scale efficiencies in its distribution centers by batching multiple orders for aggregated picking. Additionally, Amazon.com creates transportation scale by batching multiple orders going to a heavily concentrated customer area to be able to utilize less expensive transportation for long-haul transportation as opposed to their parcel carrier partners. Amazon.com leverages scope through its various operating models that allow drop shippers, other retailers, and independent third parties to sell merchandise to its customers through its Merchants@, Marketplace, and Merchant.com programs. The scope of partnerships enables Amazon.com to offer millions of products without prohibitive facility investment or inventory costs. Service is the final component to Amazon.com's supply chain strategy. The customer service experience during the online browsing and purchasing process is part of what differentiates Amazon.com from other online competitors. In addition to the front-end experience, Amazon.com incorporates its service initiatives to improve supply chain performance, such as managing service windows by offering free shipment for a longer lead time to create supply chain efficiencies.

Porter (1996) discusses a set of activities that fit and reinforce one another as essential to sustaining long-term competitive advantage.

Amazon.com utilizes scale, scope, and service in an integrated manner to ensure product availability and drive down supply chain costs to provide the selection, convenience, and low price experience on which they compete. Amazon.com's initiatives in achieving economies of scale in fulfillment and transportation are supported and reinforced by service window

management initiatives. These initiatives lead to lower costs for Amazon.com that can be utilized to improve profits or pass savings onto customers through lower prices. Scope and service fit together to allow a customer to find a vast selection of merchandise on Amazon.com with seamless fulfillment. This supports Amazon.com's goal of customer-centricity and convenience from the front-end shopping experience through final delivery of product. As the scale of volume sales grows and the scope of selection through partners grows, Amazon.com's supply chain supports the business goals of continued growth and improved profitability.

**Figure 9 Amazon.com Business Strategy and Supply Chain Model**



### ***Wal-Mart and Amazon.com Supply Chain Commonality***

Wal-Mart and Amazon.com are very different companies. Wal-Mart is the largest retailer in the world with thousands of retail store locations where customers select product from store shelves for purchase. Amazon.com is the largest internet retailer in the world, serving individual customers with product deliveries from their own distribution centers and through partner inventories. Despite their differences between Wal-Mart and Amazon.com, both share common principles in utilizing supply chain management to support their business strategies. Both Wal-Mart and Amazon.com focus on the one-stop shopping experience, whether it is through on-shelf availability at the store level or having products within the distribution network available for delivery to online retail customers. Additionally, the two companies focus on operational efficiency to lower costs and then pass those savings onto customers in order to promote growth. Also, they both understand the importance of profiling to balance supply chain initiatives of lowering costs while maintaining a high level of service. Finally, the success of their supply chain is due to using their IT capabilities for better visibility and efficient process enablement, vendor collaboration initiatives, and the ability to leverage scale. These themes show that although Wal-Mart and Amazon.com have different operating models, supply chain themes regarding on-shelf availability, operational efficiency, process profiling, partner collaboration, IT capabilities, and leveraging scale are common to both companies.

### ***Wal-Mart and Amazon.com Supply Chain Transferability***

This section discusses the potential transferability of Wal-Mart and Amazon.com supply chain practices between the two companies, the retail industry, and other industries. Wal-Mart's deep relationships with vendors with supply chain visibility, vendor managed inventory, and co-managed inventory are principles that Amazon.com could apply in streamlining their various operating models. Amazon.com's consignment inventory, as illustrated through drop shipments from book wholesalers directly to customers, is a principle that Wal-Mart could apply to further enhance their vendor relationships. Currently, Wal-Mart only performs consignment inventory for a limited amount of products. The increased visibility offered by RFID could help support Wal-Mart in vendor compliance and processes associated with consignment inventory.

Focusing on channel optimization, process differentiation by product type, and "maestro" emergence (De Graves, 2004) are supply chain trends shown by Wal-Mart and Amazon.com that are transferable within the retail industry and to other industries. Wal-Mart's supplier management innovations have changed traditional retailer and supplier responsibilities, shifting responsibilities to those that can perform activities more efficiently and cost-effectively, in order to benefit the entire supply chain. Wal-Mart's successes with global optimization illustrate the opportunity for the proliferation of overall channel optimization among other industries. Product profiling and process differentiation by product demand and physical characteristics can benefit other retailers as well as companies in other industries. Understanding which products can flow through the supply chain without being stored in inventory has helped Wal-Mart create and sustain its competitive advantage. Amazon.com's use of profiling and use of batch processes for efficient outbound distribution helps reduce their cost and allows them to

operate a profitable internet retailing model. Finally, the emergence of “maestros” in the retail industry, presents an opportunity for retailers and companies in other industries. Maestros are third-party companies that coordinate relationships between smaller suppliers and larger wholesalers or retailers. Maestros are emerging to assist smaller suppliers with selling to Wal-Mart, managing Retail Link data, and providing better service to Wal-Mart. Amazon.com’s intermediary model, where third-parties sell to Amazon.com customers is an example of Amazon.com as a virtual trading company. These companies can help retailers as well as companies in non-vertically integrated industries such as automotive or high-tech in partner selection and collaboration.

## **Conclusion**

Wal-Mart and Amazon.com compete in similar ways. Selection, convenience, and price are both essential to these companies. Although their strategies are similar, Wal-Mart’s primary operational goal is supply chain efficiency to drive costs down and support their every day low price (EDLP) strategy. Amazon.com’s primary operational goal is to provide a high level of service, where a customer can always find the product for which they are browsing, and self-select the level of delivery service and cost they are willing to incur. Additionally, Wal-Mart and Amazon.com’s different operating models require different supply chain structures and processes to support their initiatives. Wal-Mart’s capital investments in information technology and infrastructure, relationships with vendors, and commitment to process efficiency through product profile analysis support the efficiency, service, and asset utilization goals that they strive to balance. Amazon.com’s use of scale, scope, and service through unique operating models, partnerships, and supply chain process efficiencies enables them to provide selection, convenience, and competitive pricing. Both these companies achieve supply chain excellence through focusing supply chain initiatives on specific goals that support and reinforce their long-term competitive business strategies.

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