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CHAPTER TWO
Discussion Questions

1. How would you characterize the competitive strategy of a high-end department store chain such as Nordstrom? What are the key customer needs that Nordstrom aims to fill?

   The Nordstrom website states the following: Over the years, the Nordstrom family of employees built a thriving business on the principles of quality, value, selection, and service. Today, Nordstrom is one of the nation's leading fashion retailers, offering a wide variety of high-quality apparel, shoes, and accessories for men, women, and children at stores across the country. We remain committed to the simple idea that our company was founded on, earning our customers' trust one at a time.

   Nordstrom fills customer needs for high quality fashion merchandise and outstanding levels of customer service. Price is secondary for the typical Nordstrom shopper.

2. Where would you place the demand faced by Nordstrom on the implied demand uncertainty spectrum? Why?

   Implied demand uncertainty is demand uncertainty due to the portion of demand that the supply chain is *targeting*, not the entire demand. A high-end department store chain such as Nordstrom falls on the high end of the implied demand uncertainty scale. There is significant variety of products that Nordstrom carries and it is generally hard to predict demand for these fashion items. The fashion items that Nordstrom stocks have extremely high product margin, high forecast errors and stockout rates, and once the season is over, these items are sold at deep discounts at their Nordstrom Rack outlet stores.

3. What level of responsiveness would be most appropriate for Nordstrom's supply chain? What should the supply chain be able to do particularly well?

   Supply chain responsiveness takes many forms, including the ability to respond to a wide range of quantities, meet short lead times, handle a large variety of products, build innovative products, meet a high service level, and handle supply uncertainty. The Nordstrom supply chain must be highly responsive in the areas of handling highly innovative fashion products, customer response, and service level; they are effective in supplying well-heeled customers with merchandise and their return policy is legendary in the Pacific Northwest.

4. How can Nordstrom expand the scope of the strategic fit across its supply chain?

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Scope of strategic fit refers to the functions within the firm and stages across the supply chain that devise an integrated strategy with a shared objective. By adopting an intercompany interfunctional scope strategy, Nordstrom will maximize supply chain surplus. Nordstrom can move in this direction by working with its suppliers as if they are actually owned by Nordstrom. Rather than viewing the supply chain as a zero-sum game of inventory cost minimization and profit maximization, Nordstrom must recognize that spreading the wealth and occasionally taking on more inventory than is optimal for them will result in improved customer service. The intercompany interfunctional scope of strategic fit requires more effort than the other approaches presented in this section; Nordstrom must evaluate all aspects of its supply web.

5. Reconsider the previous four questions for other companies such as Amazon, a supermarket chain, an auto manufacturer, and a discount retailer such as Walmart.

Amazon focuses on cost and variety by providing books, music, and a host of other household products at low prices. Customers place orders online and expect to receive purchases in a number of days. Customer orders are processed at central warehouses or are drop shipped from suppliers by mail or common carrier. For the most part, the implied demand uncertainty for Amazon is lower as they cast such a wide net. Amazon's supply chain must be responsive in terms of flexibility; they handle an incredibly diverse range of products. Amazon's supply chain should be able to provide low prices, wide variety, and reasonable delivery schedules for its customers. In every link of the supply chain, Amazon must function on the cost-responsiveness efficient frontier in order to support its competitive strategy.

A supermarket chain focuses on cost and quality, with some specialty chains adding flexibility by carrying a broader range of products that may be targeted toward customers interested in organic products or ethnic cuisine. Implied demand uncertainty for a supermarket chain tends to be low; shoppers are typically repeat customers and have a constant demand level. The supermarket supply chain must be responsive by receiving produce quickly to ensure freshness and have a high service level. Supermarket supply chains tend to be well-established and can improve strategic fit by emphasizing speed to maintain freshness, hence perceived quality.

Auto manufacturers have extremely complicated supply chains that are increasingly focused on flexibility and lean operations. Implied demand uncertainty for auto manufacturers varies considerably by target market and manufacturer. Automotive supply chains among the big three in the United States have made great progress in the last decade and recognize that they must be responsive from a time and flexibility standpoint.

Walmart's supply chain is obsessed with cost and is facilitated by a low implied demand uncertainty, its impressive logistics system and its management

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information systems. Its supply chain is able to respond quickly to fill a wide variety of products to keep merchandise on Walmart's shelves. Walmart's level of coordination along the supply chain is excellent; it would be difficult to point out areas where true intercompany interfunctional scope of strategic fit has not been achieved. The sole supply chain criticism that surfaces is an occasional report that suppliers feel as if supply chain surplus is not shared equitably.

6. Give arguments to support the statement that Walmart has achieved very good strategic fit between its competitive and supply chain strategies. What challenges does it face as it works to open smaller format stores?

   The best argument to support the statement that Walmart has achieved very good strategic fit is its success as a company. Competition today is supply chain versus supply chain, not company versus company, so a company's partners in the supply chain often determine the company's success. Walmart's strategic focus on cost is evident in its competitive, product development, supply chain, and marketing strategy. Its marketing strategy of advertising everyday low prices appeals to consumers and does not disrupt the supply chain by causing surges in demand. Visiting one of its big box stores reveals low-priced merchandise, both national and store brands, stacked from floor to ceiling without elaborate displays or decoration. Walmart's logistics and information systems are famous for coordinating its entire supply chain and allowing it to meet customer needs at minimal cost.

   Walmart has had difficulty both with small format stores and its online sales. Challenges have arisen because the supply chain structure that is ideal for the standard Walmart stores is not as effective for both small format stores and online sales. Small format stores require replenishment in much smaller quantities and online sales requires the ability to handle a wide variety of slow moving items. The current supply chain structure is not very good at handling either.

7. What are some factors that influence implied uncertainty? How does the implied uncertainty differ between an integrated steel mill that measures lead times in months and requires large orders and a steel service center that promises 24-hour lead times and sells orders of any size?

   From a customer perspective, implied demand uncertainty increases when the customer's range of quantity required increases, lead times decrease, variety of product increases, rate of innovation increases, and required service levels increase. We also see high implied uncertainty attributed with high product margins, forecast errors above 40 percent, stockout rates above 10 percent and forced season-end markdowns. On the supply side we see increased supply uncertainty when the supply source has frequent breakdowns, unpredictable and low yields, poor quality, limited supply capacity, and evolving production processes.

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For the steel mill that requires large orders and has lead times measured in months both the implied demand and supply uncertainty is less due to a better predictable capability and a better defined schedule for production. Due to the increasing number of sizes and the shorter response time associated with the steel service center, implied uncertainty is high.

8. What is the difference in implied uncertainty faced by a convenience store chain such as 7-Eleven, a supermarket chain, and a discount retailer such as Costco?

   When customers go to a convenience store chain such as 7-Eleven, they go there for the convenience of a nearby store and are not necessarily looking for the lowest price. Implied demand uncertainty would be high as customers are looking for a variety of products and convenience versus cost and demand levels are hard to predict.

   A supermarket chain focuses on cost and quality, with some specialty chains adding flexibility by carrying a broader range of products that may be targeted toward customers interested in organic products or ethnic cuisine. Implied demand uncertainty for a supermarket chain tends to be low; shoppers are typically repeat customers and have a constant demand level. The supermarket supply chain must be responsive by receiving produce quickly to ensure freshness and have a high service level. Supermarket supply chains tend to be well-established and can improve strategic fit by emphasizing speed to maintain freshness, hence perceived quality.

   Low price is very important to customers of discount retailers such as Costco. This customer is willing to tolerate less variety and even purchase very large package sizes as long as the price is low. Customer demand can be more predictable and supply side needs are large and fairly stable.

9. What are some problems that can arise when each stage of a supply chain focuses solely on its own profits when making decisions? Identify some actions that can help a retailer and a manufacturer work together to expand the scope of strategic fit.

   High inventories, poor quality, low customer service, increased returns are just a number of problems that occur when each stage of a supply chain focuses solely on its own profits. The trucking company requires full truck loads for delivery forcing the retailer to carry more inventory than wanted or needed. The supplier offers discounts to their buyers to maximize production but forcing the buyers to purchase in larger quantities than desired. Ordering in large batches was very prevalent during the 1950s and 1960s as companies to minimize local costs and maximize their own profits.

   Today, retailers and manufacturers have the opportunity to plan promotions jointly such as Walmart and P&G. They can share sales information to determine

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customer trends. Joint product development opportunities are being explored throughout the supply chain among retailers, manufacturers, and raw material suppliers.

10. For each of the five levers—capacity, inventory, time, information, and price—identify an example where a supply chain has focused on this lever to deal with uncertainty. In each case, identify reasons why you think it is or is not an appropriate choice.

    The paint supply chain carries mixing capacity at every paint store to deal with demand uncertainty across colors. This is an appropriate choice because the relative cost of a mixer is low and the inventory saved by carrying base colors is large.

    W.W. Grainger and McMaster Carr carry inventory in centralized warehouses to meet demand. This is an appropriate choice because pooling allows them to lower the inventory required and they carry products that have a long shelf life.
    Zara uses speedy replenishment to deal with uncertain demand for its trendy products. This is appropriate because demand for its products is highly unpredictable and the ability to match supply and demand more than makes up for the higher cost of speedy replenishment.

    Seven-Eleven Japan and Zara use current demand information to drive replenishment. The investment in information coupled with speedy replenishment allows them to deal with uncertainty.

    The airline and hotel industries use price variation as the main lever to deal with uncertain demand with prices falling when demand is low and prices rising when demand is high.

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SUNIL CHOPRA

Teaching Note:
Movie Rental Business: Blockbuster, Netflix, and Redbox

Teaching Objectives

The objective of this case is to discuss how different business models and supply chain structures impact the financials of the firms in the DVD rental business. In particular, the goal is to convey that the characteristics of the movie (recent/big hit or old/eclectic) affect whether it is best rented from a centralized or decentralized model. By comparing the financials of Blockbuster, Netflix, and Redbox, we identify the strengths and weaknesses of each model. In addition, as streaming gains market share, the impact will be different for movie types and business models.

Case Questions and Discussions

1. How do the different players in the movie rental value chain provide and capture value?

Movie Studios

Studios were the creators and owners of the content. Most of their costs (stars, production, and marketing) were incurred up front, but revenues did not begin coming in until the movie was released. Revenues arose from a variety of channels, including theaters, DVD and digital releases, and video on demand/pay per view. Studios had recently moved to sharing more risk with their stars, with smaller upfront payments for the star accompanied by a share of the revenue. After about a decade of high revenues from DVD sales, studios had seen a recent decline. In recent years, the international market had come to represent a large fraction of theater sales for studios. For example, *Avatar* had worldwide box office revenues of $2.78 billion, only $0.76 billion of which was from the U.S. market.

Movie Theaters

Movies were released first to movie theaters. Studios tended to enjoy a greater cut (as high as 70 to 90 percent) of the ticket sales in the opening weeks of the movie release, and the theater owners enjoyed an increased share in the later weeks of the release. The studio's cut had declined over time, now averaging about 50–55 percent of ticket sales. Consequently, the length of the theatrical window also had declined in recent years.

Movie theaters were increasingly adopting measures to increase revenue by releasing movies as "premiere experience" screenings such as in IMAX or 3D. This allowed movie theaters to charge an additional $2–3 per movie ticket.

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In addition, a significant fraction of theater revenues had started to come from concessions and onscreen advertising.

DVD Retail Stores

A period of three or more months after the movie was released in theaters, it was released in DVD format to retail stores such as Walmart and Best Buy. These retail stores sourced DVDs from movie studios at a discounted wholesale rate. Movie studios were most attracted to this channel, as it offered them a higher profit margin/revenue than any other channel. Movie studios delayed the DVD release to the rental chains and other channels in order to tap the revenue from the retail channel as much as possible. (Studios received up to $18 on each DVD sold compared to less than $4 for a rental.) Studios also tended to actively promote and advertise the DVDs when they were released.

Blockbuster

Blockbuster started with the business model of having physical storefronts in high-traffic neighborhood locations. Its primary value addition was to bring recent content close to the customer in the form of a VHS tape (originally) or DVD. By building stores that were larger than existing mom-and-pop rental stores, Blockbuster offered customers a wider choice of movies and better availability on recent releases. Movies were typically rented out for $5 for five nights. Blockbuster had difficulty with older or niche movies that did not have a broad audience. Even with nearly 8,000 titles in a store, a store could only keep a small fraction of old titles.

Netflix

Netflix started as a mail-order DVD rental service that later turned into a mail-based subscription service (eventually with a greater focus on streaming) that offered customers greater choice in the variety of movies they were able to rent and watch. Due to physical limitations of the store size, Blockbuster's storefront model could not offer customers as wide a variety of movies to choose from. (Netflix offered more than 100,000 titles compared to less than 8,000 at the largest Blockbuster store.)

In addition, Netflix had a robust recommendation system that could suggest movies for customers. Netflix customers were requested to rate the movies they watched, and a taste profile was generated for each customer based on these ratings. Movies were then recommended to customers based on their taste profiles and what other customers with similar profiles seemed to enjoy. Thus, Netflix reduced the search cost that customers had to bear in identifying movies to watch (among the over 100,000 titles they carried). By introducing customers to older or less-known movies, Netflix was also profitable for movie studios, as they would get a share of the rental revenues from these titles.

Netflix also solved an important problem for studios by generating demand for its catalog of older movies. If a studio were to offer a Netflix-like monthly subscription plan for its movies, it would be not as attractive to customers, as studios only had access to the movies in their own catalogs. By consolidating and sourcing movie titles from various studios, Netflix effectively generated demand for a wider variety of movies, including older titles.

Netflix focused on adding value through inventory aggregation (for DVDs), search efficiency, and content aggregation (for video on demand). From a financial perspective, we will argue that Netflix (with its centralized business model that aggregates inventories) adds much

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more value for older movies with small and sporadic demand compared to hit movies with large and predictable demand. Netflix therefore served the "long tail" of the customer demand corresponding to a wide variety of movies with relatively low demand.

Redbox

Redbox's primary value proposition was to deliver content in the form of a recently released DVD very close to the customer (much closer than Blockbuster historically accomplished). Redbox offered customers a cheap and easy way to rent movies through its vending machines that were located in high-trafficked locations such as fast food restaurants and supermarkets. Because Redbox vending machines were located at places people tended to frequent, the service offered the easiest way to rent DVDs.

Redbox's vending machines tended to stock newly released DVDs, which were rented out at $1.20 a night. Redbox thus offered customers the cheapest way to watch new movies. Thus far, the company had stayed away from the long tail and focused on recent releases. Its recently announced partnership with Verizon, however, could represent a channel for distributing long-tail content.

Video on Demand

Video on demand (VOD) services offered customers the most convenience in renting and watching movies. As long as they had a cable subscription and set-top box available, customers could rent movies directly through their TV sets and start watching. No additional hardware or separate boxes were necessary. Movie studios also preferred the VOD channel to DVD rentals, as they received higher revenue than through DVD rentals.

There was also a strong push from the on-demand players to make studios release movies on VOD channels on the same day as the DVD release. The major value additions provided by cable companies were content aggregation, fund transfer aggregation, along with access to customer TVs.

Digital on-Demand

Players such as Apple, Amazon, and Google were becoming increasingly active in the digital pay-per-view and on-demand rental channel. Most of their offerings could be streamed directly from the Internet and watched on computers. New devices had been developed (Apple TV, Google TV, Roku, etc.) that allowed the digital content from these companies to be streamed to TVs. Netflix was also an active player in this field; it allowed its monthly subscription plan customers to watch movies by streaming through devices such as Roku, PlayStation, Xbox, and Wii. The value additions provided by these digital channels were content aggregation, fund transfer aggregation, and strong brand recognition to get customer access.

2. What factors led to Netflix's growth? How should Blockbuster have responded to the challenge posed by Netflix?

The factors that led to Netflix's success were:

- *Transition from VHS to DVD.* Transition from the VHS to DVD storage of movies coincided with the emergence of Netflix as a major player in the movie rental business. DVDs were cheaper and easier to handle and transport. This allowed Netflix to introduce

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the DVD-by-mail subscription plans. Sending VHS tapes by mail would have been much more expensive.

- *Low costs.* Blockbuster incurred high operating costs due to its storefront rental model (in the form of PP&E, inventory, and SG&A). Netflix, through its distribution center–based delivery model, was able to reduce its costs of operation and PP&E. Netflix's PP&E was one-tenth that of Blockbuster, whereas its revenue was just 40 percent that of Blockbuster.

  Netflix also had low inventory costs (2.21 percent of revenue or 4.5 percent of COGS) compared to that of Blockbuster (15.73 percent of revenue or 33.98 percent of COGS), as well as a much lower SG&A (see **Exhibit 1** for details).

- *Wide inventory selection.* Compared to Blockbuster, Netflix carried a wider variety of older titles sourced from studios at a cheaper rate compared to the cost of new releases. The Blockbuster model was not well suited to carrying a wide variety of older movies because a typical store carried only 3,000 titles (compared to more than 100,000 available at Netflix). The centralized Netflix model, in contrast, was much better suited to carrying large variety.

- *Recommendation system.* Netflix's model of providing high variety (for both DVDs and streaming) was bolstered by a robust recommendation system, which suggested movies to customers based on their interests and rental history. With high variety, reducing search costs becomes important (something that the recommendation engine helped with).

- *Subscription model.* Netflix's subscription model of renting DVDs for a fixed monthly fee was attractive to customers who wanted the privilege or comfort of watching as many movies as they wanted for a fixed subscription price. Blockbuster's high-cost store rental ($5 for five nights per DVD) was not attractive to those customers. In 2010, Netflix's monthly subscription fee of $8.99 was lower than two rentals at Blockbuster. Even when the service was priced at $19.95 a month (in 2000), it was comparable to renting four videos at Blockbuster.

Some Challenges for Netflix

High transportation cost was one of the biggest challenges Netflix faced for its DVD business. Shipping a DVD (to the customer and back) can cost as much as 75 cents per disc. This increases the SG&A costs for Netflix for its DVD business. The cost of streaming has been estimated to be significantly lower (around 5 to 10 cents to deliver a movie online). As a result, Netflix tried to encourage users of DVDs to transition to streaming by increasing the price of the service (it charged $7.99 for the DVD service and a separate $7.99 for streaming instead of the previous $8.99 for both).

The challenge in both cases has been new content. The DVD service is ideally suited for a wide variety of old content. It can be argued that streaming a wide variety of old content allows Netflix to reduce its distribution costs while maintaining its advantages. With new content, however, there is a problem using DVDs (high transportation cost). In fact, the company had been accused of "throttling" in a class action lawsuit (*Frank Chavez v. Netflix*). The company gave preference to customers who used a few DVDs each month over others that used many DVDs each month for new releases. This is because frequent users increase transportation costs (even though Netflix denied that this was the cause in its settlement). New releases also have higher

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acquisition costs for streaming. In fact, Netflix has had to pay significantly higher prices for acquiring new digital content.

Another challenge for Netflix for DVD rentals comes from the difficulties faced by the Postal Service. As the Postal Service raises prices and cuts service, costs at Netflix will rise while response time will get worse for DVD delivery.

Netflix did not transition to streaming without difficulties. The company briefly separated its DVD and streaming business in 2011, but pulled back based on customer response. Its DVD rental business continued to generate profits, but Netflix had to pay increasing costs for its streaming rights, especially for newer content.

Moving forward, Netflix's biggest challenge continues to be the cost of new content especially for its streaming service. It can be argued that Netflix would be better off continuing to focus on only the long tail for both its DVD and streaming service. This would keep the cost of content acquisition low while taking advantage of the aggregate distribution model that Netflix has.

Blockbuster's Response

In response to Netflix, Blockbuster should have pressed its advantage in multiple channels. It should have utilized its physical storefronts and the newly introduced mail-subscription service (in response to Netflix's mail offering) much more effectively and as complements to each other.

In addition, Blockbuster did not move into the mail-subscription online model early enough, as it had invested heavily in its physical storefront model. Once Blockbuster introduced its own offering in the DVD-by-mail category, Netflix already had a firm lead. Further, Netflix's mail offering had many more DVD titles than Blockbuster had, and was also complemented by a robust recommendation engine, which Blockbuster's service lacked.

In short, Blockbuster should have been looking to move into the low-cost (online) models much sooner and should have diversified from its high-cost (physical storefront) model.

The company could also have brought in vending machines to rent and return the high-volume rental movies. Its stores already had slots where customers could return DVDs. Once the movie was dropped into a slot, however, more work had to be done by employees to update inventory records and restock shelves. A vending machine would have reduced Blockbuster's cost of rentals and return while also making rentals available when the store was closed.

Blockbuster effectively missed an opportunity to create a hybrid system that both improved customer service and reduced costs.

3. What factors led to Redbox's growth? How and why was it able to capture market already dominated by big players such as Blockbuster and Netflix?

Although Netflix already occupied a strong position in renting a wide variety of titles, Redbox attacked Blockbuster in the new-movie segment. Its business model provided greater convenience to customers while also reducing both price and cost. The factors that led to Redbox's success were:

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- *Low fixed and variable costs.* Redbox's kiosks offered a low fixed-cost business model compared to the high-cost physical storefront rental business model of Blockbuster. Each vending kiosk was relatively inexpensive at $15,000 and generated $30,000 revenue in the first year, rising to $40,000 and $50,000 in Years 2 and 3. The company had very low fixed investment in PP&E (this is not entirely reflected in the Coinstar financial statement) and also relatively low operating costs, as Redbox employees only came once a week to restock the vending machines when new DVDs were released. The model incurred virtually no variable cost in renting DVDs or accepting returns (all the work was done by the customer).
- *Access and availability.* Redbox's kiosks were accessible close to customers in high-trafficked locations such as grocery stores, restaurants, and supermarkets Redbox had around 30,000 vending machines by early 2012). As a result, a Redbox vending machine was typically much closer to customers than the closest Blockbuster store. The locations also allowed customers to get a DVD while shopping instead of making a special trip to rent a DVD. Redbox implemented an online reservation system that allowed customers to find the closest vending machine with their desired movie in stock and to reserve the movie for a night. This ensured that customers did not waste a trip.
- *Low pricing.* Redbox's $1-a-night model of DVD rental, (which increased to $1.20 a night by 2012) was attractive to customers. Customers were more likely to prefer to pick up the DVD for $1 and return it at their convenience.

Blockbuster improved availability of its titles (despite holding them in vending machines with only a few hundred DVDs each) by allowing customers to go online and identify the closest vending machine with the desired title in stock. Overall, the Redbox model was ideally suited to provide recent movies, (which rented at high and predictable rates) to customers at low cost.

4. What are key success factors in the movie rental business? How do Redbox, Blockbuster, and Netflix compare along those dimensions?

The key success factors in the movie rental business were costs, which included fixed and operational costs (facilities, transport), content (acquisition and inventories), delivery channels, and pricing. Companies needed to adequately control all of these factors to be profitable in this business.

In addition, customers were increasingly moving away from the physical storefront model rentals to online and on-demand viewing. As seen from Exhibit 4 in this case, in-store rentals were forecasted to decline going forward, but vending, online subscription, and VOD channels were expected to continue to grow. This shift in customer behavior had a greater impact on the costs, delivery channels, content, and pricing models adopted by the firms in the movie rental industry.

Facilities

Blockbuster had a high-cost physical storefront model of movie rental. Blockbuster leased the storefronts at high costs in high-trafficked neighborhood locations (this increased SG&A and PP&E). Only a single wall at a Blockbuster store was dedicated to new releases, (which constituted a significant fraction of the rentals). Redbox, in contrast, used very low cost vending machines (with low fixed installation costs of $15,000) in high-trafficked locations such as

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grocery stores, supermarkets, and malls to rent the same recent releases (much lower PP&E/SG&A) compared to Blockbuster.

Whereas a Blockbuster store carried around 3,000 titles that were not recent releases, this represented a very small fraction of old movies. In contrast, Netflix carried a very wide variety of titles but in centralized distribution centers. Netflix had about 60 distribution centers, where DVDs were processed and shipped all over the United States. These distribution centers were located close to post office locations, allowing Netflix to afford timely processing and delivery at relatively low cost. Thus, Netflix had much lower facility costs than Blockbuster while providing a much higher variety of movies.

Inventories

Inventories at Blockbuster were high (relative to revenues) because of the decentralized nature of its operations. In particular, carrying many low-volume rental titles (after all, there were perhaps only about 30 movies at any given time that were renting in large quantities) exacerbated the inventory requirements. This increased the cost of both inventory and space for Blockbuster. Netflix carried a wider selection of titles in its distribution centers, but was able to carry lower inventories because of aggregation. Redbox stocked newly released DVDs, which rented in large volumes with relatively predictable demand. As a result, there was much less inventory sitting around. Each Redbox kiosk carried close to 630 DVDs comprising 200 of the newest movie titles. Each DVD was rented out on average 15 times, after which it was sold to the customer.

Transportation

Blockbuster's physical storefront model incurred low transportation costs, whereas Netflix bore the high shipping and handling costs of processing DVDs by mail. As per an MSNBC article by Ethan Epstein, Netflix estimated an expenditure of $600 million on postage in 2010. Redbox incurred low replenishment costs in restocking its vending kiosks.

Delivery Channels

Netflix offered customers the choice of renting DVD titles by mail and streaming movies directly through a Netflix-enabled home entertainment device. Redbox's focus was on renting DVDs through its vending kiosks. (It recently partnered with Verizon to offer streaming services.) Blockbuster followed the physical storefront rental model, and later tried to match Netflix's DVD-by-mail offering. Blockbuster did not develop significant capabilities and partnerships for streaming movies. Toward the end, through a partnership with NCR, Blockbuster started installing its own brand of vending kiosks throughout the United States. Blockbuster never took effective advantage of a multichannel hybrid strategy.

Pricing

Redbox followed a pricing model of $1 a night per DVD (the price increased to $1.20 in 2011), while Netflix followed an all-you-can-watch monthly subscription model. Redbox's offering was attractive to users who wanted to watch new movies and return them quickly. Netflix's plan was geared toward heavy users who were attracted to particular movie genres and interested in discovering movies based on their tastes. Both pricing schemes significantly undercut Blockbuster's model of $5 per DVD for five nights for its in-store rentals.

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After comparing the firms on the above dimensional factors it is clear that Blockbuster, Netflix, and Redbox had their own advantages in their offerings. Redbox's model was suitable for the price-value customer looking to watch recent titles, whereas customers who valued variety and choice and also were attracted to a simple fixed monthly subscription plan would appreciate Netflix's offering. Blockbuster's emphasis of storefront rentals was highly successful during the era of VHS tapes (and little other competition) but was found wanting when DVDs became the preferred storage medium and new competition arrived in the form of Netflix. Blockbuster had the opportunity to implement a multichannel strategy using each channel for the type of movies it was best suited for. Unfortunately Blockbuster took no action until it was too late.

5. How would you advise these companies to modify their strategies and structures going forward?

An explosion of online on-demand rental options had recently become available. Companies such as Apple, Amazon, and Google were providing their own on-demand stores. Many more new devices were being introduced to the market (Apple TV, Google TV, Roku, Boxee, etc.) that could stream on-demand content to TVs. It became increasingly likely that DVDs would be replaced in the future as a content storage medium, and more and more content would be directly streamed or accessed from the cloud.

Netflix understood this development and was increasingly offering the online streaming option to its existing monthly subscription plan customers. Netflix was also pursuing more and more licensing deals with movie studios to be able to offer an increased selection of streaming titles for its customers. (Netflix recently signed a licensing deal to pay close to $1 billion to the Epix movie channel to add Paramount, Lions Gate, and MGM movies to its catalog.)

The challenge for Netflix was the cost of acquiring content, as well as deciding which content it should focus on. For existing old content and eclectic content (e.g., Iranian movies), the move from DVD to streaming could help Netflix because it significantly reduced shipping cost while keeping the acquisition cost of content low. For new content, however, acquisition costs for streaming were likely to be much higher for Netflix (as has been the case), making this a segment that Netflix was better off staying away from.

From a strategic perspective, the Netflix model (DVD rentals plus streaming) was best suited for older and more eclectic titles rather than newer titles. In addition, Netflix might have had more to gain by sticking to this segment and offering some discount for customers that used the DVD service and wanted to add streaming (the cost of both at $15.98 was the sum of the costs of each). This was because offering a discount would likely have customers streaming instead of getting a DVD, thus lowering transportation cost.

Netflix's efforts to buy recent content for streaming and to pay for original content seemed misplaced because it did not leverage the company's existing strengths with DVD rentals. Instead it put the company in head-to-head competition with much bigger players for the streaming business.

Redbox enjoyed a competitive advantage in that it allowed people to rent recent movies cheaply. It continued to grow its number of vending machines (recently acquiring NCR's machines as well) and recently announced a partnership with Verizon for streaming content. A hybrid model in which Redbox rented recent DVDs through its vending machines and streamed older content through the Verizon partnership could be quite powerful because it would allow Redbox to use each channel to serve the appropriate product/customer. The vending machine

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model could serve price-sensitive customers looking for recent content while the streaming model could serve customers looking for variety (while keeping acquisition costs low if they stayed away from recent content).

Blockbuster unfortunately missed its opportunities to create the hybrid model that Redbox seemed to be aiming for.

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Exhibit 1: Company Comparisons (%)

Metric	Blockbuster	Netflix	Coinstar
SG&A (% of Revenue)	49.50	24.16	13.60
COGS (% of Revenue)	46.30	49.20	69.60
Inventories (% of Revenue)	15.73	2.21	9.12
Inventories (% of COGS)	33.98	4.50	13.10
PP&E (% of Revenue)	58.47	15.92	66.57
PP&E with Depreciation (% of Revenue)	6.13	7.90	35.08
Liabilities (% of Revenue)	45.64	28.80	71.05

Exhibit 2: Blockbuster

Both Netflix and Redbox operated with lower costs because they were not burdened with the heavy fees of leasing thousands of retail locations as Blockbuster was. The table below shows that the general and administrative expenses for Blockbuster were 47.48 percent and 44.13 percent of revenues in 2009 and 2008, respectively.[1] The figures for Netflix for the same period were 3.1 percent and 3.6 percent, respectively.[2]

	Fiscal Year Ended	
	3-Jan-2010 ($ in millions)	4-Jan-2009 ($ in millions)
Total Revenues	4,062.4	5,065.4
Operating Expenses		
General and Administrative	1,928.7	2,235.3
Advertising	91.4	117.7
Depreciation/Amortization	144.1	146.6
Impairment of Goodwill	369.2	435
General and Administrative Expenses as a Percentage of Revenue	47.48%	44.13%

Source: Blockbuster 2009 Annual Report.

[1] Blockbuster 2009 Annual Report.
[2] Netflix 2009 Annual Report.

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Exhibit 3: Netflix

Economic of Shift from DVDs to Digital

The shift from physical DVD mailing to digital delivery for older eclectic titles (the long tail) would help Netflix lower its high shipping cost in mailing out DVDs. Netflix estimated that it will spend $600 million on postage expenses in 2010, and the expense would rise to $800 million within the next few years. For Netflix, the cost of subscription was 54.4 percent and 55.8 percent of revenues in 2009 and 2008, respectively (see table below). Internet streaming was considerably cheaper, and it was estimated that the costs would be as low as 5 cents a gigabyte for bandwidth—about a nickel a movie.

	Year Ended December 31	
	2009	2008
Cost of subscription ($ in thousands)	909,461	761,133
As a percentage of revenues	54.40%	55.80%

Source: Netflix 2009 Annual Report.

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Exhibit 4: Digital File Purchase and Rentals

Amazon

Amazon's catalog of more than 50,000 movies and TV shows was available for rental or purchase. These titles could be rented and watched online, through desktop software, or via compatible devices from Panasonic, Roku, Samsung, Sony, and TiVo. Amazon streams at 720p, like Netflix, or HD (1080p) on HD devices.

iTunes

iTunes dominated the online music download market and enjoyed a popular premium positioning. The store carried more than 30,000 TV episodes and more than 2,500 films, including 600 in HD. Apple also sold Apple TV hardware for transferring files from computers to TV screens.

Convergence of TV and Internet

Consumers, particularly young consumers, increasingly viewed the Internet as their primary source of entertainment. This trend in attitude was the driving force between innovations that sought to merge the functionality of TVs and computers. Players in this new space focused on ways to facilitate the watching of downloaded or streaming movies on TV:

- Online vendors Netflix, Amazon, and Blockbuster all partnered with third-party hardware manufacturers such as TiVo and Roku to launch low-cost set-top boxes for video download and streaming. Movies could be downloaded through gaming consoles such as the Xbox.
- Independent upstart VUDU offered HD movie downloads to the TV via its own set-top box.
- Riding on the success of its iTunes application as a way to purchase music and video, Apple offered Apple TV as a way to integrate computer and TV files. Users could view any purchased media on their computers, video iPod, iPhone, or TV through a syncing process, (which can be performed wirelessly within the home).
- The newest HDTVs on the market offered direct Ethernet connections to the TV set, which allowed the viewer to watch streaming video or download from partnered services. Panasonic's Viera Cast service, for example, offered easy TV access to YouTube, Picasa web albums, movie downloads from Amazon, and other programs (e.g., weather forecasts and stock ticker data).
- Google, through its video-sharing site YouTube, started providing video rental service, offering selections from more than 500 content partners.

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CASE STUDY—The Demise of Blockbuster

Teaching Objectives

The objective of this case is to discuss how different business models and supply chain structures impact the financials of the firms in the DVD rental business. In particular, the goal is to convey that the characteristics of the movie (recent/big hit or old/eclectic) affect whether it is best rented from a centralized or decentralized model. By comparing the financials of Blockbuster, Netflix and Redbox, we identify the strengths and weaknesses of each model. The centralized Netflix model displays strategic fit for a wide variety of somewhat older movies whose demand is hard to predict. The decentralized Redbox model displays strategic fit for a few new releases whose demand is large and predictable. The growth of both companies left Blockbuster squeezed in the middle because its model did not have the same level of strategic fit.

Case Questions and Discussions

1. In what ways did Blockbuster achieve better strategic fit than local stores?

Blockbuster started with the business model of having large physical storefronts in high-traffic neighborhood locations. By building stores that were larger than existing mom-and-pop rental stores, Blockbuster offered customers a wider choice of movies and better product availability. Movies were typically rented out for about $5 for five nights.

Given that mom-and-pop stores were much smaller, even though they carried only a few hundred titles, it was very difficult for them to provide availability of these movies given the high cost of inventory (VHS tapes sold for $60–$80 each at that time) and space. Blockbuster built larger stores that aggregated demand across a wider area than a typical mom-and-pop store. The larger store allowed Blockbuster to provide greater variety and better availability at lower cost than mom-and-pop stores. The aggregation of inventory and physical space allowed Blockbuster to fill demand from its customers better than mom-and-pop stores.

2. How much implied uncertainty do Netflix and Redbox face? What levers do they use to deal with this uncertainty?

Redbox focuses on a few new releases. The demand for these movies is large and relatively predictable. As a result, Redbox faces a relatively low level of implied uncertainty that can effectively be served using decentralized inventory that is close to customers. In contrast, Netflix provides a very wide variety of older movies whose demand can be difficult to predict. The wide variety increases the level of implied uncertainty. Netflix, however, makes its customer wait a bit to get their movies, allowing it to lower the implied uncertainty to some extent. Netflix then pools this uncertainty and serves its customers using inventory that is stored in centralized warehouses, allowing it to further reduce the uncertainty it must absorb.

3. How did Netflix and Redbox achieve better strategic fit than Blockbuster?

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Netflix and Redbox achieved better strategic fit than Blockbuster by targeting different segments of movie rentals. Whereas Blockbuster attempted to provide its customers both new releases as well as older movies, Netflix and Redbox divided the market among themselves. Netflix primarily targeted a wide variety of older movies while Redbox primarily targeted a much smaller variety of new releases. Blockbuster's attempt to serve both markets increased its cost for both new releases and older movies. In contrast, Netflix was able to provide variety to its customers more effectively (100,000 titles rather than 5,000 at Blockbuster) and at lower cost through its aggregate model of shipping from DCs. Redbox was able to provide new releases at lower cost than Blockbuster by using vending machines.

Whereas a Blockbuster store carried around 3,000 titles that were not recent releases, this represented a very small fraction of old movies. In contrast, Netflix carried a very wide variety of titles but in centralized distribution centers. Netflix had about 60 distribution centers (at its peak of mailing DVDs), where DVDs were processed and shipped all over the United States. Thus, Netflix had much lower facility costs than Blockbuster while providing a much higher variety of movies.

Only a single wall at a Blockbuster store was dedicated to new releases, (which constituted a significant fraction of the rentals). Given that Blockbuster was paying for the whole store, this increased the facility cost per rental because most of the space was used by other movies that rented at a much lower rate than the new releases. Redbox, in contrast, used very low cost vending machines (with low fixed installation costs of $15,000) in high-trafficked locations such as grocery stores, supermarkets, and malls to rent the same recent releases (much lower PP&E/SG&A) compared to Blockbuster. As a result, the facility cost per rental was much lower at Redbox compared to Blockbuster.

Inventories at Blockbuster were high (relative to revenues) because of the decentralized nature of its operations. In particular, carrying many low-volume rental titles (after all, there were perhaps only about 30 movies at any given time that were renting in large quantities) exacerbated the inventory requirements. This increased the cost of both inventory and space for Blockbuster. Netflix carried a wider selection of titles in its distribution centers, but was able to carry lower inventories because of aggregation at its DCs. Redbox stocked newly released DVDs, which rented in large volumes with relatively predictable demand. As a result, there was much less inventory sitting around. Each Redbox kiosk carried close to 630 DVDs comprising 200 of the newest movie titles. Each DVD was rented out on average 15 times, after which it was sold to the customer.

Netflix used a centralized supply chain structure to provide variety in the form of old movies (high uncertainty) to its customers at low cost. Redbox used a decentralized supply chain structure to provide predictability in the form of new releases (low uncertainty) close to its customers at low cost. A combination of the two focused supply chains performed significantly better than the Blockbuster supply chain as illustrated in a comparison of the financials in Exhibits 1 and 2 (in the absence of Redbox financials, we use Coinstar financials).

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Exhibit 1: Company Comparisons (%)

Metric	Blockbuster	Netflix	Coinstar
SG&A (% of Revenue)	49.50	24.16	13.60
COGS (% of Revenue)	46.30	49.20	69.60
Inventories (% of Revenue)	15.73	2.21	9.12
Inventories (% of COGS)	33.98	4.50	13.10
PP&E (% of Revenue)	58.47	15.92	66.57
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Exhibit 2: Blockbuster

Both Netflix and Redbox operated with lower costs because they were not burdened with the heavy fees of leasing thousands of retail locations as Blockbuster was. The table below shows that the general and administrative expenses for Blockbuster were 47.48 percent and 44.13 percent of revenues in 2009 and 2008, respectively.[1] The figures for Netflix for the same period were 3.1 percent and 3.6 percent, respectively.[2]

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Advertising	91.4	117.7
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Impairment of Goodwill	369.2	435
General and Administrative Expenses as a Percentage of Revenue	47.48%	44.13%

Source: Blockbuster 2009 Annual Report.

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[2] Netflix 2009 Annual Report.

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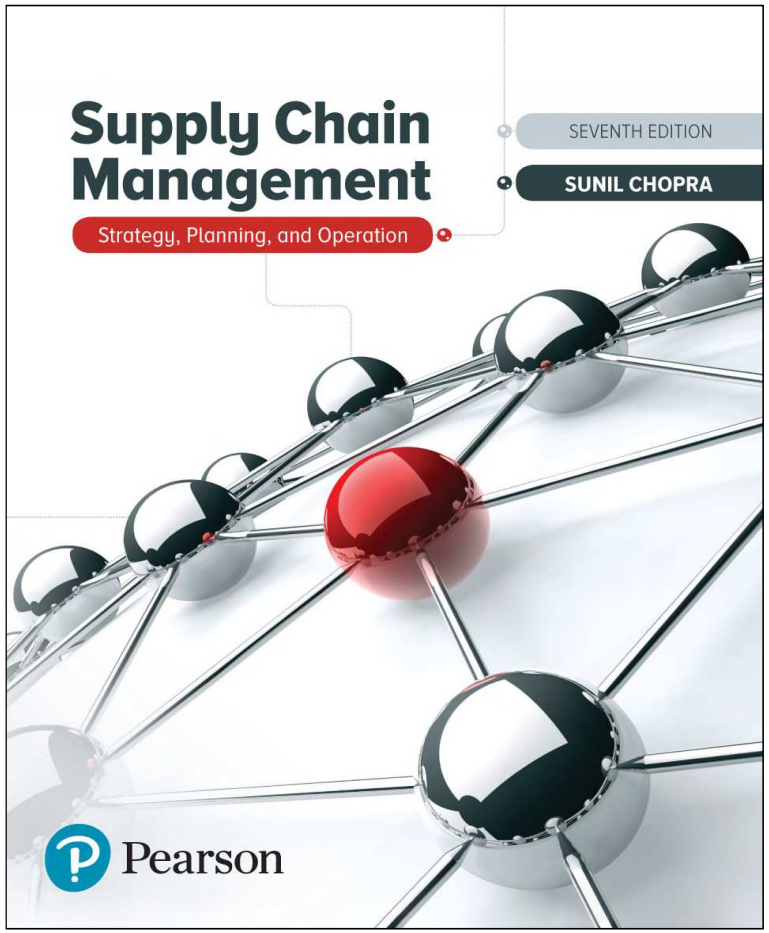
Supply Chain Management: Strategy, Planning, and Operation

Seventh Edition



Chapter 2

Achieving Strategic Fit in a Supply Chain

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Learning Objectives

2.1 Explain why achieving strategic fit is critical to a company's overall success.

2.2 Describe how a company achieves strategic fit between its supply chain strategy and its competitive strategy.

2.3 Identify the main levers to deal with uncertainty in a supply chain.

2.4 Discuss the importance of expanding the scope of strategic fit across the supply chain.

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Competitive and Supply Chain Strategies

- **Competitive strategy** defines the set of customer needs a company seeks to satisfy through its products and services
- **Product development** strategy specifies the portfolio of new products that the company will try to develop
- **Marketing and sales** strategy specifies how the market will be segmented and product positioned, priced, and promoted
- **Supply chain** strategy determines the nature of material procurement, transportation of materials, manufacture of product or creation of service, distribution of product, follow-up service, whether processes will be in-house or outsourced
- All functional strategies must support one another and the competitive strategy

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The Value Chain

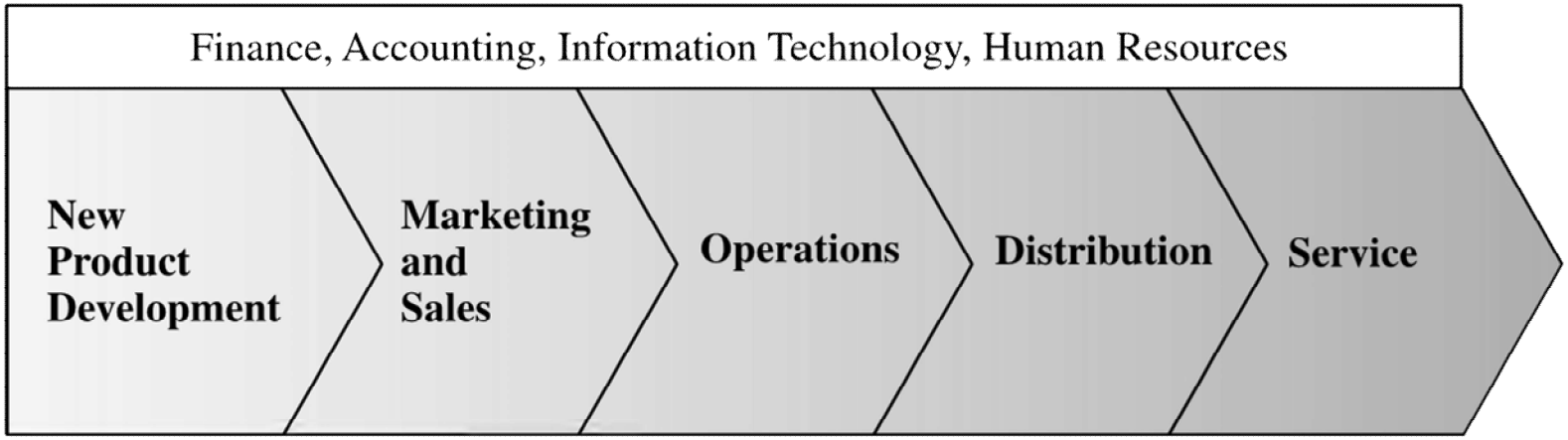

Figure 2-1 The Value Chain in a Company

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Achieving Strategic Fit (1 of 2)

- **Strategic fit** – competitive and supply chain strategies have aligned goals
- A company may fail because of a lack of strategic fit or because its overall supply chain design, processes, and resources do not provide the capabilities to support the desired strategy

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Achieving Strategic Fit (2 of 2)

1. The competitive strategy and all functional strategies must fit together to form a coordinated overall strategy. Each functional strategy must support other functional strategies and help a firm reach its competitive strategy goal.
2. The different functions in a company must appropriately structure their processes and resources to be able to execute these strategies successfully.
3. The design of the overall supply chain and the role of each stage must be aligned to support the supply chain strategy.

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Summary of Learning Objective 1

Strategic fit requires that all functions within a firm and stages in the supply chain target the same goal—one that is consistent with customer needs. A lack of strategic fit between the competitive and supply chain strategies can result in the supply chain taking actions that are not consistent with customer needs, leading to a reduction in supply chain surplus and a decrease in supply chain profitability.

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How Is Strategic Fit Achieved?

1. Understanding the customer and supply chain uncertainty
2. Understanding the supply chain capabilities
3. Achieving strategic fit

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Step 1: Understanding the Customer and Supply Chain Uncertainty (1 of 2)

- Quantity of product needed in each lot
- Response time customers are willing to tolerate
- Variety of products needed
- Service level required
- Price of the product
- Desired rate of innovation in the product

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Step 1: Understanding the Customer and Supply Chain Uncertainty (2 of 2)

- **Demand uncertainty** – uncertainty of customer demand for a product
- **Implied demand uncertainty** – resulting uncertainty for only the portion of the demand that the supply chain plans to satisfy based on the attributes the customer desires

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Customer Needs and Implied Demand Uncertainty

Table 2-1 Impact of Customer Needs on Implied Demand Uncertainty

Customer Need	Causes Implied Demand Uncertainty to …
Range of quantity required increases	Increase because a wider range of the quantity required implies greater variance in demand
Lead time decreases	Increase because there is less time in which to react to orders
Variety of products required increases	Increase because demand per product becomes less predictable
Required service level increases	Increase because the firm now has to handle unusual surges in demand
Rate of innovation increases	Increase because new products tend to have more uncertain demand
Number of channels through which product may be acquired increases	Increase because the total customer demand per channel becomes less predictable

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Implied Uncertainty and Other Attributes (1 of 2)

1. Products with uncertain demand are often less mature and have less direct competition. As a result, margins tend to be high.
2. Forecasting is more accurate when demand has less uncertainty.
3. Increased implied demand uncertainty leads to increased difficulty in matching supply with demand. For a given product, this dynamic can lead to either a stockout or an oversupply situation.
4. Markdowns are high for products with greater implied demand uncertainty because oversupply often results.

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Implied Uncertainty and Other Attributes (2 of 2)

Table 2-2 Correlation Between Implied Demand Uncertainty and Other Attributes

	Low Implied Uncertainty	**High Implied Uncertainty**
Product margin	Low	High
Average forecast error	10%	40% to 100%
Average stockout rate	1% to 2%	10% to 40%
Average forced season-end markdown	0%	10% to 25%

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Impact of Supply Source Capability

Table 2-3 Impact of Supply Source Capability on Supply Uncertainty

Supply Source Capability	Causes Supply Uncertainty to...
Frequent breakdowns	Increase
Unpredictable and low yields	Increase
Poor quality	Increase
Limited supply capacity	Increase
Inflexible supply capacity	Increase
Evolving production process	Increase

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Implied Uncertainty (Demand and Supply) Spectrum

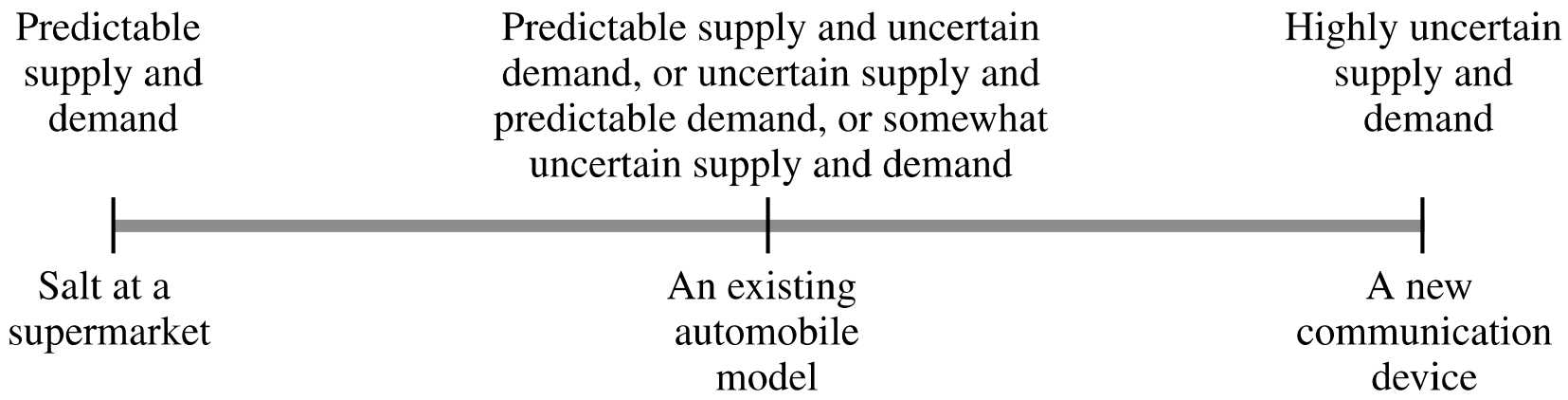

Figure 2-2 The Implied Uncertainty (Demand and Supply) Spectrum

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Step 2: Understanding Supply Chain Capabilities (1 of 2)

- How does the firm best meet demand?
- Supply chain responsiveness is the ability to
  - Respond to wide ranges of quantities demanded
  - Meet short lead times
  - Handle a large variety of products
  - Build highly innovative products
  - Meet a high service level
  - Handle supply uncertainty

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Step 2: Understanding Supply Chain Capabilities (2 of 2)

- Responsiveness comes at a cost
- **Supply chain efficiency** is the inverse to the cost of making and delivering the product to the customer
- The **cost-responsiveness efficient frontier** curve shows the lowest possible cost for a given level of responsiveness

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Cost-Responsiveness Efficient Frontier

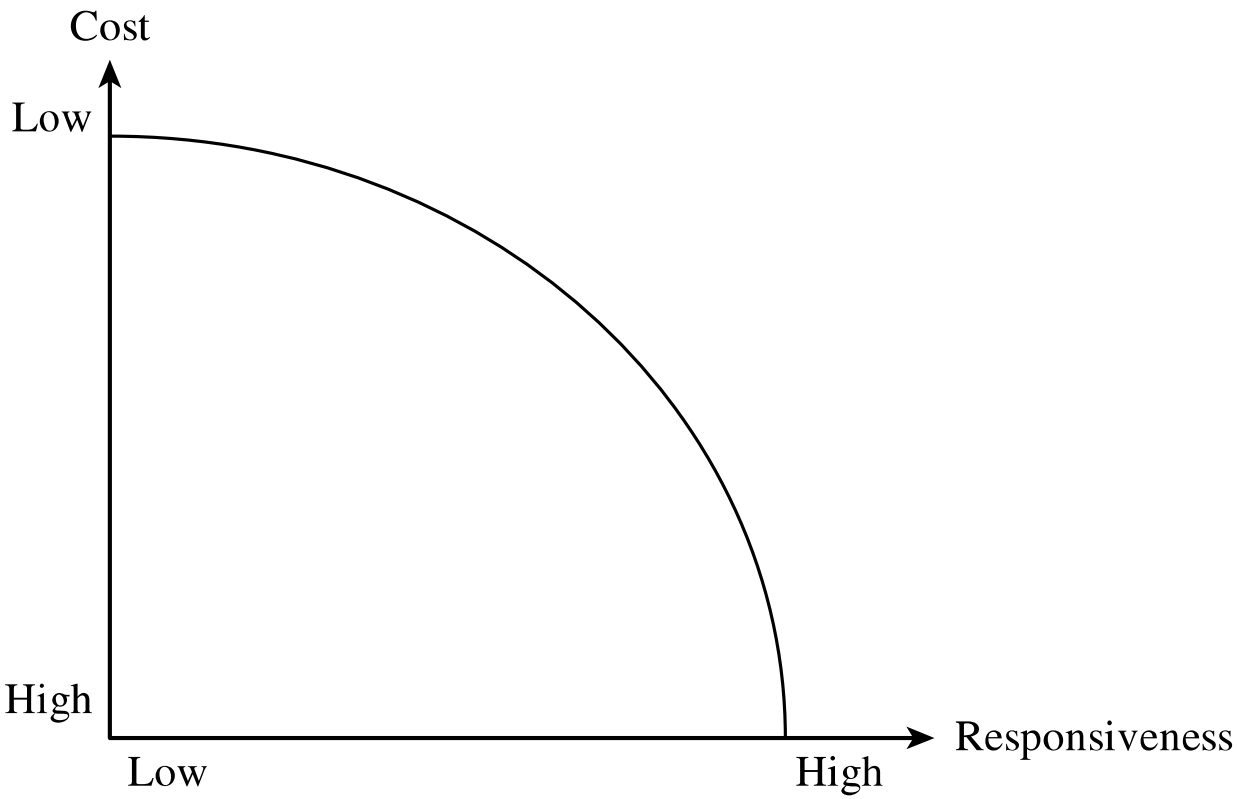

Figure 2-3 Cost-Responsiveness Efficient Frontier

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Responsiveness Spectrum

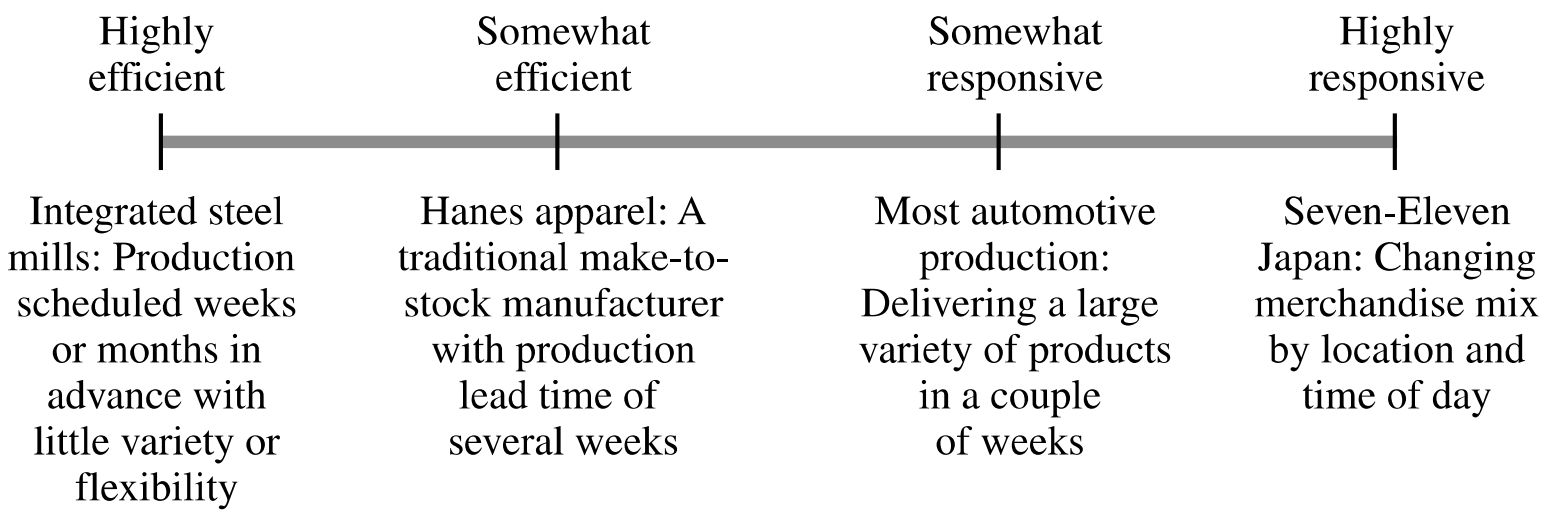

Figure 2-4 The Responsiveness Spectrum

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Step 3: Achieving Strategic Fit

- Ensure that the degree of supply chain responsiveness is consistent with the implied uncertainty
- Assign roles to different stages of the supply chain that ensure the appropriate level of responsiveness
- Ensure that all functions maintain consistent strategies that support the competitive strategy

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Zone of Strategic Fit

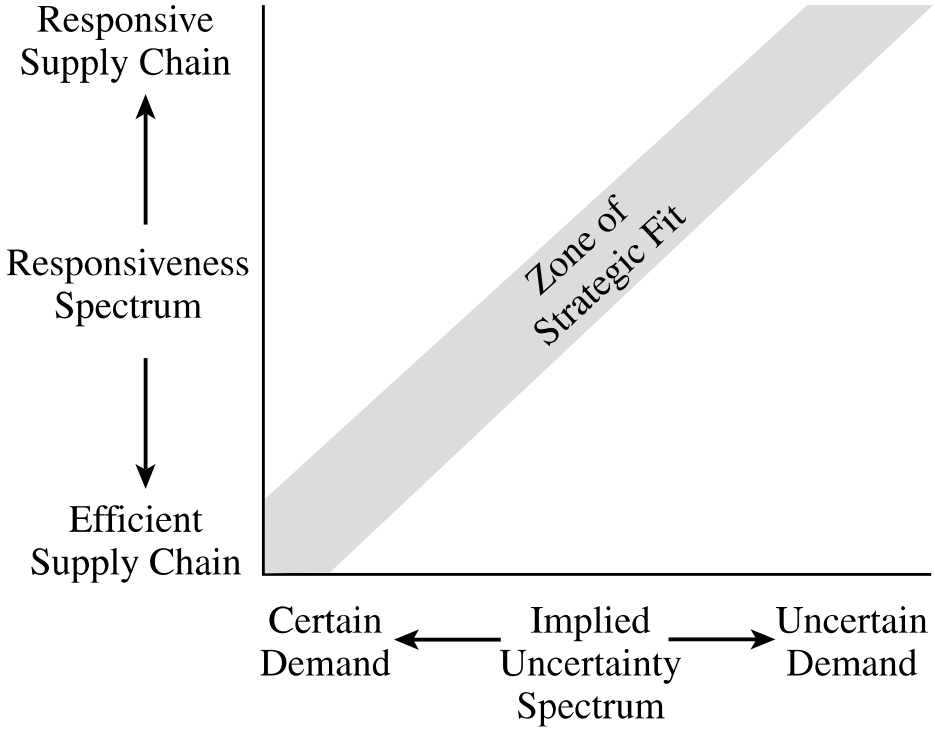

Figure 2-5 Finding the Zone of Strategic Fit

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Roles and Allocations

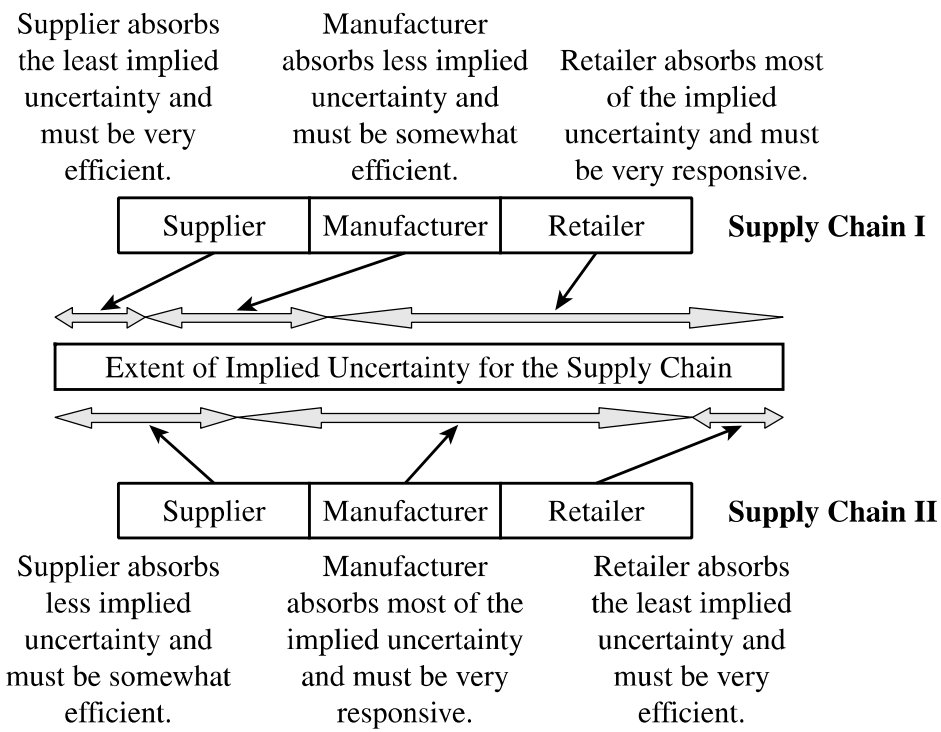

Figure 2-6 Different Roles and Allocations of Implied Uncertainty for a Given Level of Supply Chain Responsiveness

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Efficient and Responsive Supply Chains

Table 2-4 Comparison of Efficient and Responsive Supply Chains

	Efficient Supply Chains	**Responsive Supply Chains**
Primary goal	Supply demand at the lowest cost	Respond quickly to demand
Product design strategy	Maximize performance at a minimum product cost	Create **modularity** to allow postponement of product differentiation
Pricing strategy	Lower margins because price is a prime customer driver	Higher margins because price is not a prime customer driver
Manufacturing strategy	Lower costs through high utilization	Maintain capacity flexibility to buffer against demand/supply uncertainty
Inventory strategy	Minimize inventory to lower cost	Maintain **buffer inventory** to deal with demand/supply uncertainty
Lead-time strategy	Reduce, but not at the expense of costs	Reduce aggressively, even if the costs are significant
Supplier strategy	Select based on cost and quality	Select based on speed, flexibility, reliability, and quality

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Tailoring the Supply Chain

- Achieve strategic fit while serving many customer segments with a variety of products across multiple channels
- Requires sharing operations for some links in the supply chain, while having separate operations for other links

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Changes over Product Life Cycle (1 of 2)

- Beginning stages
  1. Demand is very uncertain, and supply may be unpredictable
  2. Margins are often high, and time is crucial to gaining sales
  3. Product availability is crucial to capturing the market
  4. Cost is often a secondary consideration

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Changes over Product Life Cycle (2 of 2)

- Later stages
  1. Demand has become more certain, and supply is predictable
  2. Margins are lower as a result of an increase in competitive pressure
  3. Price becomes a significant factor in customer choice

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Summary of Learning Objective 2

To achieve strategic fit, a company must first understand the needs of the customers being served and the capabilities of all supply sources. Both the needs and the capabilities should be used to identify the implied uncertainty that the supply chain must absorb. The second step is to understand the supply chain's capabilities in terms of efficiency and responsiveness. The key to strategic fit is ensuring that supply chain responsiveness is consistent with customer needs, supply capabilities, and the resulting implied uncertainty. Tailoring the supply chain is essential to achieving strategic fit when supplying a wide variety of customers with many products through different channels.

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Supply Chain Levers

- Five basic levers to deal with uncertainty
  - Capacity, combination of excess capacity and flexible capacity
  - Inventory, one of the most common levers used in practice to deal with uncertainty
  - Time, combination of speedy supply and the willingness of customers to wait
  - Information, appropriate information can help a supply chain reduce uncertainty
  - Price, prices of products and services that vary over time

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Supply Chain Uncertainty

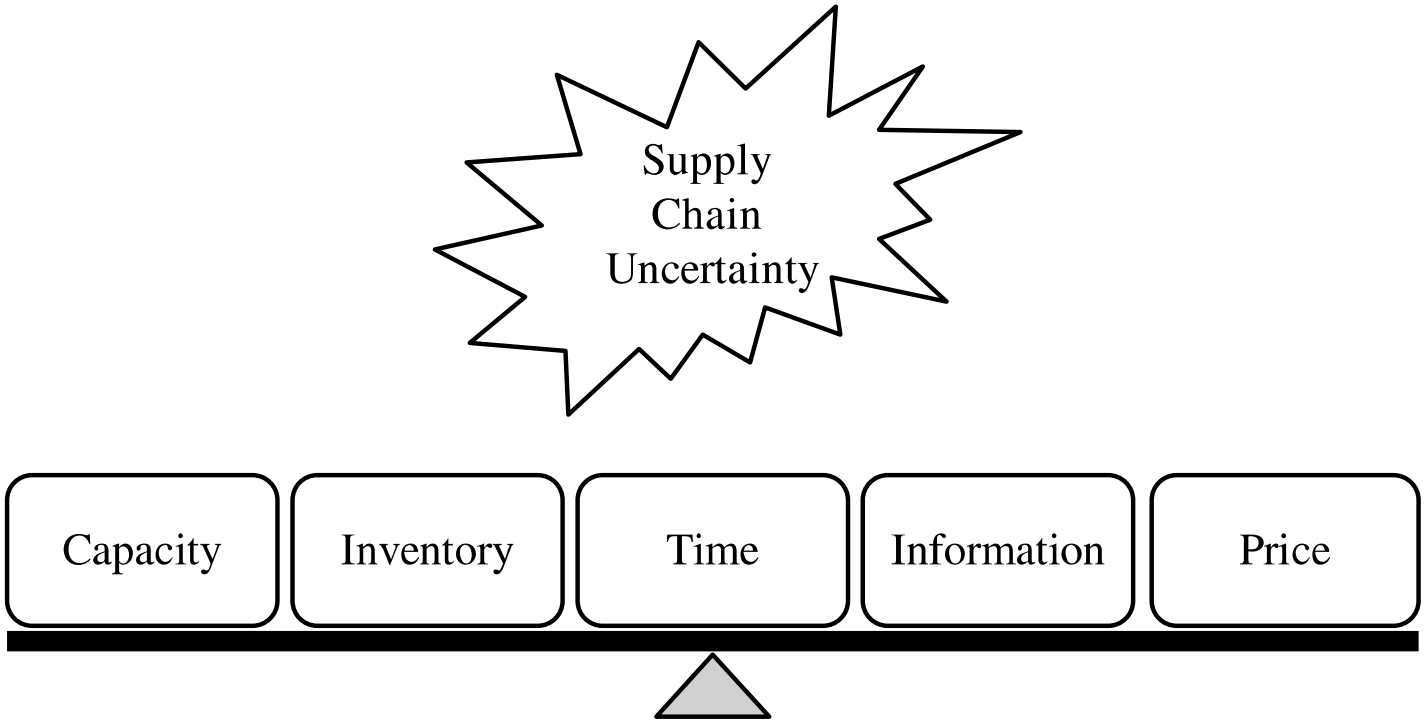

Figure 2-7 Five Key Levers to Deal with Supply Chain Uncertainty

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Summary of Learning Objective 3

The implied uncertainty that a supply chain needs to absorb depends on the needs of the customer segment(s) targeted. Capacity, inventory, time, information, and price are the five levers that a supply chain can use to deal with this uncertainty. Investing more in one lever generally allows the supply chain to invest less in one or more of the other levers. To achieve strategic fit, a supply chain must find the right balance between investments in the five levers to effectively serve the target customer segment(s).

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Expanding Strategic Scope (1 of 3)

- **Scope of strategic fit** – the functions within the firm and stages across the supply chain that devise an integrated strategy with an aligned objective
- Intraoperation Scope: Minimizing Local Cost
  - Each stage of the supply chain devises strategy independently

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Expanding Strategic Scope (2 of 3)

- Intrafunctional Scope: Minimizing Functional Cost
  - Firms align all operations within a function
- Interfunctional Scope: Maximizing Company Profit
  - Functional strategies are developed to align with one another and with the competitive strategy

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Expanding Strategic Scope (3 of 3)

- Intercompany Scope: Maximizing Supply Chain Surplus
  - Supplier and customer work together and share information to reduce total cost and increase supply chain surplus
- Agile Intercompany Scope
  - A firm's ability to achieve strategic fit when partnering with supply chain stages that change over time

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Summary of Learning Objective 4

The scope of strategic fit refers to the functions and stages within a supply chain that coordinate strategy and target a common goal. When the scope is narrow, individual functions try to optimize their performance based on their own goals. This practice often results in conflicting actions that reduce the supply chain surplus. As the scope of strategic fit is enlarged to include the entire supply chain, actions are evaluated based on their impact on overall supply chain performance, which helps increase supply chain surplus.

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