

SUPPLY CHAIN COMPLEXITY AND RISK MANAGEMENT: VF CORPORATION

The global branded apparel company, VF Corporation, embraces the complexity created by customer demand for unique styles as a competitive differentiator and focuses on talent management initiatives to leverage that complexity and manage risk in its supply chain.

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ABOUT THIS REPORT

As part of the Supply Chain Management: Beyond the Horizon research project, faculty and staff from the Eli Broad College of Business at Michigan State University conducted in-depth interviews with a number of organizations to gain insights into the development and implementation of various supply chain strategies, practices, and processes. The focus was intentionally on the future and on identifying what challenges are driving supply chain decisions in the current environment. The following report summarizes key findings from our investigation of supply chain complexity and risk management obtained during our visit to VF Corporation.

BACKGROUND

VF Corporation is a global branded apparel company that focuses on lifestyle clothing, footwear, and accessories. Since its inception in 1899 as a glove and mitten manufacturer, the firm has grown, diversified, and reinvented itself multiple times. Today, its 30 brands are organized into five coalitions or loose confederations that include outdoor and action sports, jeanswear, imagewear, sportswear, and contemporary brands. The firm has approximately 64,000 employees, sales of \$12.4 billion (2015), and a consistent track record of annual sales and earnings growth. The firm is highly diversified across brands, products, distribution channels, and geographies, which provides a strong competitive advantage relative to single-brand competitors.

Because of its focus on lifestyle brands, the firm must remain focused on its consumers and their evolving behaviors and preferences. The firm has four key components in its business strategy:

1. **Lead in innovation** (drive new products and new technologies to support evolving consumer needs and tastes)
2. **Connect with consumers** (engage consumers in new and meaningful ways)
3. **Serve consumers directly** (reach consumers across multiple channels, wherever and whenever they want)
4. **Expand geographically** (take advantage of scale to reduce risk and drive competitive advantage)

This corporate strategy leverages the firm's scale, scope, and complexity to provide unique value propositions for each of its brands. As a result, the VF Corporation supply chain organization must understand and manage this complexity and transform it into a strong competitive advantage.

VF Corporation's global supply chain organization is responsible for supply chain services across the globe, with more than 31,000 supply chain team members speaking 15 major languages. The organization produces 525,000,000 units per year (17 units per second). Of these, 77 percent are sourced (\$4.2 billion; 406 million units) and 23 percent are manufactured internally (\$1.1 billion; 119 million units). Central to VF Corporation's global supply chain and the unit of measure, so to speak, are coalitions. A "coalition" is a business grouping within VF that consists of a loose confederation of brands with a common lifestyle focus.

¹ VF Corporation 2015 Annual Report.

² Tom Glaser, President, Global Supply Chain, VF Corporation, in a presentation delivered to employees in Hong Kong (October 25, 2016).

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CORE VALUES

To support its coalitions, brands, and consumers, over time the firm has moved toward a regional production model to focus on speed to market (as opposed to simply cost and quality). Increasingly, speed to market is becoming a major differentiator with fashion products. Sustainability has become a significant driver in the business as well, due both to its importance to millennials and its importance to the communities in which the firm operates. VF Corporation currently has 30 plants globally, with additional locations being considered. VF Corporation is the only global lifestyle branded apparel firm with owned manufacturing.

VF Corporation is not only a lifestyle brand, but is also a firm that is very much driven by its core values. Many of these core values reflect an emphasis on broad-based sustainability with its focus on profit, people, and the planet. Consequently, VF Corporation is highly accountable to its consumers and communities and, through its supply chain organization, has developed a responsible sourcing program. The program focuses on four key areas: (1) ensuring safe and healthy workplaces, (2) standing behind product quality and safety, (3) minimizing environmental impact, and (4) enriching workers' lives outside the workplace.

These values are best reflected in the "Ideal Plant Model" developed by VF Corporation and deployed throughout its various plants and operations worldwide. This model provides standards for facilities around the globe. It includes a "CHEM-IQ" process for ensuring harmful chemicals never enter the supply chain and the adoption of the Higg Index³ related to environmental and social impacts. For instance, one initiative has resulted in 85 percent water recyclability at its Mexican facilities (which is significant given the high water usage in apparel manufacturing).

Logistics spend is \$316 million, with 34 owned distribution centers (9.5 million square feet of owned space) and 16 third-party logistics partnerships in North America, Europe, Asia, and Central and South America. The effective management of this network provides VF Corporation with a competitive advantage relative to its competitors in terms of scale, flexibility, and redundancy, all of which are important in the highly dynamic apparel industry.

ORGANIZATION STRUCTURE

As previously mentioned, the global supply chain organization is home to the firm's supply chain capabilities, which include purchasing, sourcing, manufacturing, distribution, and planning. The firm uses a unique structure for its supply chain leadership. Supply chain leads, known as "vertical leads," exist within the coalitions/brands and serve as advocates for business needs within the supply chain strategy. Supply chain leads also exist, performing functional roles to drive scale and leverage. These individuals are known as "horizontal leads." This leadership structure builds positive tension into the system and creates balance between competing interests—helping to avoid the common supply chain problems associated with a reactive posture and functional sub-optimization.

³The Higg Index is an apparel and footwear industry self-assessment standard for assessing environmental and social sustainability throughout the supply chain. More information can be found at <http://apparelcoalition.org/the-higg-index/>.

STRATEGY

During its 115-year history, the strategic focus of VF Corporation has evolved significantly. The firm originally was a manufacturer of branded apparel. The firm then began to think of itself as an organization of brands supported by manufacturing. Now the firm is evolving into a direct-to-consumer business, driven by the “Amazonification” of the consumer experience.

VF Corporation has recognized that consumer expectations and behavior in the apparel industry are rapidly changing, to a great extent because of consumers’ general awareness of the convenience of Amazon’s business model. As a result, VF Corporation is modifying its current approach to become more connected to its consumers. The supply chain network was originally designed as a wholesale business, with large distribution centers serving as consolidation points to serve retail customers. Today, with owned retail stores and the growth of e-commerce, new logistics and distribution strategies are emerging.

CUSTOMERS

VF Corporation serves consumers through a variety of channels including wholesale sales to retailers (such as Walmart, Nordstrom, Macy’s, and Kohl’s), owned retail stores of multiple varieties (full price, outlets, custom) and direct-to-consumer e-commerce approaches. The consumer experience is critical to reflecting lifestyles, so VF Corporation takes a very active role in managing customer relationships to ensure consumers are served appropriately.

COMPLEXITY AND RISK MANAGEMENT

As a large, globally diversified organization, VF Corporation’s supply chain is significantly complex, resulting from the variation in its product offerings, the customization it offers, and the multiple channels it uses to get to market. While some organizations consider complexity a problem—something that should be reduced or eliminated—VF Corporation considers this complexity, if well-managed, to be a source of competitive advantage. The following sections describe the complexity of VF Corporation’s supply chain in terms of both market and supply factors.

MARKET FACTORS

There are several market factors that influence complexity at VF Corporation. The strategic decision to move away from reliance upon commodity-style products and to build the business around lifestyle brands requires deep understanding and close alignment with consumer preferences and tastes. Each of the coalitions, and even the brands within the coalitions, has specific consumer drivers that are central to VF’s product and merchandising strategy. These drivers are not static, but instead shift and change over time—requiring constant innovation and product “freshness.”

Freshness is important in fashion-influenced markets, since consumers frequently and repeatedly seek new products, styles, colors, and options. A company like VF Corporation must introduce new models on a regular basis; it must also be prepared to drop old lines for newer lines. These new product introductions require constant turnover of stock-keeping units throughout the channel. VF must keep giving its customers a reason to come back and buy new products—a reason more compelling than that of replacing worn-out items.

In general, new products are introduced twice a year (in the spring and in the fall), which requires manufacturing and distribution agility as well as constant loading and de-loading of supply chain inventory. Continual innovation is not characteristic of all VF Corporation brands, but a significant number of them are impacted by this reality. Coalitions and brands drive VF's product/style strategy, and its supply chain organization seeks opportunities to support these efforts centrally.

The ability to support changing consumer preferences and tastes is further complicated by extreme seasonality in certain segments of the business. Some seasonality is apparent in the firm's overall aggregate demand, but at the brand (and even the product) level, seasonality can become extreme. Managing this seasonality adds complexity to the supply chain, especially since it is dependent upon a supply chain ecosystem comprising many overlapping networks developed through brand acquisition.

Because VF Corporation is a multi-channel business, customer requirements also create complexity in its supply chain. The requirements of the wholesale channel are different from the requirements of the retail channel. Beyond this, the requirements of specific customers in the wholesale channel are different from those of other customers. For instance, Walmart's requirements for Wrangler jeans are different from Macy's requirements for Nautica shirts and pants.

Managing a multi-channel business is further complicated by the fact that demand patterns are different across brands globally. Lead times for delivery are also changing. In general, speed is better. However, the continued pressure related to next-day delivery may be driven more by internal desire than customer demands or competitive pressures. In the e-commerce space, there is a strong desire for service-level guarantees and guaranteed delivery. Returns are also a challenge and are managed at the coalition level. VF Corporation is implementing a "hassle-free" returns initiative.

Some firms address these external factors by narrowing business scope and standardizing supply chain capabilities to serve a particular channel, customer, or product line. But this complexity provides a means for VF Corporation to spread its risk, since the organization is not overly dependent upon any one channel, product, brand, or geography. The firm actually wants to become a leader in managing complexity, believing that no one else can match its scale and scope globally.

SUPPLY FACTORS

There are several supply factors that influence complexity at VF Corporation. The desire to support its brands and their unique market positioning has resulted in tremendous product variety and proliferation of stock-keeping units. Each apparel product has multiple colors and sizes. Because it is difficult to sell an incomplete assortment in retail, items are often moved to a less visible location and discounted. Managing inventory and assortments across multiple locations therefore becomes critical. Beyond this, brand and merchandising requirements related to packaging—bags, boxes, sustainability, and the like—vary by coalition and even by brand.

Culturally, VF Corporation strives to be an innovator in the apparel space, using innovation in its colors, styles, technologies, and even usage categories to help it compete.

The global nature of the business also creates sourcing, manufacturing, and distribution complexity. VF Corporation sources finished product from third-party manufacturers and also produces product in owned manufacturing facilities. Owned manufacturing affords an advantage in the form of a direct knowledge of costs. The living wage is a big issue in terms of total cost (it is important to balance industries in specific geographies). The firm moves product sourcing from internal to external facilities as capacity requires. A common purchase order system for sourced product and a second system for internal manufacturing are used (expense has prevented the development of and migration to a single system).

VF Corporation also has developed a concept known as “third-way,” in which it brings its own expertise and capabilities to supplier partners to combine the advantages of owned manufacturing with the flexibility of third-party facilities. “Third-way” gives the firm choices concerning the manufacturing approach that is most suitable for each product. Further, VF has regionalized its manufacturing capabilities, allowing it to source or produce product closer to the final consumer. Decisions regarding location are often influenced by speed, currency, trade rules and tariffs, and duties.

The sourcing and manufacturing footprint influences distribution through the cost and complexity of flowing products to market. The firm has overlapping distribution networks by region, brand, and channel, so the need to provide wholesale, retail, and e-commerce solutions from within the same network is a significant challenge. Currently, VF Corporation lacks the capability to link UPS or FedEx information through to customers (which is critical to creating a seamless customer experience).

To some extent, measuring complexity is about supply chain capacity versus plan. At a high level, blueprints are shared by brand and planning occurs within the brand teams. The supply chain organization further engages the brands through the sales and operations planning process and through establishment of service-level agreements. The organization has invested in multi-horizon planning to help maintain a long-term focus. Its direct-to-consumer initiatives are about speed to market (cost, quality, and speed), and speed and innovation are driving challenges (ship direct and higher customer service requirements).

Understating or overstating demand has significant implications for the supply chain. Demand planning is made more difficult by seasonality, more styles, lower volumes per item, and more planning investment. There is continued pressure on margins, especially with investment in newer plants and supply and global location risk. Styles are a challenge, with 10 percent growth year over year. Customers constantly demand unique items, but costs are averaged across business units so the organization cannot calculate the items' per-customer cost. From a systems standpoint, there is good visibility internationally, but limited visibility domestically (due to legacy systems).

Interestingly, VF Corporation views this complexity and the ability to manage it as a competitive advantage because the firm is not dependent on any one product, brand, location, or technology. In general, VF Corporation is not concerned with competitors and risk since it is large enough to overcome volume fluctuations in particular segments.

RISK MANAGEMENT

While VF Corporation uses its scale, scope, and complexity to help manage risk, there are other factors that must be considered, too.

- Social and geopolitical risks (terrorism, political upheaval, port strikes)
- Economic and trade risks (currency fluctuations, tariffs and duties, taxes)
- Technology and intellectual property risks (counterfeiting, process knowledge)
- Supply capacity and capability risks (surge capacity, supplier knowledge)
- Natural disasters (earthquakes, tsunamis, floods)

The balanced network we describe here helps mitigate these risks and provides competitive advantage, since the firm leverages relationships, high-performing factories, and talent for maximum benefit. Nevertheless, the firm must remain vigilant concerning the people with whom it associates. For instance, experience has shown that expertise is important—but which individuals possess that expertise and how they are trained to use it is even more important. Relationships with governments, banks, and others in the local markets are also important.

TALENT

VF Corporation considers its human resources and global talent management initiatives critical to leveraging complexity and managing risk in the supply chain. In essence, the firm believes the only real differentiator for an organization as complex and ever-changing as VF is its people. Products will change; brands will be added and divested; processes will evolve. As a result, VF Corporation continues to invest in talent development initiatives focused on global-ready leaders, diversity, mobility, and capability development as well as organizational health focused on agility, speed, innovation, and change management as cultural enablers.

VF Corporation understands that the ability to leverage complexity and manage risk at an organizational level essentially requires building a growth-enabling talent ecosystem, leveraging organization capabilities, and creating a learning culture marked by a global mindset, high collaboration, inclusion, coaching, development, transparency, and accountability.

KEY LESSONS LEARNED

As a global multi-branded business, VF Corporation can spread risk across coalitions and global locations, making the firm more capable of withstanding economic challenges in individual segments within the business. This carefully orchestrated understanding of scale, scope, and complexity provides the organization with a definitive competitive advantage. Still, the experiences of VF Corporation demonstrate a number of critical lessons that management must embrace to master complexity:

- 1. Complexity must be embraced and accepted for what it is—a potential source of competitive advantage.** Many managers tend to treat complexity as a problem and as something to be avoided. VF Corporation has learned that complexity is something demanded by the customer, complexity is here to stay, and (if managed appropriately) complexity can become a source of competitive advantage—something the company can use to better serve its customers.
- 2. Complexity is a system issue and it must be addressed as such.** There is a tendency to treat complexity as something that belongs to management or marketing, or to the supply chain or supplier. But many factors contribute to complexity. The experiences of VF Corporation clarify that marketing, product design, innovation, supply chain issues, and the changing nature of technology all contribute to complexity. Consequently, it must be treated as a system issue—an element that must be managed by everyone within the firm. It is everyone’s responsibility. When complexity is managed as a shared asset, its benefits can be realized and its potential costs minimized.
- 3. Understand the relationships between complexity and risk/resilience.** To a certain extent, this lesson builds on the previous lesson. Complexity and risk/resilience are not independent. Failure to appropriately manage complexity can become a source of risk. In addition, risk—through supply capacity and capability risks, natural disasters, and economic and intellectual property risks—can affect an organization’s ability to deliver the appropriate level of complexity to its key customers. Building an organization that can absorb risk and complexity-driven problems enhances resilience. Consequently, these elements must be jointly managed.
- 4. When dealing with complexity, risk, and resilience, system robustness is preferred to system optimality.** In academic research and in the minds of most practitioners, there’s something magical about “optimality.” After all, if you’re optimal, then you’re the best—there’s nothing better. Yet VF Corporation focuses not on optimality, but rather on “robustness.” Robustness is very different from optimality. Robustness is a characteristic that enables the system, when exposed to a shock or disturbance, to recover

quickly because it can buffer against these shocks. Complexity and its partner, risk, involve uncertainty; they require the understanding that the organization may encounter an unforeseen challenge. VF Corporation has a system that can cope with these shocks and challenges—a robust system. When faced by a dynamic, turbulent environment, VF Corporation’s management strongly believes that robustness beats out optimality. It is the new desired system trait.

5. **Dealing with complexity and risk is a skill that management must master.** Ultimately, VF Corporation’s success with complexity and risk depends upon the ability to recognize and understand them at the management level—requiring that the right types of skills be developed in management personnel. For this reason, complexity management has now become an integral element of talent management and leadership at VF Corporation.

CONCLUSION

Its unique business model has allowed VF Corporation to embrace complexity and view complexity’s management as a competitive differentiator. While size, scale, and complexity may be perceived as challenges or problems for some organizations, they create competitive advantage for VF Corporation by spreading risk and keeping the organization from being overly dependent on any one channel, brand, or product.

This perspective on complexity and risk has implications for supply chain strategy, organizational design, and talent management, and provides a strong example of the connection between business model and supply chain capabilities.

ABOUT APICS

APICS is the premier professional association for supply chain management and the leading provider of research, education and certification programs that elevate supply chain excellence, innovation and resilience. The APICS Certified in Production and Inventory Management (CPIM), APICS Certified Supply Chain Professional (CSCP), APICS Certified in Logistics, Transportation and Distribution (CLTD) and APICS Supply Chain Operations Reference Professional (SCOR-P) designations set the industry standard. With over 45,000 members and approximately 300 channel partners, APICS is transforming the way people do business, drive growth and reach global customers.

ABOUT ELI BROAD COLLEGE OF BUSINESS

Michigan State University's Eli Broad College of Business prepares students to make business happen through an innovative curriculum and collaborative culture, guided by a distinguished faculty. The hardworking, team-oriented students of Eli Broad College acquire deep knowledge of their chosen disciplines and a broad understanding of how global businesses work, enhanced by study abroad and real-world projects in research centers and experiential labs. The college, consistently ranked among the top business schools, offers undergraduate, graduate, and executive development programs. Broad graduates are ready to tackle business challenges around the world, part of an unparalleled peer and alumni network.



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