The Power of Synchronization

The Case of TAL Apparel Group

A Deloitte Research Case Study

Table of Contents

Introduction

The story of how TAL Apparel Group grew from a single textile mill in Hong Kong to its current status as a global powerhouse in apparel design, manufacturing, and logistics, is a prime example of how synchronization—the simultaneous and highly efficient coordination of far-flung supply chain, product development, and marketing and sales activities with customers and suppliers—can provide not only the operating model for a potent business strategy but also an effective competitive response to an increasingly commoditized industry.[1]

Hong Kong-based TAL, one of the largest apparel manufacturers in the world, is subject to a double set of cost pressures: One comes from its retail customers and another from the international multitude of competitors, including many from mainland China where cost, quality, and delivery are the only differentiators.

In response, over the last ten years TAL has changed the dynamics of its competitive situation to its distinct advantage by delivering a value proposition beyond the usual concerns of cost, quality, and delivery. This has been achieved by taking the synchronization of supply and demand to a whole new level of performance. By linking activities on the factory floor of its various Asian factories to points of sale at retailers in the U.S., TAL has established closer ties with its retail customers and successfully managed to "lock in" its customer base. In the process, it has evolved from a strict commodity manufacturer to a full-fledged, synchronization services provider. Furthermore, with its close and stable customer relationships, TAL has developed the capabilities to create new materials, products, manufacturing, and logistics processes to help ensure continued improvement of its business model.

History of Meeting Ever Higher Hurdles

The firm got its start in 1947 as a company called South China, which later—through an alliance with an Asian-based conglomerate, Jardine Matheson Group—became Textile Alliance Limited or TAL. Since then, the company has successfully met the many challenges that have affected the apparel industry: the relentless need to reduce cost and cycle time while simultaneously increasing quality, on-time delivery, collaboration and differentiation. Over the years, each new challenge has required TAL to jump ever higher hurdles, acquire new skills, and develop new resources.

To meet the demands of cost efficiencies, economies of scale became ever more important to TAL. Originally a single textile spinning mill located only in Hong Kong, TAL today has additional production facilities in Thailand (its largest production base), Malaysia, Taiwan, China, U.S., Indonesia, Vietnam, and Mexico with a combined factory floor space of 3.5 million square feet. Together these plants supply 41 million tops, 8 million pants, 1.5 million outerwear, and 130,000 sets of tailored suits. With a workforce of 23,000, its annual turnover is about US$600 million. Major customers include Brooks Brothers, L.L. Bean, J.C. Penney, Giordano, Land's End, Liz Claiborne, Nautica, and Tommy Hilfiger. The majority of TAL's sales are directly to retailers, in part, because of the higher margins due to fewer middlemen. Nearly 80 percent of the total production is sold in the United States with TAL's output accounting for one in eight dress shirts sold in the U.S. The rest goes to destinations in Asia-Pacific, including South Korea, Japan, China, and Europe.

Since the 1960s, U.S. retailers have been undergoing tremendous cost pressures. This generated the first major wave of outsourcing to Asia in an effort to find cheaper labor and lower costs while maintaining quality. TAL and other Asian apparel manufacturers were beneficiaries of this trend. The requisite skills were simply cost containment and quality.

Also during this period of time, retailers increasingly looked to designers to heighten product demand and margins by changing the look of products more frequently. Fashion began to permeate nearly each and every apparel product. Cost containment and quality were not enough. Reduced cycle time for product development and launch became key. Over the last 20 years, TAL's cycle time to create garments ready for shipment from yarn dyed fabric was reduced from five months to 60 days today. In addition to cost containment and quality control skills, TAL also responded by improving its communications with global customers and by providing more flexible and responsive manufacturing and design systems.

With the advent of electronic data interchange systems or EDI in the early 1970s, TAL again had to change by providing the ability to exchange documents electronically with its customers. Now IT was added to the already large number of required skills. Today, TAL boasts that it is one of the few Asian suppliers capable of handling a variety of EDI documents, such as purchase order (PO), advance ship notice (ASN), invoice, point-of-sales (POS) data, order status, etc., in a wide variety of standards.

The late 1980s to 1990s saw the rise of supply chain management software from firms such as i2 Technologies and Manugistics and their widespread deployment in the consumer goods and retail industries. TAL saw this as an opportunity to provide rapid replenishment for customers such as J.C. Penney, yielding the benefits of much faster shipment and dramatically reduced cycle time as well as more efficient inventory operations.

From the late 1990s to today, the hurdle has once again been raised: Firms are now being asked to synchronize their supply and demand activities far more effectively and this means ensuring that far-flung product development, marketing/sales, and supply chains are in close coordination. TAL responded by enabling vendor managed inventory with customers such as J.C. Penney. In doing so, TAL was able to link its designers and its factory floors half a world away to the points of sale in the U.S., resulting in ever greater efficiencies for its customers and expanded business opportunities for TAL.

Competing on Synchronization Services

The company's business model has evolved in three stages from traditional manufacturer to flexible manufacturer to that of an integrated synchronization services provider with capabilities for rapid design, flexible manufacturing, and collaborative planning, forecasting, and replenishment, including vendor managed inventory (VMI).

Traditional manufacturing was based on a business model of command demand. TAL had little or no visibility into its customers' demand requirements and simply responded to orders. Competition was based on price, quality, and delivery. TAL was strictly a manufacturer and supplier, but eventually, that model was no longer enough to compete. With ever greater cost and delivery pressures, TAL's retail customers in turn forced TAL to evolve into a flexible manufacturer that could respond to the retail customer's own demand on the warehouse or store level.

Over time, TAL had to start to synchronize to that demand by offering logistical services on top of manufacturing. Now as an integrated synchronization services provider with manufacturing capabilities, TAL not only has visibility into demand at the retailer's point of sale, i.e. to demand from the final consumer, but can link this information back directly to production operations on the factory floor as well as to product development and R&D activities.

TAL's evolution toward synchronization of supply with demand began in 1995 with the need to supply rapid replenishment to J.C. Penney's warehouses. TAL could see into J.C. Penney's demand and synchronize with it on a warehouse level. Weekly orders were communicated by EDI and shipped within a week of order receipt. The benefits were substantial with cycle times reduced from four to six months to about 30 days, and inventory reduced from six months to about seven weeks.

Then TAL's factories began to ship directly to J.C. Penney's stores instead of their warehouses. TAL now had finer visibility into J.C. Penney's demand on the store level. The factories would select inventory according to each store's requirements, and pack, bar code, and consolidate shipping orders directly to the stores. Furthermore, TAL developed customized heat shrink packing to meet each store's individual packaging needs. The benefits for TAL were minimized factory inventory and higher order fill rates. At J.C. Penney, this form of collaboration completely eliminated warehouse inventory thus bypassing warehouse and handling, improved fill rates, and increased customer satisfaction. Overall, the direct shipment to stores generated savings of 15 percent of cost free on board (FOB).

Tight Collaboration Yields Synchronization

TAL's successful synchronization of supply and demand results from a melding of discrete entities—TAL itself, its suppliers, and its customers—into a collaborative business model that responds holistically to demand. Although many companies collaborate, the tightness of fit between TAL, its suppliers, and customers enables the company to synchronize more efficiently, quickly, accurately, and extensively. In TAL's case, the synchronization business model responds not just to its customers' demand but its customers' own customers' demand as well. TAL's collaborative planning, forecasting, and replenishment program allows the company to see and synchronize with demand on the customer's customer level. For example, instead of receiving store level data from J.C. Penney, TAL receives point-of-sale data directly from J.C. Penney on its customers. The data is fed into TAL's demand forecasting model yielding dynamic model stock of stock keeping units (SKUs) for each store.

Model stock and SKU information can now be dynamically linked to TAL's factory floor. The factory knows what and how much of each SKU to make for each, individual store. TAL will receive forecasting guidance as to what shirt style, in what size and color to replenish for an individual J.C. Penney store. Although forecasts are never completely accurate, TAL's collaborative information and fast manufacturing capabilities enable the company to react quickly to changes and if necessary, TAL can trigger a "fire truck" cycle yielding shirts ready for shipment in just four hours.

TAL's synchronization services capabilities, including VMI, completely frees the customer from the burden of inventory management and maintenance. It also creates a tightly-coupled, true partnership between supplier and customer via granular visibility into the demands of the customer's customers—the final consumer—through sharing of point-of-sales (POS) data. The main benefits are faster, more flexible and more accurate response to the consumer market resulting in greater sales, fewer closeouts and reduced inventory. Supply becomes more demand driven or more of a pull process rather than a push process.

Close collaboration with certain customers has allowed TAL to design products for them. For example, TAL designs some of J.C. Penney's shirts as well as Dillard's private label shirts. Close collaboration with both customers and fabric suppliers has enabled TAL to co-create innovative products such as wrinkle-free, 100 percent cotton shirts; patented, pucker-free seams; and pinpoint oxford shirts that can withstand machine washing up to 50 times or more.

In products of the yarn-dye-fabric type (meaning the yarn is dyed first before it is woven into fabric and then cut and assembled for the final product), TAL has reduced time to market—from idea and design to delivery at the customer's store—from more than 180 days 10 years ago to just 90 days today, including 30 days of shipping to the U.S. market. If the product is a weave-dye product (meaning the fabric is woven before designs are made and ready to be dyed; a process used primarily for solid color shirts), TAL can bring new products to customers in less than 60 days including shipping time.

On the supply side, TAL shares its own rolling, three month demand information with its largest fabric suppliers every two weeks. Again, the benefits are reduced inventory, more availability, and increased flexibility for both TAL and its suppliers.

Lessons Learned

TAL is a prime example of the use of synchronization as a competitive weapon in response to the destruction of traditional competitive advantages in manufacturing such as price, quality, and delivery. Synchronization offers a truly distinctive competitive weapon that changes the very basis of competition. Underlying TAL's success are key lessons for other companies:

- **Collaboration can generate synchronization.** Collaboration, although necessary, is no longer sufficient to succeed in many industries, but employed appropriately, it can lead to new levels of synchronization. It is the tightness of collaboration between your company, your suppliers, and your customers that will dictate how well you are able to synchronize and work as almost a single virtual company serving your end customer. Collaboration must be extensive, stretching from your suppliers all the way to your customers. Information that forms the basis of collaboration must be as accurate as possible and that means intimate access to your customers', your suppliers' and even your customers' customer information. If the information, such as medium-term forecast, is wrong, and inevitably it can be, you must be flexible and quick enough to respond all along the supply chain. In the end, relationships with both your customers and suppliers really matter.

- **Synchronization can help sharply differentiate companies even in "commoditized" industries.** Although TAL is in the cut-throat, price-driven apparel industry, TAL has managed to differentiate itself by changing the basis of competition by offering synchronization services that include advanced VMI at the store/SKU level to collaboration, planning, forecasting and replenishment (CPFR) services with extensive sharing of forecasting, planning, promotional and replenishment data.

- **A successful synchronization strategy may require very different skills and resources, but these different skills and resources can dramatically change the basis of competition, making it difficult for competitors to follow.** Most commodity manufacturers of apparel do not have the sophistication or the aptitude to use IT as a competitive weapon. In the case of TAL, sophisticated skills in the deployment and use of technologies such as advanced planning and scheduling (APS), forecasting software, EDI, and enterprise resource planning (ERP) were critical to its ability to use synchronization as a differentiator. In addition, most commodity manufacturers do not have the sophistication to sell a complex partnership between supplier and customer. Nor do many competitors have the skills to transition from a pure product manufacturer to a complex services provider.

- **Synchronization can have a global reach.** In TAL's case, synchronization reaches from the factory floor in Asia across different enterprises to the point of sale in the U.S. It spans across continents, functions, and enterprises and ultimately, it not only impacts and benefits customers but the customers' customers as well.

- **Synchronization builds customer loyalty.** With TAL being able to offer customized product, manufacturing, inventory, and logistics management, its customers are tightly coupled with the company. This creates higher switching costs for customers, a more loyal customer base, and substantial barriers to entry for competitors. These synchronization capabilities will become all the more important as apparel quotas are reduced or eliminated in the coming years, creating a potential abundance of price-driven competition.

- **Synchronization yields substantial benefits in terms of cost, growth, and profits.** For TAL, synchronization has helped reduce inventory, increase sell-through, decrease close-outs, improve margins, and has enabled both suppliers and customers to react to changes in demand much faster and far more profitably.

End Note

[1] For more information on synchronization in global networks, see e.g. Deloitte Research, *Mastering Complexity in Global Manufacturing: Powering Profits and Growth through Value Chain Synchronization* (New York and London, 2003); Deloitte Research, *Mastering Innovation: Exploiting Ideas for Profitable Growth* (New York and London, 2004); Deloitte Research, *Synchronicity: An Emerging Vision of the Retail Future* (New York, 2004); Deloitte Research, *Consumer Business Digital Loyalty Networks: Increasing Shareholder Value through Customer Loyalty and Network Efficiency* (New York, 2002); and Deloitte Research, *Unlocking the Value of Globalisation: Profiting from Continuous Optimisation* (New York and London, 2005).

Authors

Peter Koudal
Peter Koudal is Director of Deloitte Research, Deloitte Services LP, and leads the global manufacturing research.

Victor Wei-teh Long
Victor Wei-teh Long is a China technology and business advisor working in collaboration with Deloitte Research, Deloitte Services LP.

Acknowledgments

Deloitte Research is grateful for the support, contributions, and insights provided for this study by Harry Lee, Chief Executive Officer, TAL Apparel Group; and Ruth Kan, Chief Financial Officer, TAL Apparel Group. In addition, comments and suggestions received from Katherine Heires, Deloitte Research, Deloitte Services LP; and Craig Richardson, Deloitte Touche Tohmatsu (Hong Kong) are very much appreciated.

Recent Thought Leadership

- **Mastering Innovation:** Exploiting Ideas for Profitable Growth
- **Globalization Divided?** Global Investment Trends of U.S. Manufacturers
- **Mastering Complexity in Global Manufacturing:** Powering Profits and Growth Through Value Chain Synchronization
- **Synchronicity:** An Emerging Vision of the Retail Future
- **Prospering in the Secure Economy**
- **The Challenge of Complexity in Global Manufacturing:** Critical Trends in Supply Chain Management
- **Profiting From Continuous Differentiation in the Global Chemicals Industry**
- **The World's Factory:** China Enters the 21st Century
- **Integrating Demand and Supply Chains in the Global Automotive Industry**
- **The High-Tech Industry and the Relationship Portfolio:** A Strategic Approach to Dynamic Partnering
- **Global Manufacturing 100**
- **Performance Amid Uncertainty in Global Manufacturing:** Competing Today and Positioning for Tomorrow
- **Digital Loyalty Networks:** e-Differentiated Supply Chain and Customer Management
- **Making Customer Loyalty Real:** Lessons From Leading Manufacturers

Please visit www.deloitte.com/research for our latest thought leadership or contact us at: delresearch@deloitte.com.

For more information about Deloitte Research, please contact the Global Director, Ajit Kambil, Deloitte Services LP, at +1 617 437 3636 or via Email: akambil@deloitte.com.

ISBN 1-892383-31-6

For More Information

Global

Ed Carey
Deloitte Touche Tohmatsu (United States)
Tel: +1 312 374 3048
Email: ecarey@deloitte.com

Gary Coleman
Deloitte Consulting LLP (United States)
Tel: +1 212 492 4119
Email: gcoleman@deloitte.com

Katsuaki Takiguchi
Tohmatsu & Co. (Japan)
Tel: +81 3 6213 3631
Email: ktakiguchi@deloitte.com

Americas

Tara Weiner
Deloitte & Touche USA LLP (United States)
Tel: +1 215 246 2326
Email: tweiner@deloitte.com

Francisco Perez Cisneros
Deloitte (Mexico)
Tel: +52 55 5080 67 20
Email: fperezcisneros@dttmx.com

Doug Engel
Deloitte & Touche USA LLP (United States)
Tel: +1 312 946 2399
Email: dengel@deloitte.com

Asia Pacific

Yoshiaki Kitamura
Deloitte Touche Tohmatsu (Japan)
Tel: +81 3 6213 1307
Email: yoshiaki.kitamura@tohmatsu.co.jp

Ted Lee
Deloitte Touche Tohmatsu CPA Ltd (China)
Tel: +86 21 6141 2288
Email: tedlee@deloitte.com.cn

Europe, Middle East and Africa

Gilles Goldenberg
Deloitte S.A. (France)
Tel: +33 1 40 88 28 16
Email: ggoldenberg@deloitte.com

Wim Vaessen
Deloitte Consulting GmbH (Germany)
Tel: +49 0 211 8772 3411
Email: wvaessen@deloitte.de