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SUPPLY CHAIN MANAGEMENT (534E5B) CASE STUDY

Case Study 1: Walmart

Background

Walmart, the world's largest retailer by revenue, has built an unparalleled supply chain that serves as a benchmark for the entire retail industry. With net sales exceeding $600 billion and operations across 24 countries, Walmart's logistics and distribution system is the foundation of its competitive strategy.

Company Overview

- Global Presence: 10,500+ stores across 24 countries
- U.S. Distribution Centers: 140+ domestic, 40+ import centers
- In-House Fleet: 9,000+ trucks
- Distribution Coverage Each DC supports 75-100 stores within 250-mile radius
- Store Inventory Turns: 8-9 times per year
- Market Position: #1 retailer globally (Fortune ranking)

Key Supply Chain Characteristics

1. Centralized Distribution Network

Walmart created a hub-and-spoke distribution system where regional distribution centers (DCs) serve as centralized collection and redistribution points. Each DC is strategically located to support 75-100 stores within a 250-mile radius, optimizing delivery times and logistics costs.

2. Cross-Docking Operations

This revolutionary logistics technique bypasses traditional warehouse storage:

- Products flow directly from manufacturer dock to store-bound dock

- Goods are not stored in inventory (or minimal time)

- Reduces inventory holding costs and improves freshness

- Requires precise demand forecasting and timing

3. Advanced Information Systems

- Electronic Data Interchange (EDI) with suppliers

- Point of Sale (POS) systems capturing real-time sales data

- RFID tagging for inventory visibility

- Bar-code technology for automated tracking

- Big data analytics for demand forecasting

4. Walmart-P&G Partnership Model

The pioneering collaboration between Walmart and P&G exemplifies supplier integration:

- Continuous Replenishment Program (CRP): Uses real-time inventory data to automatically trigger shipments

- VMI (Vendor-Managed Inventory):P&G manages inventory levels at Walmart stores

- Data Sharing: POS data shared directly with suppliers for demand visibility

- Collaborative Planning: Joint demand forecasting and supply planning

5. Strategic Supplier Relationships

- Long-term partnership contracts

- Collaborative problem-solving

- Shared technology platforms

- Transparency in demand and inventory information

Performance Metrics and Results

| Metric | Walmart Achievement | Impact |

|--------|-------------------|--------|

| **Inventory Days** | 30-35 days | Rapid capital turnover |

| **Logistics Cost** | 7-8% of sales | Lowest in industry |

| **Stockout Rate** | <2% | High availability |

| **On-Time Delivery** | 98%+ | Reliable supply |

| **Supply Chain ROI** | 15%+ annually | Competitive advantage |

Key Success Factors

1. Information Sharing as Competitive Advantage

Unlike competitors who guard sales data, Walmart shares real-time POS information with suppliers. This transparency enables suppliers to optimize production and forecasting, benefiting the entire supply chain.

2. Demand Chain vs. Supply Chain Mentality

Walmart shifted from "supply chain" (retailer pushes products) to "demand chain" thinking (customers pull products). This customer-centric approach requires flexible manufacturing and distribution systems.

3. Workforce Education and Ethics

Walmart invested in driver training, ethics codes, and supply chain responsibility awareness throughout the system, creating a culture of efficiency and accountability.

4. Technology Investment

Continuous investment in automation, data analytics, and system integration to maintain technological leadership in supply chain operations.

Challenges and Limitations

1. Supplier Dependency Issues

Heavy reliance on supplier cooperation for VMI and CRP success; any breakdown in supplier capability or willingness disrupts the system.

2. Demand Forecasting Accuracy

Despite advanced systems, seasonal variations and unexpected demand changes create "bullwhip effect" complications through the supply chain.

3. Logistics Cost Pressures

Rising fuel prices, labor costs, and regulatory requirements continuously pressure logistics economics.

4. Global Standardization Complexity

Operating across diverse markets with different regulations, consumer preferences, and infrastructure creates supply chain complexity.

Discussion Questions

1. Explain the cross-docking operation at Walmart. How does it differ from traditional warehouse operations, and what advantages does it provide?

2. What is the Continuous Replenishment Program (CRP)? How does it improve supply chain efficiency between Walmart and P&G?

3. Describe how Walmart's Point of Sale (POS) system contributes to supply chain decision-making. What information flows from stores to suppliers?

4. How did Walmart shift from a "supply chain" to a "demand chain" mentality? What organizational changes were necessary to implement this shift?

Case Study 2: From Kenya to the world- flowers by ocean

The customer

Sian Flowers is a leading Kenyan producer of high-quality roses and summer flowers, exporting their blooms to Europe, the United States, the UAE and Australia. The company has won regional and international recognition for pursuing rigorous sustainable practices, including limiting the use of pesticides and the conservation and treatment of water. In addition, Sian is Fair Trade Certified, paying great attention to the welfare of workers and the

community.

The challenge

When the Covid-19 pandemic hit, Sian Flowers' supply chains, especially to Europe, were impacted, as it was for other players in the industry.

Fewer flights were operating to western markets, and space on board was limited, making it difficult to secure space for Sian's entire cargo, which resulted in wastage of produce. Air freight rates had also become prohibitively expensive, which had an impact on margins. Everyday challenges were disrupting the seamless movement of their sensitive flowers too – multiple touchpoints between the farm and port jeopardized the vase life of their cut flowers.

These issues notwithstanding, Sian was committed to environmentally sustainable practices and believed they needed to find ways to reduce their carbon footprint.

The Maersk solution

Maersk's team in Kenya devised an end-to-end cold chain solution that facilitated the easy movement of the cut flowers from Mombasa to Rotterdam by ship instead of plane. These included:

- A cold room facility in Nairobi
- Cold storage of loose cartons in cages
- Palletisation, stuffing and booking services
- Trucking from Alpha to Mombasa
- Customs brokerage at Mombasa and Rotterdam
- Trucking from Rotterdam port to Aalsmeer
- Deconsolidation services in the Netherlands (de-stuffing, sorting and storage)

Operating twice a week from Mombasa, Maersk shipping vessels transports the refrigerated cargo to Rotterdam in Controlled Atmosphere (CA) containers providing Sian with control over gas levels in the container while their flowers are in transit on the ship. Captain Peter, Maersk's proprietary digital visibility assistant, offers Sian remote monitoring of the temperature and humidity levels in the container along the journey, enabling them to act to maintain the CA containers' conditions intact. One of the most important aspects of the ocean solution and conducive to maintaining the freshness of the flowers on arrival at destination is the reliability of our ocean schedule times, which we guarantee, as well as the offer of long-term freight rates that could lend stability to Sian's finances in a volatile environment.

The result

Sian's delicate flowers have been traveling seamlessly and reliably across Kenya, thanks to fewer

touchpoints and a single point of contact. All their cargo is allocated space on board Maersk's Ocean vessels, which has become a viable alternative to air freight. The flowers continuously arrive fresh to the Netherlands, where logistics is efficiently coordinated ensuring the flowers reach markets on time and enjoy a

good vase life. Sian has also been able to achieve a near-90% reduction in greenhouse gas emissions with ocean transport.

Discussion Questions

1. What was the situation Sian was facing due to Pandemic?

2. What is the alternative Maersk offered to SIAN?

3. What is the learning from this case?

Case Study 3: Volkswagen Scandal

The Volkswagen emission scandal hit the automotive market hard. The problems ultimately affected VW's supply chain, both upstream and downstream. Consumers have sued the company for loss in value of their cars. VW dealerships are also not immune from this problem. Sales were affected as a result of the scandal. What was shocking was the deliberate deception of customers and government agencies. A Volkswagen engineer pleaded guilty to "… helping the auto maker's admitted efforts to cheat on emissions tests, becoming the first person criminally convicted in the United States in a wide-ranging scandal that has cost the German giant billions of dollars."VW had acknowledged earlier to installing illegal emissions-cheating software on about 600,000 diesel cars in the United States and 11 million vehicles globally. The conspiracy started in November 2006 and continued until the cheating was discovered in September 2015. This is the first case where the Justice Department had charged an individual in corporate investigations. VW will pay $14.7 billion as part of a settlement with three federal agencies who sued the company for excessive diesel emissions.

The investigation of VW has been extended to its suppliers. Bloomberg News reported that the Justice Department is "… looking at whether industry suppliers also knew or contributed to VW's insertion of software into diesel-powered cars to allow them to cheat emissions tests." In particular, Bosch, one of the world's largest manufacturers of components and systems to the auto industry, "… supplied diesel software to VW for test purposes but it ended up in vehicles on the road." Bosch issued a statement saying: "As is usual in the automo□ve sup ply industry, Bosch supplies these components to the automaker's specifications. How these components are calibrated and integrated into complete vehicle systems is the responsibility of each automaker." Bosch has allocated €750 m for legal costs rela□ng to this case.32 This scan dal has been very costly for both VW and Bosch.

Discussion Questions

1. What was the situation VW was facing due to a vendor?
2. Who was more affected by scandal?
3. What can VW do to prevent such scandals in the future?
4. What is the learning from this case?

Case Study 4: China One Policy

Three decades of globalisation have substantially changed the structure of the world economy with one of the most significant changes being the growing integration of large emerging markets into global production systems. China has become both a major production centre and an increasingly important consumer market. Persistent

high growth and rising affluence in the domestic market suggest that China will continue to be a magnet to international business (A.T. Kearney 2010; UNCTAD 2010).

However, a number of international businesses appear to be experiencing growing disquiet with regard to their operations in China. The sources of such concern include fears about the rising costs of producing in China as well as a desire to diversify operational and environmental risks. These concerns are manifested in the form of a so-called China-Plus-One strategy whereby multinational enterprises investing in China

are coupling this with a second investment in a nearby location, the most popular of which include Vietnam, Cambodia, Thailand and Indonesia. The general motive for this appears to be risk diversification.

Reasons for Adopting a China-Plus-One Strategy Given the immense attractions that China offers to international investors it might seem surprising that firms would seek to spread their investments beyond the country. Nevertheless, we can identify a number of motives for a China- Plus-One strategy. The importance of China as both a manufacturing base and as a market for final goods means that a China-Plus-One strategy can be analysed as both a sourcing and a sales strategy, or indeed, a combination of the two. In the former case, concern with regard to rising costs is the principal motivation. In the latter case, overdependence on a single market or the growing difficulties of doing business there may prompt the adoption of a China-Plus-One strategy. We can identify four principal motives. The first relates to rising costs, predominantly labour costs, within China (Milne 2010; Trunick 2008). Many early 4

investments into China were prompted by a desire to gain access to lower cost resources, particularly labour. This was reflected in the importance of highly labour-intensive industries such as footwear, apparel, toys and sports goods in the earlier stages of the country's development. However, there is no doubt that China's labour costs have moved up and that in comparison with other economies in the region, China

is no longer the lowest cost source. Pay increases for industrial workers rose by an average of 19 percent in 2008 and 16 percent in 2009. At the time of writing, the minimum monthly wage in Vietnam (US$52.50), Cambodia (US$56), and Laos (US$42) are well below those in China. Minimum wage levels vary by locality in China but currently are US$140.8 per month in Beijing, and US$164.2 in Shanghai. In recent months, a number of foreign owned plants in China, have experienced difficulties in the labour relations area including disputes (Honda and Toyota), as well as a worryingly high number of work-related suicides (Foxconn). These problems were settled through the provision of wage increases: with Foxconn initially raising wages by an average of 20 percent and Honda by 24 percent. More recently Foxconn has announced a second substantial wage increase for production workers, this time an increase of sixty-six percent. For assembly workers this would mean a wage increase from 900 yuan ($134.5) per month to 2000 yuan ($298.5) which is almost double the local minimum wage level (1,100 yuan) (China Business News 2010). The Chinese authorities have also played a part in pushing up costs and wages. In particular, China's 2008 Labour Contract Law is estimated to have increased labour costs by as much as one-third for those companies who had failed to comply with earlier standards (ILRF 2010). Furthermore, the Guangdong government has introduced draft legislation designed to facilitate enterprise-based collective wage negotiation in the province. This reflects concerns not with China's high level of work-related deaths and injuries, but also a fear that minimum wage levels may be circumvented, or at best, may serve as maximum wage levels (China Labour Bulletin 2010).

Questions:

Read the Chine One Case Study and answer the following questions:

Q1. What is the biggest change in last 3 decades?

Q2. Why are a growing number of business experiencing growing disquiet with regard to their operations in China?

Q3. What is China plus one strategy?

Q4 Reasons for Adopting a China-Plus-One Strategy

Q5. How India can leverage “China Plus One” Strategy.