Navigating International Supply Chains – A Case Study Collection

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1. Introduction to the Case Study Collection & Overview of Cases
2. Summary of Case Studies
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Overview | Navigating International Supply Chains – A Case Study Collection

This collection includes ten case studies from globally operating enterprises that can be utilized for teaching and training purpose. Therefore, interviews with over 30 company representatives have been conducted. The cases cover different industries (e.g. automotive, consumer goods, electronics, logistics service providers). Among others, the case studies cover the following main topics:

- Volatility and risk management
- Organizational alignment
- Supply chain transparency
- Lead time management
- Forecasting
- Cultural and behavioral management
- International procurement
- Fourth party service providers
- International logistics networks
- Etc.
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1. BearCo | A Case Study of an International Manufacturer of Bearings

Abstract

The following case study describes the supply chain structure of a German manufacturer of different kinds of bearings named BearCo. The case describes how BearCo serves thousands of customers through a global network of warehouses – and the shortcomings arising from that. It also includes examples of how the erratic behavior of individuals in the supply chain can cause devastating volatility along the whole supply chain.

Supply Chain

Industry

- Diverse

Product

- Bearings

Topics

- Organizational alignment
- Supply chain transparency
- Lead time management
- Cultural management
2. Brake Systems Unlimited | Managing Capacities in an Era of Shortage

Abstract

Due to technological advancements over the past decades, the global demand for electronic sub-components such as transistors, wafers, and others has grown exponentially and outpaced the speed at which the manufacturers of those components can increase their capacity. This situation, combined with complex and time-consuming production processes of those components, leads to very long lead times that challenge millions of supply chains worldwide. The following case describes how a manufacturer of brake systems suffers from long lead times, and how irrationally behaving customers may be managed in an era of shortage.

Supply Chain

Industry

• Automotive

Product

• Brake systems, especially electronic brake control units

Topics

• Capacity management
• Volatile customer demand
• Supply chain flexibility
• Behavioral management
Abstract

SAG is a manufacturer of steering systems for the automotive industry. The following case describes how SAG manages its supply chain for electric motors. Due to safety reasons, SAG is not able to change its supplier and has to deal with any incorrect decisions made during the product development process. Consequently, SAG manages its supply chain down to the fourth tier, in order to mitigate volatility and disruptions caused by this second tier supplier.
4. Prime Engines | Leveraging potentials in the sourcing process of an automotive OEM

Abstract

This case study describes the supply chain of Prime Engines, an original equipment manufacturer (OEM) in the automotive industry in the niche of high quality sports and luxury cars. Due to the developments in the last decades, the automotive industry is characterized by a huge supplier network and rather low degree of value-added in the German factories. The networks are globally dispersed, which leads to in some cases long lead times and high complexity in the case of unforeseen events.

Supply Chain

Industry

- Automotive

Product

- Car dashboard

Topics

- International procurement
- Tender management
- Linear performance pricing
- Supplier negotiation
5. Robo Electrics | Dealing with unreliable costumers in Asia-Pacific markets

Abstract
RoboElectrics is a Chinese subsidiary of a German manufacturing company of the same name. Both companies are part of a corporate group that is led by the German parent. This case study describes the supply chain, and supply chain challenges, of the E-Switch-578, an electronic component that is used in a number of rather different high tech circuits. A number of automotive and other machinery manufacturers depend on the E-Switch-578 for crucial automotive safety features.

Supply Chain

Industry
- Electronics

Product
- Frequency converter

Topics
- Warehouse automation
- Forecasting
- Delivery reliability
- Network planning
- Belt and Road Initiative
6. MOVE | Handling Volatile Customer Demand in the Chinese Market

Abstract

The following case describes the supply chain for clutches for the Chinese market manufactured by MOVE, one of the major suppliers in the automotive industry. In China in particular, MOVE experiences a very high degree of demand volatility from Chinese OEMs that either increase demand at short notice or drastically reduce previously forecast quantities. Due to an inflexible supply chain with very high transportation and supplier lead times, MOVE must find ways of dealing with these circumstances.

Supply Chain

- Automotive
- Clutch
- Volatile customer demand
- Forecasting
- Behavioral management
- Production planning
7. EurasiaTrain | An Alternative for Transporting Goods between Europe and China

Abstract
The overarching subject of the case study is China’s Belt and Road Initiative (BRI). One of the goals of the BRI is the promotion of overland transport between China and Europe. Global Supply Chain Support (GSCS) is one of the leading worldwide logistics service providers. The case study describes the services GSCS unit offers and the environment in which these services are offered. Additionally, the case describes a number of the challenges – bottlenecks, the volatile environment, and strict rules and regulations – GSCS faces when offering these services.

Abstract

Entering new markets comes with its challenges. The Connect SE, a wholesale organization for screws and other fastener products fights on to fronts: they want grow in the US market and they want to establish a webshop to grab market share in the online business. Furthermore, the Connect SE suffers because of counterfeit products from Asia flooding its markets all over the world. This Case Study deals with those challenges and tries to find the corresponding mitigation strategies.

Supply Chain

Industry

- Retailing

Product

- Screws and other joining elements

Topics

- Distribution systems
- E-commerce
- Product originality
9. RuSh | Managing International Logistics of Shoes Through a Control Center

Abstract

Originally founded in Japan, today RuSh sells all kinds of shoes all over the world. Due to the historically grown nature of their supply chain, the management of inbound material flows from RuSh’s suppliers to their own distribution centers is complex and includes many redundancies in functions. Currently, over 40 people all over the world are responsible for managing this inbound flow. To reduce cost, RuSh analyzed different opportunities, but one 4PL approach caught their interest. This case describes the supply chain network of a global shoe manufacturer and how the Control Center approach can assist logistics management. Additionally, the case describes how a big Western logistics service provider is struggling to establish itself in the Japanese market due to huge cultural barriers.
10. **StandArts** | Preparing a Fast-growing Fashion Network for the Challenges of the Globalized World

**Abstract**

This case study describes the company StandArts, which in recent decades has achieved high growth in the international apparel market with standardized, functional clothing sold at good quality and low prices. In order to develop further market shares, the company’s management is considering entering the FastFashion segment with constantly changing seasons and high market volatility. This poses major challenges for logistics in particular and requires a strategic analysis of competitors.
Agenda

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## Case KPIs

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<tr>
<th>Company and Sales KPIs</th>
<th>BearCo</th>
<th>Brake Systems Unlimited</th>
<th>SAG</th>
<th>Prime Engines</th>
<th>Robo Electrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>€ 5 billion</td>
<td>€ 1 billion</td>
<td>€ 2 billion</td>
<td>€ 40 billion</td>
<td>€ 700 million</td>
</tr>
<tr>
<td>Annual Revenue Growth</td>
<td>7%</td>
<td>n/a</td>
<td>n/a</td>
<td>20 %</td>
<td>12 %</td>
</tr>
<tr>
<td>Number of Employees</td>
<td>50,000</td>
<td>20,000</td>
<td>7,000</td>
<td>20,000</td>
<td>3,500</td>
</tr>
<tr>
<td>Market Share</td>
<td>15%</td>
<td>n/a</td>
<td>30%</td>
<td>0,9 %</td>
<td>30 %</td>
</tr>
<tr>
<td>Legal Form</td>
<td>AG</td>
<td>AG</td>
<td>AG</td>
<td>AG</td>
<td>Subsidiary of AG</td>
</tr>
</tbody>
</table>

## Production KPIs (product-related)

<table>
<thead>
<tr>
<th>Production Strategy</th>
<th>Make to stock</th>
<th>Assemble to order</th>
<th>Assemble to order</th>
<th>Assemble to order</th>
<th>Assemble to order</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigated Product</td>
<td>Cylindric roller bearing</td>
<td>Brake control unit</td>
<td>Steering system (electric motor)</td>
<td>Dashboard for sports cars</td>
<td>Electronic components</td>
</tr>
<tr>
<td>Production Volume</td>
<td>&gt;2,000,000 pcs./year</td>
<td>n/a</td>
<td>1,000,000 pcs./year</td>
<td>300,000 pcs/year</td>
<td>20,000 pcs/year</td>
</tr>
<tr>
<td>Depth of Value-creation</td>
<td>60%</td>
<td>25%</td>
<td>35%</td>
<td>20 %</td>
<td>50 %</td>
</tr>
</tbody>
</table>

## Logistics KPIs (product-related)

| Number of Suppliers       | 4 / 2,000 (in total) | 40 | 200 | 30 | 7 |
| Number of Customers       | B2B and B2C mass market | Up to 50 B2C customers | Up to 40 B2C customers | B2C mass market | Up to 50 B2C customers |
| Delivery Reliability      | 87%              | 85%            | 70%               | Over 90 %        | 85 %              |
| Total Product Lead Time   | 50 days          | 150 days       | 160 days          | 12 months        | 180 days          |
| Avg. Distance to the Costumer | Worldwide | Worldwide | Worldwide | Worldwide | Within China |
## Company and Sales KPIs

<table>
<thead>
<tr>
<th></th>
<th>MOVE</th>
<th>EurasiaTrain</th>
<th>Connect SE</th>
<th>RuSh</th>
<th>StandArts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Revenue</strong></td>
<td>€ 10 billion €</td>
<td>€ 10 billion €</td>
<td>€ 800 million</td>
<td>€ 1 billion</td>
<td>€ 8 billion</td>
</tr>
<tr>
<td><strong>Annual Revenue Growth</strong></td>
<td>1.5%</td>
<td>9%</td>
<td>5%</td>
<td>10%</td>
<td>30%</td>
</tr>
<tr>
<td><strong>Number of Employees</strong></td>
<td>70,000</td>
<td>70,000</td>
<td>700</td>
<td>5,000</td>
<td>40,000</td>
</tr>
<tr>
<td><strong>Market Share</strong></td>
<td>15%</td>
<td>15%</td>
<td>15%</td>
<td>10%</td>
<td>11%</td>
</tr>
<tr>
<td><strong>Legal Form</strong></td>
<td>AG</td>
<td>AG</td>
<td>SE</td>
<td>AG</td>
<td>AG</td>
</tr>
</tbody>
</table>

## Production KPIs (product-related)

<table>
<thead>
<tr>
<th>Production Strategy</th>
<th>Assemble to order</th>
<th>-</th>
<th>Make to stock</th>
<th>Make to stock</th>
<th>Make to stock</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investigated Product</td>
<td>Clutch</td>
<td>-</td>
<td>Screws and fastener products</td>
<td>Shoes</td>
<td>Basic clothing products</td>
</tr>
<tr>
<td>Production Volume</td>
<td>n/a</td>
<td>-</td>
<td>Unknown</td>
<td>n/a</td>
<td>2000 stores in 25 countries</td>
</tr>
<tr>
<td>Depth of Value-creation</td>
<td>45%</td>
<td>-</td>
<td>0% (no own production)</td>
<td>0% (no own production)</td>
<td>0% (no own production)</td>
</tr>
</tbody>
</table>

## Logistics KPIs (product-related)

| Number of Suppliers | 80 | - | 200 | 300 | 90 |
| Number of Customers | 30 | - | B2B mass market | 2,000 | B2C mass market |
| Delivery Reliability | 92% | 65% | 99% | 90% | 85% |
| Total Product Lead Time | 5-6 months | 12-16 days transportation time (main run) | 6-7 months | n/a | 4-5 months |
| Avg. Distance to the Customer | Worldwide | - | Worldwide | Continental | Worldwide |
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