

Chapter 10

Supply Chain Analysis



Ch10. Supply Chain Analysis

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Short Description

- The supply chain is a network of suppliers, manufacturers, distributors, retailers, and customers that are linked by information, wares, and capital that move among the participants. (Fiala, 2005)
- Supply Chain Management (SCM) is:
 - The management of the elements among the supply chain's functions (procurement, logistics, and inventory management).
 - Interactions between the firm and outside companies within the supply chain.



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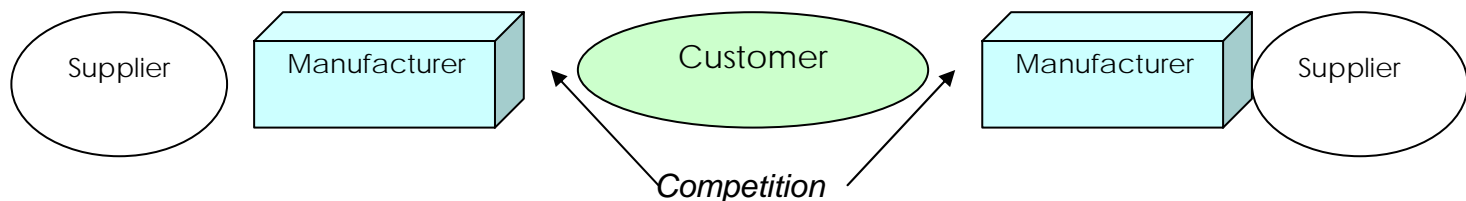
Short Description

- SCM requires analyst to answer:
 - What is the relative bargaining power of suppliers to industry competitor's supply chains?
 - Do competitors or one's own enterprise have too many suppliers when a few relationships could do?
 - How effective are your own enterprises as well as competitors' supply chains?
 - Where are the vulnerabilities and strengths in the management of a competitor's supply chain?
 - How does your own supply chain compare to industry competitors as well as benchmark practices?

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Background

- Over time, strong import and export markets have developed to deal with our desire for far-away goods.
- Communication and transportation improvements in the last century fuelled the desire for varieties of consumer goods.
- Improvements in technology and disposable income mean that we expect complex goods when and where we want them.
- SCM emerged in the 1960s.
- Up until the 1990s, SCM was company-centric.
- ***Old model of competition:***





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Background

- In the 2000s the field of SCM is still youthful and continues to evolve.
- Many firms are realizing that:
 - New opportunities to add value and increase profits cannot be undertaken alone.
 - Partners that make up the chain will be more successful together than they could ever be by themselves.
 - Future competitive arena will witness chains compete against chains rather than companies competing against companies .



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Strategic Rationale

- No firm is completely self-sufficient.
- Effective SCM can reduce “bull-whip” effect.
- Flexibility is important, but shorter cycle and lead times and pressure to reduce costs makes flexibility hard for firms to attain.
- Managing supply chain risk is difficult when many manufacturers fragment their supply chains.



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Strengths and Advantages

- Effective SCM analysis can lead to a competitive advantage.
 - Decreased costs, increased efficiency, better product availability, and increased sales.
- SCM can align all parties' interests.
- SCM can lead to changes that help firms better manage their assets, therefore decreasing costs.
- Customer centricity of SCM translates to a product and information flow that will ultimately benefit the customer.



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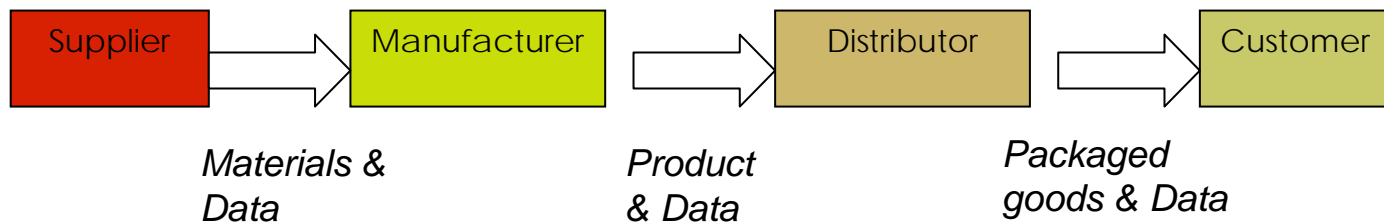
Weakness and Limitations

- SCM requires a lot of data that firm may not have access to.
- Managers may not authorize SCM analysis if they suspect that recommendations are too costly or drastic.
- As no standard set of network modeling tools has developed, firms run the risk of running into compatibility issues with supply chain partners.
- Current evolution of the most SCM analysis models have yet to allow for the comparative illustration associated with *how* these supply chain networks compete against one another.

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Process for Applying the Technique

- SCOR (Supply Chain Operations Reference) model developed by the Supply Chain Council (SCC).
- Looks at SCM from a strategic perspective, rather than operational or design perspective.
- Traditional model for companies to view themselves as sole entities:





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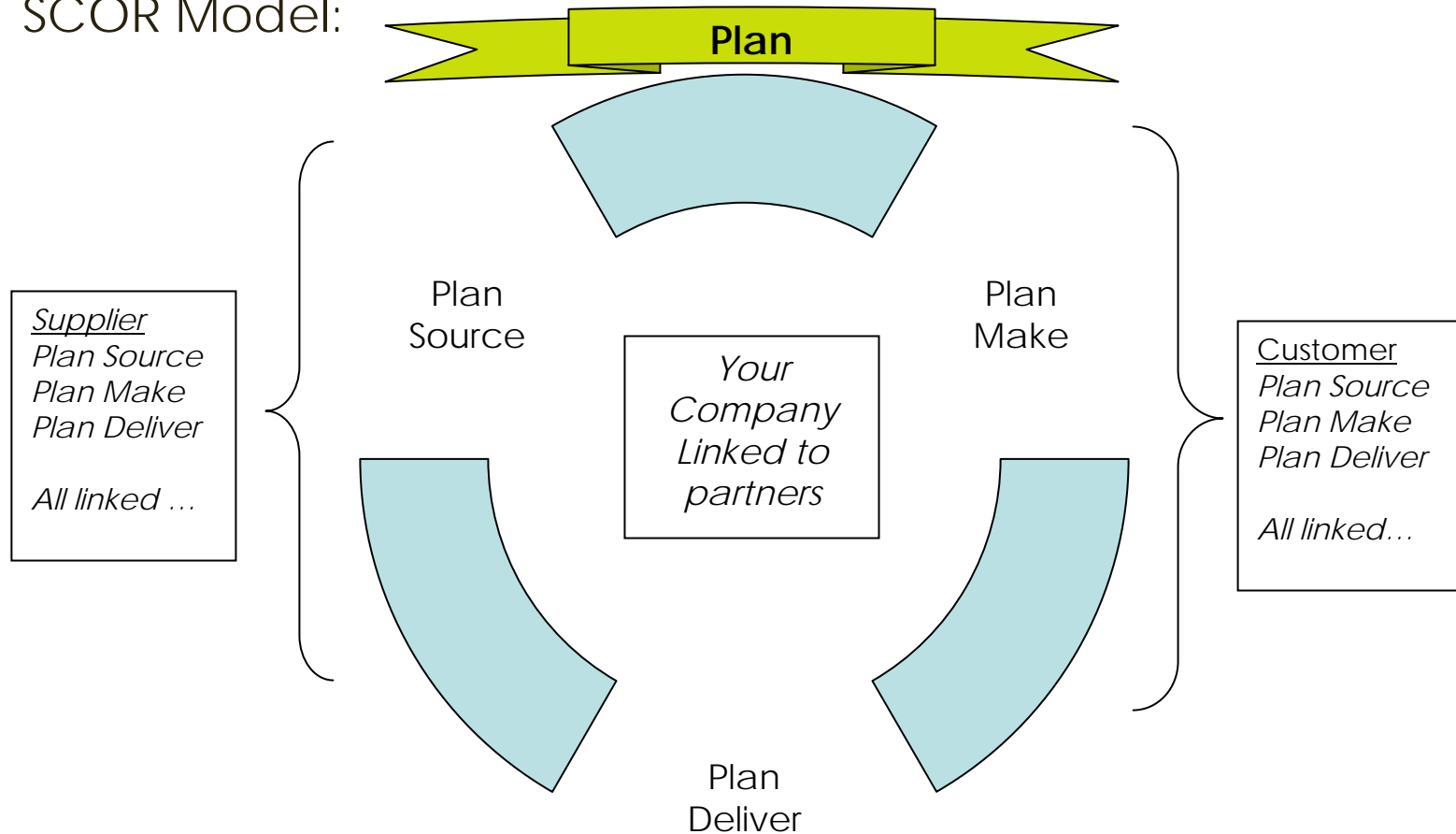
Process for Applying the Technique

- SCOR Model:
 - The first of the four processes, is central to managing the other three processes: **source, make and deliver**.
 - Every time there is an exchange of goods between parties, all four processes are utilized.
- The SCOR model identifies three levels of process detail:
 - Level 1: Process types
 - Level 2: Process categories
 - Level 3: Process elements

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Process for Applying the Technique

- SCOR Model:





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Process for Applying the Technique

- With SCOR perspective, turn to Step 1:
- Benchmarking:
 - Decide what to benchmark.
 - Form a team that is capable and responsible to carry out the process.
 - Identify benchmark partners.
 - Acquire and analyze benchmarking information.
 - Implement newly acquired best practices.



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Process for Applying the Technique - Step 2: Ten essential rules:

Rule	Tool
1. SCM requires supplier and customer relationships to take advantage of scale economies when facing tough competition.	<ul style="list-style-type: none">• Use incentives and align interests.• Share information with suppliers & customers .• Clearly define roles and areas of accountability for all parties.• Apportion costs, risks, and rewards.
2. Supply Chain network should allow access to global markets.	<ul style="list-style-type: none">• Supply chain analysis should reveal if competitors are beating you on price or innovation.• Moving operations overseas can open the supply chain to emerging markets.
3. SCM means meeting customer needs, wants, and expectations.	<ul style="list-style-type: none">• Design the supply chain from the customer backward
4. Companies must drive costs out of chains and arrange access to supplies.	<ul style="list-style-type: none">• Logistics system should allow company to rally in the event of unanticipated needs or hold-ups.



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Process for Applying the Technique - Step 2: Ten essential rules:

Rule	Tool
5. Focus on agility.	<ul style="list-style-type: none">• Collaborative relationships are essential.• Design products with “postponement” in mind.
6. Adopt a position pivotal to chain success.	<ul style="list-style-type: none">• Take a pro-active role in chain development. Identify strong executive level leadership whose job this is, and make sure they have the resources they need.
7. Technology creates challenges if adoption is piecemeal.	<ul style="list-style-type: none">• Support a Digital Business Transformation (DBT) where every facet of every operation is examined.
8. Successful chains get products to market quickly.	<ul style="list-style-type: none">• Support real-time information exchange.• Use time and cycles as metrics to which incentives are linked.



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Process for Applying the Technique - Step 2: Ten essential rules:

Rule	Tools
9. Collaboration and integration blur organizational boundaries.	<ul style="list-style-type: none">• Use supply chain risk management best practices (Jorgensen, 2006).
10. Pressure from stakeholders can mean conflict and little tolerance for growing pains.	<ul style="list-style-type: none">• Wall Street measures market value, rather than absolute value.• A "Triple-A supply chain", one that is agile, aligned, and adaptable, will ultimately be successful (Lee, 2004, p.104).



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Summary

- When the ten areas are highlighted as strengths or weaknesses, areas for improvement or potential competitive advantage are easy to visualize.
- No amount of technology or resources will make a difference to supply chain performance without good leadership, good people, and a supportive corporate culture.
- In a global marketplace that increasingly values the ability to get goods to customers as quickly, cheaply and effectively as possible, SCM be increasingly important.

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- Case Study: Best Buy Vs. Sears/ Kmart

Rule #	Rationale	Sears	BB
1.	Best Buy has learned that being a good customer is the best partnership with its shipping company - incentives are aligned based on costs that are within the carriers' control, and efficiencies are rewarded. At peak times carriers are overloaded and are in a position to decide what they will deliver, and to whom. Collaboration ensures Best Buy gets their merchandise (Trunick, 2005). Sears/Kmart on the other hand, has yet to develop a logistics strategy. Currently the company has 10 information systems devoted to SCM, 9 to data warehousing, and 9 to logistics management, and 8 to inventory management. It's unlikely that any of these systems are aligned to each other, much less any of their carriers (Dignan, 2004).	No	Yes
2.	Sears needs to work with overseas suppliers, from designing private label merchandise forward (Kay, 2005). Best Buy sources most products from Asia which are brought into two West Cost hubs, and sent into a streamlined network, but is otherwise not vertically integrated (Cottrill, 2005).	Not Yet	Yes

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Case Study: Best Buy Vs. Sears/ Kmart

Rule #	Rationale	Sears	BB
3.	Best Buy's Supply Chain has been designed around customer needs. When Best Buy discovered they couldn't be all things to all people, they decided to focus on 8 core groups of customers, emphasizing 1 or 2 in a particular store depending on the demographics of each market. Non-sales activities have moved up the supply chain to allow sales people more time with customers. This "customer-centric" approach sees the store from the customer's perspective and allows empowered employees access to data on product logistics. (Cottrill, 2005) Both Sears and Kmart struggled with defining their target market before their 2004 merger, and that has not changed. The company has yet to identify who shops in their stores and what they are buying, much less what they're needs are. (Kay, 2005)	No	Yes
4.	Part of Best Buy's SCM plan includes greater delivery frequency of smaller shipments (Cottrill, 2005). Sears is still turning merchandise slower than competitors and has as yet to figure out to improve this markedly.	No	Yes



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Case Study: Best Buy Vs. Sears/ Kmart

Rule #	Rationale	Sears	BB
5.	Sears is merging for muscle. Best Buy's new system focuses on agility—they share collaborative technology with 17 suppliers to share information in real time, and new predictive modeling technology actually recalls solutions to past problems when presented with like problems and adapts (Cotrill, 2005).	No	Yes
6.	Sears' size and vertical integration mean it is in a position to influence supply chain generation, but that hasn't happened yet. Best Buy takes the initiative to work constructively with its partners.	No	Yes
7.	At one time, Best Buy used internal forecasts as well as forecasts from suppliers and third parties. They now only use one forecast which is a consolidation of information from partners and internal data (Cotrill, 2005). Sears still has 37 software applications being used. (Dignan, 2004)	No	Yes

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Case Study: Best Buy Vs. Sears/ Kmart

Rule #	Rationale	Sears	BB
8.	Best Buy shares real-time information with 17 partners and has redesigned its channel more smaller deliveries to go exactly where they are needed, and the deliveries are sales-floor ready. (Cottrill, 2005). Sears technologies are not integrated, and thus do not support one another (Scheraga, 2005).	No	Yes
9.	Best Buy does have the technology to get instant information about delays and incidents, and predictive modeling technology, and an empowered work-force, but there has been little mention of continuously monitoring suppliers for well-being. Many of these suppliers are in Asia, and hence not visible. There is little public indication given anywhere that Sears is using Supply Chain Risk Management Best Practices.	No	Partly
10.	Overall: Best Buy has only instituted the new scheme at one quarter of its stores in its Concept VII roll-out, but those stores are already performing well—gains have been twice that of traditional stores (Chakravarthy & Bourgeois, 2004). Sears has a lot of work to do, including identifying customer needs and positioning the business before designing a new supply chain and integrating partners and technology.	No	Yes



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- **FAROUT Summary**

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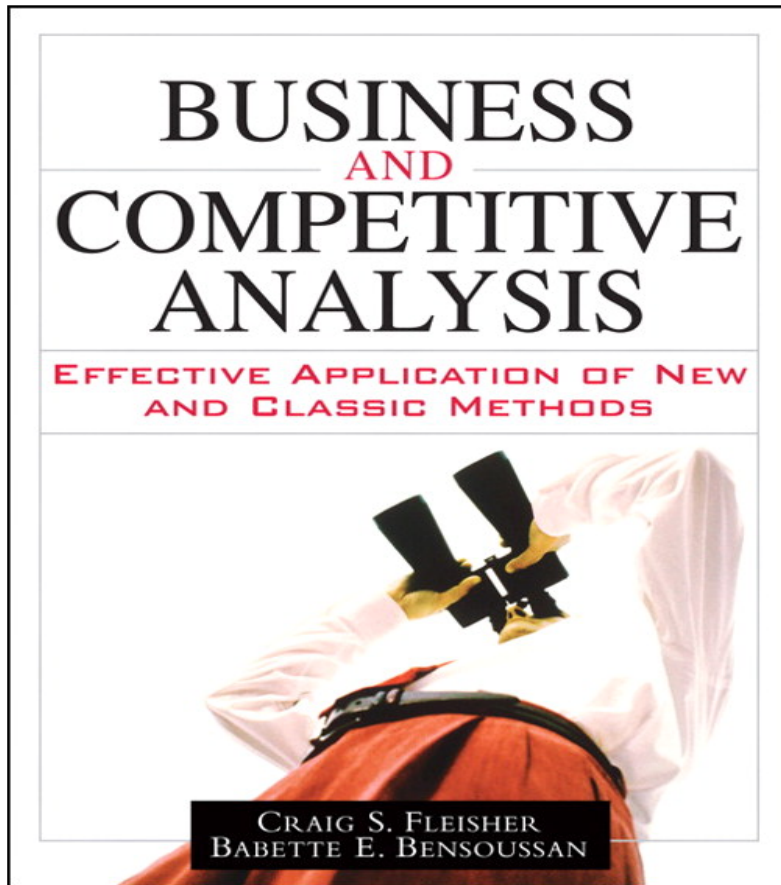


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Related Tools and Techniques

- Key Success Factors
- Benchmarking
- Network Analysis
- Value Chain Analysis
- Business Process Re-engineering
- Financial Resources and Statement Analysis

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For More About **Supply Chain Analysis** and 23 Other Useful Analysis Methods, see:

Fleisher, Craig S. and Babette E. Bensoussan

Business and Competitive Analysis: Effective Application of New and Classic Methods

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