CHAPTER ONE

Discussion Questions

1. Consider the purchase of a can of soda at a convenience store. Describe the various stages in the supply chain and the different flows involved.

When a customer purchases a can of soda at a convenience store, his or her purchase represents the end of a supply chain’s delivery of an item and the beginning of information regarding his or her purchase flowing in the opposite direction.

The supply chain stages include customers, retailers, wholesalers/distributors, manufacturers, and component/raw material suppliers. A customer’s purchase moves product toward the customer and dollars and information toward the retailer.

The retailer places an order from the wholesaler/distributor to replenish stock, thereby moving information back up the supply chain while moving product down the supply chain. As the order is filled, the retailer will move dollars back up the supply chain.

The wholesaler/distributor transmits information and dollars to the manufacturer who produces product and ships it down the supply chain to the wholesaler.

Finally (or initially, depending on your perspective) the manufacturer moves orders (information) and dollars toward suppliers in exchange for material flow into their production processes.

1. Why should a firm such as Dell take into account total supply chain profitability when making decisions?

Dell realizes that its ultimate success lies with the success of its supply chain and its ability to create value and generate supply chain surplus. If Dell was to view supply chain operations as a zero sum game, it would lose its competitive edge as its suppliers’ businesses struggled. Dell’s profit gained at the expense of its supply chain partners would be short lived. Just as a physical chain is only as strong as its weakest link, the supply chain can be successful only if all members cooperate and focus on a global optimum rather than many local optima. Real value creation occurs if Dell and its supply chain partners can together run the supply chain more effectively.

1. What are some strategic, planning, and operational decisions that must be made by an apparel retailer such as Gap?

As Gap plans supply chain strategy it must first consider the marketing function’s pricing and product plans in order to structure a supply chain consistent with these plans. Strategic considerations such as the capacity of each supplier and assembly operations, sourcing decisions, and how logistics are to be handled are all part of the design. The supply chain must also settle on communication channels and frequencies.

Supply chain planning takes the strategic decisions as a given and seeks to exploit efficiencies in the chain to maximize supply chain surplus. The entire chain should collaborate in forecasting and planning production to achieve a global optimum. The forecasts should take into account planned promotions and known seasonal fluctuations in demand.

The operational decision takes the plans as a given and makes day-to-day decisions to process customer orders, allocate resources to certain customers, trigger orders from supply chain members, and deliver product.

1. Consider the supply chain involved when a customer purchases a book at a bookstore. Identify the cycles in this supply chain and the location of the push/pull boundary.

All supply chain processes can be broken down into four process cycles that connect the five stages of the supply chain; the customer order cycle, the replenishment cycle, the manufacturing cycle, and the procurement cycle.

The customer order cycle connects the customer with the retailer; this connection is made as the book, perhaps *Supply Chain Management* by Chopra and Meindl, is selected and paid for by the customer.

The replenishment cycle connects the retailer and the distributor and is triggered by the retailer’s need to fill the empty shelf space with another copy of this tome.

The manufacturing cycle connects the distributor and the manufacturer. As demand for the book is realized and distributors empty their warehouses, they signal the manufacturer to print another million copies to fill their empty warehouses.

Finally, the procurement cycle connects the manufacturer and the supplier. The manufacturer requires raw material inputs of paper, ink, and so on, to begin the assembly process for another batch of *Supply Chain Management*.

The push/pull boundary exists where demand switches from reactive (pull) to speculative (push) production. For most bookstore supply chains, the push/pull boundary is between the customer order cycle and the replenishment cycle. The customer order pulls the book from the book store shelf but the initial production of the book was triggered by a build order that moved materials along the supply chain to the retail outlet.

1. Consider the supply chain involved when a customer orders a book from Amazon. Identify the push/pull boundary and two processes each in the push and pull phases.

In Amazon’s original operations design, the push/pull boundary existed betwixt the retailer (Amazon) and their distributor. Amazon ordered product from the distributor and the customer order arrived. Today, Amazon has almost one 100 warehouses where it stocks an inventory of items it is confident that will sell. In this scenario, the push/pull boundary exists between the customer and the retailer.

Processes in the pull phase are the order fulfillment, shipping, customer returns, and customer billing. Processes in the push phase are production, stock replenishments, shipping, and payment.

1. In what way do supply chain flows affect the success or failure of a firm such as Amazon? List two supply chain decisions that have a significant impact on supply chain profitability.

The success or failure of a company such as Amazon is decided by the effective function of its supply chain. The flow of products from publishers to distributors to customers must be rapid and reliable in order to satisfy customers. The goal is to effectively match supply and demand. The flow of information back through the supply chain allows all members to coordinate efforts. The flow of money allows all supply chain members to maintain operations. Supply chain profitability is influenced by location of facilities, inventory, sourcing, promotion, and fulfillment decisions.