# *Principles of Supply Chain Management*

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# Instructor’s Guide

# Discussion Questions

# Chapter 2 – Supply Chains as a System

1. Explain why the input-transformation-output model is called the DNA of the supply chain.

## The input-transformation-output (ITO) can be applied to both manufacturing and service companies. It is the most basic relation that describes the ultimate function of a supply chain, to move product and services form a source to a consumer.

1. Describe the four types of flows inside a supply chain. Which flows are considered core activities? Which flows play supporting roles to these core supply chain activities?

## The flow of goods and services is considered the basic flow in supply chains and a core activity. Information, funds, and relational flows are supporting flows to the flow of goods and services.

1. Using Table 2.1 as a guide, describe other types of supply chains not listed in the table.

## This question offers the potential for class discussion as students will have a variety of jobs with different types of companies. While they may not have thought broadly about supply chains, they will be able to see the connection.

1. In today’s customer-driven market, an effective supply chain needs to be responsive to requests from internal and external customers. Who are these internal and external customers? How are their needs different from each other?

## In a manufacturing environment, internal customers are the next department or work station in the manufacturing process. What may not be as obvious is the role of other functional areas such as marketing (production is the internal customer for demand forecasts), finance (needs to have supporting information for production requests for capital expenditures) and human resources (need to know number and type of employees to hire). Internal customers are expected to cooperate with one another.

## External customers need more formal documentation than internal customers. They also need more support and reinforcing attention than internal customers. Companies need to be attentive to external customers.

1. What types of external influences impact the supply chain? What types of influences have you seen at places you may have worked?

## This question examines the open system influences shown in Figure 2.3, of at least the following: competitors, economy, technology, government, environment and social.

## This also provides an opportunity for class discussion, although students may have a little difficulty in coming up with examples from their own work experience.

1. Supply chain integration is a desirable goal that is faced with both obstacles and enablers. An effective supply chain manager is capable of removing these obstacles and capitalizing on enablers to help integrate supply chains with its business partners. How can a supply chain manager address these obstacles and enablers of supply chain integration?

## This is where relation-building comes into play. Good relationships with customers and suppliers make it possible to identify and overcome problems quickly before permanent damage occurs.

1. Business processes that cannot be measured cannot be managed. Managing supply chain performance requires the measurement of both tangible and intangible benefits and costs. What are the major benefits of effective supply chain management?

## This is a difficult area for most companies. While it is possible for companies to measure benefits and costs for their own company, it is much more difficult to measure costs and benefits for an entire supply chain. Consequently, it is even more difficult to decide how best to allocate them among supply chain participants.

1. Describe strategies that companies use to create value for their customers through effective management of their supply chains.

## Strategies for an individual company can include low prices, high quality, fast response time, and flexibility. Ideally, these strategies are extended throughout the supply chain. However, companies may not adequately consider this in selecting suppliers.

1. How does outsourcing increase or decrease the risk of supply chain disruptions?

## Outsourcing increases the number of entities involved and increases the complexity of the supply chain. When the outsourcing is offshore (to a supplier in another country), it increases the distance products must travel and increases the number of different modes of transportation involved. Adding all of these variables increases the risk of disruptions.

1. Discuss the potential use of chaos theory in supply chain management.

## Chaos theory deals with non-linear patterns. As supply chains become more complex and geographically dispersed, participant behaviors and external forces do not always behave in a linear fashion. It is becoming increasing difficult to use simple linear models to forecast future expectations.