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11.481J / 1.284J / ESD.192J Analyzing and Accounting for Regional Economic Growth
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INDUSTRIES, REGIONS, AND RESTRUCTURING

A. Definitions:

Cluster of Firms: “A cluster is a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by commonalities and complementarities. The geographic scope of a cluster can range from a single city or state to a country or even a network of neighboring countries” (Porter, 1998, p. 199)

Michael E. Porter. 1998. *On Competition*. Cambridge, MA: A Harvard Business School Review Book.

Chain (supply or commodity): “A network of labor and production processes whose end result is a finished commodity” (Hopkins and Wallerstein, 1986, p. 159). A global commodity chain “consists of interorganizational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world economy” (Gereffi, Korzeniewicz, and Korzeniewicz, 1994, p. 2).

Terrence K. Hopkins and Immanuel Wallerstein. 1986. “Commodity Chains in the World-Economy Prior to 1800.” *Review*, Vol. 10, No. 1, pp. 157-170.

Gary Gereffi, Miquel Korzeniewicz, and Roberto P. Korzeniewicz. 1994. “Introduction: Global Commodity Chains.” In *Commodity Chains and Global Capitalism*, edited by Gary Gereffi and Miguel Korzeniewicz, pp. 1-14.

Supply chain versus value-added chain. Both of these concepts are juxtaposed in some articles, but they are not equivalent.

Supply Chain: On the one hand, the concept of supply chain is often associated with infrastructure and their connections (e.g., rail, truck, and air routes, storage facilities, and final distribution centers), thus the logistics of getting goods from the producer to the consumer. The focus is on minimizing the cost of transporting goods and/or maximizing the amount of goods that can be transported to achieve just-in-time delivery. This is associated with the interrelationship between firms linked by the functional nature of firms.

Value-added Chain, on the other hand, the value-added chain emphasizes the value created by a firm’s activities, not necessarily along a supply chain, focusing on the management of the flow of goods and services to maximize the value of the final product.

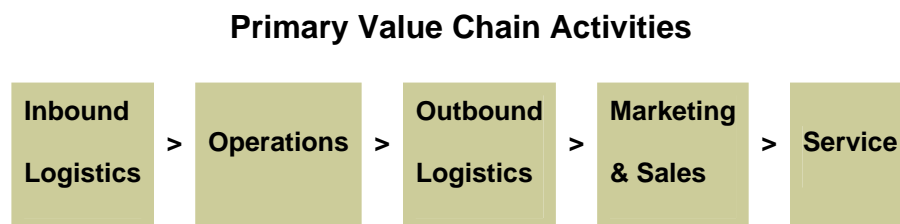
Although transportation analysts and management analysts are the dominate users of

supply-chain management techniques, value-chain analysts come primarily from the business-school perspectives that Porter pioneered. Management and financial analyses are the main focus of value-chain studies. These two types of analysis can be overlapping, but they are usually conducted singularly.

<http://www.quickmba.com/strategy/value-chain/>
downloaded 02-16-05

The Value Chain

To analyze the specific activities through which firms can create a competitive advantage, it is useful to model the firm as a chain of value-creating activities. Michael Porter identified a set of interrelated generic activities common to a wide range of firms. The resulting model is known as the **value chain** and is depicted below:



The goal of these activities is to create value that exceeds the cost of providing the product or service, thus generating a profit margin.

- **Inbound logistics** include the receiving, warehousing, and inventory control of input materials.
- **Operations** are the value-creating activities that transform the inputs into the final product.
- **Outbound logistics** are the activities required to get the finished product to the customer, including warehousing, order fulfillment, etc.
- **Marketing & Sales** are those activities associated with getting buyers to purchase the product, including channel selection, advertising, pricing, etc.
- **Service** activities are those that maintain and enhance the product's value including customer support, repair services, etc.

Any or all of these primary activities may be vital in developing a competitive advantage. For example, logistics activities are critical for a provider of distribution services, and service activities may be the key focus for a firm offering on-site maintenance contracts for office equipment.

These five categories are generic and portrayed here in a general manner. Each generic activity includes specific activities that vary by industry.

Support Activities

The primary value chain activities described above are facilitated by support activities. Porter identified four generic categories of support activities, the details of which are industry-specific.

- **Procurement** - the function of purchasing the raw materials and other inputs used in the value-creating activities.
- **Technology Development** - includes research and development, process automation, and other technology development used to support the value-chain activities.
- **Human Resource Management** - the activities associated with recruiting, development, and compensation of employees.
- **Firm Infrastructure** - includes activities such as finance, legal, quality management, etc.

Support activities often are viewed as "overhead", but some firms successfully have used them to develop a competitive advantage, for example, to develop a cost advantage through innovative management of information systems.

Value Chain Analysis

In order to better understand the activities leading to a competitive advantage, one can begin with the generic value chain and then identify the relevant firm-specific activities. Process flows can be mapped, and these flows used to isolate the individual value-creating activities.

Once the discrete activities are defined, linkages between activities should be identified. A linkage exists if the performance or cost of one activity affects that of another. Competitive advantage may be obtained by optimizing and coordinating linked activities.

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The value chain also is useful in outsourcing decisions. Understanding the linkages between activities can lead to more optimal make-or-buy decisions that can result in either a cost advantage or a differentiation advantage.

The Value System

The firm's value chain links to the value chains of upstream suppliers and downstream buyers. The result is a larger stream of activities known as the *value system*. The development of a competitive advantage depends not only on the firm-specific value chain, but also on the value system of which the firm is a part.

Recommended Reading

Porter, Michael E., [*Competitive Advantage: Creating and Sustaining Superior Performance*](#)

In *Competitive Advantage*, Michael Porter introduces the value chain as a tool for developing a competitive advantage. Topics include:

- Sharing of value chain activities among business units.
- Using value chain analysis to develop low-cost and differentiation strategies.
- Interrelationships between value chains of different industry segments.
- Applying the value chain to understand the role of technology in competitive advantage.

The book concludes by considering the implications for offensive and defensive competitive strategy, including how to identify vulnerabilities and initiate an attack on the industry leader.