## Value Chain Analysis

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### Introduction

Nowadays companies achieve long-term competitiveness by providing high-quality products and services at reasonable and competitive prices. To attain a competitive advantage, the company has to match and then surpass their competitors, and even discover what the customers want and satisfy their expectations. Strategic analysis helps the company focus its plan and hence achieve a competitive advantage.

A strategic management accounting method used to measure the importance of the customer's perceived value is value chain analysis. Through evaluating the strategic advantages and disadvantages of the company's activities and value-creating processes in the market place, value chain analysis is essential to assess the company's competitive advantages.

### Value Chain Concept

The value chain concept was first stated by Michael Porter (1985) to describe how a customer accumulates along a chain of activities that lead to the final product and service. Porter's value chain diagnoses the company into strategically important activities and evaluates the impact on company cost and value behaviour. He outlines the value chain as the internal processes through which the company designs, produces, sells, delivers and supports its product. Cost is no longer treated as an expense that goes to the profit and loss account, but it is treated as value that accumulates to company wealth as shown in balance sheet. Porter indicates that "a company's value chain and the way it performs individual activities are a reflection of its history, its strategy, its approach of implementing its strategy, and the underlying economics of the activities themselves."

Porter (1985) classifies business activities under two categories: primary product line activities and support activities. Primary activities refer to the processes directly involved in transforming materials into finished goods, then goods delivery and after-sales services to goods sales. They basically include:

- materials intake, specification check, handling and warehousing;
- materials and components processing into finished goods;
- order processing and distribution;
- communication, pricing and decision-making by management; and
- installation, repair and parts replacement.

These primary activities can be grouped into upstream activities such as supplying and manufacturing, and downstream activities such as marketing and distribution.

Support activities are the processes and actions to facilitate the primary product line activities. They are the company's staff functions and include the following:

- procurement - purchasing of raw materials, supplies, other consumables and assets;
- technology development - application of know-how, procedures and technological inputs involved in every value chain activity;
- human resources management - selection, promotion and placement, appraisal, rewards, management development, staff relations; and
- company infrastructure - general management, strategic planning, accounting, finance, legal, government affairs and quality management.

Value chain analysis is a technique that yields value improvement. There are two components of value chain analysis: the industry value chain and the company's internal value chain. The industry value chain includes all of the value-creating activities within the whole industry, beginning with the basic raw material and ending with the after-sales service of the product sold. The internal value chain of a company includes all the value creating activities of that specific company.

Internal value or cost analysis is used to identify the factor or cost determinants for each value-creating process. By examining the factors that drive costs, a company can assign priorities among its cost improvement initiatives to determine its cost advantage, and a company should also be aware of the cost factors of its competitors.

Management accounting systems contain the total cost of each value-creating process; they may not reveal the causes or factors for the significant individual costs. Adopting single output or volume measures (e.g. units, labour hours, sales in dollars) to assign costs is often misleading. Multiple cost drivers usually provide more useful information. Structural cost drivers are general and derived from a macroeconomic viewpoint. Executional cost drivers are more specific and application-related.

**Structural cost drivers:**

- Scale – What are the investment amounts for research and development, product design, production and other operations?
- Scope – What is the area of operation, front-line or back-end?
- Experience – How many years has the company already operated this?
- Technology – What technical processes are involved in each process of the company's value chain?
- Complexity – How sophisticated are the products or services to provide to customers?

**Executional cost drivers:**

- Workforce involvement – Do the employees take part in decision-making and performance improvements?
- Total quality management – Are the managers and employees devoted to total quality in processes and products?

- Capacity utilization - What are the operational scales for matching utilization of plant capacity?
- Plant layout efficiency – How efficient is the production plant's layout?
- Product configuration – Is the product design or service formulation effective?
- Linkage with suppliers and customers – Is the linkage with vendors and customers based on the company's value chain?

**Implementation of Value Chain Analysis**

There is a three-stage process to conduct value chain analysis. It delivers value to customers and reviews all processes to maximize product value.

1. **Activity Analysis** – Ascertain the activities that contribute to the processing of the product or service.
2. **Value Analysis** – Recognize the items and/or services that customers value in the way one conducts each activity, and then calculate the changes based on relevant structural and/or executional cost drivers.
3. **Evaluation and Planning** – Decide what changes to make and determine how to conduct the plan.

**Contribution of Value Chain Analysis**

The value chain links up a series of value creating activities from supplier to customer. The objective is to perform value chain activities more efficiently and at a lower cost than competitors. The focus is the chain from the customer's perspective. This overcomes the criticisms of traditional management accounting, starting too late and finishing too soon in terms of the value chain. Value chain analysis extends from materials input, work-in-process and finished goods manufactured to other primary activities as after-sales services, as well as support activities as procurement, technology, human resources management and company infrastructure.

**Limitations of Value Chain Analysis**

Value chain analysis is still regarded as a new strategic management accounting tool and has several operational limitations:

**1. Availability of data:**
Company data about revenues, costs, and assets used for value-chain analysis are obtained from financial information in a single period. Multiple-period data for long-term strategic decision-making, changes in cost structures, capital investments and market prices may not be immediately available.

**2. Ascertainment of revenues, costs and assets:**
Identification of relevant revenues, costs, and assets for each value chain activity is difficult. As there is no scientific approach, much work is done through trial-and-error and experimentation methods.

**3. Identification of cost drivers:**
Isolation of cost drivers for value–creating activities, identification of value chain linkages across activities, and computation of supplier and customer profit margins present serious challenges.

**4. Identification of stages:**
Identification of stages in an industry's value chain is affected by the ability to locate at least one company department that participates in a specific stage. Breaking down a value stage into two or more stages is necessary for diagnosing abilities at various stages.

**5. Resistance from employees:**
Value chain analysis involving strategic partners outside the company is still a new concept and is not easily understood by all employees. It may face resistance from front line staff as well as managers.

## Conclusion

In the past, management accounting concentrated on internal information. It put excessive emphasis on control of production costs. The modern business idea presumes that cost reduction must be found in the "value-added" process; that is, selling price less the cost of raw material or the cost of work-in-process items.

There are other inputs such as engineering, maintenance, distribution and service, so purely following a value added approach can be misleading. The traditional value added approach starts too late as it ignores linkages with suppliers, but it also stops too early as it ignores linkages with customers.

The modern value chain approach incorporates external and internal data, applies appropriate cost drivers for all major value-creating processes, exploits linkages throughout the value chain and offers continuous monitoring of a company's strategic competitive advantage. It involves the inputs of other strategic partners, such as material suppliers, finished goods wholesalers, and final customers. The goal is to perform value chain activities more efficiently, and ultimately surpass industrial competitors.

## References

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