Strategic Cost Accounting

M. Com (Semester IV)
Topic- Value Chain Analysis

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What is Value Chain Analysis?

Value chain analysis (VCA) is a process where a firm identifies its primary and support activities that add value to its final product and then analyse these activities to reduce costs or increase differentiation. Value chain represents the internal activities a firm engages in when transforming inputs into outputs.

Value chain analysis is a strategy tool used to analyse internal firm activities. Its goal is to recognize, which activities are the most valuable (i.e. are the source of cost or differentiation advantage) to the firm and which ones could be improved to provide competitive advantage. In other words, by looking into internal activities, the analysis reveals where a firm's competitive advantages or disadvantages are.

Value Chain Analysis is a useful way of thinking through the ways in which you deliver value to your customers, and reviewing all of the things you can do to maximize that value. It takes place as a three-stage process:

1. **Activity Analysis**, where you identify the activities that contribute to the delivery of your product or service.
2. **Value Analysis**, where you identify the things that your customers value in the way you conduct each activity, and then work out the changes that are needed.
3. **Evaluation and Planning**, where you decide what changes to make and plan how you will make them.

By using Value Chain Analysis and by following it through to action, you can achieve excellence in the things that really matter to your customers.

Advantages of Value Chain Analysis

- Improves quality by providing better understanding of customer requirements when products are assembled from multiple input sources (e.g. cars, computers...).
- Provides a way to evaluate competitive cost position and thereby improving strategic positioning.
- Reduces time when there is a great deal of interdependency between the participants in a value chain.
- Reduce cost by focusing attention on areas needing cost reduction and by reconfiguring the value chain.

How to Improve the Value Chain?

When a firm takes into account its value chain, it needs to consider its value proposition, or what sets it apart from its competitors. Value chain analysis is designed to improve profits by creating a product or service that is so superior that customers are willing to pay more than the cost to develop it.

But improving a value chain for the sake of improvement should not be the end goal. Instead, a company should decide why it wants to improve its value chain in the context of its competitive advantage to differentiate itself among its peers.

Two common competitive advantage strategies include low cost provider or specialization/differentiation of product or service.

- **Low-cost provider** – value chain analysis focuses on costs and how a company can reduce those costs.
- **Specialization** – value chain analysis focuses on the activities that create a unique product or differentiation in service.

Thus, there are two different approaches on how to perform the analysis, which depend on what type of competitive advantage a company wants to create (cost or differentiation advantage). The table below lists all the steps needed to achieve cost or differentiation advantage using VCA.

Types of Competitive Advantages

Cost advantage	Differentiation advantage
This approach is used when organizations try to compete on costs and want to understand the sources of their cost advantage or disadvantage and what factors drive those costs.	The firms that strive to create superior products or services use differentiation advantage approach.
Step 1. Identify the firm's primary and support activities. Step 2. Establish the relative importance of each activity in the total cost of the product. Step 3. Identify cost drivers for each activity. Step 4. Identify links between activities. Step 5. Identify opportunities for reducing costs.	Step 1. Identify the customers' value-creating activities. Step 2. Evaluate the differentiation strategies for improving customer value. Step 3. Identify the best sustainable differentiation.

Steps of Cost Advantage

To gain cost advantage a firm has to go through 5 analysis steps:

1. **Step 1. Identify the firm's primary and support activities.** All the activities (from receiving and storing materials to marketing, selling and after sales support) that are undertaken to produce goods or services have to be clearly identified and separated from each other. This requires an adequate knowledge of company's operations because value chain activities are not organized in the same way as the company itself. The managers who identify value chain activities have to look into how work is done to deliver customer value.
2. **Step 2. Establish the relative importance of each activity in the total cost of the product.** The total costs of producing a product or service must be broken down and assigned to each activity. Activity based costing is used to calculate costs for each process. Activities that are the major sources of cost or done inefficiently (when benchmarked against competitors) must be addressed first.
3. **Step 3. Identify cost drivers for each activity.** Only by understanding what factors drive the costs, managers can focus on improving them. Costs for labour-intensive activities will be driven by work hours, work speed, wage rate, etc. Different activities will have different cost drivers.
4. **Step 4. Identify links between activities.** Reduction of costs in one activity may lead to further cost reductions in subsequent activities. For example, fewer components in the product design may lead to less faulty parts and lower service costs. Therefore, identifying the links between activities will lead to better understanding how cost improvements would affect the whole value chain. Sometimes, cost reductions in one activity lead to higher costs for other activities.
5. **Step 5. Identify opportunities for reducing costs.** When the company knows its inefficient activities and cost drivers, it can plan on how to improve them. Too high wage rates can be dealt with by increasing production speed, outsourcing jobs to low wage countries or installing more automated processes.

Steps of Differentiation Advantages

VCA is done differently when a firm competes on differentiation rather than costs. This is because the source of differentiation advantage comes from creating superior products, adding more features and satisfying varying customer needs, which results in higher cost structure.

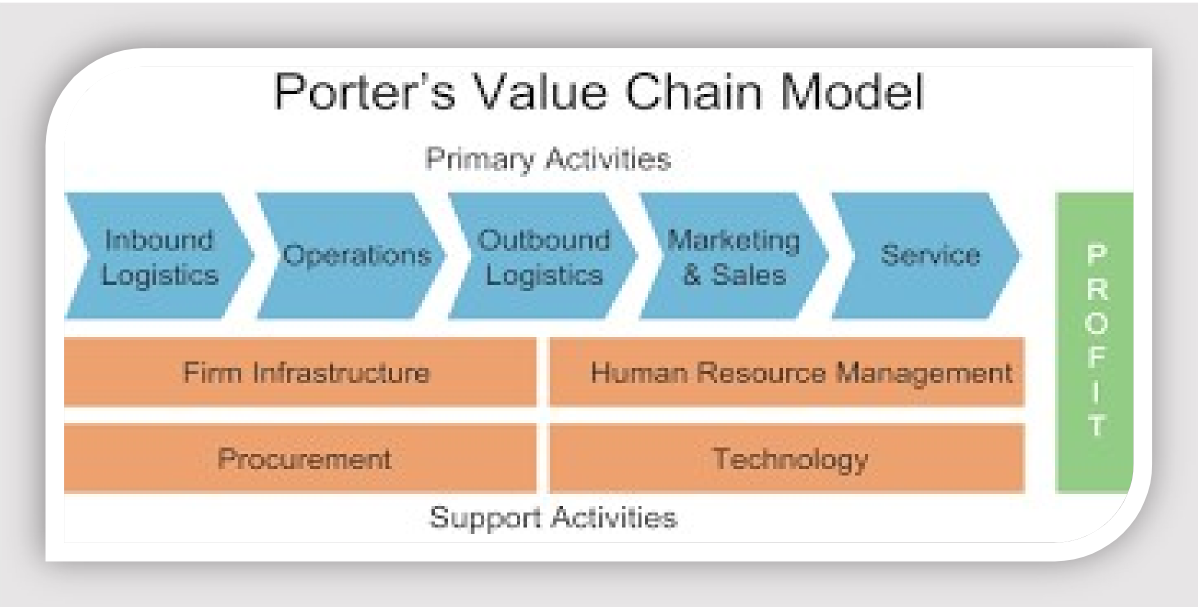
1. **Step 1. Identify the customers' value-creating activities.** After identifying all value chain activities, managers have to focus on those activities that contribute the most to creating customer value. For example, Apple products' success mainly comes not from great product features (other companies have high-quality offerings too) but from successful marketing activities.
2. **Step 2. Evaluate the differentiation strategies for improving customer value.** Managers can use the following strategies to increase product differentiation and customer value:

    - Add more product features;
    - Focus on customer service and responsiveness;
    - Increase customization;
    - Offer complementary products.

3. **Step 3. Identify the best sustainable differentiation.** Usually, superior differentiation and customer value will be the result of many interrelated activities and strategies used. The best combination of them should be used to pursue sustainable differentiation advantage.

Porter's Value Chain Model

M. Porter introduced the generic value chain model in 1985. He identified several key steps common among all value chain analyses and determined that there are primary and supporting activities that when performed at the most optimal levels will create value for their customers, such that the value offered to the customer exceeds the cost of creating that value, resulting in higher profit. Porter's framework groups activities into primary and support categories Value chain represents all the internal activities a firm engages in to produce goods and services. The primary activities focus on taking the inputs, converting them into outputs, and delivering the output to the customer. The support activities play an auxiliary role in primary activities. Thus, VC is formed of primary activities that add value to the final product directly and support activities that add value indirectly. When a company is efficient in combining these activities to provide a superior product or service, then the customer is willing to pay more for the product than the cost to make and deliver the product which results in a higher profit margin.



Although, primary activities add value directly to the production process, they are not necessarily more important than support activities. Nowadays, competitive advantage mainly derives from technological improvements or innovations in business models or processes. Therefore, such support activities as 'information systems', 'R&D' or 'general management' are usually the most important source of differentiation advantage. On the other hand, primary activities are usually the source of cost advantage, where costs can be easily identified for each activity and properly managed.

Elements in Porter's Value Chain

Rather than looking at departments or accounting cost types, Porter's Value Chain focuses on systems, and how inputs are changed into the outputs purchased by consumers. Using this viewpoint, Porter described a chain of activities common to all businesses, and he divided them into primary and support activities, as shown below.

Primary Activities

Primary activities relate directly to the physical creation, sale, maintenance and support of a product or service. They consist of the following:

1. **Inbound logistics** – These are all the processes related to receiving, storing, and distributing inputs internally. Your supplier relationships are a key factor in creating value here.
2. **Operations** – These are the transformation activities that change inputs into outputs that are sold to customers. Here, your operational systems create value.
3. **Outbound logistics** – These activities deliver your product or service to your customer. These are things like collection, storage, and distribution systems, and they may be internal or external to your organization.
4. **Marketing and sales** – These are the processes you use to persuade clients to purchase from you instead of your competitors. The benefits you offer, and how well you communicate them, are sources of value here.
5. **Service** – These are the activities related to maintaining the value of your product or service to your customers, once it's been purchased.

Support Activities

These activities support the primary functions above. In our diagram, the dotted lines show that each support, or secondary, activity can play a role in each primary activity. For example, procurement supports operations with certain activities, but it also supports marketing and sales with other activities.

1. **Procurement (purchasing)** – This is what the organization does to get the resources it needs to operate. This includes finding vendors and negotiating best prices.
2. **Human resource management** – This is how well a company recruits, hires, trains, motivates, rewards, and retains its workers. People are a significant source of value, so businesses can create a clear advantage with good HR practices.
3. **Technological development** – These activities relate to managing and processing information, as well as protecting a company's knowledge base. Minimizing information technology costs, staying current with technological advances, and maintaining technical excellence are sources of value creation.
4. **Infrastructure** – These are a company's support systems, and the functions that allow it to maintain daily operations. Accounting, legal, administrative, and general management are examples of necessary infrastructure that businesses can use to their advantage.

Companies use these primary and support activities as "building blocks" to create a valuable product or service.

Process of Porter's Value Chain

To identify and understand your company's value chain, follow these steps.

Step 1 – Identify sub activities for each primary activity

For each primary activity, determine which specific sub activities create value. There are three different types of sub activities:

Direct activities create value by themselves. For example, in a book publisher's marketing and sales activity, direct sub activities include making sales calls to bookstores, advertising, and selling online.

Indirect activities allow direct activities to run smoothly. For the book publisher's sales and marketing activity, indirect sub activities include managing the sales force and keeping customer records.

Quality assurance activities ensure that direct and indirect activities meet the necessary standards. For the book publisher's sales and marketing activity, this might include proofreading and editing advertisements.

Step 2 – Identify sub activities for each support activity.

For each of the Human Resource Management, Technology Development and Procurement support activities, determine the sub activities that create value within each primary activity. For example, consider how human resource management adds value to inbound logistics, operations, outbound logistics, and so on. As in Step 1, look for direct, indirect, and quality assurance sub activities. Then, identify the various value-creating sub activities in your company's infrastructure. These will generally be cross-functional in nature, rather than specific to each primary activity. Again, look for direct, indirect, and quality assurance activities.

Step 3 – Identify links

Find the connections between all of the value activities you've identified. This will take time, but the links are key to increasing competitive advantage from the value chain framework. For example, there's a link between developing the sales force (an HR investment) and sales volumes. There's another link between order turnaround times, and service phone calls from frustrated customers waiting for deliveries.

Step 4 – Look for opportunities to increase value

Review each of the sub activities and links that you've identified, and think about how you can change or enhance it to maximize the value you offer to customers (customers of support activities can be internal as well as external).

Table 1. Comparison of Traditional Management Accounting Systems and Value Chain Costing

	Traditional Management Accounting Systems	Value Chain Costing
Focus	Internal	External
Perspective	Seeks cost reduction in value added process.	Seeks competitive advantage based on entire set of linked activities from suppliers to end-use customers.
Cost analysis-way	In term of: product, customer, and function With a strongly internal focus Value added is a key concept	In terms of the various stages of the overall value chain of which the firm is a part With a strongly external focus Value-added is seen as a dangerously narrow concept
Cost analysis-objective	Three objectives all apply, without regard to the strategic context: Score keeping, attention directing, and problem solving.	Although the three objectives are always present, the design of cost management system changes dramatically depending on the basic strategic positioning of the firm: either under a cost leadership strategy, or under a product differentiation strategy.
Cost driver concept	A single fundamental cost driver pervades literature - cost is a function of volume. Applied too often only at the overall firm level.	Multiple cost drivers such as: Structural drivers (e.g. scale, scope, experience, technology, complexity) Executional drivers (e.g. participative management, total quality management) Each value activity has a set of unique cost drivers.
Cost containment philosophy	Cost reduction approached via responsibility centers or product cost issues	Cost containment is a function of the cost driver(s) regulating each value activity.
Primary concern	Cost impact	Cost/Value/Revenue relationship
Nature of data	Internal information	External and internal information
Primary role	Scorekeeper	Analyst and consultant
Management responsibility	Follower/reactive Risk-averse	Leader/proactive Comfortable with ambiguity

Problems of Value Chain Analysis

There are several problems when using VC analysis in relation to cost effective management as given below-

1. **Incorrect allocation of cost within the chain:** Certain costs are extremely difficult to allocate to certain individual products, but they are the costs of activities which are very significant in relation to total quality and in turn competitive advantage.
2. **Long and time-consuming process:** If the total philosophy of value chain is not adopted, there is risk of overlooking strategic aspects in decision making. This exercise needs to be repeated again and again looking at competition, both in the present and in the future.
3. **Non availability of information regarding competition, product lines and structure:** The whole exercise of developing a value chain in practice may be very difficult as the information required is very seldom available.
4. **Depends on lots of assumptions or supposition:** Another problem inherent when using VC analysis is that management accountant has to make lot of assumptions or suppositions because of non-availability of information. These may be correct.

Conclusion

Value Chain Analysis is a complex and an industry specific phenomenon which has evolved over the period of time. It is a continuous process of gathering, evaluating and communicating information for decision making and will help you to identify all the value-creating activities and processes within your organisation. Implementing Value chain analysis is highly complex in nature due to the difficulty and the differences that exist between the Value Chain Analysis requirements and the existing organizational methods and records. However, integrating the two on similar lines can enable organizations work smartly reaping greater profits. Today’s cost accountant must understand many functions of a business’s value chain, from manufacturing to marketing to distribution to customer service.