Value Configurations

Value configurations are used to understand and analyze a business' activities, the strategic importance of the activities, and how they affect cost and value. A much used framework for analyzing the competitive strengths of a business is the value chain model.

Porter's Value Chain Model

In 1985 Michael Porter presented a value chain model which identifies key activities that are generic to all businesses in terms of value generating activities. The model represents a systematic way for examining the different activities a firm performs, and how these activities interact with each other. Porter highlights that this approach is necessary when analyzing the sources of competitive advantage. The value chain approach divides a firm into a set of generic categories of strategic important activities which determine the firm's relative cost position or its basis for offering a differentiated product (Porter 1985). Porter says that every firm's value chain is based on nine generic categories of activities, and that these categories are linked together in characteristic ways (Porter 1985). The model presented is generic for all types of organizations, and activities that are strategically vital for a specific industry are considered as industry dependent.

In competitive terms, value is the customer's willingness to pay for what is provided to them. Firms will be profitable if the cost of producing a product is lower than the value the firm claim by doing so. Porter emphasizes that when analyzing a firm's competitive advantage value should be used instead of cost. The reason is that firms often raise their costs deliberately so that they can get a premium price through differentiation.

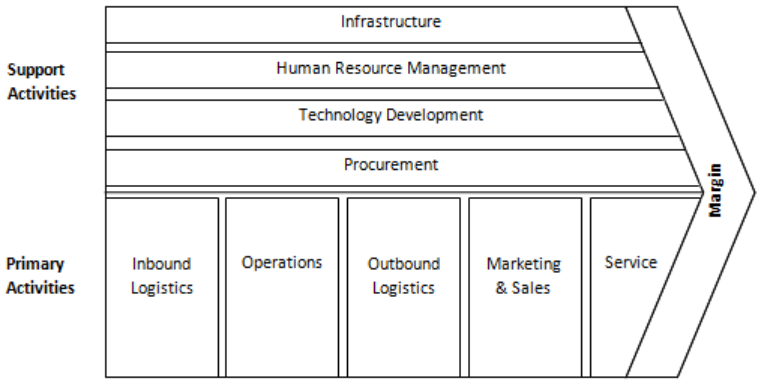


Figure 1: The Generic Value Chain (Porter 1985, 37)

Dozens of organizations have used Porter's value chain for analyzing and planning, and for generating value and strategic plans. However, a significant number of businesses have found it difficult to use this approach with any rigidity to their industry sector. In 1998 Charles Stabell and Øystein Fjeldstad therefore published a paper presenting three value configuration models for understanding and analyzing value creation. (Leading Edge Forum 1998)

Fjeldstad and Stabell's three Value Configuration Models

In the article *Configuring value for competitive advantage: on chains, shops, and networks* Fjeldstad and Stabell present their research on limitations of Porter's value chain model. Arguing that they have experienced serious problems in applying Porter's value chain model, especially to businesses in some service industries, their perception is that three different models are needed in order to understand and analyze value creating activities over a broad range of industries and businesses.

Their work builds on Thompson's (1967) topology of long-linked, intensive, and mediating technologies, and presents three value configuration models, the value chain, the value shop and the value network. From Thompson (1967) an explanation of his typology of long-linked, intensive and mediating technologies can be found. In short he describes a long-linked technology as a process characterized by serial interdependence. That is, an act Z can only be performed after act Y has been successfully completed, which again is dependent on act X and

so on. Thompson uses the mass production assembly line as an example of being of long-linked nature. He says that when producing one single product, repetitively and at a constant rate assembly line production approaches instrumental perfection. When producing only one kind of product this permits the use of what Thompson refer to as clear-cut criteria during selection of production elements such as machines, materials, human operators etc. The repetitive approach allows for removal of imperfections and modification of the process. Through repetition human motions can also be improved through learning and experience. Finally, due to production at constant rates, the process can be standardized such that each of the resources involved in the process is utilized to its capacity. As for mediating technologies the primary function is to link customers who wish to be interdependent, like the bank linking borrowers and depositors. Here, the complexity does not lie in sequential interdependence, but in the requirement of operating in standardized ways and in extensive areas. This often involves serving multiple customers distributed both in time and space. The intensive technology is characterized by that a variety of techniques are drawn upon in order to achieve a change in one specific object. It is a custom technology in the sense that the selection, combination and order of application of various techniques depend on the specific problem that is to be solved, and is determined on feedback from the object itself. Thompson describes the general hospital as a good example of illustrating this, because which activities and the order they are performed depends on the state of the specific patient. The approach of using different techniques in different orders depending on the nature of the object is also valid and used for objects of nonhuman nature, like the construction industry. (Thompson 1967)

Stabell and Fjeldstad describe their work as “exploring the idea that the value chain models the activities of a long-linked technology, while the *value shop* models firms where value is created by mobilizing resources and activities to resolve a particular customer problem, and the *value network* models firms that create value by facilitating a network relationship between their customers using a mediating technology” (Stabell and Fjeldstad 1998). The two latter models are better suited for key service industries, and Fjeldstad and Stabell argue that using these three models will give better coverage of value chain and value configuration analysis. Each of the value configuration models has its own set of core activities which creates value for the customer. The selected model will therefore be important for how value is generated, and how the business should be structured and managed. (Leading Edge Forum 1998)

Below, an overview of Fjeldstad and Stabell's three value configuration models is presented. Knowledge and experience have been added as key cost drivers of value shops. These value configurations will be further elaborated in the following section.

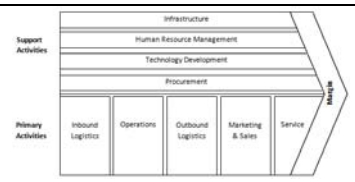
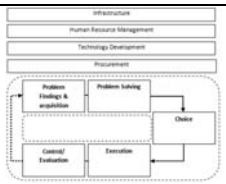
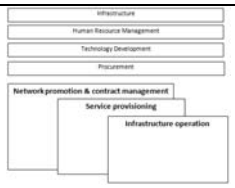
	Value Chain	**Value Shop**	**Value Network**
Value chain logic	Transformation of inputs into products	(Re)solving customers problems	Linking customers
Primary technology	Long-linked	Intensive	Mediating
Primary activity categories	- Inbound logistics - Operations - Outbound logistics - Marketing - Service	- Problem-finding and acquisition - Problem-solving - Choice - Execution - Control/evaluation	- Network promotion and contract management - Service provisioning - Infrastructure operation
Main interactivity relationship logic	Sequential	Cyclical, spiraling	Simultaneous, parallel
Primary activity interdependence	- Pooled - Sequential	- Pooled - Sequential - Reciprocal	- Pooled - Reciprocal
Key cost drivers	- Scale - Capacity utilization	- Knowledge - Experience	- Scale - Capacity utilization
Key value drivers		- Reputation	- Scale - Capacity utilization
Business value system structure	Interlinked chains	Referred shops	Layered and interconnected networks
Model			

Table 1: Overview of three different value configurations based on Stabell and Fjeldstad (1998, 415)

Value Chain

Porter emphasize that when analyzing a firm's competitive advantage value should be used instead of cost, because as long as the value a firm gains is higher than the costs of producing a product the firm will be profitable. (Porter 1985)

Stabell and Fjeldstad's value chain is based on Porters value chain model, but they claim that this model is best suited for companies that make products. It is emphasized that it in this model is the process of transforming input into products that creates value, and that it is the product that is the medium for transferring value between the firm and its customers (Stabell and Fjeldstad 1998).

The main focus of the value chain is on specific key activities, and the primary concern of value creation is the overall efficiency and cost of performing these key activities. In general this method is best suited for firms that produce a standard product at large numbers. Here the management focus will normally be on the output of the process which is the product, the process efficiency, the ability to respond to supply and demand changes, the control of upstream and downstream activities and the interface to the customer (Leading Edge Forum 1998). In the value chain process the value creation is analyzed by disaggregating a firm's value creation process into key activities. These activities are seen as the building blocks of the product, and each of them contribute differently to the characteristics of the product that creates value to the customers. The disaggregation must not be too complicated, but it is still important that it captures the activities that are strategically important. As showed in Figure 2, the value chain configuration consists of two layers, primary activities and supportive activities. Stabell and Fjeldstad (1998, 417) refer to Porter (1985, 34-35), and presents five generic primary activity categories within the value chain:

Inbound logistics:	Activities associated with receiving, storing, and disseminating inputs to the product.
Operations:	Activities associated with transforming inputs into the final product form.
Outbound logistics:	Activities associated with collecting, storing, and physically distributing the product to buyers.
Marketing and sales:	Activities associated with providing a means by which buyers can purchase the product and inducing them to do so.
Service:	Activities associated with providing service to enhance or maintain the value of the product.

Table 2: The five generic primary activity categories within the value chain

The generic support activities presented in Stabell and Fjeldstad (1998, 417) are:

Procurement:	Activities performed in the purchasing of inputs used in the value chain.
Technology development:	Activities that can broadly be grouped into efforts to improve product and processes.
Human resource management:	Activities of recruiting, hiring, training, developing, and compensating personnel.
Firm infrastructure:	Activities of general management, planning, finance, accounting, legal, government affairs, and quality management.

Table 3: The generic support activities

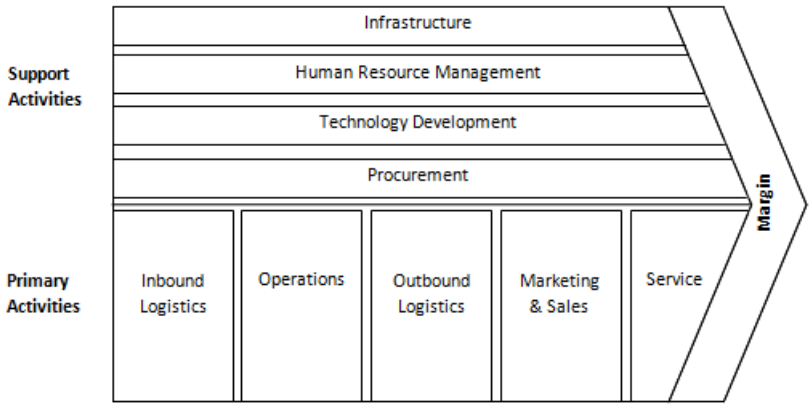


Figure 2: The Value Chain Diagram. (Porter 1985, 37)

As shown in Figure 2, the value chain diagram has a specific structure. This special format underlines the relationship between the different activities. The arrow shape of the diagram

represents the direction flow of the primary activities. The support activities that are layered on top of the primary activities symbols that these activities can happen in parallel to primary activities, and that these activities can apply to any of the primary activity categories. The margin line at the end of the arrow shape underlines that all of the activities in the diagram are cost elements, and that they together create the value that is delivered at the end of the value chain (Leading Edge Forum 1998). Porter (1985, 38) explains margin as the "… difference between total value and the collective cost of performing the value activities". The categories of supporting activities are not unique for the value chain model, and they should therefore also be relevant for other models (Leading Edge Forum 1998).

Value Shop

According to Stabell and Fjeldstad the aim of firms that are organized as value shops is to solve a specific customer problem or to seize on market opportunities. Depending on the problem that needs to be solved recourses are mobilized in order to create an individual solution to the problem. The usage and combination of different resources and activities, and the order in which they are used depends on the specific problem that needs to be solved. This way it is the customer's problem that in itself determines the intensity of the activities in the value shop (Stabell and Fjeldstad 1998). This is a quite different approach than the one of the value chain, which performs a fixed set of activities in order to create a large number of a standard product. The value shop model applies well to professional services like medicine, law, architecture, IT, engineering etc.

Another characteristic differentiating this model from the value chain is that activities are cyclic, iterative and interruptible. This meaning that it is common to move back and forth between certain activities. An example here could be that it would not be uncommon for an architect to move back and forth between different activities in order to get confirmation or rejection of e.g. the work done on a sketch. When one task is solved this can generate a new sequence of activities, and the whole process can be interruptible. This iterative and cyclic approach creates sequential and reciprocal interdependence between the different activities (Stabell and Fjeldstad 1998).

It should also be noted that in the value chain model there are strong information asymmetries between the customer and the firm. This asymmetry exists because the firm has knowledge and expertise that the customer needs, and is the reason the customer approaches the firm in the first place.

As shown in Figure 3 the flow of the different activities is not linear, but cyclical, iterative and interruptible. The primary activities of the value shop presented in Stabell and Fjeldstad (1998, 423) consist of generic problem solving and decision making activities:

Problem-finding and acquisition:	Activities associated with recording, reviewing, and formulating of the problem to be solved and choosing the overall approach to solve the problem.
Problem solving:	Activities associated with generating and evaluating alternative solutions.
Choice:	Activities associated with choosing among alternative problem solutions.
Execution:	Activities associated with communicating, organizing, and implementing the chosen solution.
Control and evaluation:	Activities associated with measuring and evaluating to what extent implementation has solved the initial problem statement.

Table 4: The Primary activities of the Value Shop presented

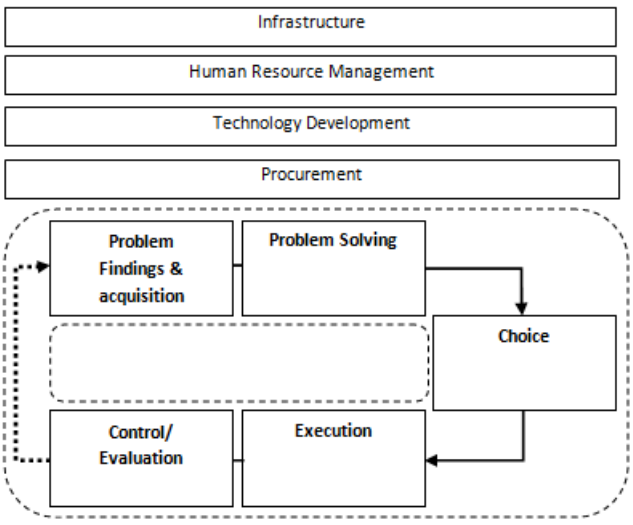


Figure 3: The Value Shop Diagram (Stabell and Fjeldstad 1998)

Since different skills and expertise is required at different stages of the problem solving process, focus in management is on areas like problem and opportunity assets, resource mobilization, project management, solutions delivery, outcome measurement and learning. (Leading Edge Forum 1998)

Value Network

Value networks are defined by Stabell and Fjeldstad (1998) as organizations that create value to its customers by linking them together or by mediating between them. Linking between the customers can be direct or indirect. An example of direct linking can be found in telephone services, while the linking of groups of customers through a common pool of funds within retail banking would be indirect linking of the customers. The firm is not the actual network, but it provides a networking service to the customer. The most common example of such companies are telephone companies, but also banks, postal services, transport and logistics etc. rely on mediating technology. (Stabell and Fjeldstad 1998)

As the name implies the customer value lies in the network that is created between customers. The larger the network the higher the value provided to customer becomes. It is however important that the mediators admit members that complement each other. To create value to the customer the mediating activities have to be performed simultaneously at multiple levels. The primary activities of the value network therefore have a strong reciprocal interdependence in comparison to the sequential relations within the value chain. In order to synchronize activities in the value network and to ensure reciprocity, standardization is often used by the mediators. (ibid.)

The primary activities of the value network presented in Stabell and Fjeldstad (1998, 429) is inspired by telecommunication because it is a rather generic form of mediation:

Network promotion and contract management:	Consists of activities associated with inviting potential customers to join the network, selection of customers that are allowed to join and the initialization, management, and termination of contracts governing service provisioning and charging.
Service provisioning:	Consists of activities associated with establishing, maintaining, and terminating links between customers and billing for value received. The links can be synchronous as in telephone service or asynchronous as in electronic mail service or banking. Billing requires measuring customers' use of network capacity both in volume and time.
Network infrastructure operation:	Consists of activities associated with maintaining and running physical and information infrastructure. The activities keep the network in alert status, ready to service customer requests.

Table 5: Primary activities of the Value Network

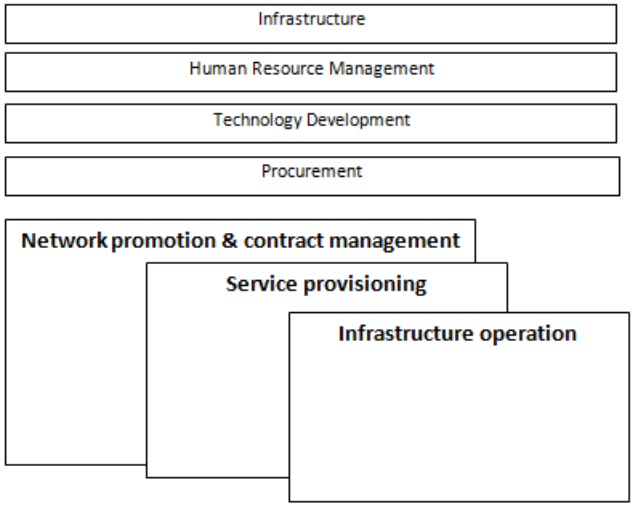


Figure 4: The Value Network Diagram (Stabell and Fjeldstad 1998)

As can be seen from the value network diagram (see Figure 4) the primary activities of the value network overlap. According to Stabell and Fjeldstad (1998) this format is used to underline the concurrent interactivity relationship among the three primary activity categories. Since the diagram is not shaped as an arrow, which is the case for the value chain diagram, this illustrates that value is created by the work of mediating between customers. (ibid.)