

## 2 Theoretical background and literature review

This sections presents, in a manner similar to a SWOT analysis, the theoretical background and literature review of the value chain analysis approach and different cost accounting approaches. For each approach, a brief overview and summary of the approach is provided, which will be discussed in the following paragraphs. The strengths and weaknesses of the approach, and the advantages and disadvantages for the consulting industry, will be also explained.

### 2.1 The value chain and service value chain

The value chain is, according to the handbook for value chain research by Kaplinsky and Morris (2002) “the full range of activities which are required to bring a product or service from conceptions, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers, and final disposer after use”. Other authors, like Lanen et al. (2008), define the value chain as “the set of activities that transport raw sources into the goods and services end user purchase and consume, and the treatment or disposal of any waste generated by the end user”. Mowen and Hansen (2011, p. 27) describes the value chain as “set of activities required to design, develop, produce, market, deliver and provide post-sales service for the product and services sold to the customer.” According to Mowen and Hansen (2011), internal value chains exist which also need to be managed. In summary, most definitions contain the transformation of raw resources into goods and services.

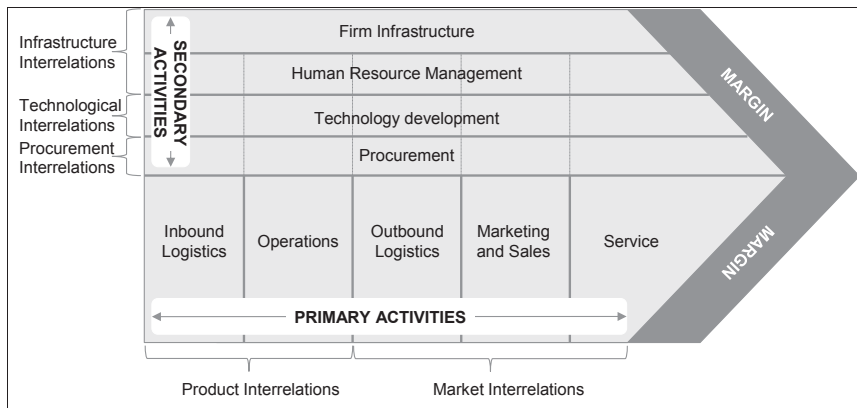
The service value chain structures the value processes of a service firm. The traditional value chain framework applies to the throughput of material products while, in the service value chain, the customer is throughput through the process (Bruhn and Georgi 2006). Christensen et al. (2003) argue that customers of service firms are not buying tangible products or even tangible service “products”, they are buying a result.

## 2.2 Value chain analysis

The term “value chain” was originally introduced in Michael Porter's book “Competitive Advantage - Creating and Sustaining Superior Performance” (Porter 1985). The value chain analysis is based on Michael Porter's generic value chain model (Porter 2001), developed in 1985 and used to explore Porter's model of competitive advantages through differentiation or cost leadership strategy. Porter always warns of the danger of being “stuck in the middle” (Porter 1996). The model of competitive advantages will not be discussed in this study as the discussion would be too broad. It should be noted, however, that other authors like Mathur (1988) see exactly this “stuck in the middle” as a possibility for competitive advantage.

Porter breaks companies' value chains down into single activities. The method allows the firm to understand which parts of its operations create value and which do not (Ketchen and Hult 2007). The aim is to cut the entire complicated supply chain of a company into smaller units. Hergert and Morris (1989) state that “the fundamental notion in the value chain analysis is that a product gains value as it passes through the vertical stream of production within the firm. When created value exceeds costs a profit is generated”. The model was originally introduced for companies in the manufacturing industry (Armistead and Clark 1993, Ketchen and Hult 2007), which has a significant impact on service firms which will be discussed later. As the Fig. 2.1 shows, the value chain is segmented into primary and support activities.

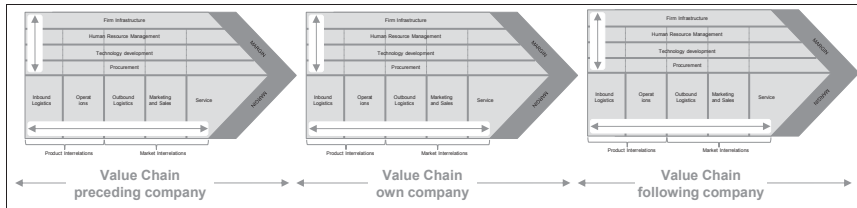
Primary activities are those involved with a product's physical creation, sales and distribution, and after-sales service. In detail, this involves the product interrelations inbound logistic and operations and the market interrelations outbound logistic, marketing, sales and after-sales service (Ireland et al. 2009, Mowen and Hansen 2011). Primary activities are always defined as value-added activities which are “those that customers perceive as adding utility to the goods or services they purchase” (Lanen et al. 2008, p. 4).



**Fig. 2.1 Classical value chain: adapted from Porter (2001)**

Support activities provide the assistance necessary for primary activities. In detail, this involves the infrastructure interrelations firm's infrastructure and human resource management, technological interrelations (technology development) and procurement interrelations (procurement) (Ireland et al. 2009, Mowen and Hansen 2011). Those activities are not part of the closer value chain they are included in every function of the value chain (Lanen et al. 2008).

Usually most companies do not produce all components by themselves and has, as incoming, a set of already-finished products. In this situation, the company is part of a larger supply chain (see Fig. 2.2) and needs to consider linkages with external activities (Mowen and Hansen 2011). Porter (1985) also identified the importance of chains or networks which lies outside and controlled by other companies (see Fig. 2.2) (Armistead and Clark 1993). The upstream-suppliers (preceding company) provide input to a company which adds value (own company), which then downstreams the products to the next company (following company) (Normann and Ramirez 1993).



**Fig. 2.2 Value chain as part of a network of chains**

The target of a well-planned and organized value chain is to maximize value creation while minimizing costs, where all activities of a company link efficiently together (Lynch 2003). The result of adding together the total value and the cost of creating value is, according to Porter (1985), the margin. The total value is referred to as the price a customer is willing to pay (Macmillan and Tampoe 2000). According to Johnson et al. (2008), especially in service organisations, the organisational culture also has an impact on creating value, as culture includes the way people perform the service, which if it successfully enhances competitive advantages and is difficult for competitors to copy.

Accounting data is also essential for the value chain analysis. Therefore, cost accounting is an excellent approach to dedicating cost to single functions and operations (Kinney and Raiborn 2009). According to Lanen et al. (2008), measuring the effects of a value chain is a fundamental service of cost accounting.

### 2.3 Service profit chain analysis

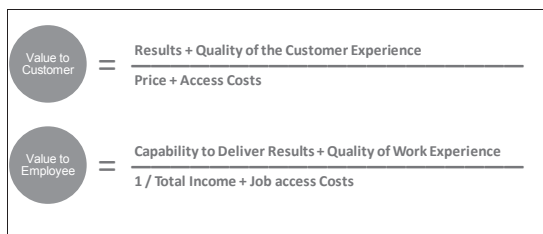
The service profit chain is an analysis framework that should be more suitable to the service industry than the traditional value chain framework, which was originally developed for the industrial economy. The framework “service profit chain” was developed by the Management Interest Group at the Harvard Business School as a concept for how a service company earns its money (Loveman 1998) and which argues “that revenues are driven by service quality perceptions, which in turn are driven by operational inputs and employee efforts” (Kamakura et al. 2002, p. 296). According to the designer Heskett et al. (1994) “the service-profit chain establishes relationships between profitability, customer loyalty, employee satisfaction, loyalty,

and productivity. The links in the chain (which should be regarded as propositions) are as follows: Profit and growth are stimulated primarily by customer loyalty. Loyalty is a direct result of customer satisfaction. Satisfaction is largely influenced by the value of services provided to customers. Value is created by satisfied, loyal, and productive employees. Employee satisfaction, in turn, results primarily from high-quality support services and policies that enable employees to deliver results to customers.” (see Fig. 2.3)



**Fig. 2.3 The Service Profit Chain adopted from Loveman (1998)**

Simplified, the framework means that profit and growth results from customer loyalty. Customer loyalty comes from customer satisfaction, which is a function of the value delivered to the customer. This function is mathematically represented in Fig. 2.4.



**Fig. 2.4 Value to customer and employee formula (Heskett et al. 2010)**

The value delivered to the customers is provided by the employee. A high value “delivery” comes from loyal and productive employees, which results, in turn, from a function of satisfaction of the employee, which relates to internal quality (Heskett and Sasser 2010). According to Maister (2001), the quality and customer relationship is driven by the employee’s satisfaction. Kamakura et al. (2002) interpret the framework as an integrative tool which translates customer perceptions and behaviours into profits, while understanding the company’s investments in the service quality.

The service profit chain itself is a set of elements executed as an operating strategy (Heskett and Sasser 2010). Each activity within the chain has an owner that could be an employee, customer or both. The behaviour and functionality of those owners is essential to understand within the framework. It requires therefore a fully-developed framework of measurement and an analysis of a full representative lifetime of the activities and owner. This analysis could help a firm understand their own strengths and weaknesses.

According to Heskett et al. (2010) the research on the application of the service profit chain framework has not been advanced thus far and needs to be extended. The available data counts for merely insignificant results and is therefore not academically useful. To go forward, better guidance for the collection of data needs to be developed. Therefore, better definition of terms used to describe activities in the service chain, standardised methods of collecting and organizing data, fitting approaches of analysing and sharing those standards with researchers and practitioners is required (Armistead and Clark 1993, Heskett and Sasser 2010).

### **2.3.1 Strength of the models**

Both the value chain analysis and the service value chain analysis are concepts which, through the analysis, could demonstrate the strength and weaknesses of the company and alight to create transparency. The results could then be used for internal and external benchmarking. Internal best practices could be set up within an exchange program implemented in the other departments.

The application of the value chain analysis framework has already been widely discussed in the literature, which includes explanations of the success of various firms (Johnson et al. 2008), basis for resource audits (Johnson et al. 2008), allocations in accounting systems (Hergert and Morris 1989) and as basis for the development of an ABC in service firms (Innes and Mitchell 1990). This makes it easier to adapt the concept for an individual company's purposes and the application is associated with less risk. According to Armistead and Clark (1993), Porter suggests a value chain paradigm in the service industry in a re-formulated model with

a focus on cost drivers to gain cost advantages. In this re-formulated model, the primary and supportive activities are divided into steps of the service firm.

### **2.3.2 Weaknesses of the models**

The value chain analysis was originally introduced as a framework for the manufacturing industry homogeneity (Armistead and Clark 1993, Ketchen and Hult 2007). According to Armistead and Clark (1993), Porter recognised originally just the operational flow in a service firm and did not explore the supportive activities. Compared to the manufacturing industry, activities in the service industries are extremely diverse (Evans and Bellamy 1995). Often, no direct relationship between input and output exists, and services cannot be stored. Therefore, a direct application is often impossible and needs to be adjusted to the characteristics of the service industry.

From the perspective that each company is a part of a broader value chain (Armistead and Clark 1993, Normann and Ramirez 1993, Mowen and Hansen, 2011), a strategy could be derived from the concept that the positioning of a company in the right place on the value chain (with right market and products) is the only strategy. Normann and Ramirez (1993) argue such strategies would lead to the limited strategy of placing only value adding activities in the value chain; today, it is also necessary to reinvent value.

The service value chain concept has not been widely discussed in the literature and the application is more theoretically discussed. A broader set of application examples is missing. More research on this concept still needs to be done before the concept could serve as a basis for an application study (Armistead and Clark 1993, Heskett and Sasser 2010).

### **2.3.3 Opportunities and threats for consulting firms**

Value chain analysis in the consulting industry appears to be under researched, as no papers or literature could be found, which obviously seems to be a gap. For the purpose of collecting activities within a company and their value chain, the value chain analysis frame seems to be a fitting concept for the service industry, which also

needs, of course, to be adjusted to it. According to Armistead and Clark (1993), the model is useful also in formulation of service operation strategies. It is always the application, translation and further development of existing concepts that provide the right framework. To set up a cost accounting approach, it's possible to find a fitting general framework in the model.

Both frameworks serve the transparency of companies' processes. Value chain analysis allows for the systematic evaluation of the process and helps to find inferences. On the other hand, it is always important for benchmarking to measure the company with other comparable organisations within the same sector. Such data includes operational data, customer data and financial data (Kamakura et al. 2002). Especially for the consulting industry, the collection of this data will be rather difficult to gather without an independent researcher, as the results are comprised of sensitive strategy data. Unless such data is collected over an extended period of time, the results will be not significant.

Burtonshaw (2010) argues that the value chain model is, at the first glance, not fitting to the consulting industry, as the contractual relationship between client and consultant is satisfied by, for example, the exchange of knowledge for an agreed fee and this concept would not fit to the model. On the other hand, he also argues that, on a more detailed level, the model fits as, in the example of knowledge, sharing of knowledge leads to regular improvements and development of best practice.

The service profit chain framework is more valuable as an analysis tool for analysing soft interrelations, rather than hard interrelations of the value chain. To achieve long-term profitability, a service profit chain audit can help with understanding the drivers. According to Heskett et al. (1994), such an audit comprises drivers relating to profit and growth, customer satisfaction, external service value, employee loyalty, employee satisfaction, internal service quality and leadership. For the cost accounting approach, it is necessary to measure hard facts. The framework for this study seems to not be the best fit at this point in time.



## 2.4 Introduction to cost accounting

Cost accounting has its origin in the manufacturing industry, therefore most of the approaches and terminology refer to it. For this study, it is always important to consider this fact, as the transfer to the service industry needs to be developed. There are lot of accounting and financial terms used in this study which are important first to understand. To assist the reader in understanding the terms, a description of the important terms is provided in Appendix A of this study.

Cost accounting is a part of internal management accounting and designed for providing information to managers (internal users) to assist them in making decision (Martinson 1994, Lanen et al. 2008). It has the three functions: documentation, information, planning and control, and conflict resolution and decision making (Bertsch 1991, Raiborn and Kinney 2009, Mowen and Hansen 2011) (see Fig. 2.5). It's usually divided into cost element accounting, cost center accounting and cost object accounting. Each system can be distinguished according to the level of allocation in absorption costing accounting and variable costing accounting, and according to the level of time in actual, normal, standard (plan) costing accounting. In summary, cost accounting should measure the cost of the performed products or services. According to Martinson (1994), this function is very important as this information influences decision on pricing, choice of product or service and operating income.

1. Documentation	2. Information, planning and control	3. Conflict resolution and decision making
<ul style="list-style-type: none"><li>▪ recording the actual costs incurred in one period (one set price and quantity required)</li><li>▪ transferring cost to cost objects</li><li>▪ combination of formal and informal recordkeeping</li></ul>	<ul style="list-style-type: none"><li>▪ orientation, foundation and control of decisions</li><li>▪ cost information and tasks</li><li>▪ the information is current or forecasted, quantitative or qualitative; monetary or nonmonetary</li></ul>	<ul style="list-style-type: none"><li>▪ argumentation and transparency</li><li>▪ information to resolve conflict</li></ul>

**Fig. 2.5 The three functions of cost accounting adapted from Bertsch (1991)**

Cost accounting is often called “responsibility accounting,” as the system of reporting is usually tailored to the company and, within the system, structured so that costs and incomes are assigned to responsible person within the organisation (Lanen et al. 2008). Those responsible persons are assigned to cost centers, revenue centers, profit centers and investment centers.

Often costs of the cost center are based on management decision (e.g. restructuring of a company) or are incurred through legal requirements (e.g. accounting). Most companies try to manage the cost centers through a dedicated budget, which is not allowed to exceed (budget) (Lanen et al. 2008). According to Lanen et al. (2008), such provisions may lead people to suboptimal behaviour in terms of cost consciousness. Unused budget will not be reported as savings, rather, it will be spent as the cost center responsible person will expect to achieve a lower budget if they request a higher or even same budget next year. The evaluation or performance measurement of cost centers is conducted through the behaviour of the responsible person and the fact that quality of the service will not be considered difficult. Ideally, the performance should be measured also by the input factors / products and output factors / products. The achievement of the company's overall goals is more important than the fulfilment of a budget. In the case of legal costs, it is necessary to be in compliance instead of remaining on budget. The cost center approach also ignores the investment made in the organisation.

Revenue center responsible persons have no responsibility for cost. The achievement of own objectives may have a negative effect on companies' profitability through too much spending to achieve the revenue or by badly pricing (Lanen et al. 2008, Mowen and Hansen 2011).

The profit center concept leads to more cost consciousness behaviour from responsible persons as the profit of the center add financial value to companies' overall performance (Lanen et al. 2008). However, the performance measurement shouldn't be measured just by those financial KPIs. Other KPIs, like quality and the alignment to other company objectives (e.g. growth) also needs, according to Lanen et al. (2008), to be considered. The investment made in the organisation will also not

Service Business Costing

Cost Accounting Approach for the Service Industry

Baum, M.B.

2013, XX, 124 p. 34 illus., Softcover

ISBN: 978-3-8349-4443-6