

# Reflection essay on value chain analysis



VALUE CHAIN ANALYSIS Shank and Govindrajana (1989) \* value chain – “ the linked set of value-creating activities from basic raw material sources for component suppliers through the ultimate end-use product delivered into the final customers’ hands” \* VCA is used to analyze, coordinate and optimize linkages between activities in the value chain, by focusing on the interdependence between these activities. VCA – core analytical tool of strategic management accounting (SMA) \* break up “ the chain of activities that runs from basic raw materials to end-use customers into strategically relevant segments in order to understand the behaviour of costs and the sources of differentiation” \* Managing linkages in the value chain, which is also the central idea of supply chain management, can be used to reduce costs and to enhance differentiation

CRITICISM \* Little empirical evidence of its use in practice is available, which has been a reason for criticism on the relevance of the concept for practice. although a VCA conceptually spans the entire value chain, crossing organizational boundaries, its role in interfirm relationships has received little attention. \* Issues of joint VCA – collaborating firms may be concerned about the following three issues: 1. The exchange of sensitive information. 2. A fair division of cost and benefits. 3. The appropriation of investments to be made in specific assets. \* First issue – When buyers and suppliers exchange cost and performance information, concerns may arise about their bargaining position and about information spill overs to competitors.

Therefore, they will not exchange private information before they are confident that this information will not be used against them. \* Second/ Third – With respect to the division of costs and benefits, collaborative decisions

need to be taken based on two levels of analysis. First, the investment must earn an adequate rate of return for the risks associated with the project. In addition, when investments need to be made in specific assets, which have little value outside the relationship, the investing firm needs to be confident that this investment will not be appropriated by the other. Second, the partners need the prospect of receiving a fair share of the benefits, before they are willing to participate in the project. \* Solution – trust built during previous interactions, if not contractual agreements on profit and cost sharing, ordering quantities and length of the relationship, confidentiality agreements for information exchange, and joint investments in equipment, creating a mutual hostage situation.

LIMITATIONS OF TRADITIONAL MANAGEMENT \* based on the internally oriented concept of value added \* problem of the value added concept is – by starting cost analysis at the point of purchase, possibilities to exploit linkages with suppliers are missed, and by stopping the cost analysis already at a completed sale, possibilities to exploit linkages with customers are missed. The value added perspective focuses on (maximizing) the difference between the firm's purchasing costs and selling price.

Thereby it ignores linkages in the wider value chain, such as the causes of this purchasing price, the costs of activities related to the product, and the consequences of the product for the buyer's activities. \* A VCA, in addition to the buyer's costs, takes account of the activities and costs of other firms in the value chain (i. e. suppliers and buyers), and recognizes the interdependencies of these activities and costs. LIMITATIONS OF

TRADITIONAL ACCOUNTING SYSTEM \* Cannot be used for VCA they do not

<https://assignbuster.com/reflection-essay-on-value-chain-analysis/>

focus on critical activities, but on responsibility centers. \* they do not account for interdependence between subunits (such as activities), while cost and performance of one subunit often depend on the costs and performance of other subunits. \* they do not accumulate data about the drivers of costs. \* Therefore, use ABC or SCM \* ABC – assigns costs to activities and identifies the specific drivers of those costs – this info can be used to optimize and better coordinate the performance of activities across the supply chain.

For example, a VCA may lead conclusion that supply chain costs will be reduced when the supplier delivers products in another form, improving the efficiency of the buyer's receiving and stock keeping activities, or when activities are aligned with firms in the supply chain who can perform them more efficiently \* SCM in which accounting information is used for developing and supporting a firm's strategies SMA consists of analyses of different strategic dimensions of the firm, such as competitor analysis, strategic positioning analysis and analysis of the value chain in which the firm operates \* proposes methods in which management accounting information can be useful to support decisions related to these different strategic dimensions. \* Includes SCM, VCA Performing a value chain analysis \* VCA explicitly takes account of the interdependence between activities of buyers and suppliers. Decompose value chain into strategically relevant activities, and costs, revenues and assets are assigned to these 'value activities'. \* For each activity the cost drivers are identified. \* These steps enable the firm to analyze the behaviour of costs and the sources of differentiation. \* When the analysis includes multiple firms across the value

chain, insight is gained into how buyers' and suppliers' activities are interrelated in terms of cost and differentiation. To develop a sustainable competitive advantage, the last step is to use the outcomes of the analysis to control cost drivers better than competitors do or to reconfigure the value chain. \* Competitive advantage can be achieved either by reducing costs, while keeping value constant, or by increasing value, while keeping costs constant. \* use of an ABC analysis as a basis for performing a VCA \* Methods of performing VCA – \* 1) performed by one firm, looking beyond its boundaries to its buyers and suppliers in the value chain (they call this 'taking an external perspective'). 2) In interfirm relationships – performed jointly by buyers and suppliers in the supply chain. For this purpose, the cooperating firms need to share cost and performance information. Such a joint analysis of the value chain integrates cost data of multiple firms, leading to a broader scope than an internally oriented VCA, and a higher accuracy of cost data than when the analysis is performed by one firm taking an external perspective (and making assumptions about the other firms' activities and costs).

Such a joint analysis, however, requires the willingness of both buyers and suppliers to participate in a VCA. However, this cooperation may often not be accomplished, due to appropriation concerns arising from sharing information and acting jointly in the supply chain. 4. The use of VCA by J. Sainsbury's<sup>4</sup> The model was used for analyzing the costs of activities of Sainsbury and a group of its suppliers to identify opportunities to reduce supply chain costs and was based on principles similar to those of VCA. 4. 2. Supply chain management at Sainsbury market share – second largest super

market chain in the UK, after Tesco. In 1998 the company had over 23, 000 different products on its shelves from approximately 4, 000 suppliers. \*

Based on the type of products these suppliers delivered, Sainsbury classified them into six different networks: produce, main ambient, slow moving ambient, bulky goods, chilled and frozen. \* For managing the supply chain, three types of suppliers were distinguished, primarily based on the volume that they delivered, but also on the strategic importance of their products to Sainsbury.

The 24 key suppliers together accounted for approximately 30% of all products sold by Sainsbury, and were referred to as ‘ core suppliers’. In 1996 Sainsbury and these suppliers formed the Supply Chain Development Group (SCDG), which initiated activities for improving the supply chain. \* The second type of suppliers distinguished for SCM practices were referred to as ‘ middle-large suppliers’, with whom individual actions for improvement normally would have had too little impact to justify the costs of those actions. However, when treated as a group, significant improvements could be realized with them (i. . a critical mass was required). For instance, this was the case with ‘ cross-docking’. When using cross-docking, suppliers do not deliver directly to each Sainsbury’s regional distribution centres (RDCs) anymore, but instead deliver to a primary consolidation centre (PCC). In this PCC, deliveries of different suppliers for each RDC are bundled, and are then transported by Sainsbury to the RDCs. This practice can result in large efficiency gains, as each supplier can reduce its number of deliveries from many to one, while Sainsbury transports only once to every RDC.

However, for cross-docking to be beneficial, a large group of suppliers that frequently delivers orders of a reasonable size is required. Deliveries from middle-large suppliers were of such a size that they did not deliver full loads at the RDCs, and therefore were well suited for cross-docking. \* The third type of suppliers distinguished for SCM practices were referred to as ‘small suppliers’, which often delivered a small number of products in low volumes.

Specific actions to improve supply chain operations with small suppliers would have had little impact on costs and performance. Therefore, these suppliers primarily were involved in general initiatives for supply chain improvement, such as the internet-based ‘web-EDI’, that Sainsbury developed for all suppliers, as a cost reducing alternative for the costly normal EDI-systems. This web-EDI improved information exchange by enabling suppliers to receive orders and production planning forecasts, and to send invoices by the internet.

Sainsbury’s senior management decided to focus on improving supply chain control by better managing the interdependence with suppliers. An important means to realize this was the development of a cost model to perform analyses of (part of) the value chain. 4. 3. 1. The initiation and goal of the model \* Until 1996, the only insight that Sainsbury had into the costs of the supply chain were the yearly distribution costs. This information provided little basis for coordination and control of interdependent activities in the supply chain. Development of a cost model to provide senior management with a greater understanding of the total supply chain process – improve decision making and deliver a clear understanding of the interrelationship of costs and the activities that drive them. \* by performing

activity and cost driver analyses insight could be gained into the supply chain costs and the interdependence of supply chain cost and performance, that ideas could be generated to reduce costs and that cost effects of changing supply chain activities could be assessed. The analysis of 'linkages' in the supply chain thus had to be a central element of the model.

4. 3. 2. The design of the model

In developing the model the following definition of the supply chain was used: All activities involved in moving the product from the end of the supplier's production line onto the supermarket shelf. These boundaries of the supply chain thus encompassed part of the value chain, including the supplier's activities, Sainsbury's distribution activities, and Sainsbury's retail activities. Suppliers thus could deliver to PCCs, to RDCs or directly to the stores.

When a supplier delivered to a PCC or RDC, then Sainsbury took care of further distribution in the supply chain to the stores. The design of the cost model reflected this supply chain structure. It contained different sections reflecting the activities performed at different stages of the supply chain. The different sections were called "suppliers", reflecting the suppliers' activities, "distribution", reflecting Sainsbury's distribution activities performed in the PCCs and RDCs, and "retail", reflecting Sainsbury's retail activities related to the supply chain.

Each of these sections contained around 20 standard activities, which were possibly (but not necessarily) performed in the supply chain with a supplier. A cost driver was identified for each activity. The model used and integrated cost and activity information of both Sainsbury and suppliers, and thus could



be considered to be a VCA model. The costs consisted of the supply chain related costs of suppliers, PCCs, RDCs, stores, and Sainsbury's head office.

The costs of both parties were allocated to the activities and cost drivers in the model. This exercise led to an insight into the costs of activities in the supply chain. As the model did not relate costs to cost objects (e. g. products), but only to activities, it could be considered to be a form of Activity Cost Analysis (ACA) The model was designed to analyze activity costs from different perspectives: by supplier network (as discussed before), by geographical region (Sainsbury distinguished six regions where activities were performed), and by store category (Sainsbury classified its stores as super store, medium, small or product 4. 3. 3. The content of the model To be able to analyze the supply chain costs, cost and cost driver data were required from both Sainsbury and suppliers. The suppliers that participated in the model were mainly the larger (or ' core') suppliers, with whom much work in improving the supply chain was already going on. These suppliers were involved first because of the large volume of joint supply chain activities, leading to larger benefits.

In addition, the joint SCM activities already taking place signified the suppliers' willingness to participate in this type of initiatives. Assist suppliers in supplying data - providing description. Participating suppliers thus were responsible for providing reliable data. For other suppliers, however, the data collection process was a stimulus for performing an ABC analysis for internal purposes. - a better insight into their processes and costs. 4. 3. 4. The use of the model After each model update supply chain cost data was available on the activity and cost driver level.

This data was used to perform cost analyses by the different network, region and store types. They used the outcomes of the cost analyses to initiate discussions with suppliers about the cost performance of the supply chain and its processes. These discussions were used to generate ideas to reduce costs, which was the main purpose of the cost information. To support these discussions and to identify opportunities for cost reduction three types of analyses were made: benchmark analyses, strategic what-if analyses and trend analyses.

Benchmarking was used to compare suppliers' activity costs with the average of their network. In addition, cost comparisons were made between networks, regions and store types. By clustering suppliers into different networks the most important differences between their operations were eliminated, as suppliers within a network performed fairly comparable activities. The most important measure for the benchmark analysis was the cost per cost driver (i. e. the cost driver rate), as this measure could be compared directly with other suppliers.

When a supplier deviated significantly from the average – initiate a discussion with the supplier to find out the cause(s) of the difference, by analyzing the underlying activities, and to assess whether and how performance could be improved. In addition to benchmarking costs within and across supplier networks, costs of comparable activities between geographical regions and store types were benchmarked. Strategic what-if analyses were performed to analyze the effects of changes in the supply chain on supply chain costs.

When, for example, as a result of a benchmark analysis, Sainsbury and a supplier developed ideas or scenarios for improving supply chain processes, the model was used to calculate the expected changes in costs of each scenario. In these scenarios the expected changes in cost drivers were used as input for the analysis, and the outcome consisted of the expected change in supply chain costs. Trend analyses were performed to monitor the development of supply chain costs over time, and to intervene when necessary. 4. 3. 6.

Decision making and negotiations – changes might be disadvantageous to the supplier – Sainsbury will have to negotiate – either increase the prices paid to the supplier as long as it doesn't offset the benefits to Sainsbury 5.

Discussion The principles of VCA were considered useful to support this exploitation of 'linkages' with suppliers. three specific issues: 1. The need to assess and improve current supply chain performance, by analyzing and adjusting interdependent activities in the supply chain. 2. The exchange of sensitive cost information. 3.

The sharing of costs, benefits and investments that resulted from supply chain changes. 5. 2. The coordination of supply chain activities The supply chain analyses were used for initiating and supporting SCM practices. Specific analyses performed were benchmarking between suppliers, regions and store types to identify opportunities for improvement, strategic what-if analyses to quantify the cost consequences of supply chain changes, and monitoring of supply chain cost development over time. Thus, the cost model facilitated the joint coordination and control of Sainsbury's and the suppliers' activities. The model outcomes were used to initiate discussions with

suppliers about the cost performance of activities and how better managing linkages between activities could influence this performance. 5. 3. The exchange of cost information – info abuse, suppliers would be required to increase efficiency up to the other suppliers, suppliers will be replaced. To reduce the suppliers' concerns about information abuse, Sainsbury made clear agreements with the suppliers on how the information would be used (e. g. no direct comparisons between competitors), and how the model outcomes would be used (e. g. joint projects to improve inefficiencies). If Sainsbury would have made opportunistic use of the information, then this behaviour would have had a strong negative impact on its reputation in the supplier network. Relationships would have been damaged by the increasing distrust in Sainsbury's intentions, diminishing the suppliers' willingness to cooperate. Consequently, the cost saving potential in the supply chain would have remained unrealized, leaving all parties worse off. . 4. The division of benefits, costs and investments The identification of opportunities for improvement based on the VCA led to a second issue of concern: the profitability of proposed changes, and the division of benefits, costs and investments. Negotiations. 5. 5. The effects on relationships with suppliers A second important effect of the model relates to the relationships between Sainsbury and the suppliers, which were influenced in three ways. First, the discussion of model outcomes and possible courses of action increased the interaction between the parties.

As argued before, no direct action was taken on basis of the results of the analyses. Instead, the data were taken to the supplier, and discussions were initiated about the underlying operations and possible actions to improve

these operations. This intensified contact led to stronger social bonds between the firms and an increasing knowledge of each other's intentions, needs and processes. Second, the objectiveness of the cost information eased communication, decision making and negotiations between Sainsbury and the suppliers.

As the cost consequences of changes in supply chain operations became transparent, suppliers perceived less risk of ending up with negative outcomes and of having their fair share of the benefits appropriated. Third, Sainsbury found that, compared to other retailers, suppliers would come to them first with new ideas for supply chain improvement, as the effects of these ideas could be evaluated with the model. 5. 6. A comparison with the literature This case description of Sainsbury's supply chain cost model is a real-life example of the use of the principles of VCA in an interfirm setting.

Compared to the conceptualization of VCA in the literature, however, this application was characterized by a limited range of activities in the value chain, as only supply chain activities were modelled. An analysis of the complete value chain would also include the activities preceding the supply chain logistics of the suppliers (e. g. production and purchasing of raw materials) and those succeeding the logistics of the stores (e. g. sales to customers).