

IMPACT OF VALUE CHAIN MANAGEMENT ON FIRM COMETITIVENESS

W. L. Y. Janithri¹, D. A. M. De Silva², G. Fernando³

¹Department of Agribusiness Management, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya. Email: yogyajanithri@rocketmail.com

²Department of Agribusiness Management, Faculty of Agricultural Sciences, Sabaragamuwa University of Sri Lanka, Belihuloya. Email: desilva.achini@yahoo.co.uk

³Aqua Dynamics Pvt. Ltd., Negombo, Sri Lanka. Email: gayantha@aquadynamics.lk

ABSTRACT

Value chain analysis becomes an important tool to measure value creating processes of a company. This research gives emphasis on the impact of value chain management on firm competitiveness. The broad objective of this study was to analyze the current value chain management practices of an export processing company. Further, study aimed to identify the contribution of each department on the value chain management process and to find out the highest value creation node of the value chain. As a foundation three pillars of value chain analysis were utilized to divide value chain activities which are primary and support activities. Eight managers and the Surf Kite Department were selected with purposive sampling for the primary data collection. In-depth interviews with managers were used as a research strategy, and the deductive approach used as a research approach. The financial data and reports of the Industrial Engineering department were utilized as secondary data. The results revealed that there was a less contribution from inbound logistics and outbound logistics to the value chain management compared to other departments while the Industrial Engineering Department and firm general management create high value to the stakeholders. Although there was a value creation towards employees from human resource management, there was a possibility to improve their strategies to create more values. It was revealed that current value chain management practices have positive impact on firm competitiveness.

Key words: Value chain management, Firm competitiveness, Sustainable competitive advantage, Inbound and Outbound logistics

1. NTRODUCTION

Value chain analysis was first suggested by Michael Porter in 1985. According to his argument it refers to how customer value delivers through chain of activities in the company. Porter divided those activities into primary activities and support activities. Especially, the primary activities include inbound logistics, operations, outbound logistics, marketing and sales, and services. The support activities include procurement, technology development, human resource management and firm infrastructure. Hence there should be value creating processes from the beginning of purchasing raw materials to the end customer. Antoniou et al. (2008) explained that primary activities represent functionality of the value chain, while support activities represent the strength of the value chain.

In order to survive in the industry, the company has to gain competitive advantage by delivering a customer value. It can be done through value chain management. Competitive advantage refers

not what the rivals do. It can be gained through by delivering what the customer needs. As mentioned by Doneland and Kaplan (1998), firm competitiveness is determined by competitiveness of the value chain. Hence, the investigation of the value chain management on firm competitiveness is highly effective.

History of the value chain strategic management has described 20 years after the origin of value chain analysis indicating that there is no competition between two companies. Their main objective was to enhance production. New millennium has changed the face into customer service. Further products were differentiated and become nearer to customers (Antoniou et al., 2008). The Company also outsourced primary and support activities to fulfill customers' wants fruitfully. Strategic management text in 2005 (Antoniou) suggested that value chain analysis is more useful for production-based companies rather than service firms.

Value chain is not only operated in one direction. It can also be operated in both directions. For instance, suppliers gain value through payments and future orders. Customers gain value through delivered products and services (Presutti and Mawhinney, 2003).

There are three ways to assess competitive advantage through value chain approach which are internal cost analysis, internal differentiation analysis and vertical linkage analysis (Institute of Management Accountants, 1996). Internal cost analysis describes sources of profitability and associated costs of internal practices. Internal differentiation analysis identifies value creating activities within the firm. Vertical linkage analysis refers to all the links associated with the company from the beginning of raw materials to end customers. By evaluating each ways it leads to obtain competitive advantage through value chain.

This study is important as it helps understand about range and scopes that a company can get competitive advantage. And also can obtain understanding about each and every activity that enhances or reduces company growth. Further it is significant to implement policies that increase share in the marketplace. It is useful to get understanding about value chain approach as it helps increase income, increase customer satisfaction, gain competitive advantage and learn about its' impact on firms' growth (Kaplinsky and Morris, 2001).

The value can be created in different ways in different activities. It can be produced through inbound logistics by long-term contracts with suppliers, efficient storage facilities, daily transport logistics (for high value items) and efficient re-order level. The capacity utilization, training courses, distributed manufacturing, and automated manufacturing are the real value creating examples for operations. The value can be produced through outbound logistics by efficient security system, and long-term contracts with transporters. As well as that, this can be applied to support activities. The value can be generated through human resource activities with high skilled labors, training programs for development of the technical or managerial capabilities and career advancement programs.

2. METHODOLOGY

The Surf Kite Department and other supportive departments of the Aqua Dynamics (Pvt) Ltd. were taken for the study as research location. The cross sectional exploratory study was used as the

purpose of research, and it was followed by a case study strategy to gather qualitative and quantitative data regarding the impact of value chain management on firm competitiveness. Out of the principal ways of conducting an exploratory study, this study was based on interviews with experts related to the subject. Managers of the Aqua Dynamics (Pvt) Ltd were taken as a sample of research population as those are the people who are responsible for functions within the company's value chain. In addition to the primary data collected from interviews, secondary data were gathered from Industrial Engineering Department and the Accounts Department. This research was heavily based on qualitative data gathered from interviews. Purposive sampling technique was used to select respondents and to achieve research objectives. Hence, eight managers were considered for the data collection purpose as they were the people who were responsible for value adding activities.

3. RESULTS AND DISCUSSION

3.1. Identify the departmental and inter-departmental contribution towards value chain management

Primary activities:

a) Inbound logistics

Relating the value chain model to Aqua Dynamics (Pvt) Ltd., it could be revealed that Aqua Dynamics's raw materials were procured from foreign countries like Australia, China, Taiwan, France, Germany, Hong Kong, Italy, Korea, Malaysia, Singapore and United States, and wherever it will be cost effective. They have proper material inspection; and lead time takes 2 months for imported materials, while 1 month or less than one month for local materials. They re-order materials according to the past experiences, and stock verification is conducted annually.

b) Operations

According to the case study it has the ability to produce high quality product with higher efficiency. Figure 1 explains that the monthly output has increased from May to October during the seasonal demand period of the Surf Kite product. As a result, the section efficiency and overtime hours have also increased, and lost time has reduced due to the higher output.

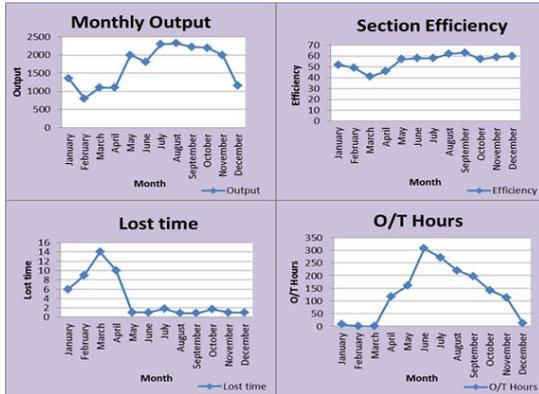


Figure 1: Operations

c) Outbound logistics

The company has been maintaining over 15-year long-term relationship with its customers. Hence the company doesn't have any interest in shared distribution systems. As mentioned by Import/Export manager it might be a reason to reduce customer satisfaction, if they have shared distribution system. Company's prime objective is producing the quality product. Thus the Company concentrates on packaging material to keep consistent with the quality and to prevent from any damages. The Company uses special wrapping depending up on the weight of the stock. The Company's efficient management system has not allowed for any damages until now. As a result of best quality guaranteed the Company exports to direct destination vessels. If the product shifts through different destinations then there is a possibility for damages and harm to the Company image for being a quality producer. As a suggestion made by the export manager vacuum cargo is suitable to minimize transportation costs. The Company has an insurance policy to reduce damages as a precautionary method.

d) Services

The Company's main target is to provide a high quality product to meet the customer expectations. For an example, Surf Kite Department their main customer is North Kite. In addition, they have customers such as BEST, CORE, KF, HENRY, SPLEEN and NOBILE. Furthermore, the Company conducts continuous market research, especially for customers to assure the quality of the product which caters to the best interests of their clients and offer a better service. Further, company is providing 2-year warranty for the products as an after sales service.

e) Support activities: Procurement

Results revealed that company maintains over 15 years of relationship with customers. The main customer of the Aqua Dynamics is NORTH Kite which is well known as a Surf Kite producer. Other than NORTH Kite they offer their service to BEST, CORE, KF, HENRY, SPLEEN and NOBILE. Hence the Company maintains a long-term relationship with their well-known customers and has popularized in the best quality product with on-time delivery. Even though there is a long-term relationship the Company has not had any agreement with suppliers. The company negotiates with suppliers according to the orders. They had purchased raw materials jointly with Sky Sports for raw materials of printing department. They have also obtained raw materials from competitors' suppliers.

f) Human resource management

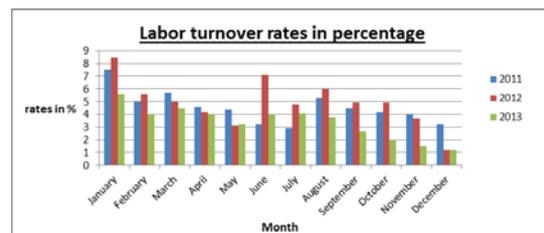


Figure 2: Labor turnover rate

According to the Figure 2, labor turnover rate has been reduced from 2012 to 2013. This implies that the human resource management concerns about reducing labor turnover rates in every year.

In January 2013 it had been reduced by 2.9% with compared to 2012. Furthermore, the introduction of training programs had been implemented in January 2013. Hence, with compared to other months in the 2013 there was a high labor turnover rate in January as training programs took some time to bring any results.

Apart from labor turnover, The Human Resource department has developed training programs for supervisors and drivers. External and internal training programs have been implemented by human resource management. The company has not developed training programs for executives and managers. In addition to that the human resource department has introduced career development programs such as basic security and training programs for supervisors.

According to the results, the value generated from the human resource department based on employee welfare activities such as implementation of staff transport programs and organized annual trips to build up better employee networks and generate the motivation.

g) Industrial Engineering Department

The department has introduced work study programs to increase efficiency of the workers and improvements of the production floors. With the introduction to the business process re-engineering the stores subsections were centralized into one section.

Hence all the production is running under centralized fabric and accessories store. Introduction of the centralized storage system has brought many advantages to the Company which are minimized extra stock keeps in each department, increase in the efficiency of the workers and saving money to the organization.

Additionally the Industrial engineering department has introduced a new layout of the Surf kite production department.

h) Research and Development Department

Table 1: Research and Development Projects

New implements	Spring loaded clamps
	Screen room
	Screen touching place
	New layout -Cutting
	New layout -Fabric stores
	New layout -Accessories
	Roll feeder – Lectra CNC cutter
	Multiply layer feeding table
	Tape heat sealer
	Bladder pumping table and new pumping area
Bladder checking water tank	
Modifications	Start cutting from underutilized Aeronaut CNC Cutter
	Modification of slitting machine
Health and safety	Tape heat sealer
	Bladder powder room

i) General management

Aqua dynamics has won competitive advantage in consistent quality and regular supplies. Although the organization has performed slowly in the past now it has changed to compete with competitors. It has succeeded strategies relate to stable a turnover.

The success of the organization is based on reliability. The main feasible strategy to maintain smooth functioning as each department is discipline. According to the General Manager the business logic of the company is “keeping the customer happy”.

3.2. To find out highest value creation node of the value chain of the Aqua Dynamics (Pvt) Ltd.

Value indices delivered by Primary activities

Table 2: Value indices of Primary activities

Inbound logistics	Operations	Outbound logistics	Service
Proper material inspection	Non-financial rewards- Best helper, Best section	On-time delivery	After sales services
	Training under supervisor	Timely documentary work	Customer service (Timely response to their issues)
	Quality	Quality reviews	
	Promotion		
	Quality reviews		

Value indices delivered by support activities

According to the above tables the support activities create more value than primary activities. Due to the non-availability of quantitative data the highest value can be measured by using qualitative data. Out of the support activities the Industrial Engineering department creates more value than other departments.

Table 3: Value indices delivered by support activities

Procurement	Human resource management	Industrial Engineering	Technology development	Firm infrastructure Finance	Firm infrastructure General management
Timely payments	Non-financial rewards-welfare, medical coverage, funeral aid, Special leaves	Social activities	Intranet-Pro suite system	Timely salary payments	Training
Timely demand	Training for new workers,	Training for production assistants and supervisors	Continuous improvement		Reliability
	Problem solver in employee issues	Better working conditions- Lighting, Aeration, layout	modification of machines concerning Ergonomics, health and		Knowledgeable people to negotiate
	Better work environment- Procedures (meals)	Problem solver in material related issues	Cost effective modifications		Long-term customer relationship
	Quality reviews	Better work environment-Health and safety			Commitment to laws, acts and standards
		Quality			
		Continuous improvements			

Further value generated towards customers can be measured by using quantitative data. The following results represent the calculation of value generated towards customers.

Table 4: Value Generated Towards Customer

Value indices	Value chain activity
Timely delivery	Outbound logistics
Quality	Operations
Price competition	Firm infrastructure-General Management
Reliability	Firm infrastructure-General Management
Customer service	Service
After sales service	Service
Promptness	Service
Manners	Firm infrastructure-General Management
Knowledge	Firm infrastructure-General Management

The highlighted row represented the point which creates the highest value of the chain according to the percentage values of the customer satisfactory surveys. According to that Firm infrastructure creates the highest value of the chain especially from the company General management. It delivers value of manners to the customers. Secondly service activity conveys value for the customers from the criteria of customer service. After that Operation activity delivers quality as a value to the customers. Above conclusions were derived from previous customer evaluation of the company.

3.3. Develop measures to improve the firm competitiveness through value chain management

Inbound logistics and Procurement

- Deliver additional businesses to suppliers
- Proper order forecasting method
- Follow standard re-order level
- ABC (Always better control analysis) inventory system
- Backward integration

Operations

- Centralized quality checking department
- Apply best practice analysis tools
- Introduction of cost effective machines
- Utilizing idle workers

Outbound logistics

- Forward integration
- Staff training
- Evaluation of logistic partners

Service

- Managing zero customer complaints

Human resource management

- Training and career development programs for executives
- Focus on development rather than training
- Recruitment standards for each and every position
- Improve knowledge of production executives, supervisors about every product
- Provide training for managers and immediate subordinates under managers
- Knowledge transfer plans
- Develop labor retention strategies

General Management

- Risk assessment
- Implement corporate social responsibility (CSR) programs
- Strengthen ISO committee
- Cross functional teams
- Consider the decisions of production assistants
- Communicate vision to everyone
- Build up culture of empowerment
- Quality circles

Finance

- Discuss with suppliers to obtain 2 months credit period and offer discounts for customers to collect money quickly

4. CONCLUSIONS

The company support activities play a significant role. Even though the Industrial engineering department new to the company it provides huge value when compared to other departments.

Further technology development provides value through introducing cost effective modifications of the machines and through continuous improvements. As an overall the primary activities of inbound logistics and outbound logistics while support activities of human resource management, Management information system should follow value added activities to sustain in the market.

According to the objective two, values generated towards society, employees and suppliers were measured by using qualitative data. As a result of qualitative data Industrial Engineering department delivered highest value of other departments. According to the quantitative data general management was selected as highest value provided for customers. Since manners of the staff were the selected highest value indices by firm customers. It was clear that firm general management considers value added activities is important to the firm competitiveness. The Industrial Engineering department and Research and development have given direction towards success by conducting total quality management, Kaizen and Business process re-engineering. Therefore the other departments should deliver their immense contribution to value chain management. Hence, as a conclusion the point which creates the highest value to the stakeholders is necessary in the management decision making. As a manager it is needed to understand the impact of value chain management on firm competitiveness.

The measures to improve the firm competitiveness by value chain management were presented separately for each and every activity in the chain. Innovative practices are more important to deliver high value added products of the market. Further in order to deliver a high value added product the company should consider the requirements of the manpower also. We couldn't control the designing and marketing of the product. But we can consider other aspects of the value chain as a non-apparel manufacturing firm. As well as we should consider cost effective practices to deliver high value added product to the market.

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