

Service Value Chain Models in Higher Education

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Abstract-

The higher education has undergone significant changes in the recent past. The notion of 'business approach of education' and 'the students as customers' is getting stronger. With the mushrooming up of the professional institutions in the country the demand and supply equations are changing. The institutions of higher learning are under tremendous pressure to provide value to the customers and other stakeholders. One of the greatest challenge faced by the higher education today is to contain costs and at the same time to improve the outcomes or to increase the productivity. This paper examines the service value chain in higher education, it extensively reviews the previous literature and discusses the various models of value chain in the higher education. The various models of Sison and Pablo (2000), Van der Merwe and Cronje (2004), Makkar, Gabriel and Tripathi (2008), Pathak and Pathak (2010) and Khaled Ahed Hutaibat (2011) have been critically examined.

Keywords- Value chain, Service value chain, Higher education models, value chain models in higher education.

I. INTRODUCTION

The Value Chain plays a vital role in understanding the need and scope for systemic competitiveness. It helps in the identification of the core competencies of an organization. A value chain exists when all the stakeholders in the chain operate in the way to maximize the generation of value along the chain. In the narrow meaning, a value chain includes the range of activities performed within a firm to produce a certain output. The 'broad' approach to value chain looks at the complex range of activities implemented by various actors (primary producers, processors, traders, service providers, etc.) to bring a raw material to the retail of the final product. In the recent past, there has been tremendous growth of service sector in the entire world, because of which a significant growth of marketing of services has been observed. As services are different from goods on the various dimensions like intangibility, heterogeneity, perishability, inseparability etc. so, special care has to be taken while marketing services. For these peculiar differences the value chain of goods and services are different though having similarities and relationship also. The higher education has undergone significant changes in the recent past. The notion of 'business approach of education' and 'the students as customers' is getting stronger. With the mushrooming up of the professional institutions in the country the demand and supply equations are changing. The institutions of higher learning are under tremendous pressure to provide value to the customers and other stakeholders. One of the greatest challenge faced by the higher education today is to contain costs and at the same time to improve the outcomes or to increase the productivity.

II. Conceptualization

A. Value chain

The value chain is a concept from business management that was first described and popularized by Michael Porter in his 1985 best-seller, *Competitive Advantage: Creating and Sustaining Superior Performance*. Porter defined the "value chain" as a representation of a firm's value-adding activities, based on its pricing strategy and cost structure. Other scholars have also defined value chain like; **Kaplinsky** (2000) defines the value chain as "the full range of activities which are required to bring a product or service from conception, through the intermediary phases of production, delivery to final consumers, and final disposal after use." While, **Stonehouse and Snowdon** (2007) defined value chain as "Porter's technique for understanding an organization's ability to add value through its activities, and their internal and external linkages, and allows managers to identify where value is currently added in the system and where there is potential to create further value in the future by reconfiguration and improved coordination of activities." According to **John Del Vecchio** a value chain is "a string of companies working together to satisfy market demands." The definition of "the value chain", according to **Lynch**, is "The value chain identifies where the value is added in an organisation and links the process with the main functional parts of the organisation".

According to Porter (1985), the primary activities (figure 1) are:

- 1) **Inbound Logistics**: involve relationships with suppliers and include all the activities required to receive, store, and disseminate inputs.
- 2) **Operations**: are all the activities required to transform inputs into outputs (products and services).
- 3) **Outbound Logistics**: include all the activities required to collect, store, and distribute the output.
- 4) **Marketing and Sales**: activities inform buyers about products and services, induce buyers to purchase them, and facilitate their purchase.

5) **Service**: includes all the activities required to keep the product or service working effectively for the buyer after it is sold and delivered.

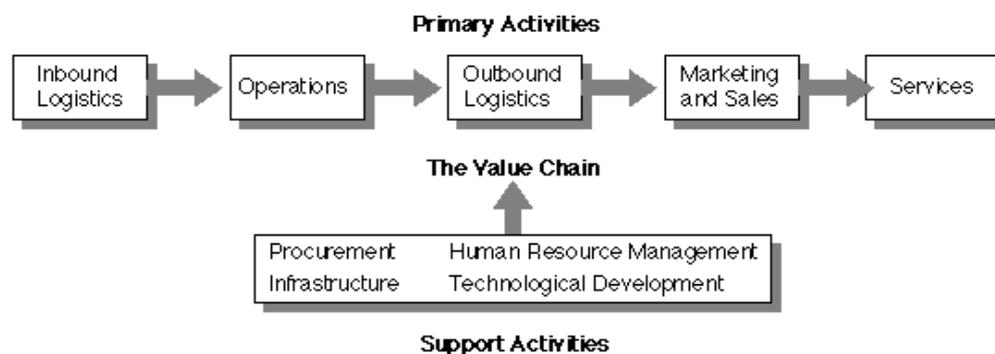


Fig. 1 Porter's Value Chain

Secondary activities are:

- 1) **Procurement**: is the acquisition of inputs, or resources, for the firm.
- 2) **Human Resource Management**: consists of all activities involved in recruiting, hiring, training, developing, compensating and (if necessary) dismissing or laying off personnel.
- 3) **Technological Development**: pertains to the equipment, hardware, software, procedures and technical knowledge brought to bear in the firm's transformation of inputs into outputs.
- 4) **Infrastructure**: serves the company's needs and ties its various parts together, it consists of functions or departments such as accounting, legal, finance, planning, public affairs, government relations, quality assurance and general management.

Porter's original value chain model (1985) is set in the context of a traditional manufacturing firm and sees the primary activities being inbound logistics, operations, outbound logistics, marketing and sales, and service with secondary or support activities relating to the infrastructure of the firm, human resource management, technology development and procurement. Porter uses his model to explore competitive advantage through differentiation and cost drivers. The original manufacturing model for the value chain as proposed by Porter has little meaning for many service organizations who cannot relate to the terms of the primary activities, inbound logistics, operations, outbound logistics, marketing and sales, and service. This seemed to be implicitly recognised by Porter in his presentation of value chain comprising the main steps in an operational flow for the delivery of service. However he did not explore the support activities of a firm's infrastructure, technology, human resource management and procurement within this amended structure.

B. Service Value Chain

The use of the value chain paradigm in a service context was suggested by Porter who gives as an example the various stages in passenger air travel. In his service example he abandons the manufacturing model with the primary and support activity divide and concentrates on the steps in service delivery. He concentrates in this re-formulated model on the cost drivers. In his service example he concentrates on the reconfiguring of the value chain to gain cost advantage. Service Value Chain is a bidirectional, cross-functional approach that can enhance cost efficiency, maximize capital utilization, increase profitability and even improve brand image is a powerful way to accomplish greater value from their after sale service for various companies. However, after-sale service that really add value—that enhance customer satisfaction, contribute significantly to companies' revenue and profit goals, and promote rigorous cost efficiency—are rare. More common are operations with traditional characteristics: labour intensive, reactive, costly and minimally strategic. Given this reality, a significant opportunity exists for companies to use Service Value Chain. Perhaps the most important characteristic of a Service Value Chain is its clear integration with all functions that influence a company's ability to provide service to its customers. The most relevant of these functions are Sales & Contract Management, Customer Service & Support, and Engineering.

III. Literature Review

Many researchers have worked in the area of service value chain. Some of the studies are as follows:

Nooteboom (2006) generalizes Porter's notion of the value chain for the analysis of service industries. First, he gives a survey of known economies of scale, scope and experience. Second, he summarizes Porter's value chain for manufacturing, which serves as a point of departure, and presents the value chain for building construction, which in important aspects is similar to manufacturing. Third, he develops value chains for two non-manufacturing and non-service industries: agriculture and extraction, and analyses corresponding economies of scale. Fourth, and this is the main objective of this paper, he turns to service industries, to develop corresponding value chains, and uses them to assign effects of scale to different types of service and different stages in their production. Similarly **Gabriel (2006)** makes a development of what ought to be a new dimension of the value chain, which will cater for the service sector. Porter's

value chain is used as a reference to build another value chain for services. A discussion on the value management, co-creation and delivery of value forms part of this article. A case of Higher Education sector of Tanzania is used as a reference case in building a concrete situation for a general value chain for services. A new model of value chain and a discussion on the need of total quality management to achieve a competitive advantage in service competition forms the last part of the article. **Thublier, Hanby and Shi (2010)** have developed new models for the Supply Chain and Demand Chain based on a literature review and the analysis of key industry trends, consumer behaviour and external forces. The developed models, contrary to classic ones, lay strong emphasis on the necessity for building sustainable relationships between all the members of these chains in order to deliver the value expected by the end-consumer. They reflect a “Paradigm Shift” by moving from “mechanistic” concepts to more “organic” one. In addition, different value perspectives for the Value Chain are suggested with particular focus on sustainable value creation and capture issues. **Feller, Shunk and Callarman (2006)** discuss the need to relate the concepts of the value chain and the supply chain in a more comprehensive and integrative manner. As this name implies, the primary focus in value chains is on the benefits that accrue to customers, the interdependent processes that generate value, and the resulting demand and funds flows that are created. Creating a profitable value chain therefore requires alignment between what the customer wants, i.e., the demand chain, and what is produced via the supply chain. For supply chains to generate maximum value in this dynamic environment, they must synchronize the flows of supply with the flows of value from customers in the form of rapidly shifting tastes, preferences, and demand. **Yale (2005)** provides a discussion primarily directed to Consumer Discretionary field service businesses. This business is characterized by demand service – typically driven by Yellow Page advertising. The Service Value Chain is the progression of a service opportunity from beginning to end. The Service Value Chain closes the loop with the customer. Once the service work is completed, the businesses want to build an on-going relationship with the customer in order to get repeat business and referrals. When everything is done right, the reward is a satisfied customer that uses the business again. **Lauridsen (2011)** supports an interactive session focuses on participating in shifting the paradigm toward learner-centred curriculum delivery. This paper contains a practitioner’s direct experience about leveraging product life cycle and service delivery to known and prospective customers. By considering the opportunity to adopt service-as-a-service to leverage predictable expenses for sophisticated solutions that are maintained by a service provider, higher education institutions are now forming consortiums and alliances. This paper offers a series of framework to identify factors which leverage activities along a "chain" of delivering an educational service to self-directed learners.

IV. Service Value Chain Models In Higher Education

Many service value models in higher education have been given by the various researchers from. Some of the important models in higher education are as follows:

A. Sison and Pablo (2000)

This model (figure 2) suggests that although there is a seemingly infinite set of tasks that are performed in any modern-day university, these myriad tasks can be analysed using the notion of a value chain. The value chain of a research university can be viewed as a network of activities centred around teaching, research, and community service, and on an individualized educational package of learning opportunities and tools that enables students’ acquisition of target knowledge and skills, and formation of target attitudes and values. These activities may be clustered into three major groups, namely, pre-education (student recruitment), education (with its elements discussed later), and post-education (graduate placement and alumni support).

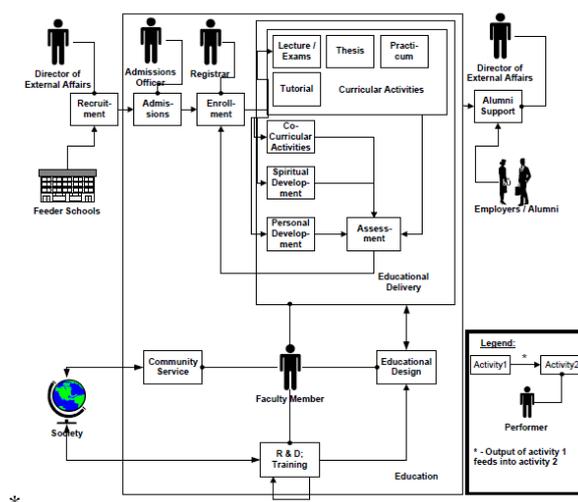


Fig. 2: Education Value Chain Framework (Sison and Pablo, 2000, p.2)

The education activity may be said to consist of the different activities in an educator’s professional life: educational design, educational delivery, research, professional development, and community service.

B. Van der Merwe and Cronje (2004)

They introduced the “educational value chain” as a graphical tool (figure 3) that developers may use in re-engineering efforts to identify possible bottlenecks that are likely to occur, as well as providing a route to follow when determining the value added elements by technology. Further, support processes include those identified by Porter with student systems being the “driving force behind technological innovations such as e-learning” and technology “which adds value to the educational value chain even if it is not seen as a primary activity within the chain”. The authors determined that the *value-chain* approach for higher education can help detect where bottlenecks occur.

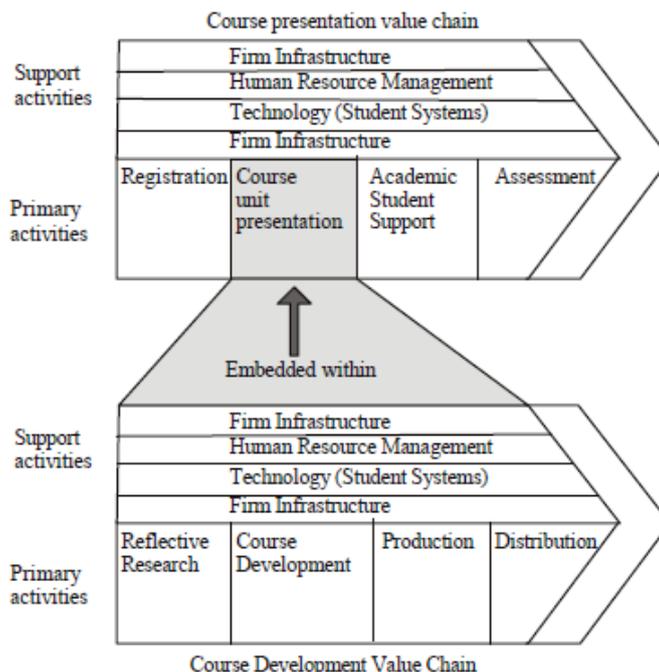


Fig. 3 Education value chain course development (van der Merwe, et al., 2004, p. 127)

C. Makkar, Gabriel & Tripathi (2008)

Calling their framework “Value Co-creation Model for Services” (figure 4), these researchers illustrate necessary components within the higher education service industry with need to co-create value. Their perspective is that “When value is co-created it implies that both service providers and users are involved”. This justified in a context of considering the “role of higher education, the socio-economic development of the country largely depends on the performance of our higher educational institutions”. The value chain analysis starts with investor’s injection of capital, the service product designers who are often faculty or program creators, all service provider staff and facilities, the infrastructure and supporting utilities, the target market of customers, citizens or people and those companies, communities or agencies that they belong to.

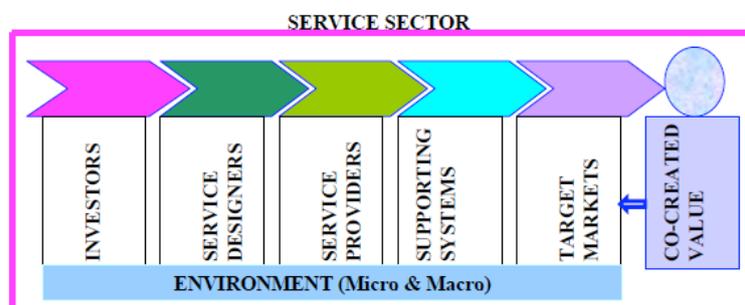


Fig. 4 Value Co-creation Model for Services (Makkar, et al., 2008, p. 197).

D. Pathak and Pathak (2010)

Pathak and Pathak (2010) proposed reconfigured value chain in higher education (figure 5) in view of the paradigm shifts. The figure captures the increasing significance of support services, the emerging trend of teaching and learning (in large part independent of the physical presence, i.e. reducing level of contact), technology as an enabler as well as a creator of cost advantage and enhanced efficiency; and the formalisation of marketing and sales services.

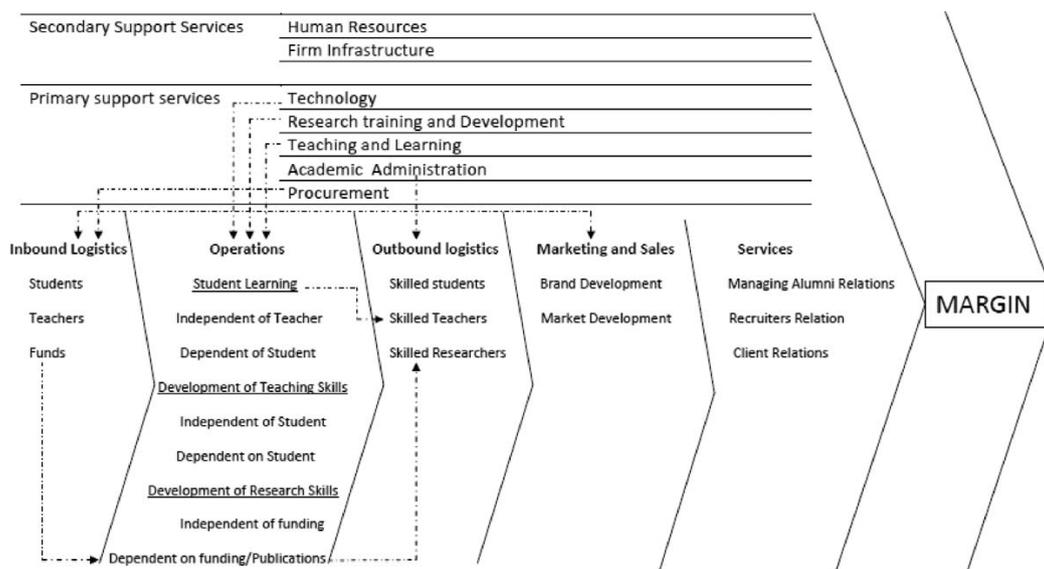


Fig. 5 Reconfigured Higher Education Value Chain (Pathak and Pathak, 2010, p. 170)

The activities identified have a structure and are capable of being outsourced. The value added at each stage has a specific measurement and the interaction/linkages between activities can be established with some degree of clarity. Higher education institutions could identify the value drivers as well depending on the business model (i.e. for profit, self-funded or externally funded as well as bricks, bricks and clicks or clicks only models of business). The margins for each institution will depend on the configuration of the chain as well as the identified value drivers. Critical internal linkages and the paradigm shift are obvious as a lot of linkages are taking place between support services and primary services. Marketing and sales and inbound logistics, procurement and inbound logistics, and technology and operations are some of the many such linkages evolving in the reconfigured value chain.

E. Khaled Abed Hutaibat's model (2011)

This model (figure 6) identifies three areas: perception of academic actuality as the context, and research and teaching as activities. Perception of academic actuality comprises the fierceness of the academic world, referring to issues such as the tightness of financial funds, the constant tension between research and teaching (as part of the overall education context), and the difficulties of staff acquisition and retention in subjects where the 'outside' job-market is very competitive. The activities of research and teaching are the main operational activities and strongly related to major strategic foci. Teaching stands for the actual class time but also the care outside the class room, for instance the time a lecturer spends with a student discussing their questions, concerns or specific issues.

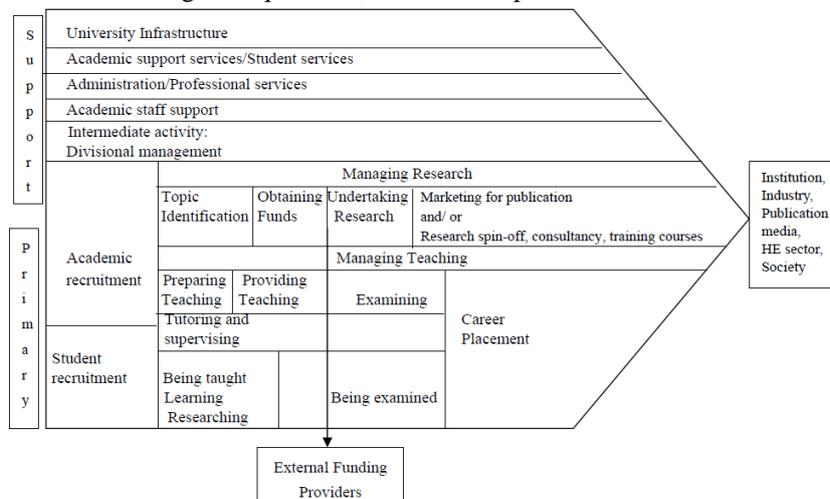


Fig. 6 Value chain for Higher Education (Khaled Abed Hutaibat, 2011, p. 218)

Here five models of service value chain in higher education have been discussed. All the five models on one hand are similar on the basis of value chain, on the other hand each model is different from other models and unique in itself. The

model given by Makkar, Gabriel & Tripathi (2008) is a very simplistic model which talks about the various components in the higher education service to co-create value. Sison and Pablo (2000) have viewed value chain of a research university as a network of activities which can be clubbed under three major groups – pre-education, education and post-education. This model is very different from service value chain given by Porter. While all the other models are the modifications and extensions of the Porter's value chain model. Van der Merwe and Cronje (2004) have given a graphical tool which can help in identifying the bottlenecks. Pathak and Pathak (2010) proposed reconfigured value chain in higher education in view of the paradigm shifts. Their value chain model explains all the components in a detailed manner. In the same manner, Khaled Abed Hutaibat's (2011) model classifies support and primary activities in detail. Both the models given by Pathak and Pathak (2010) and Khaled Abed Hutaibat's (2011), extensively explain the value chain in the higher education and can be applied universally to the higher education.

V. Conclusion

The higher education is facing lots of challenges due to the dynamic environment which is making the survival of these institutions difficult in the competitive world. To provide quality education there is a need to focus on the service value chain of the higher education. The gaps should be identified and the bottlenecks should be removed from the value chain to provide quality service. Various scholars have given different models of value chain for the educational services, which are relevant in one way or the other. The institutions of higher learning should try to implement these models in their own way and analyse the gaps in the value chain in order to improve it.

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