Introduction

Operations management is a branch of management that deals with the designing and supervision of operational processes in a business organization. Operations management covers the responsibility over all processes that involvethe production of goods and services as well as the delivery of such productionsto the final consumers.

In its duties, an operations management department ensures that processes areplanned for and executed in an efficient and effective way to satisfy the needs ofthe organization and its customers. This paper seeks to discuss concepts of operations management.

The paper will look into the history, functions, case studies, advantages, disadvantages and factors that affect the department among others. The paperwill then look into the operations management's involvement in oil and gas companies.

Operations Management

Business enterprises entail the provision of goods and services to their immediate customers. For the finished goods or offered services to be availableto consumers in a state that will satisfy the needs and desires of the consumers,measures must be undertaken by the producing organization to ensure that quality, quantity as well as the time frame of the production is appropriate with respect to the demands of consumers.

Meeting the needs of consumers is, however, a process that begins with thesearch for raw materials which are then processed to be goods and finally supplied to the consumers.

Processes of activities such as extraction of raw materials or resources, their transportation, their processing and their final distribution involve operational activities. It is the move to supervise and manage these activities that derives thebasis of operations management. Operations management ensures "effective management of resources and activities that produce or deliver goods and services of any business" (Sox 1).

Operations management therefore involves the management of "people, materials, equipments and information resources that a business may need" (Sox

1) in its daily activities. The department thus outlines and then manages all thatpertains to the production of goods and services.

The operations management is actually dominant in almost every stage of anygiven supply chain and is diverse with a variety of titles that at time can include“production planner, inventory manager, logistics manager, procurement manager and supply chain manager” (Sox 1) among others.

History of Operations Management

The history of operations management stems all the way back to the eighteenth century. In the management of production activities, operations changes were, forexample, realized in the labor system. In England, for instance, the textile industry registered operational changes with human labor being replaced with theuse of machines. Inventions of industrial equipments also lead to adjustment in methods of production in the textile industry at the time.

In the year 1785, steam engine was invented providing more options in the operations field. Administration of operations activities in business aspects, however, took its significant development in the twentieth century with introduction of theories and principles over how operations should be sufficientlymanaged. In the year 1911, for example, Fredrick Taylor developed operations management principles that involved a scientific approach.

Under his postulations, Fredrick established that the processes in a production activity can be monitored and analyzed using a scientific approach. According to him, the production processes required a deep understanding for an effective andefficient management approach. Another idea over management that he presented was the fact that people are different in nature and an understanding isnecessary so that an individual worker can be placed in the kind of job that he or she can do best.

After identification of an individual’s best suited department of work, a provisionfor training is made for better work output by the individual. The idea of motivation to workers to improve on the outcome of operational processes wasalso provided for by the theory which in addition established that the management of an organization should be distinguished from the entity’s workers.

Taylor established the basis of improving the productivity of employees as well as machinery that an organization employs in its production process. Further developments in operations management was realized in the motor industry with introduction of “assembly line manufacturing” by Ford company (Business 1).

Operational procedures were developed for the production of vehicles that werecheap and at the same time long lasting. In this approach, the company had to adopt production techniques that would help them cut on their production cost and at the same time enable them to produce durable products.

The company then adopted a “vertical integration technique” (Business 1) and awell “coordinated supply and production” (Business 1) activities. Operations management was then advanced to consider strategies in production processesthat would give companies advantage in the market for their products.

Major interest was then developed in the management of human resource as an approach to operations management. Factors that affected the level of productivity of workers were by the year 1930 being researched on with the aim of establishing optimal conditions for better productions. Later developments theninvolved the application of technology in designing and monitoring operation processes in organizations.

Operations management is however still on its development with focus being made on its elements such as “market focus, globalization, quality managementsystems, supply chain management and business process analysis, improvement or reengineering” (Business 1) among others. The history of operations managements is therefore based on introductions of new methods and technologies that are applicable in production processes.

Developments such as standardization, establishments of factories, specialization and division of labor in the eighteenth century were therefore thefoundation of development of the field of operations management. The developments were later enhanced by establishment of mass production approach in operations, quality management and the later developments in technology that enriched the operations management department towards the end of the twentieth century (Khanna 8).

Factors Affecting Development of Operations Management

Operations management has, along its, history been characterized with a lot of changes that have ensured its evolution over time to its current level. One of thedevelopments that the management has realized is for instance the diversification of its areas of application in any given institution.

Formerly, the operations management was an activity meant for the productionprocesses in factories only. The departments that immediately surrounds manufacturing such as distribution sectors were then integrated with manufacturing to form a production system.

The later inclusion of service provisions into the department in the second half ofthe twentieth century was also a development. These changes in the structure of administration in the operations management department have been driven by alot of factors in the business environment. One of the drivers to changes in the operations management has been the wave of globalization in the business environment.

Globalization moved to integrate the world into one economy in which trade barriers were greatly reduced or eliminated by governments and this had impactson organizations. Former steps that were taken to protect domestic industries from international competition were liberalized giving more freedom to international trade. Consequently, competition in every market was increased following infiltration of markets by foreign investors.

The increased competition as instigated by globalization has been a drive to changes in the department of management. Firms have continuously been forcedto look for appropriate avenues to maintain the customer satisfaction levels together with efficiency and affectivity in their production processes for profitability in the price competitive markets. This has therefore put pressure for critical adjustments in the management (Rowbotham, Azhashemi and Galloway 12).

The concept of “total quality management” as developed towards the end of thetwentieth century also instigated a significant change in the structure of organizations (Rowbotham, Azhashemi and Galloway 12). Under the management approach, all operations were to be managed together so as to enhance efficiencies in processes and qualities in productions.

The theory also rooted for an establishment of a manager to be in charge of the human resource that deals with operation processes in an organization. The theory also outlined the requirements for operations managers. The need to empower individual employees in an organization’s operations has been anotherdrive to the recent developments in the departmental management.

The move to improve productivity of individual groups or members of teams within organization, a management of employees’ needs and capacities became a necessity for their empowerment in decision making and productivity. The needto empower employees therefore modified the roles in the department.
Developments in technologies have also been shaping the approaches in thedepartmental management.

New technologies such as information and communications technologies havehad a direct impact on the management. Developments in communication

systems have for instance been shaping the organization and control aspects that are functions of operations managers. Approaches to planning and designing of operation processes have also been transformed by developmentsin technology.

The management's monitoring and evaluation techniques have been greatly transformed from its former dependence on manual techniques to electronic applications. The invention of computers and other electronic devices have greatly transformed activities and approaches in operations management (Rowbotham, Azhashemi and Galloway 13).

The general need for improvement in services offered to the general public has also been affecting the need for approaches to improve on operations in differentsectors. This has resulted in further development of principles for aligning operations to meeting desired objectives. The general forces of competitive environments and the need for increased productivity and profitability have beendictating developments in the department of operations management (Rowbotham, Azhashemi and Galloway 13).

Principles of Operations Management

With the main aim of operations management being the improvement in processes in an organization, the management applies a number of approachesto achieving its objectives. As a tool to solving problems that arise in operations,a number of principles have been developed to aid operations managers in improving the efficiencies of their processes.

Principles of operations management are applicable through the management system in accordance with the sub departments of operations management. Oneof the departments of operations management with an established principle is the"process capacity management" (Bruner 128). Capacity management deals the productivity level of processes in relation to efficiency.

For a manager to ensure an understanding of production processes and how such processes can be managed, an understanding of the factors that affects such processes is a necessity. It has been established that in order "to increase capacity, increase the limiting resource" (Bruner 128). If the production process isexperiencing a limitation in any of its necessary resources, inefficiency will be established with respect to this process which will then be transferred along the production chain to subsequent processes.

The principle in relation to capacity efficiency therefore demands that the limited resource be identified through analytical variations and measures taken to appropriately increase the resource. Another principle in operations management