

## **Analysis of the Role of Capacity Management and Planning on the Success of the Businesses**

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### **ABSTRACT**

*The main aim of this report is to explore the role, which capacity management and capacity planning plays in the overall success of businesses. The findings of this paper indicates that some of the main roles, which are played by capacity planning include: making the businesses to operate on the best operating levels, improving the level of efficiency of the businesses, making the organizations to be in a position to cut on the costs of operations, making the businesses to be able to have accurate forecasts, making the businesses to improve on the quality of the products and services, which they offer and making the organizations to be able to meet the needs and expectations of their customers. These factors result in the overall business success.*

**Keywords:** analysis, management, planning, business etc.

### **INTRODUCTION:**

Capacity generally refers to the ability to store, produce or achieve. For organizations, capacity refers to the ability of organizational systems to produce output within a given time period (Chase, Jacobs and Aquilano, 2007). In operations, management capacity can be defined as the quantity of input resources that are available for the production of relative output within a given time period. Generally, capacity refers to the maximum production capacity that can be achieved in a normal working schedule (Kimes, 2013).

According to Jornada and Leon (2016), capacity management refers to effective management of the limits of organizational resources like the labour force, office space, manufacturing technology, equipment, inventory and the different kinds of raw materials. Capacity planning refers to the process, which entails determining the capacity of production, which an organization needs to meet the ever-changing demands for the products and services (Mendes and Santos, 2014).

The capacity of a given process generally refers to the maximum amount, which the company can produce within a given time (McCarthy, 2004). Capacity management is also charged with the responsibility of planning the capacity of different kinds of processes. This is mainly the strategic role, which entails matching organization's long-term capacity and demand. It also takes into consideration the tactical aspects, as well as operations aspects of the companies. Firms integrating capacity management always strive to make sure that enough capacity is available at every time for them to be able to meet their present, as well as their future business needs and that of their consumers in a manner that is cost-effective (Rennemo, Rø, Hvattum and Tirado, 2014).

Capacity planning refers to the process, which entails the establishment of the rate of output, which the facility can achieve. In a number of cases, capacity is often purchased in "chunks". Design capacity refers to the maximum output rate under ideal conditions. On the other hand, effective capacity generally refers to the maximum rate of output under realistic or under normal conditions (Rauniar, Doll, Rawski and Hong, 2008).

## **LITERATURE REVIEW:**

The role of capacity planning and management in the success of organizations

A study by Abadi & Cordon (2014) indicated that capacity planning enables organizations to know the best operating level. The best operating level refers to the capacity for which there is minimal average unit cost. It can also be defined as the capacity level for which a given process was designed and therefore, it is the quantity of output at which the average unit cost is minimized. Capacity planning therefore helps organizations to know their best operating levels (Aguirre, Liu & Papageorgiou, 2018).

In addition, capacity planning improves the level of efficiency of the organizations through the use of just in time philosophy. Just-in-time (JIT) production, which is also referred to as the Toyota production system refers to the methodology, which is mainly aimed at minimizing the flow times in the production system and the response times from the suppliers of the company to the customers of the company (Altiparmak, Gen, Lin & Paksoy, 2016). It can be defined as the inventory strategy, which is used by manufacturers for increasing their levels of efficiency. It entails making orders and receiving inventory for production just when they are required for the production of the goods, and not before. Just in time works by making sure that the stock levels are low. It entails ordering exactly what is needed as close as possible to when it is needed. The inventory management approach is a vital component in the philosophy of lean manufacturing (Bradfield, Wright, Burt, Cairns & Van Der Heijden, 2015).

When the production orders inventory on an as-needed basis, it generally implies that the firm is not holding any safety stock and is operating with consistently low levels of inventory. The strategy is highly beneficial to firms as it makes them to be in a position to lower the costs of holding inventory. It is also highly beneficial as it helps in increasing the levels of efficiency besides minimizing wastes. In addition, just in time requires the manufacturers to be highly accurate when doing demand forecasting for their products (Emeksiz, Gursoy & Icoz, 2016).

Just in time makes it very easy to cut on costs, though at time it is capable of resulting in stock out situations. JIT is also aimed at improving a firm's return on investment through the minimization of the costs, which are deemed as non-essential. In certain companies, the production of discrete units adheres to repetitive manufacturing techniques, which includes effective implementation of just-in-time JIT techniques into the existing material requirements planning MRP systems. Production is generally founded on the actual orders of the customers (Burgess, Singh & Koroglu, 2006).

Just in time also enables businesses to be in a position to carry out forecasting in the right manner. Forecasting refers to the process, which entails making different kind of predictions regarding the future based on the past and current data and in most cases through the analysis of trends (Choo, Linderman & Schroeder, 2007). Both may refer to formal statistical methods, which uses time series, longitudinal data, cross sectional data or alternatively less formal judgmental techniques. A sound production forecast is the foundation for any project-based resource estimate. Besides, it is worth pointing out that production forecast is also the foundation for any development or any business decision (Cornelissen & Kafouros, 2008). Therefore, forecasting plays a major role in aligning resource estimation, decision-making as well as business planning. When it comes to forecasting errors, there are a number of errors that are often faced when forecasting is being done. The main forecasting errors include data or measurement errors, which take place as a complete dataset of travel demand patterns, behavioral parameters or supply conditions, model specification errors, external or exogenous errors, which are associated with external assumptions or inputs which are underpinning the demand forecasting model and the management of demand forecasting errors (Conca, Llopis and Tari, 2004).

## **CONCLUSION:**

Capacity management and capacity planning is the roadmap to business success. Organization embrace capacity planning in their bid to satisfying the changing demand of a particular product in the market segments. Capacity planning enables an organization to organize its costs as well as improves the quality of its products. In this process planners are required to understand their firms' production capacities and lay down strategies through which an organization will be able to meet the increased demand. An effective capacity utilization is only achieved if an organization is able to increase its productivity and retain profitability at the same time. Additionally, information technology is an important tool in ensuring that the company is utilize its manufacturing capacities as well as lower the cost of production. Proper use of manufacturing capacity depends on the demands in the markets segments and production schedules in order to use the available resources effectively. Therefore, the relationship between products quality and proper use of manufacturing capacity is

critical in planning. Capacity utilization is evaluated on the basis of the block of time during which the resources were continuously utilized. In capacity planning economies of scale refers to the ability of an organization to minimize the cost of production in every unit produced in a specific time frame due to its capacity to perform obligation in a different manner and in an efficient manner thus increasing production. In capacity planning, large organizations are able to produce and satisfy their clients' demands at lower costs. It is therefore important for organization to initiate mechanisms through which the organization will be able to utilize its full production potentials.

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