

Similarities and Differences between a service and a manufacturing business

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Abstract: this paper deals with the relationship between two important economic sectors, productive and service. It describes in depth the characteristics of each sector and the role they play in the overall economy. The study shows the differences and similarities that exist between the two sectors in relation to their production / operation activities; citing examples from each sector. The study concludes that each sector has its role to play in economic development and they differ in the way how each of them performs the task regarding its activities.

Key words: economic sector, service sector, manufacturing sector, operations management, production management.

ملخص: هذا المقال يدور حول العلاقة القائمة بين قطاع اقتصادي انتاجي واخر خدمي. حيث يتناول مميزات كل قطاع من نواحي عدة والدور الذي يلعبه كل منهما في الاقتصاد الكلي. تناولت الدراسة اوجه التشابه و اوجه الاختلاف بين كل قطاع فيما يتعلق بأنشطة الانتاج والعمليات، مع تحديد نماذج في كل منهما. خلصت الدراسة انه لكل قطاع مميزاته الخاصة فيما يتعلق بالأداء الاقتصادي وان الاختلافات تكمن اساسا في الطريقة التي يؤديها كل منهما في مسار التنمية الاقتصادية.

الكلمات الدالة: القطاع الاقتصادي، القطاع الخدمي، القطاع الانتاجي، ادارة العمليات، ادارة الانتاج.

1-INTRODUCTION:

Since the beginning of the industrial revolution manufacturing industries have been the social and economic pattern of several developed countries, while the service sector was considered to be less important.

In the last half of the twentieth century, the service sector began to catch up in importance in relation to manufacturing industries, and it has now assumed equal and in some cases surpassed the product producing sector. From being small and less important sector, nowadays more than 50% of the working population in U.K and other European countries work in the service sector. The fact shows that the service sector has grown rapidly and will continue to grow more and more.

However, as far as this paper is concerned, it is worth noting, that services are intangible things such as medical care for example, and in service business the principal common characteristic is the treatment or the accommodation of someone or something. Whereas, goods are tangible things such as clothing, and in manufacturing business the principal common characteristic is that something is physically created.

2- PRODUCTION AND OPERATIONS MANAGEMENT:

Before going into our discussion about the similarities and differences between a service business and manufacturing business, it is profitable to start by defining the operations management, and then we go on to discuss their activities.

According to "Chase and Aquilano ⁽¹⁾, operations management can be defined as the performance of managerial activities entailed in selecting, designing, operating, controlling and modifying productive system. This definition is perhaps the most suitable one in this essay as it indicates clearly, the required activities of production function. Selecting, designing and modifying occur less frequently than operating and controlling, therefore, we will divide them into two categories as follows:
OCCASIONAL ACTIVITIES include selecting, designing and modifying.
CONTINUAL ACTIVITIES include operating and controlling.

We will try to explain these activities and to apply them to a service business and manufacturing business in order to discuss the similarities and differences which exist between the activities in both businesses.

For the sake of this essay, the service business which I choose is "serving food in a restaurant".

1- OCCASIONAL ACTIVITIES:

As their name indicate, these activities are those which have to do from time to time, they have a low volume of custom-made output as in a custom furniture, or in a hospital emergency room for example.

A- SELECTING:

Is the strategic decision of choosing the product firstly then the process by which goods and services are to be created ⁽²⁾. In a steel factory which produces railway wheels, the strategic decision may be whether the wheels will be forged or cast. In a restaurant the decision may be the choice between a self-service restaurant where the customer can help himself, and a table service, where waitresses are needed to serve food for customers.

Selecting a product or a service entails the systematic gathering of a number of ideas and choosing those which will meet the objectives of the organisation. Once, the new product or service ideas has enumerated, the task will select the best ones, in some situations the selection of the appropriate product or service is relatively straightforward, once the goals have been stated. As an example, the restaurant which has established its goal of earning 20% profit has a large range of service possibilities open to it. Decisions must still be made concerning the hours of business, the serving of drinks and others.

- Selecting the service is usually easier and less costly than a manufactured product, this can explain because the service product generally is considered to be labour intensive rather than capital intensive, therefore, equipments and materials are not as much important in a service sector as in manufacturing ⁽²⁾.

- Service can generally be changed rapidly, directly by modifying the nature of itself, or indirectly by sales production and pricing; this is not the

case in manufactured product, where the product cannot be changed rapidly as in the service sector.

- In service where the transformation process is of vital concern to the customer, selecting the service product may be equivalent to selecting the physical process by which the service is produced, an example for this is in hospital stay where the patient is concerned with the way by which he is being treated, whereas in manufacturing the customer is only concerned with the final product and not with how it is created.

- In service sector, determining the size and skill level of the workforce required to perform the service is equivalent to selecting the service itself, this is because the customer in a service sector buys the skill of the owner, such example as in the dentist, or mechanic, etc. In manufacturing the workforce needed is determined by technological choices relating to working methods.

B- DESIGNING:

Is the tactical decision concerned with the creation of methods of carrying out a productive operation ⁽³⁾, it involves designing the products, processes equipment, jobs, methods and wage payments and operating and control systems. In both restaurant and manufacturing factory, decisions should be made concerning the contents of jobs to be done and the types of services and control activities required to assure smooth operations in order to achieve the goals established.

We have said that services are labour intensive, so their design often emphasis on the skill of the person doing the service. Hence, the design of service is labour intensive and typically includes personnel attendance to the needs of the customer, where the design of product is capital intensive and their design emphasis on the equipments required.

Product design was firstly aimed at maximizing the output and minimizing the coast, later the design aimed at modularizing, and more recently simplification became the design objectives.

In the design of services special consideration should be taken for the fact that the customer participates in the production process ⁽⁴⁾, and this is not the case in designing the product, as the customer here is only concerned with the final product.

Product development requires product engineering, such as detailed cost specification, the beginning of intensive market research and setting up the plant and facilities.

Service development requires nearly the same steps; a restaurant for example, must design its output taking into account, how many customers and how many meals will be served a day? What kind of customers and what kind of services should be offered to satisfy their needs? How else the process can be designed? All such facilities should be developed in order to provide the specified service.

In general sense, in designing both service and product, the designer should centre on the need of the customer and not on the need of the server or the output ⁽³⁾, as the aim objective is to satisfy the customer's need.

C- MODIFYING:

Involves the revision of productive system in light of change in demand, organisational goals technological breakthroughs, new products and processes, research findings, failure in the existing products, operating and control systems.

In a manufacturing factory, modifying may take the form of installing new capital equipments ⁽⁴⁾ in order to produce new product, or introducing of a computer-based production control system.

In a restaurant, modifying may range from the addition of car park facilities for the customers, to offering a full home-service catering.

In both businesses the manager has to implement new techniques, and be aware of any possible change in order to avoid any problem which may occur. Furthermore, the manager has to find reasons in order to correct those mistakes, and avoid them in the future.

2-CONTINUAL ACTIVITIES:

These activities include planning, operating and controlling (6); they run continuously and produce a large volume of standardised output as in automobile assembly in a car factory or in a fast-food chain as MacDonald's hamburger.

In both service business and manufacturing business, continual activities are concerned with setting products or services output levels, scheduling products or services and scheduling workforce, allocating people and equipments to meet these schedules, control of inventory and quality of product or service assurance.

These activities are very important in both businesses to ensure that the product or service is being produced at the right time, at the right cost and at the quality desired by the customer. In a restaurant for example, the control may be the inspection of incoming food and the quality of service by which the customers treated, as an efficient service will not be appreciated if it is accompanied by rudeness and untidiness; thus the main interest in a service business is to give service cheerfully and always be helpful, otherwise the customer will run away and go somewhere else.

OPERATIONS SYSTEM:

Operations system can be defined as a set of components whose function is to transform a set of inputs into some desired output. as shown in the following.

SYSTEM	INPUT	COMPONENT	OUTPUT
RESTAURANT	HUNGRY CUSTOMER, FOOD, CHEF, WAITRESS, EQUIPMENT.	WELL PREPARED FOOD, WELL SERVED CUSTOMER	SATISFIED CUSTOMER
CAR FACTORY	RAW MATERIALS, TOOLS EQUIPMENT, WORKERS	FABRICATION, ASSEMBLY OF CARS	COMPLETE CAR

The processes of transformation from input to output are varied some of them are.

Physical as in manufacturing

Geographical as in transformation

Exchange as in retailing

Storage as in warehousing

There are also some transformations such as physiological transformation, as making a sick person well, and attitudinal transformation as in entertainment and education.

The nature of operations in both manufacturing and service system is not the same. Manufacturing can include activities concerning the production of tangible goods such as clothes, cars, etc. Service includes hospital, restaurant, ect. Which produce intangible goods.

The main feature that sets a service system apart from a manufacturing system is the extent to which the customers must be in direct contact with the service system during the creation of the service product⁽⁵⁾. In a restaurant, the customer is in direct contact with the waitress while serving food for him, while in manufacturing factory the production

function is usually well insulated from the external environment by other functional areas of the factory.

A customer orders for example, must go through a marketing department which relay them to production.

Manufacturing system deals with intermediaries, whereas the service system deals with ultimate consumer, in furniture factory customers are wholesalers or may be other producers, while in a restaurant the customer is the ultimate consumer of food which has been served for him.

CONCLUSION:

In conclusion, it may be worth saying that it is very difficult to find clear distinctions that exist between product producing and service producing activities, really, all products producing activities involve some elements of service, and thus, all products whether they are durable goods as refrigerators, or consumable goods as shoes, have services built into them. However, we may note that service is presumed to be performed by individuals for other individuals, often on one -to- one basis, whereas manufacturing is presumed to be performed by machines, we may also note that location in both businesses is very important, a restaurant for example must be located at sites, that are convenient to the public, while the location of manufacturing factory is influenced by the availability of raw materials, labour and shipping facilities.

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