SERVICES MARKETING

Dr. P. Muthamil Thirumagal
Head of the department
Of commerce
Kunthavai Naacchiyaar Govt. Arts College For

What is service?

- A service is an act or performance offered by one party to another.
- Services are economic activities which create value and provide benefits for customers.
- Service are intangible activities. Services generates organisation.

What is marketing?

- The action or business of promoting and selling products or services, including market research and advertising.
- Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large.

Services Marketing

- Services marketing is primarily concerned with a scientific and planned management of services.
- It makes possible coordination of the service provider as well as the user.

Significance of Services Marketing

- Generation of employment opportunities
- Optimum utilisation of resources
- Capital formation
- Increasing standard of living
- Use of environment friendly technology

Service Sector

- Service sector has been sustained growth and development.It is growing both in terms of domestic productive capacity and exports.

  COVERAGE OF SERVICE

- Traditional services
- Modern services
- New generation services

COMPONENTS OF SERVICE

- ❑ PHYSICAL PRODUCT
- ❑ SERVICE PRODUCT
- ❑ SERVICE ENVIRONMENT
- ❑ SERVICE DELIVERY

Reasons for growth of the service sector

1. *Democraphic changes*
2. *Economic changes*
3. *Social changes*
4. *Political changes*
5. *Technological changes*

CHARACTERISTICS OF SERVICES

- ❑ INTANGIBILITY
- ❑ INSEPARABILITY
- ❑ HETEROGENEITY
- ❑ PERISHABILITY
- ❑ OWNERSHIP
- ❑ PRICING OF SERVICES

CLASSIFICATION OF SERVICES

- ❑ CLASSIFICATION OF SERVICES BY ADRIAN PAYNE
- ❑ CLASSIFICATION OF SERVICES BY CHRISTOPHER LOVELOCK

DIFFERENCES BETWEEN GOODS AND SERVICES

- ❑ TANGIBILITY
- ❑ TRANSPORTABILITY
- ❑ HETEROGENEITY
- ❑ EXISTENCE
- ❑ RESALE
- ❑ STORAGE
- ❑ SMALL FIRM SIZE
- ❑ DIFFICULTY QUALITY CONTROL

MORE DIFFEERENCES BETWEEN GOODS AND SERVICES

- ❑ LABOUR INTENSITY
- ❑ LEGAL AND ETHICAL BARRIERS
- ❑ FLUCTUATING DEMAND
- ❑ SAMPLING
- ❑ RESTIRCTED APLLICABILITY OF A PORTFOLIO THEORY
- ❑ ESTABLISH OF LARGE MARKET SHARES

Evolution and Growth

A service is an act or performance offered by one party to another. *Services* are economic activities which create value and provide benefits for customers. Services are intangible activities which may be separately identified or tied to a physical product. However, the performance of a service is essentially intangible. It does not normally result in transfer of ownership as in case of products. Of late, business organisations have been making innovative efforts to market the various services offered by them. In services generating organisations like banks, insurance companies, hotels, transport companies, *etc.*, application of marketing principles has become imperative for their growth and success, *i.e.*, a marketer plans, promotes and renders services to customers or clients. So, services marketing focuses on selling the services to the satisfaction of users or customers. Services marketing is primarily concerned with a scientific and planned management of services. It makes possible sychronisation of the interests of the services providers as well as the users. Marketing a service therefore, means marketing something intangible. Marketing services aims at profit making through user's satisfaction. For example, a life insurance company basically sells the service of protection that would be acceptable to the potential buyers and yield profits to the company. Banks make available to the customers savings, investment and credit facilities. The transport companies offer to their customers safe and economic transport service. Likewise, tourist organisations, hotels, communication organisations offer services to their customers. By and large, all the services generating organisations practise marketing for accomplishing the organisational goals. It is in this background, the growth of the service sector should be studied.

Evolution and the growth of the Service Sector

With the advent of industrial revolution in the eighteenth century, dramatic changes took place in production. Consequently, service sectors namely, financial structures, transportation and communication networks developed appreciably. This all round development has ultimately made available the benefits of large scale production. After the second world war, there has been a shift in importance from the traditional manufacturing to service based enterprises. Countries like USA, UK, Germany, Japan, Canada, Sweden *etc.*, have changed from being '*goods dominated*' to '*services dominated*'. The developed economies are renamed as service economies which make significant contribution in terms of employment and Gross Domestic Product (GDP). *Table 1.1* reveals the significance of service sector over the manufacturing sector.

Coverage of Services

Traditional Services

- Utilities like electricity and water supply
- Transport Services - *rail, road, air etc.*
- Communication Services - *Post, Telephone, Broadcasting, Telecasting etc.*
- Educational Services
- Legal Services
- Accountancy Services
- Medical Services
- Insurance, banking etc.
- Financial Services-Stock Brokerage Leasing etc.
- Food, leisure and recreation services - *restaurants, hotels, catering, fast food joints etc.*
- Entertainment Services - *Cinemas, Clubs, Casions, Video-game parlours, amusement parks etc*
- Miscellaneous services such as *Maintenance and repairs*
- Beauty Parlours
- Distributive trade or retailing
- Hospitality service- *tourism, hotels,* transport

Modern Services

- Travel Agency
- Real Estate
- Advertising
- Public relations
- Market research
- Physical Fitness, Health clubs
- Car rental Service
- Courier Service
- Credit Cards

New Generation Services

- Business Services
- Recruitment Services
- Computer Software Solutions
- Computer maintenance
- Management Consultancy
- Management Training
- Technical Training
- Computer Training
- Value Added Telecom Services
- Radio paging
- Cellular Phone
- Fax
- E-mail
- Internet
- V-sat
- Video Conferencing
- E-commerce
- Cosmetic Surgery

Figure 1.1 - Activities Coming under 'Services'

The evolution of services marketing may also be studied from the view point of Fisk, Brown and Bitner. They have identified the following stages in the evolution of services marketing.

1. The Crawling out Stage (prior to 1980)
2. The Scurrying about Stage (1980-86)
3. The Walking Erect Stage (From 1986 onwards)

1. The Crawling Out Stage (Prior to 1980)

The first and foremost stage in the evolution of services marketing is known as *Crawling out* stage. During this stage, the existence of a distinct body of literature was found imperative in order to solve the problems in the service sector. Services marketing suffered from the paucity of marketing theories. The marketing strategy that could serve the specific needs of services sector was not existing. According to Donnelly, there are vast differences between the channels used for services and those used for physical goods. The argument that the service organisations need not have separate body of theory was found baseless. The increased competition generated by the Multinational Corporations called for the application of modern marketing principles in service organisations. They were convinced that then only they could grow and make a significant contribution to the economic development. It is in this context, the experts thought in favour of practising marketing principles in the service sector.

2. Scurrying about Stage (1980-85)

Having realised the importance of application of modern marketing principles in service organisations, adequate attention was paid to the crucial issues of managing quality in service operations. Zeithaml, Berry and Parasuraman developed a pioneering model known as 'Gaps Model' for service quality. This model explained the importance of assessment of quality in services. The inter-personal aspects of service, relationship marketing and international marketing were the other areas found relevant to services marketing. Marketing mix (price, place, promotion, people, process, physical evidence) was developed by Booms and Binter by taking into account the distinctive characteristics of services. In the crawling out stage, the study of characteristics of services (intangibility, inseparability, heterogeneity) was given importance. The services marketing mix developed by Booms and Binter gave an expanded version of marketing mix. As a result of varied efforts directed at promoting services marketing, books on the subject came to limelight. Ultimately, services marketing emerged as a separate field of academic study.

3. Walking Erect Stage – 1986 on wards

The period subsequent to 1986 is identified as *walking erect stage*. During this stage, having recognised the differences between product and services, the focus was on specific marketing problems of the service organisations. Particularly, attention was paid on (i) the design of the physical lay out of facilities where the service is delivered (service design), (ii) setting and surrounding in which service is delivered (service setting), (iii) blue printing to understand the totality of a service as a process, (iv) finding the link between customer needs and design elements, (v) service encounters, where the consumer and producer meet in order to offer more benefits to consumer, (vi) Internal Marketing to instil and maintain a strong service mentality throughout an organisation, (vii) relationship marketing to turn new customers into regular clients – being strong supporters of the company, (viii) Transactional strategy involving the integration of strategy formulation and implementation across all the countries in which the company wishes to do business, etc.

Reasons for the Growth of the Service Sector

The Service Sector has increased dramatically in importance only in the last decade. Deregulation of services, growing competition, fluctuations in demand and the application of new technologies have stimulated the growth of the Service Sector. Banks, Housing societies, insurance companies, Professional service providers such as accountants, lawyers, Airlines, Retailers, Telecommunication Companies *etc.*, are increasingly dependent upon service marketing principles. The reasons for the growth of the services sector may be analysed under the following headings:

(1) Demographic Changes, (2) Economic Changes, (3) Social Changes, (4) Political and Legal Changes, (5) Technological Changes.

(1) Demographic Changes

Demographic factors are related to population. There is a general increase in the population and increased life expectancy, etc., now in India. Rise in life expectancy has resulted in the population increase of senior citizens. Their growing numbers have paved the way for the growth of old age homes, health care centres, nursing, tourism and hospitality services. Apart from these, there has been a structural shift among people. Migration of people from rural areas to urban areas has led to the development of new towns or regions. This has increased the need for providing infrastructure and support services. Since 1960s, services of numerous varieties have emerged. Hotels and restaurants, beauty parlours and laundries, lodging, transport, insurance, banking, finance, communication (telephone and postal), advertising and promotion, engineering, consultancy services, tourism and travel and many other professional services have grown in importance due to demographic changes.

(2) Economic Changes

The economic factors play a crucial role in the development of the service sector. With the advent of globalisation of business, the world market has grown fast. The internationalisation of service companies has created a greater demand for services such as communication, transport and information services. Airlines and Air cargo companies which were predominantly domestic have established extensive foreign route networks. Besides the above, advertising agencies, hotel chains, fast food restaurants, car rentals, accounting firms, *etc*,. operate on several continents.

The revolution in information technology has also contributed to the tremendous growth of the service sector. The IT sector is contributing substantially to customers of late. In India, even a common man can have access to facilities such as *Internet, Multimedia* and various computer applications now. This demand for vital services has encouraged the growth of professional units engaged in services marketing. Thus, economic changes have led to the development of specialised services and their marketing as a distinct part of the every economy.

3) Social Changes

The increased role of women in the workforce has led to the growth of several services. Working women supplement the income level of the family. With the increased income, the demand for child care services, travel, beauty parlours, fast food, *etc.*, has increased. A part from this, twin-income households demand consumer services including retailing, real estate and personal financial service. International travel for visiting friends and relatives settled abroad is responsible for several consumers becoming more sophisticated. Consumers now-a-days demand a wide range of services, including legal and investment counsel. These social changes have significantly increased aspiration levels. Consequently, students are making new demands on learning institutions. They want to acquire the skills needed to compete in the fast changing social environment.

4) Political and Legal changes

Political and legal changes are the important causes of growth of service sector. Globally, the resources of the government have become vast permitting creation of huge service departments. Deregularisation has exposed many service industries to intense competition. Enactments on *Consumer Protection* and *Environment Protection* have been strengthened all over the world. The increased government interaction in the trade sector has promoted trade with various countries. Regional interests in the global trade of goods and services are well protected by trading blocks such as North American Free Trade Agreement (NAFTA), European Common Market, Association of South East Asia Nations (ASEAN), South Asian Association for Regional Co-operation (SAARC) etc. The expansion of global trade has given scope for the creation of huge infrastructure. Financial services are becoming increasingly important generating more employment opportunities.

(5) Technological Changes

Adoption of new technologies has improved the quality of service offered by several organisations. The integration of computers and telecommunications has revolutionised communication sector. The influence of internet on the service organisations like travel, banking, education, financial services, insurance *etc.*, is total. With the advent of national or even global electronic delivery systems, they have totally transformed the scope of the business. Further, they facilitate reengineering activities such as delivery of information, execution of orders, settlement of claims and payments, etc. These developments have enhanced the service standards by permitting the creation of centralised customer service departments and replacement of men by machines.

Impact of Social environment on the growth of Services Marketing

The impact of social environment on the growth of the services sector is revealed by the following Table.

Environmental Trend	Service Market
1. Consumer Affluence	Dine-out habits (hotels and restaurants), travel, entertainment, club, repairs and servicing, health care, carpet and dry cleaning, domestic services, banking and investments, retailing, insurance.
2. More Working Women	Domestic services, travel, nurseries, fast food restaurants, financial services, marriage counselling, retailing, personal care.
3. Greater life expectancy	Hospitals, nursing homes, entertainment , travel, resorts, leisure services, investment, banking.
4. Complexity of life	Travel, legal aid, tax counselling, professional services, airlines, courier services, insurance, banking.

5. Youth	Entertainment, leasing, fast food, travel, picnic resorts, educational institutes, tutorial aids, counselling, retailing.
6. Corporate Crowd	Hotel, advertising, Legal services, recruitment services, management counselling, health care, airlines, travel booking, Courier services, insurance, banking, marketing research.
7. Product Innovation	Repair and servicing, Training education, sharing services.
8. Growing product Complexities	Expert, advice, specialists.

Table 1.2 Impact of Environment on the growth of service sector

(Adopted from Schoell W.F. and Ivy J.T. "*Marketing Contemporary Concepts and Practices*").

Significance of Services Marketing

Proper marketing of services contributes substantially to the process of development. If innovative marketing principles are followed in services marketing, the socio-economic transformation will take place at a much faster rate. In future, the service sector would operate in a conducive environment offering great potential. If the opportunities are properly utilised by the service sector, it will lead to an all round development of the economy. The significance of the service economy may be discussed under the following headings:

1. Generation of employment opportunities
2. Optimum utilisation of resources
3. Capital formation
4. Increased standard of living
5. Use of environment-friendly technology.

1. Generation of employment Opportunities

The components of the service sector are wide and varied. For example, the service sector includes personal care services, education services, medicare services, communication services, tourism services, hospitality services, banking services, insurance services, transportation services, consultancy services, etc. The organised and systematic development of the service sector would create enormous employment opportunities. Application of marketing principles in the service sector is instrumental to the development of the economy. However, it is appropriate to mention that India has not been successful in utilising the potential of the service sector. As seen in Table 1.1, in USA about 80 per cent of job opportunities are offered by the service sector compared to India's 60%. So, the significance of the service sector lies in its capacity to create job opportunities. If the service sector is properly developed, it will solve the problem of unemployment in India to a great extent. After liberalisation policy, the service sector in India has been emerging as a dominant component in the economy.

2. Optimum Utilisation of Resources

India is bestowed with rich resources. Particularly, the human resources available in India favour the growth of the service sector. While the labour content in most manufacturing activities is dropping steadily with use of technology, the labour content in the service sector is comparitively high. As India is rich in human resources, service sector can grow steadily. Moreover, service sector offers excellent export opportunities too. In fact, the important agenda of the World Trade Organisation (WTO) is opening up of market for services. So, by exploiting these factors, India can maximise its services export. Though its performance in the export of computer software is quite commendable already, it should concentrate on other areas as well. Service firms such as personal care services, the entertainment services, tourism services, hotel service contribute to the growth of the economy without consuming any natural resources. In a sense, the growth of service firms of this kind conserve natural resources. Thus, services marketing help conserve the valuable resources for future generations.

3. Capital Formation

There are indications that Services will grow more rapidly in the near future. Economic, social and political factors signal an expansion of the service sector. Investments and job generations are far greater in the service sector compared to manufacturing. It is estimated that telecom alone will account for an investment of Rs. 150,000 crores in the coming years. Investment encourages capital formation. For the development of a nation, the flow of capital should be directed towards the most productive uses. If investments are made in the service sector, it will contribute to the nation-building process. With increased developmental activities, the per capita income increases which, in turn, facilitates capital formation. Performance of profitable services can absorb higher investments, thereby accelerating the rate of capital formation.

4. Increasing the Standard of Living

The standard of living of the people in any country would be decided on the basis of quality and standard of products consumed or services availed in the day-to-day living. Any development is transparent only when the living conditions of the masses improve. When compared with developed countries, the standard of living in India is far from satisfactory. Standard of living cannot be improved by offering more opportunities for earnings. On the other hand, the standard of living is determined by the availability of goods and services for citizens and a wise spending on them. The development of services industry is sure to promote the standard of living of the people.

5. Use of Environment-friendly Technology

Now-a-days, almost all services are found technology-driven. Developed countries are making full use of latest technology while rendering services. Technologies used by service generating organisations such banks, insurance companies, tourism, hotel services, communication services and education services are not detrimental in any way to the environment. On the contrary technologies used in manufacturing organisations may have harmful effects on the environment. So, services industry do not pollute the environment which is indeed laudable.

The Concept of Service

Meaning and Definition of Services

'Services' are revolutionising the whole world. Today, we live in an econom which is service-oriented. Marketers offer tangible goods with supporting servic such as *pre-sale* or *after sale* services, accompanying a product. But as distinctive area of study in marketing, attention is paid to those services sold b business or professional concerns with profit seeking motive. These ar fundamentally commercial services offered in business. These services may b *labour services* (domestic, office, factory, workers), *personal services* (cooking laundry, photographers, barber), *professional services* (accountant, lawyer musician, engineer) or *institutional services* such as offered by transport, banking insurance, warehousing, advertising and such other service organisations. Thus the term *services* has a very wide scope and application. So, it is appropriate to understand the concept of services with various definitions offered by experts

1. "Services refer to social efforts which include even the government to fight five giant evils, *e.g.*, *want*, disease, ignorance, squalor and illness in the society". – *Sir. William Beveridge*
2. "Services can also be defined as a human effort which provides succor to the needy. It may be food to a hungry person, water to a thirsty person, medical services to an ailing person and education to a student, loan to a farmer, transport to a consumer, communication aid to two persons who want to share a thought, pleasure or pain". – *Rao. A.V.S*
3. "Establishments, primarily providing a wide variety of services for individuals, business and government establishments and other organisations, hotels and other lodging places. Establishments, providing personal services, repair and amusement services, educational institutions, membership organisations and other miscellaneous services are included". – *U.S Government's Standard Industrial Classification*
4. "Services can also be defined as an action(s) of organisation(s) that maintains and improves the well-being and functioning of people". – *Hasenfield Y. and Richard A.E.*

8. The buyer receives [illegible] provider who may be an individual, a firm, a [illegible] institution specialising in selling certain benefits or satisfaction.
9. Service is frequently augmented by a tangible product attached to the service.
10. Some definitions of 'service' (Stanton) exclude supplementary services that support the sale of goods or other services.
11. Any organisation that considers itself to be a service operator can utilise the range of research that has been developed specially to deal with problems related to services.
12. Products that are primarily intangible are classified as services.

Components of Service

Understanding the nature of the service is the first task in services marketing. The nature of service gives useful clues on the benefits expected by customers from it. Having found out the needs of the customers, the marketer has to ascertain whether his products meet customers' specifications. Generally, customer's needs are rarely satisfied by physical products alone. The intangible element of a product is a key element in maintaining a satisfied customer. The services may be divided into four components, namely, (1) Physical product, (2) Service product, (3) Service environment and (4) Service delivery. These components must be properly managed in order to meet customer's needs. Figure 2.1 shows the components of a service.

Figure 2.1 Components of a Service

(1) The Physical Product

The various products marketed by a firm involve the physical transfer of ownership of those products. They are tangible and their quality is standardised. For example, physical products include T.V., Radio, Refrigerators, Computers, Hair oil, Vacuum Cleaner, Washing Machine, etc. But service firms offer purely intangible products. Different service firms offer different services. For example, colleges and schools offer education, insurance companies risk coverage, banks credit and financial service, beauticians personal and beauty care, hotel accommodation and convenience, cinema theaters entertainment, dry cleaners cleaning services, solicitors legal advice, police security and protection, management consultants professional advice, and couriers offer communication and delivery. All these service offering units are customer-oriented.

All manufacturing organisations should develop standards to ensure that products comply with customer's specifications. Quality of products should be ensured in all modern organisations. The quality control department is responsible for ensuring compliance of the product with the customer's specifications. Japan is the pioneering country which developed QFD in 1970s in an endeavour to coordinate the work of marketing managers and production engineers towards the common goal of meeting customer needs. QFD links engineering design features to specific customer needs assuring increased product's value to customers.

(2) Service Product

A service is an activity or benefit that one party can offer to another which is essentially intangible in nature. Service involves some interaction with customers without effecting transfer of ownership. For example, people visiting exhibitions, trade fairs are allowed to inspect the consumer durables without being approached by sales representatives. Salesmen are trained in making proper approach to the customers visiting their showrooms. The price labels carried by the products reduce the anxiety of price sensitive customers and relieve them from the botheration of price negotiations. So, the service providers should plan their interaction with customers in order to provide better service experience to them.

(3) Service Environment

The potential customers form an impression about the service on the basis of service environment. The service environment represents the physical back drop that surrounds the service. For example, providing hygienic food is the core service in a hotel or restaurant. Customers expect the restaurants to be maintained clean, offer flexible dining hours prompt service, soft music, decor, exotic menu, etc. These elements of service environment have an important impact on the service experience. The service environment appropriate to one firm may be inappropriate for others. For example, a fast food restaurant needs bright lighting while a luxurious and romantic restaurant needs high decor and dim lighting. A hair dressing saloon displays the pictures of famous stylists, range of treatments, *etc.*, and offer journals and materials facilitating light reading.

(4) Service Delivery

The Service delivery is one of the important components of service. Service delivery is of great importance to the customer's overall perception about the quality of service. The service provider should give due consideration to the way service is rendered to customers. Services are created as they are consumed. The *customer* is often the topic in production process. So, the thrust is more for tailoring the service to meet the needs of individual customers. While deciding the method of service delivery the following questions should be considered.

(i) Should the service be delivered at a single site or through multiple outlets?

(ii) What is the most convenient type of transaction for customers?

(iii) If the type of interaction is changed, would the service quality improve or deteriorate?

(iv) Is it possible to use suitable intermediaries to achieve multiple outlets?

Services with multiple outlets help ensure quality and consistency in the service offering. There are two types of interaction between customer and service organisation (i) Customer goes to service organisation and (ii) Service organisation comes to customers. When services require the customers to come to the supplier, there is a great scope for exercising control over the delivery of service, For example, when a patient visits a dentist, he may be favorably influenced by the decor of the waiting hall, courtesy of the receptionist, etc.

			...ption	cuisines – Room Service – Room Cleaning
Couriers	Communication	– Service time – Collection centres	– Waiting hall – Sorting space – Parcel Office	– Promptness in Delivery – Billing section

Characteristics of Services

Every product is a bundle of physical (tangible) and non-physical (intangible) attributes. Products which are intangible in nature are classified as services. Goods are produced while services are performed. The special nature of service comes from many distinctive characteristics. These characteristics of services call for marketing programmes that are substantially different from those found in product marketing. So, it is essential for the service marketers to carefully study the characteristics of services. These are give below:

(1) Intangibility
(2) Inseparability
(3) Heterogeneity
(4) Perishability
(5) Ownership
(6) Pricing of Services.

1. Intangibility

Services are essentially intangible. So, it is impossible for customers to see, feel, taste, hear or smell services before they are bought. This feature of services makes their nature an abstract phenomenon. So, the sales force or a company's promotional programme, while selling or promoting the sale of a service should concentrate entirely on the benefits to be derived from the service. An insurance company promotes service benefits such as guaranteed payment of child's education expenses, or a retirement income. Promotion of *package holidays* focuses on use of an aircraft, a transfer coach and a hotel room. The strategies developed by the service providers for communicating the benefits of service are based on (i) tangible representation of the service and (ii) focus on the service provider himself rather than on the service.

(i) *Tangible Representation of the Service* : Developing a physical object that represents the service makes services more tangible. Banks promoting the sale of *credit cards* emphasise physical manifestation of credit. By possessing a credit card, customers can store credit. Credit card is the physical object of credit service offered by the banks and financial institutions. It symbolizes the convenience in availing credit. The tangibility of the credit card permits the banks to market their credit service under different brand names and images. For example, the *Central Card* of the Central Bank of India and *Gold Card* of American Express, etc.

(ii) *Focus on the Service Provider* : Sometimes, service providers are more tangible than the services themselves. For example, airline ticketing, life insurance agent, and doctor are more tangible than their services such as *air cover travel*, *life insurance cover*, and *medical care* respectively. Service providers are known for their skill and expertise which represent their service. So, advertising campaigns focus on the competence of the service providers. Buyers infer quality from the place, people, equipment, sales literature, materials, symbols and price chart that they see. So, the marketers of the service providers should successfully manage and control these physical attributes and tangiblize the intangible. Service marketers must be able to transform intangible services into concrete benefits.

2. Inseparability

Generally, physical products are first manufactured and then put into inventory and distributed through multiple resellers and consumed later. But this is not rue of services. Typically services are produced and consumed simultaneously. Vhen a person renders a service, then the provider is part of the service. Personal ervice cannot be separated from the individual. Service providers such as dentist, usician, dancer and such other professionals create and offer service simultaneously. The client is also present as the service is produced. Both the provider and client affect the outcome of the service. Due to inseparability, direct sale of service is the only channel of distribution. As an individual, the service provider is able to sell his service only to a limited number of customers in a day. But when an institution is acting as a creator of a service, it may extensively market its service through agents. For example, a travel agent, an insurance broker, a finance broker *etc.*, may represent a tourist organisation, insurance company and financial institution respectively. Inseparability bears certain market implications – (i) Simple distribution, (ii) Multiple locations, (iii) Image of the service providers.

(i) *Simple Distribution* : Services are produced and consumed simultaneously. In other words, the production process is associated with the enjoyment of service. Active participation of consumer in the production process of service is inevitable. (Student and teacher, patient and doctor, credit card holder and ATM *etc.*,). So, distribution of services must be simpler than the distribution of goods. The service provider should learn to work with larger groups. For example, by increasing the working hours, a dentist can attend to more patients daily.

(ii) *Multiple Locations* : Services cannot be stored or transported. So, service providers can eliminate the role of intermediaries while providing service. But services must be offered in many locations. The service organisations can train more service providers and build up client's confidence. Service establishments such as banks, cinema halls, restaurants, beauty parlours, dry cleaners must be located close to the consumers. Since offering services in more locations increases cost, the number of service locations must be optimum.

(iii) *Image of the Service Provider* : In the case of entertainment and professional services, buyers are very particular about a specific provider. When clients have strong provider preferences, price is increased in accordance with the provider's limited time. The image of the service provider extends to the service facility offered by him. In order to maintain sufficient image, professionals spend a considerable amount on furniture and office decor. The decor of the professionals' office convey an image of competence.

Differences between Goods and Services

Generally, it is regarded that a good is a thing and a service is an act. In other words, goods represent an object, or material whereas services is a deed or a performance. Both services and goods are interlinked. For example, the airline passenger while availing the services of airport enjoy consumption of food, etc. So, it is comparatively difficult to conceive a pure service or pure good. A pure good gives benefits containing no element of service. Likewise, a pure service would contain no element of goods. Goods can be physically touched and verified. They can also be carried home and can be stored at a place. But services like banking, insurance, personal care, baby sitting, transportation *etc.*, cannot be stored at a place. The effects of services include, pleasure, entertainment, relief from ailment, etc. The differences between goods and services may be studied under the following heads:

1. Tangibility,
2. Transportability,
3. Heterogeneity,
4. Existence,
5. Resale,
6. Storage,
7. Small Firm Size,
8. Difficult quality control,

9. Labour Intensity,
10. Legal and Ethical Barriers,
11. Fluctuating demand,
12. Sampling,
13. Restricted Applicability of a Portfolio Theory,
14. Establishment of Large Market Shares.

(1) Tangibility

Tangibility means anything which can be viewed or touched or felt. Services are intangibles as they cannot be seen tasted, felt, heard or smelt before they are bought. Services are intangibles as it is not possible to view them. But goods are tangible economic objects. They are capable of being seen, touched, tasted, heard or smelt. We can only realise the services used by us. A service by nature is an abstract phenomenon and carries intangible perceptions. According to Carman and Uhl, "A buyer of products has an opportunity to see, touch, hear, smell or taste them before they buy". But these things are not possible in case of services.

(2) Transportability

Goods can be transferred from one place to another. Manufacturers transport goods from factory to the market. Customers carry home goods bought by them. So, there is transfer of goods from the point of sale to the point of use. Thus, transferability of goods necessitates a physical distribution channel. But it is not possible to physically transfer the services from the point of sale to the point of use. Many service businesses either use electronic channels (computer, TV, Radio) or contact the customers personally. As physical distribution channel is absent in case of services, there is no need of intermediaries like wholesalers or retailers as in the case of goods.

(3) Heterogeneity - [illegible], different

Services are heterogeneous in nature. For the diagnosis of the physician, the physical presence of the patients is essential. Services vary according to the customers as services are created according to the specific needs of the customers. The heterogeneity of service makes it difficult to establish standards. However, the variability of service is less in case of machine oriented service. Due to services variability, the service provider is not able to provide a consistent quality in operation. This heterogeneous nature is not true with goods or products. Use of technology has made possible large scale production of goods in anticipation of future demand. The quality of goods produced is identical.

(4) Existence [illegible] struggle

Services are non-existent in nature. They can only be realised by availing them at the time of their production. But goods are existent. So, the goods produced at one point are distributed by others at other points. Since goods are existent, they are produced, sold and then consumed. But services are sold, produced and then used.

(5) Resale

Goods manufactured at one point are made available for distribution at different centres. Physical inspection of goods is possible before they are bought. The physical attributes of goods such as colour, size, shape taste, *etc.*, can be determined in advance of their purchase. But it is highly difficult for the customer to evaluate in advance the quality of service. Moreover, when goods are sold, the ownership is transferred in favour of the buyer. But sale of service does not result in transfer of ownership. So these two attributes, namely, *physical inspection* and *transfer of ownership* permit the intermediaries such as wholesalers and retailers to purchase goods for resale.

(6) Storage

As services are perishable, they cannot be stored. Service value exists only at the time it is produced. Unutilised or underutilised services are regarded a waste. Vacant rooms in a lodge, vacant beds in a hospital, unsold seats in the aircraft, unbooked marriage hall all represent a permanent loss. If the service provider fails to sell the services, it may be lost forever. But products like machines, equipment, soap, toothpaste can be preserved till they are sold.

(7) Small Firm Size

As services are not transportable, many service firms remain small in size. As a matter of fact, the small size does not permit marketing sophistication. Though service organisations like accounting and advertising agencies tend to be big, they are divided into smaller branch offices. Efficient service companies are known for adopting a marketing plan. They respond positively to the ever changing market conditions. The marketing process employed by them is the same as in the case of tangible products. Service firms being small and single unit operations are not able to fully realise the economies of scale. But organisations marketing tangible goods are generally big in size and are able to realise the economies of scale.

(8) Difficult Quality Control service

Quality should be the 'mantra' and be included in all operations of the organisation. It is difficult to define the quality concept. The service provider can exercise quality control through standards or specification in the manufacturing process. From the point of view of customer, quality occurs only when the services provided to them satisfy their needs. The idea of quality is, thus, strongly linked to the needs and expectations of the customers. It is very difficult to achieve quality in services as many services are provided only at the point of sale. Consumers find it difficult to judge the quality of service as they have less information about the quality of service offered. But control of quality is easy in respect of tangible products as they have physical features. These physical features can be objectively controlled in order to provide quality products to customers.

(9) *Labour Intensity*

Generally, service organisations are labour-intensive in nature. This factor prevents many service organisations from realising economies of scale. As services are intangibles and consumed simultaneously with production, it is difficult for the service provider to increase his output. Many services are personally produced considering the specific needs of the individual client. But in case of tangible products, it is easy to apply assembly line techniques for the reducing the number of workers.

(10) *Legal and ethical barriers*

Service units are increasing. There has been a significant move towards service industries from manufacturing activities. As a result, a large number of "Small Service Business Enterprises" (SSBES) have emerged which compete for market share by expanding the service offered. But professional ethics prevent many service providers from practising certain kind of marketing activities. Pressure from respective associations prevent professionals such as doctors, attorneys, chartered accountants from developing marketing programmes of their choice.

(11) *Fluctuating Demand*

Services are of perishable nature. Like manufacturing, services cannot stock their output in a warehouse till demand materialises. Matching of supply and demand is difficult in service marketing. When demand is less than capacity, then the cost of services will be more. As a result, profitability will come down and the provision of such a service will remain unproductive. On the other hand, if the demand far exceeds supply, it cannot be met satisfactorily by the service organisations. But the manufacturing organisations can store goods for a later sale. So, they can meet any excessive demand by supplying the goods from warehouse. The variability of service output poses challenges to service providers. Brand building in service is very difficult when compared with tangible goods. It is relatively easy for the marketer of tangible products to incorporate quality control measures into production processes. In case of providing service on a one-to-one basis, such as hair dressing, standardisation of output also becomes difficult.

(12) ***Sale through sample***

Sale through sample is not applicable in case of services. Tangible goods bought by one can be resold. The owners have a legal right to resell them. Products like groceries, grains, rice *etc.*, are popular for sale by sample. But we cannot do the same with services. If we book a room in a hotel, we do not have the right of reselling it. Goods are tangible economic products that are capable of being seen and touched, heard or smelt. By examining a small portion of the agricultural produce like grains, the characteristics of the whole lot can easily determined. This facilitates sale of tangible goods through sample.

(13) ***Measurement of Service Quality***

In case of tangible goods, their quality can be assessed by examining them. If products do not conform to specifications, they can be rejected. But services cannot be measured or verified before sale. Since service is inseparable from the service provider, the delivery of service greatly influences its quality. The intangibility of most services do not allow assessment and evaluation of service quality. Moreover, setting standards is difficult as services vary from person to person.

(14) ***Establishment of Large Market Share***

Generally, goods are produced before they are sold while services are sold before they are produced. Further, services marketing has a limited influence on consumers before the purchase is made. Normally, customers must experience the intangible services in order to have sufficient information about the service. So, service marketing starts with the critical *needs identification* in the market. But the entry into market for intangible services is comparatively easier when compared with tangible goods. Service industries present fewer barriers to enter the market. Thus, competitors may easily gain an entry into the service market, being lured by the profitability of a particular kind of service. As a result, there will be a mushroom growth of service firms marketing similar services. The existence of a large number of fast food franchisers is an example of this fact. Moreover, service firms being small in size are not able to realise economies of scale by acquiring a large market share.

CHAPTER

5

MANAGING DEMAND AND SUPPLY

Introduction – Forecasting demand – Understanding demand patterns – Managing capacity constraints – Capacity planning – Strategies for managing capacity to match demand – Strategies for managing demand to match capacity – Strategies when demand and capacity cannot be matched : Waiting lines, Reservations, Queuing, Triage, Delaying service delivery – Yield Management – Summary – Questions.

INTRODUCTION

The subject of this chapter is the challenge faced by managers of matching service supply with customer demand on a daily basis in a dynamic environment. Service capacity is a perishable commodity. For example, a plane flying with empty seats has lost forever, the revenue opportunity of flying with one more passenger.

Unlike products that are stored in warehouses for future consumption, a service is an intangible personal experience that cannot be transferred from one person to another. Instead, a service is produced and consumed simultaneously. Whenever the demand for a service falls short of the capacity to serve, the results are idle servers and facilities. Furthermore, the variability in service demand is quite pronounced. The natural variation in service demand creates periods of idle service at some times and periods of consumer waiting at other times.

The lack of inventory capability leads to four possible scenarios at any given time.

1. Excess Demand

The level of demand exceeds maximum capacity. In this situation, some customers will be turned away, resulting in lost business opportunities. For the customers who do receive the service, its quality may not match what was promised due to crowding or overtaxing of staff and facilities.

2. Demand Exceeds Optimum Capacity

No one is being turned away but the quality of service may still suffer due to overuse, crowding, or staff being pushed beyond their abilities to deliver consistent quality.

3. Demand and Supply are Balanced at the level of Optimum Capacity

Staff and facilities are occupied at an ideal level. No one is overworked, facilities can be maintained, and customers are receiving quality service without undesirable delays.

4. Excess capacity

Demand is below optimum capacity. Productive resources in the form of labour, equipment and facilities are under utilized, resulting in lost productivity and lower profits. Customers may receive excellent quality on an individual level because they have the full use of the facilities, no waiting and complete attention from the staff.

Not all firms will be challenged equally in terms of managing supply and demand. The seriousness of the problem will depend on the extent of demand fluctuations over time and the extent to which supply is constrained. Some types of organisations will experience wide fluctuations in demand (e.g. telecommunications, hospitals, transportation, restaurants) while others will have narrower fluctuations (e.g. insurance, laundry, banking). For some, peak demand can usually be met even when demand fluctuates (e.g. electricity, telephone) while for others peak demand may frequently exceed capacity (e.g. theatres, restaurants, hotels).

FORECASTING DEMAND

Everyday, managers make decisions without knowing what will happen in the future. Making good estimates is the main purpose of forecasting. It is necessary to understand why forecasting is so important to service operations, what types of service outputs are forecast and the factors that affect our choice of forecasting methods.

In order to carry out any serious attempt at planning resources, it is first necessary to have some assessment of the level of activity required of those resources. The better the assessment, the better the quality of the planning.

In the long term a tour operator might be attempting to forecast the annual value of holidays sold in order to determine the growth rate, market position and broad level resource requirements to meet this demand. However, to be of use in planning terms, this would need to be converted into operational units, such as number of holidays sold. Over a shorter time scale, in order to plan the transportation requirements, this would need to be broken down into countries (or atleast regions served by major airports). Within each region, it might be possible to break the demand down into specific areas, and within that, specific types of accommodation (luxury, mid range economy hotel, self catering).

Good forecasts are an essential input to all types of productive systems because they form the basis for planning. There are many types of services, however that would be chaotic without forecasting of demand. A few situations that differ widely from manufacturing companies are described briefly below.

Fixed Capacity with Widely Fluctuating Demand

If a service firm has relatively limited range of capacity and widely fluctuating demand for its services, it must establish policies to prevent idle facilities when demand is normally low. It also must seek means for treating customers when demand exceeds.

A beauty shop is an example of a service with fixed capacity where demand varies widely by the day of the week, hour of the day and season for the year. Potential sales, once lost, may not be made up in many cases.

Service Systems that Cannot Carry Inventories

One of the features of manufacturing that allows adjustments for fluctuations to be made more easily is the ability to carry inventory for extended periods of time. Most services are intangible and are consumed during production. In the case of intangible outputs of services, capacity must be very closely matched to demand. Delays in supplying the service may lead to lost sales or ill-will.

Sharing Capacity

A recent innovation in the service industries is sharing capacity. This has been done by the electric utility industry with plants connected in major interstate grids. Excess capacity over and above the utilised capacity for the present level of activity can be shared or hired.

UNDERSTANDING DEMAND PATTERNS

Matching capacity to demand over a period of time requires the consideration of the demand curves commonly faced. We can then seek ways to adjust service output along such curves. Some of the basic types of demand curves are shown in figure 5.1. A clear understanding of demand patterns, why they vary and the market segments that comprise demand at different points of time is necessary to manage fluctuating demand.

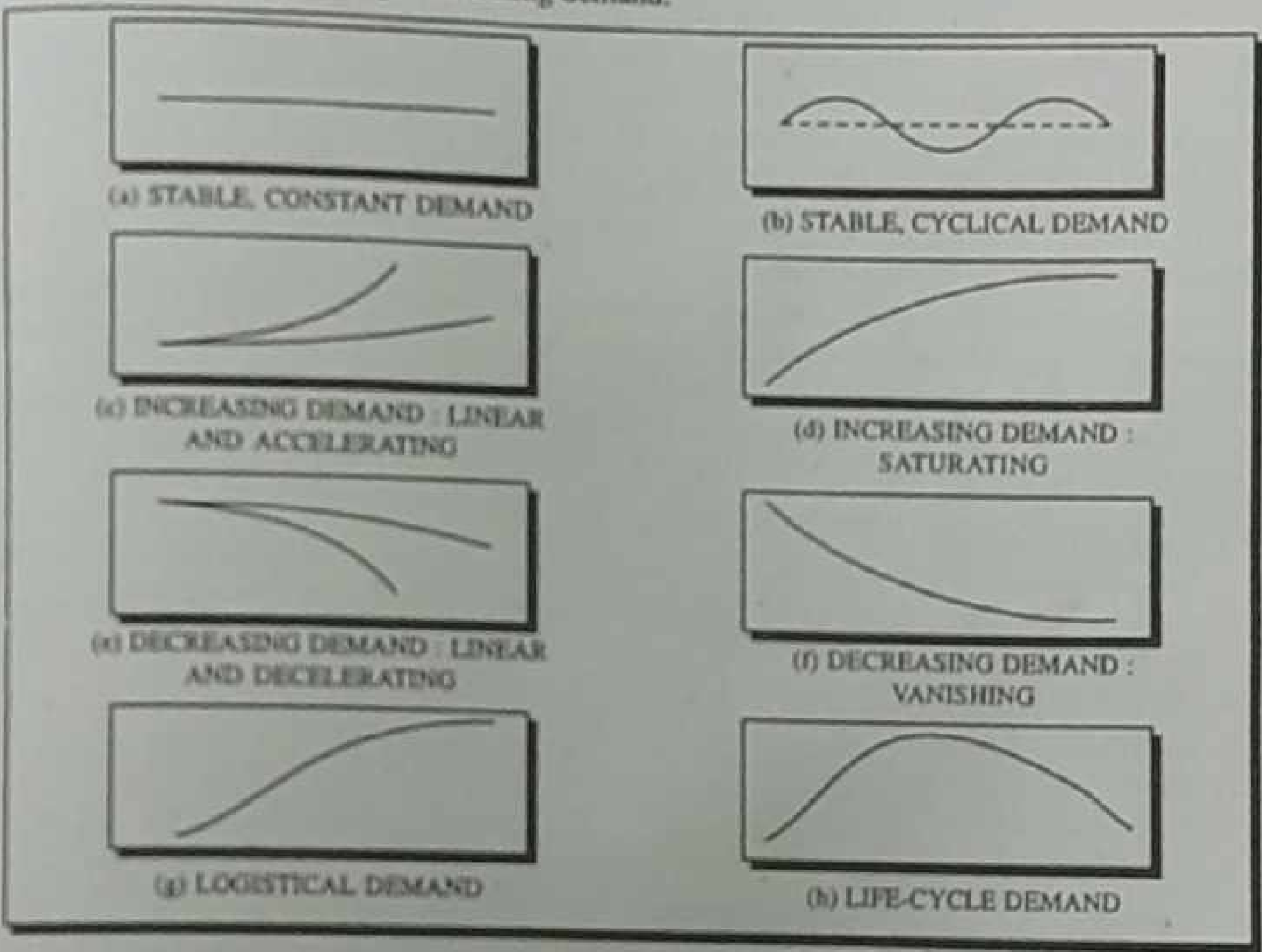

Fig. 5.1 Typical Curves Representing Forecasts of Demand : Demand vs Time

Charting Demand Patterns

The organisation needs to chart the level of demand over relevant time periods. Organizations that have good computerized customer information systems can do this very accurately. Others may need to chart demand patterns more informally. Daily, weekly and monthly demand levels should be followed and if seasonality is a suspected problem, graphing should be done for data from at least the past year. Sometimes demand patterns are intuitively obvious, in other cases patterns may not reveal themselves until the data are charted.

Predictable Cycles

Variation in demand can be caused by many factors. Some of which are predictable and some are not. Is there a predictable cycle daily, weekly, monthly and/or daily? If there is a predictable cycle what are the underlying causes? Tax accountants can predict demand based on when taxes are due. Services catering to children and families respond to variations in school hours and vacations. Retail and telecommunication services have peak periods at certain holidays and times of the week and day. When predictable patterns exist, generally one or more causes can be identified.

Random Demand Fluctuations

Random variations in demand is a fact of life for virtually every service – there is no apparent predictable cycle. For example, day to day changes in the weather may affect use of recreational, shopping or entertainment facilities. While the weather cannot be predicted far in advance, it may be possible to anticipate demand a day or two ahead. Health related events also cannot be predicted. Accidents, heart attacks and births all increase demand for hospital services, but the level of demand cannot generally be determined in advance. Natural disasters such as floods, fires and hurricanes can dramatically increase the need for such services as insurance, telecommunication and health care.

Demand Patterns by Market Segment

If an organisation has detailed records on customer transactions, it may be able to disaggregate demand by market segment. Or the analysis may reveal that demand from one segment is predictable while demand from another segment is relatively random. For example, for a bank, the visits from its commercial accounts may occur daily at a predictable time, whereas personal account holders may visit the bank at seemingly random intervals.

MANAGING CAPACITY CONSTRAINTS

Demand cannot be perfectly controlled, efficient management of resources requires that the firm consider changing capacity by increasing it to meet high demand and contracting it in slack periods. However, depending upon the type of service, service firms (Exhibit 5.1) are faced with the constraints of;

1. Labour.
2. Time.
3. Facilities.
4. Equipment.

1. Labour

For a firm that employs a large number of service providers, labour or staffing levels can be the primary capacity constraint. A law firm, a university department, a consulting firm, a tax accounting firm, and a repair and maintenance contractor may all face the reality that at certain times demand for their organisations' services cannot be met because the staff is already operating at peak capacity. In some instances it is easier to hire and fire people than it is to purchase and divest buildings and machinery. This approach can be costly how ever, if employees require extensive training to provide the service or if hiring and lay off costs are high. In such cases, firms may prefer to supplement their permanent work forces with cadres of part time employees who work fewer hours, but who are employed often enough to keep their skills sharp.

Nature of the constraint	Types of service*
Time	Legal Consulting Accounting Medical
Labour	Law film Accounting firm Consulting firm Health clinic
Equipment	Delivery services Telecommuniction Utilities Health club
Facilities	Hotels Restaurants Hospitals Airlines Schools Theaters

* The examples illustrate the most common capacity constraint for each type of service. In reality, any of the service organizations listed can be operating under multiple constraints. For example, a law firm may be operating under constrained labour capacity (too few attorneys) and facilities constraints (not enough office space) at the same time.

Exhibit 5.1 What is the Constraint on Capacity?

(*Source* : Service Marketing - Valarie. A. Zethaml, Mary Jo Bitner)

Another solution that avoids training and hiring costs is to simply increase the work hours of the regular staff during periods of high demand. This policy provides high flexibility in matching short-term demand fluctuations, but it cannot be sustained for long periods of time. The cost of overtime pay and the effects on service quality of tired employees can overwhelm the benefits. Moreover, when demand falls below desired levels, labour capacity cannot be correspondingly reduced by shortening the hours of full-time employees. However, labour hour capacity can be reduced by scheduling vacations and alternative maintenance duties during such periods.

The capacity of the workforce can also be made more flexible through extensive cross training, which enables employees to perform several different jobs. This approach allows management to reassign those working at less essential tasks to assist temporarily at points of high demand. For example, many retail stores have people working in backroom operations who can assist in serving customers when traffic becomes too great for the regular sales staff. It is also possible to increase the productivity, and hence work capacity, of a staff without adding more people through training in improved job skills and by motivating personnel through inspiring leadership.

2. Time

For some service businesses, the primary constraint on service production is time. For example, a lawyer, a consultant, a hairdresser, and a psychological counsellor all primarily sell their time. If their time is not used productively, profits are lost. If there is excess demand, time cannot be created to satisfy it. From the point of view of the individual service provider, time is the constraint.

Time capacity can be increased by simply operating for longer hours, although this is not an option if those times do not match customer needs. Increasing hours of operations also produces some of the complications with personnel mentioned above. Time capacity can also be increased by shortening the time required to serve customers that is, by shortening the length of time customers spend in the service (for example, by shortening the rides at an amusement park). It can also be done by reducing the amount of time customers spend with the most time-constrained assets (increasing the capacity of the hospital's best surgeon by assigning all but the most essential tasks to other staff).

Time can also be saved by using periods of slack demand for other uses, particularly for maintenance and repair. These functions must be performed at sometime or other, however, if they can be scheduled away from peak demand periods, the overall productivity of the services facilities will be improved.

3. Facilities

Most service firms are faced with restrictions, brought about by their limited facilities. Hotels have only a certain number of rooms to sell, airlines are limited by the number of seats on the aircraft, educational institutions are constrained by the number of rooms and the number of seats in each class room and restaurant capacity is restricted to the number of tables and seats available.

Physical facilities are often more difficult to adjust. Adding a building tends to increase capacity by large amounts and moving to new quarters of appropriate size is an impractical solution if done too frequently. However, a service firm with multiple outlets may be able to accommodate excess demand at one facility by sending it to other units. Firms may also have the option of renting temporary facilities. Facilities can also contribute to the improvement of productive capacity by providing a comfortable, efficient environment in which to work.

4. Equipment

For service firms equipments may be the critical constraint. For trucking or air freight delivery services, the trucks or airplanes needed to service demand may be the capacity limitation. During the Christmas holidays, Federal Express and other delivery service providers are faced with this issue. Health clubs also deal with this limitation, particularly at certain times of the day, telecommunication companies face equipment constraints when everyone wants to use the telephone lines during peak hours.

Productivity enhancement tools can increase the capacity of a fixed work force by freeing the staff from time wasting, repetitive tasks. Banks have built ATMs to allow their counter people to devote more time to customers needing more complex services. Manufacturers of sophisticated computer and electronic products build self diagnostic components into their products to avoid sending costly engineers into the field to do routine analyses. Computers that automate ordering and billing activities and keep track of customer purchase histories have transformed operations performed by the clerical staff in many kinds of firms. However, some equipment can be extremely expensive and only available in increments that add large units of capacity and thus make the firm less flexible. In such cases, firms may be able to rent the equipment or share ownership with other firms.

Understanding the above primary capacity constraints that restrict service capacity help in capacity management/planning.

CAPACITY PLANNING

Capacity planning involves determining the resource capacity that a firm will need to meet its demand. The role of capacity planning is to convert the strategic types of marketing plans or demand forecasts associated with long range planning into over all capacity requirements, these aggregate capacity requirements will subsequently serve as a framework for the short range allocation of over all capacity to individual services.

It is important to recognise that capacity planning should have a time dimension associated with it. Thus the number of tables (or even chairs) in a restaurant does not measure in capacity; this can be measured as the (maximum) number of meals served per day. In general terms, capacity is measured by the maximum output level (tasks completed, customers served) in a period of time. For a hotel it might be beds available per night; for a supermarket, customers served per hour; for an airline, passenger miles per year and for a college, student teaching hours per semester.

It is important to note that generally it is necessary to express capacity in some general units, particularly when this capacity can and is used to deliver a range of different services. For the college, it is tempting to think of capacity as the maximum number of students on a particular course, whereas this does not portray the true picture, as in reality a mix of courses is offered and different courses have different requirements. Capacity utilisation concerns how the capacity is used to satisfy customers. It is concerned with establishing a strategy for meeting the variations in demand. Decisions such as the number of full time workers to employ, whether part-time workers or sub-contracting should be used, when the services should be offered, at which sites or times and how much capacity is needed are all part of aggregate capacity planning.

Capacity planning is somewhat different for services than for manufacturing because of the following factors :

1. Most services are perishable and cannot be inventoried. Thus it is impossible to produce the service early in anticipation of higher demand at a later time.
2. Demand for services is often difficult to predict and demand variations are typically more severe and frequent (i.e. they occur over shorter time periods).
3. Because of the variety of services offered and the individualized nature of services, the capacity required to meet demand is difficult to predict. For example, the time required to serve a customer at a bank can vary considerably depending on the number and type of transactions requested by the customer. Units of capacity also may be hard to define. For instance, should a hospital define capacity in terms of numbers of beds, numbers of patients, size of nursing or medical staff or number of patient hours at each level of care ?
4. Since most services cannot be transported service capacity must be available at the appropriate place as well as at the appropriate time.

5. In view of these difficulties it is helpful to note one final difference. Service capacity is generally altered by changes in labour rather than by equipment or space, and labour is a highly flexible resource.

Long-term Capacity Planning

Long-term capacity planning decisions are generally strategic in nature, normally involving investments in buildings and equipment primarily, and to a lesser extent in human resources. They must be made in the knowledge of a range of external factors, which include economic, social, technical factors as well as the behaviour of major competitors. Capacity decisions can be to increase capacity, which can be achieved either through one large step increase or through several small step increases, or to reduce capacity, which might come from closing or consolidating 'centres' figure 5.2 presents this range of options.

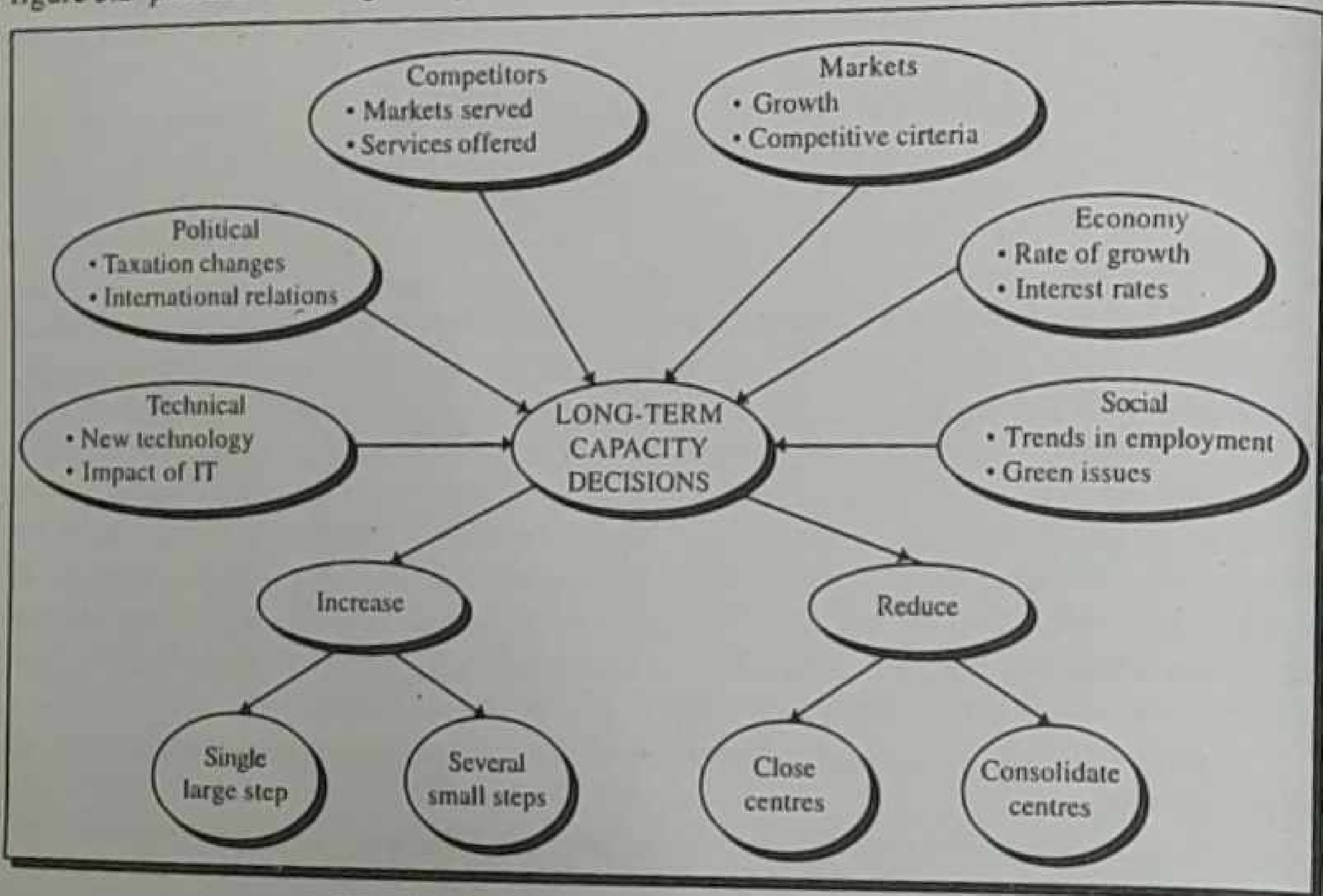

Fig. 5.2 Long-term Capacity Management Decisions

The large increase has the advantage of economies of scale, the change and disturbance caused by the capacity increase last a relatively shorter time. The small increases involve less risk if the predicted demand for the service does not materialize and when each increase takes place, the latest technology can be used. It is important to recognise that the presence of the customer in the service system has an impact on the capacity management decision. If there is likely to be (significant) competition, opening a second centre in a neighbouring location thus making it 'convenient' for another potential group of customers, rather than doubling the capacity of the existing centre, could be a better strategy. Developments in communication technology have had an impact in this area. For example, capacity management decisions in telephone banking and insurance services are not significantly influenced by the location of the customers, and their location has little impact on increasing capacity.

Short-term Capacity Planning

Decisions in this area relate to attempting to match supply of resources and demand with two broad options being ***to try and adjust resources to meet demand or to try to manage demand so that resources do not need to be adjusted***. In general terms, the technology involved in the equipment used to deliver the service, and the flexibility and responsiveness of the work force, are among the factors which will determine the extent to which this is possible and the lead time necessary to make the appropriate changes.

In some environment it is important that the service can be 'guaranteed'. Examples are the emergency services (fire, police, ambulance) utilities (gas, electricity and water). For these, it is not unusual to maintain excess capacity and to develop contingency plans to handle the extremely high levels of demand which can occur very infrequently. Non urgent, routine tasks are in part used to absorb the excess capacity. This might include maintaining equipment, training and providing advisory services. Within the fire service, plans are drawn up whereby one fire station can have back up provided by a neighbouring station if levels of 'demand' (fires or other emergencies) are at an extremely high level.

It is sometimes possible to offer an alternative service when capacity limitations are reached within one area. Illustrations are the air passenger upgraded from tourist to club/business class because the tourist section on the flight is full, the holiday makers are offered alternative accommodation because the hotel into which they were originally booked was full or the diners in the restaurant are offered an alternative dish, when the one chosen originally was finished. This process has to be handled with care as it can change customer's expectations of the service and it can cause problems for other passengers (the other passengers who paid the full club class fare).

Two key parameters are the demand from customers and the time required to provide the service. A number of possibilities are available to influence or attempt to manage demand. The most common is the appointment or reservation system. However, this does have the disadvantage that, depending on the consequences, a proportion of customers might not turn up for any given appointment. As a result, organisations can be encouraged to over book appointments, which can result in either delaying or changing the service. During periods of non peak demand, different pricing policies are often used to stimulate demand (weekend break offers in hotels) figure 5.3 summarises the strategies for matching supply of and demand for services.

STRATEGIES FOR MANAGING CAPACITY TO MATCH DEMAND

The amount of flexibility a firm should build into its capacity is a strategic decision, which is determined by the type of service offered, costs, labour availability and other factors. At one extreme is a level - capacity strategy, in which the firm designs its systems to provide a constant level of capacity and absorbs the costs when demand is far above or far below that level. At the other extreme is the strategy to "chase demand" with capacity that can be rapidly expanded or contracted to meet current needs. A given firm's optimal level of flexibility to match, capacity to demand will fall somewhere between those two extremes. The various strategies used to manage capacity are described below (Figure 5.4).

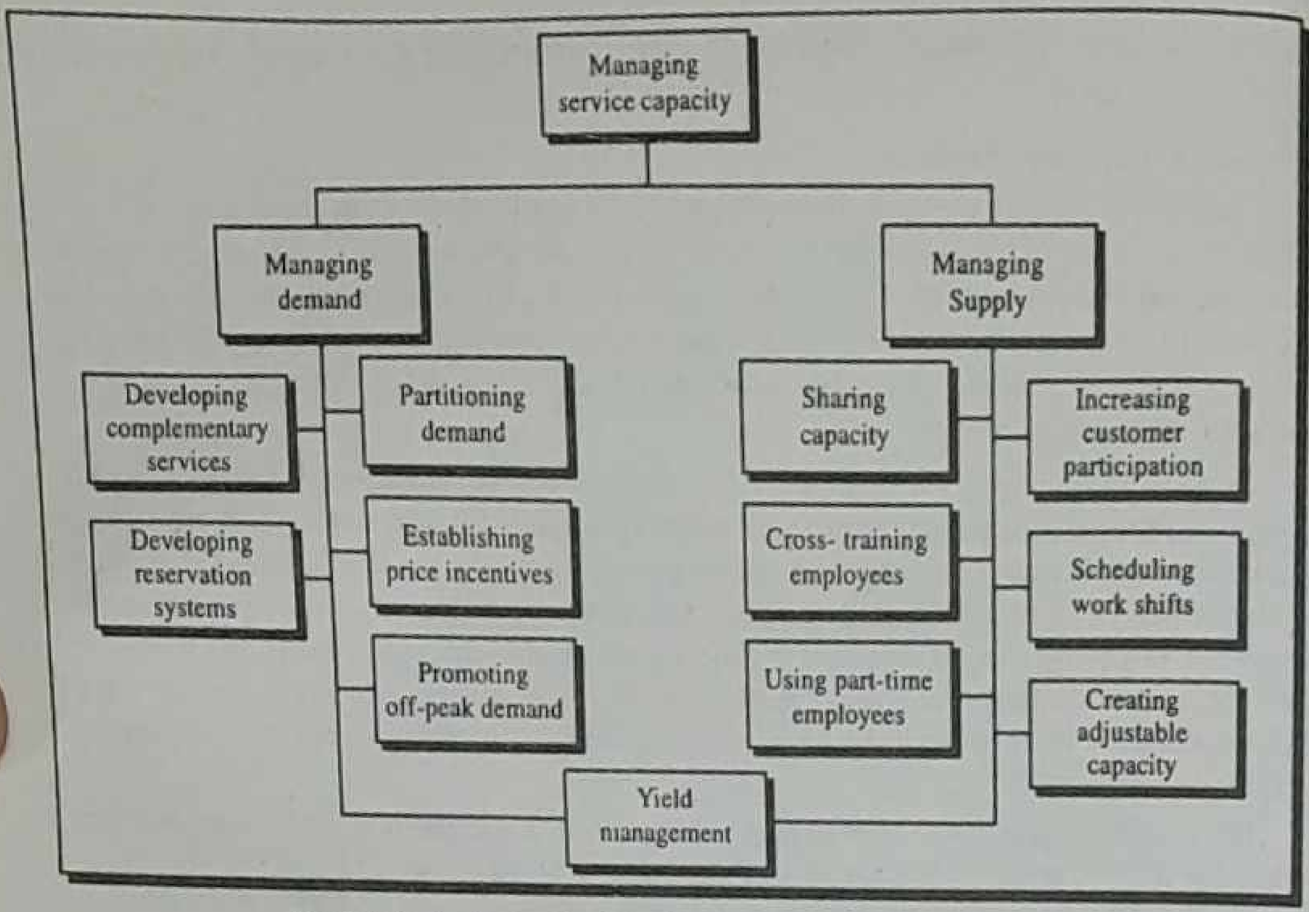

Fig. 5.3 Strategies for Matching Supply of and Demand for Services

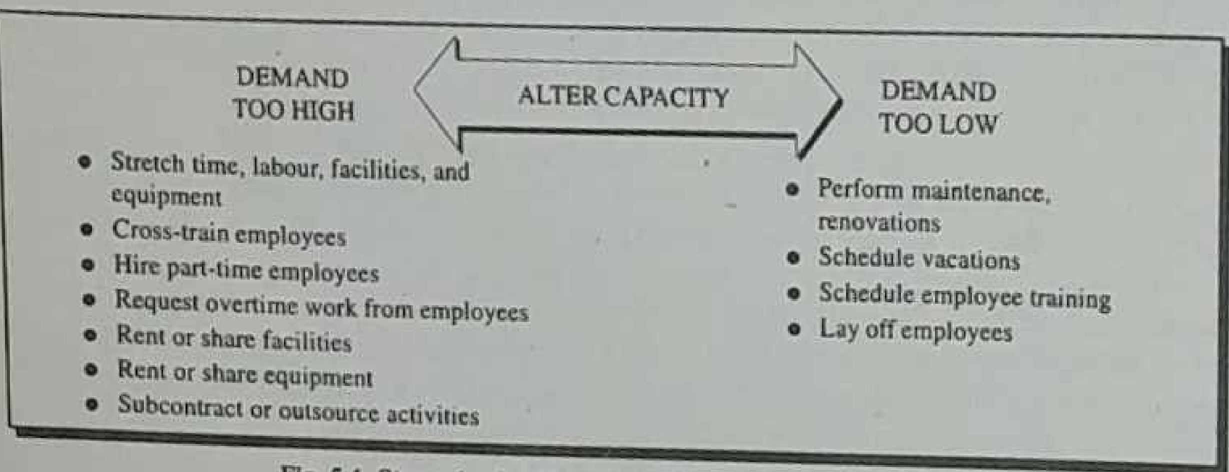

Fig. 5.4 Strategies for Managing Capacity to Match Demand

1. Customer Involvement

Another source of additional capacity is the customer himself or herself. By converting certain operations to self service, the firm's own personnel can be diverted to other functions. Buffets and salad bars at restaurants and fast food joints are common examples.

In general, requiring customers to provide their own service must be reflected in lower prices or they tend to feel they are being cheated. Self service firms also lose a certain measure of control over service quality when customers are asked to perform key steps, so managers must be careful to transfer only easily accomplished tasks to their patrons.

2. Cross Training Employees

Some service systems are made up of several operations. Sometimes when one operation is busy, another operation may be idle. Cross training employees to perform tasks in several operations creates flexible capacity to meet localised peaks in demand.

The gains from cross-training employees can be seen at supermarkets. When queues develop at the cash registers, the manager calls on stockers to operate registers until the surge is over. Likewise, during slow periods some of the cashiers are busy stocking shelves. This approach can also help build an "esprit de corps " and give employees relief from monotony.

3. Using Part-time Employees

When peaks of activity are persistent and predictable, such as we see at meal times in restaurants or on pay days at banks, part-time help can supplement regular employees. If the skills and training required are minimal, a ready part time labour pool is available from college students and other interested in supplementing their primary source of income.

Another source of part-time help is off duty personnel placed on stand by. Airlines and hospitals often pay their personnel to be on stand by. Standbys are paid some nominal fee to restrict their activities and to be ready for work if needed.

4. Stretch Existing Capacity

The existing capacity of service resources can often be expanded temporarily to match demand. In such cases no new resources are added but rather, people, facilities and equipment are asked to work perhaps harder and longer to meet demand.

Stretch time : It may be possible to extend the hours of service temporarily to accommodate demand. Retailers are open longer hours during the Diwali or Christmas shopping seasons and accountants have extended appointment hours before tax deadlines.

Stretch labour : In many service organisations, employees are asked to work longer and harder during periods of peak demand. For example, consulting organisations face extensive peaks and valleys with respect to demand for their services. During periods of peak demand, associates are asked to take on additional projects and work longer hours.

Stretch facilities : Theatres, restaurants, meeting facilities and class rooms can sometimes be expanded on a temporary basis by the addition of tables, chairs and other equipment needed by customers.

Stretch equipment : Computers, telephone lines and maintenance equipment can often be stretched beyond what would be considered the maximum capacity for short periods to accommodate peak demand.

In using these types of 'stretch' strategies, the organisation needs to recognize the wear and tear on resources and the potential for inferior quality of service that may go with the use. These strategies should thus be used for relatively short periods in order to allow later for maintenance of the facilities and equipment and refreshment of the people who are asked to exceed their usual capacity.

5. Sharing Capacity

A service delivery system often requires a large investment in equipment and facilities. During periods of under utilisation, it may be possible to find other use for the capacity. Airlines have cooperated in this manner for years. At small airports, airlines share the same gates, ramps, baggag handling equipment and ground personnel. It is also common for some airlines to lease their aircra to other airlines during the off season. The lease agreement includes painting on appropriate insigni and refurbishing the interior.

6. Modify or Move Facilities and Equipment

Sometimes it is possible to adjust, move or creatively modify existing capacity to meet demand fluctuations. Hotels accomplish this by reconfiguring rooms – two rooms with a locked door between can be rented to two different parties in high demand times or turned into a suite during slow demand. The airline industry offers dramatic examples of this type of strategy. The new Boeing 777 aircraft is so flexible that it can be reconfigured within hours to vary the number of seats allocated to one, two or three classes. The plane can thus be quickly modified to match demand from different market segments essentially molding capacity to fit demand.

7. Schedule 'Down Time' during Periods of Low Demand

If people equipment and facilities are being used at maximum capacity during peak periods, then it is imperative to schedule repair, maintenance and renovations during off peak periods. This will ensure that the resources are in top condition when they are most needed. With regard to employees, this means that vacations and training would also be scheduled during slow demand periods.

8. Other Methods to Alter Capacity

In addition to adjusting the various components of capacity listed above, service industries have developed other ways to increase capacity. One is to use sub- contractors to bolster service capacity. This can give the firm access to highly trained employees for short periods of time. Similarly, the firm may be able to rent facilities and equipment on short notice.

STRATEGIES FOR MANAGING DEMAND TO MATCH CAPACITY

Excessive fluctuations in demand for service need not be accepted as inevitable. Service systems can smooth their demand by using both active and passive measures. While the arrival of consumers will still occur at random intervals, the average rate of arrivals will be more stable over time. There are several strategies that might be used for demand smoothing. Figure 5.5 summarizes the strategies commonly used to manage demand.

DEMAND TOO HIGH	⟵ SHIFT DEMAND ⟶	DEMAND TOO LOW
• Use signage to communicate busy days and times • Offer incentives to customers for usage during nonpeak times • Take care of loyal or "regular" customers first • Advertise peak usage times and benefits of nonpeak use • Charge full price for the service - no discounts		• Use sales and advertising to increase business from current market segments • Modify the service offering to appeal to new market segments • Offer discounts or price reductions • Modify hours of operation • Bring the service to the customer

Fig. 5.5 Strategies for Shifting Demand to Match Capacity

1. Partitioning Demand

Demand for a service is seldom derived from a homogenous source. Instead it is often grouped into random arrivals and planned arrivals. For example a bank can expect visits from its commercial accounts on a regular daily basis and at approximately the same time. It can also expect random arrivals of its personal account holders. Likewise the walk-in patients arriving at a doctor's clinic are more than those with appointments. Walk in demand is uncontrollable, appointments are controllable. Moreover, patients in flow is higher on week days than week end. Therefore, why not make appointments in the latter part of the week to level demand.

2. Vary the Service Offering

One approach is to change the nature of the service offering, depending on the season of the year, day of the week or time of day. For example, accounting firms focus on tax preparation late in the year and until April, when taxes are due. During other times of the year they can focus on audits and general consulting activities. Airlines even change the configuration of their plane seating to match the demand from different market segments. In some planes, there may be no first class sections at all. On routes with a large demand for first class seating, a significant portion of the seats may be placed in first class.

Care should be exercised in implementing strategies to change the service offering, since such changes may easily imply and require alterations in other marketing mix variables – such as promotion, pricing and staffing to match the new offering. Unless these additional mix variables are altered effectively to support the offering, the strategy may not work. Even when done well, the down side of such changes can be a confusion in the organisation's image from the customers' perspective or a loss of strategic focus for the organisation and its employees.

3. Developing Complementary Services

Restaurants have discovered the benefits of complementary services by adding a bar. Diverting waiting customers into the lounge during busy periods can be profitable to the restaurant, as well as soothing to anxious consumers. Complementary services are basically offered to occupy waiting consumers.

4. Promoting Off Peak Demand

Creative use of off-peak capacity results from seeking out different sources of demand. An example is the use of resort hotel during the off season as a retreat location for business or professional groups. Telephone companies offer lower rates to encourage long distance dialling at night or on week ends, when switching equipment is underutilized.

The strategy of promoting off peak demand can be used to discourage over taxing the facility at other times. A department store's appeal to 'shop early and avoid the Christmas rush' and a super market's offer of double coupons on week days are examples.

5. Pricing Incentives

Customers understand price. As long as demand curves slope downward, lowering price is a great incentive for getting customers to buy more of what you have to offer and raising price will choke off demand. Raising prices for peak times and lowering prices for non peak times can work wonders for smoothing out the demand on the service process. Telephone companies offer cut rates in the evening and night hours. Movies have matinee specials. Hotels' lowest rates are offered during week ends. However over reliance on price can result in price wars and eventually all competitors suffer.

6. Communicate with Customers

Another approach for shifting demand is to communicate with customers, letting them know the times of peak demand periods so they can choose to use the service at alternative times and avoid crowding or delays. For example, signs in banks and post offices that let customers know their busiest hours and busiest days of the week can serve as a warning, allowing customers to shift their demand to another time if possible. Forewarning customers about busy times and possible waits have added benefits.

7. Modify Timing of Service Delivery

Some firms adjust their hours and days of service delivery to more directly reflect customer demand. Banks now have extended working hours and even work on week ends.

8. Modify location of Service Delivery

Another strategy may involve moving the service to a new location to meet customer demand, or even bringing the service to customers. Mobile training facilities, libraries are examples of services that physically follow customers.

9. Advertising and Sales Promotion

In addition to signage being used to communicate peak demand times to customers, advertising and other forms of promotion can be used to emphasize different service benefits during peak and slow periods. Advertising and sales messages can also be used to remind customers about peak demand times and promotional offers during off season are common.

STRATEGIES WHEN DEMAND AND CAPACITY CANNOT BE MATCHED

Sometimes it is not possible to manage capacity to match demand, or vice versa. It may be too costly – for example, for most health clinics it would not be economically feasible to add additional facilities or physicians to handle peaks in demand, patients simply have to wait to be seen. Sometimes, waits, may occur when demand backs up due to variability in length of time for service, for example, even though patients are scheduled by appointments in a physician's office, frequently there is a wait because some patients take longer to serve than the time allotted to them.

For most service organisations waiting customers are a fact of life at some point. Waiting can occur on the telephone – customers put on hold when they call into ask for information, order something or make a complaint – and waiting can occur in person – customers waiting in the line at the bank, post office or at a clinic. Waiting can occur even with service transactions through the mail – delays in mail order delivery or back logs of correspondence on a manager's desk.

Some of the strategies that can be used to manage demand and capacity in the above situations are described below :

1. Reservations

For a number of services, especially those that have a high intrinsic value for the customer, demand can be managed by introducing a reservation system. There are reservations for services particularly when supply is likely to be constrained. There are reservations for doctors and other health care services, for traditional restaurants, for most professional services and for many other services.

Sometimes, reservations do more than simply ensure full utilisation of the service. They can also be used to segment demand and thus squeeze more revenue out of the customer who wants a better seat (at a game or a concert or on a plane) or a better room (at a hotel or in a hospital) or otherwise better or quicker service.

Reservations also act to regulate the arrival of demand and to reduce its variability. Reservation systems cost money to install and operate but they are effective and usually regarded by consumers as fair and justified, particularly if the queue is managed by a first come first served rule or by a rationing scheme whereby those who pay more are served first. Reservation systems do, however, require early non spontaneous action by consumers and thus they are not well suited to all kinds of services. One would be hard put to install a reservation system for retail operations, unless what is being sold is of very high value (e.g. houses or works of art).

Often of course, reservation systems exist side by side with first come, first served non reservation systems (e.g. hotels, transportation, restaurants). This nearly always occurs with services that often have enough excess capacity that they do not want to turn away walk in business. Consumers here, too, recognise that those who have planned ahead should be rewarded more than those acting on impulse, if capacity suddenly becomes constrained.

RAILWAYS COME BACK ON TRACK

Computerised reservation system will be decentralized

The passenger amenities in Southern - Railways is being upgraded to international standards. 60 stations of the Indian Railways are selected for this upgradation exercise. In an attempt to provide train commuters with better facilities, the authorities have graded these selected railway stations from A to F, depending on the category of the city and passenger traffic handled.

Firstly persons booking tickets will no longer have to stand in different queues for the Southern, Central, Western, Eastern, Northern, South eastern and North eastern trains. A passenger can purchase any number of tickets to any station from one counter. Its called the 'global reservation system'.

Extending its computerization efforts, complaints and suggestions from the commuters and other users of the railway station will be recorded and dispensed with immediately. This system is followed in all the 11,000 trains of the Indian Railways and can be used by the one billion commuters presently. The railways now have an exclusive communication network called the 'railnet' which connects the 62 railway divisions distributed across the country. The other step in improving the existing passenger amenities is to upgrade the 'National Train Enquiry system', the 'Interactive Voice Responsive system' that gives details about reservation status and information on timings of trains.

The 44 types of concessions available for the marginalised sections of the society is made available on the computer. A person who fills his age as 65 automatically gets a 30 percent concession on his ticket fare. Boards are placed at various location in the Railway stations announcing the luggage charges to be given to porters.

Another new facility being offered is the circular journey ticket for those interested in exclusive train journey. The further distance they travel, the lesser the ticket cost. An added benefit is the eight breaks offered during this special journey. The Railways plan to make the computer reservation system decentralised, like post offices in each locality.

Source : Bangalore Times

Exhibit 5.2

2. Waiting Lines

Services being intangible cannot be inventoried in advance, but once a customer arrives he or she may be willing to wait for service to begin, in effect one can inventory customer arrivals

5. Delaying Service Delivery

In some services it is possible to introduce short term delays and still retain the customers. A consulting or law firm may be able to hold onto customers requesting service by convincing the customer that the delay is worth the wait. So when supply must be matched to the short run demand, delaying delivery of a service encounter into the next day or week, or until capacity becomes available is one means of making the work load more uniform. Obviously pushing a customer into a future time period is likely to lose a firm some goodwill or lower the quality of service.

YIELD MANAGEMENT

Yield management is defined as 'the process of allocating the right type of capacity to the right kind of customer at the right price so as to maximise revenue or yield'. Using yield management models organisations find the best balance at a particular point in time among the prices charged, the segments sold to and the capacity used.

Taking the example of airlines, because of the perishable nature of airline seats (i.e., once a flight has departed, the potential revenue from an empty seat is lost forever) offering a discount on fares to fill the aircraft became attractive. However, selling all seats at a discount would preclude the possibility of selling some at full price. Yield management attempts to allocate the fixed capacity of seats on a flight to match potential demand in various market segments (e.g. clubs, business, economy) in the most profitable manner. Although the airlines were the first to develop yield management, other capacity constrained service industries such as hotels, rental car firms and cruise lines are also adopting the practice.

Yield management is most appropriate for service firms that exhibit the following characteristics :

1. Relatively Fixed Capacity

Service firms with a substantial investment in facilities, such as hotels and airlines, can be considered capacity constrained seats on a flight are sold, further demand can be met only by booking passengers on a later flight. However, motel chains with multiple inns in the same city have some capacity flexibility because guests attempting to find room at one site can be diverted to another location within the same company.

2. Ability to Segment Markets

For yield management to be effective, the service firm must be able to segment its market into different customer classes. The airlines are able to discriminate between a time sensitive business traveller and a price sensitive customer. Developing various price sensitive classes of service is a major marketing challenge for a firm using yield management. Hotels might segment their market into different customer classes and adjust the allocation of available rooms to each class on the basis of the seasons of the year.

3. Perishable Inventory

For capacity constrained service firms, each room or seat is referred to as a unit of inventory to be sold (actually rented). The revenue from unsold capacity is lost forever.

4. Product Sold in Advance

We have seen that reservation systems are adopted by service firms to sell capacity in advance of use. However, managers are faced with the uncertainty of when to accept an early reservation at a discount price or when to accept an early reservation at a discount price or when to wait and hope to sell the inventory unit to a higher paying customer. For example in a hotel, if demand is higher than expected, budget rate classes are closed and only reservations at standard rates are accepted. If the accumulation of reservation falls below the acceptable range, then reservations for rooms at budget rates are accepted.

5. Fluctuating Demand

Using demand forecasting, yield management allows managers to increase utilisation during periods of slow demand and to increase revenue during periods of high demand.

6. Low Marginal Sales Costs and High Marginal Capacity Change Costs

The cost of selling an additional unit of inventory must be low, such as the negligible cost of a snack for an airline passenger. The marginal cost of capacity additions is large capital investment as in the case of airlines or hotels.

SUMMARY

Service organisations lack the ability to inventory their products, therefore, the effective use of capacity can be critical to success. Idle capacity in the form of unused time, labour facilities or equipment represents a direct drain on bottom line profitability when the capacity represents a major investment, for example, airplanes, expensive medical imaging equipment or lawyers and physicians paid on a salary, the losses associated with under use of capacity are enormous. Overused capacity is also a problem. People, facilities and equipment can become worn out over time when used beyond optimum capacity constraints. People can quit, facilities become run down and equipment can break. From the customer's perspective, service quality also deteriorates. For organisations focused on delivering quality service, therefore, there is a natural drive to balance capacity utilisation and demand at an optimum level in order to meet customer expectations.

This chapter provides an understanding of the underlying issues of managing supply and demand in capacity constrained services by exploring the lack of inventory capability, the nature of service constraints (time, labour, equipment, facilities) and the causes of fluctuating demand.

A variety of strategies for matching supply and demand have been discussed. The basic strategies fall under two headings : ***Demand strategies*** (Shifting demand to match capacity) and ***Supply strategies*** (managing capacity to meet demand.) Organisations frequently employ several strategies simultaneously to solve the complex problem of balancing supply and demand.

Yield management is a sophisticated form of supply and demand management and balances capacity utilisation, pricing, market segmentation and financial return. Any one of the strategies is likely to imply changes in multiple marketing mix elements to support the strategy. Whenever, such changes are made, even if done well, there is a risk of the firm losing focus or inadvertently altering its image in pursuit of increased revenues. While this is not necessarily bad, the potential strategic impact on the total organisation should definitely be considered.

Further where it is not possible to align supply and demand. In these unresolved capacity-utilisation situations, the inevitable result is customer waiting. Strategies for effectively managing waiting lines are, to establish a reservation process; differentiate waiting customers and make waiting fun or at least tolerable and queuing.

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