

Service Supply and Demand – Methodology and Trends

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Abstract

The service supply and demand are components of the service markets. The authors deal with defining the concepts of service supply, demand, consumption need, as well as their categories in terms of several criteria. The identification and the analysis of the factors influencing the service demand are an important stage in the complex process of the service quantitative and qualitative evaluation. Specific analytic, statistic, normative methods are used to study the service demand. The service supply peculiarities are an outcome of their characteristic features. The service supply is influenced by a set of complex, simultaneous set of factors. A lot of trends have been noticed in the service supply dynamics.

Keywords: service supply, service demand, consumption need, need categories, service demand methods of analysis.

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1. Introduction

The consumer is the representative of demand on the market. He takes the benefits from the services provided and acquired, and uses them, thus meeting his own needs.

At a microeconomic level, the service demand stands for the quantity of services that one or all managers choose to acquire in a period of time, observing the price and other objective economic or subjective circumstances determining it, to meet the consumption needs.

Here is an analysis of the consumption needs, starting from the idea that consumption is the fundamental reason of the materialistic side of life.

The consumption needs are the amount of the people's needs, of sales units and institutions, and of all the managers active on the market. It may be defined as the wish to meet needs, generated either by a natural demand or by the behavioural demands of the society, urging to actions which may be met by means of consumption.

The consumption needs may become known through an individual or collective solvent request. The needs amount to represent the consumption cluster comes out and is formed on a concrete, general background issued by the social production, that generates

the dimensions and the complexity of the needs system, through its volume, structure and diversity.

The demand is the wish to acquire a product or a service, through the opportunity and the availability of paying its price accordingly (Gherasim, 1993).

In accordance with Zaharia (2005), the service demand meets the main part of the consumption need, the services being also available on the market, so that the service demand is determined by the following three major conditions:

- the availability of buying the service;
- the customer's wish to consume the service in a certain quantity;
- the opportunity of acquiring the service, mainly determined by the consumer's solvency.

2. Factors of influence on demand

The analysis and identification of the service **demand factors of influence** are two important stages in the complex process of the service quality and quantity evaluation. The outcomes of this scientific research are a basis in grounding investments in this field, as well as in settling the market policy of the service suppliers.

The service demand factors of influence can be grouped in two large categories: general factors and specific factors (Zaharia, 2005).

The general factors of the service demand include: the tariffs in use, the consumer's income, the replaceable and complementary services tariffs, the consumer's demands and the time.

- **the tariffs in use** are a sound factor of influence of the service demand; when the tariff goes up, the consumer will buy a smaller quantity of that service. There are two explanations for that. Firstly, by asking a higher tariff for a service initially available at a much lower one, the consumer will considerably diminish a part of his income. Secondly, when the consumer encounters the service higher tariff in relation to other services, he will easily replace it by another service available for him at a price similar to the one he could pay initially. Generally, the service demand is indirectly proportional to the tariff when the other factors are at an invariable level. The changes in the service demand by the tariffs in use will depend on:
 - the tariff initial level;
 - the service quality;
 - the ratio between the service quality and its tariff;
 - the flexibility of the demand as against the used tariff.
- **the consumer's demands** are another factor of influence of the service demand. According to the demand evolution which is determined by the changings in the consumer's incomes, the services can be:
 - **normal services**, when the demand may go up or down, yet in the same direction with the consumer's income;
 - **inferior services**, when the demand goes contrary to the consumer's income.

The effects of the consumer's income on the service demand could be different, depending on the socio-economic environment of the demand.

- **the replaceable service tariffs.** The replaceable services are those services meeting similar needs. When a service tariff goes up, the demand for the replaceable service goes up, too. Depending on the replacement degree, services can be:
 - **entirely replaceable**, when the necessity of the replaced service is almost equivalent to the substitute;
 - **partially replaceable**, when the replacement is achieved in a certain ratio.

It is very important to know the consumer's availability to substitute one service by another one.

- **the complementary services** influence the level and the dynamics of the service demand in the opposite way. The main characteristic of the complementary services accounts for the need of services to be consumed together, while one service tariff growth will diminish the consumption of the both services. Depending on the **complementary degree**, services can be **strictly complementary**, when the degree is close to 1, and **partially complementary**, when the degree is different from 1.
- **the consumer's demands** for a certain service directly influence the demand evolution; thus, when the consumer's demands for a certain service go up, the total demand for that service will go up, too. The consumer's demands can be identified through marketing research, and they are generally invariable for a longer period of time. This factor has certain **features**:
 - it stresses certain quality aspects, influencing the service demand;
 - it grounds the criteria for the service supply segmentation;
 - it allows the quantity evaluation of the service demand, based mainly on a complex analysis of the financial restrictions.
- **the time factor** is less important to the evaluation of the service demand, mainly when the production and consumption simultaneity are considered. This factor is shown some attention only in the producer's attempt to become capable of offering a certain service. The tertiary sector is significantly vast and complex, and that is why the service demand is also influenced by **specific factors**, together with the general ones:
 - services for the population;
 - services for the organizations;
 - international services.

The specific factors of the service demand include: the specific factors for the population, the specific service factors for the organizations and specific international services factors.

- **Specific service factors for the population** are the demographic factors, the socio-cultural factors, the ratio between the spare time and the income. The main demographic factors with a direct influence on the structure and dynamics of the population service are:
 - the population number;

- the population structure by gender and age groups;
- the territorial distribution of the population, from the number point of view and its gender and age group structures.

The demographic factors for the population under 19 years will influence directly the evolution of the educational and training services, mainly the primary, gymnasium and high school levels. There also is the old population who strongly influence the medical health care services. The growth of the life length would also contribute to the growth of the tourist service demand.

In terms of the **socio-cultural factors** to influence the service demand there are the social changes, the town planning and the affiliation to a cultural environment which has its own traditions, customs and mentalities.

This influence can be also noticed from the opposite direction, as the services themselves may influence the evolution of the socio-cultural factors, too. Thus, the development of the means and ways of communication greatly contribute to the growing and the diversification of the consumers' needs.

The ratio between the spare time and the income would influence the quantity and structural evolution of the service demand. Actually, according to the ratio between the spare time and the income, the consumers can belong to the following groups:

- **high income people, with limited spare time** – this is characteristic to the middle aged population, busy with the professional work, a great service consumer;
- **high income people, with much spare time** - this is typical for a small category of population concerned about spending spare time in the most agreeable way (tourist services, entertainment services, etc);
- **low income people** – characteristic for a certain category of consumers who are forced to give up some services or to replace them. They mainly contribute to the first need service.

- **Specific service factors for the organizations.**

In the analysis and the identification of these factors influencing the service demand, two fundamental elements of the organization environment should be considered: the internal environment which is directly observed by the organization management, and the external one, with its two components, the micro and the macro environment. The complexity of the internal environment is the result of the modern technology effects on the organization, from mechanization to automation and cybernetics. In terms of the external environment dynamics, a special attention should be given to the impact of the competitive growth, together with the goods and services providers and customers.

- **Specific international services factors** will include :

- the income growth and the changing of the population consumption;
- the development and the liberalization of the goods trade;
- the evolution of the scientific and technical progress;
- the expansion of the multinational companies activity.

The income growth and the changing of the population consumption will strongly influence the international services, as a result of the changing of the demands and life style of the different consumers' categories.

The trade development and liberalism has determined the development of complementary services (car service, transportation, insurance, banking etc).

The technical and scientific evolution has led to the development of services with regard to the transfer of technology, engineering, and informatics, as well as of services of information protection.

The expansion of the multinational companies' activity creates the service dynamics in the market research, the growth of the telecommunication, banking services, etc.

Here are the main categories of methods used in the study of the population service demand, as well as the results of a research aiming at meeting the population service demand.

3. Methods used for the study of demand

That requires a large scale of methods, which have proved to be also valid in the case of the consumption goods. Yet, in the case of services, the difficulty consists in the quality of information with regard to the service demand, a difficulty caused by the service complexity, diversity, and characteristics.

By the way of approaching and the results, these methods can be grouped as follows: analytical methods, statistical methods and normative methods (Zaharia, 2005).

The **analytical methods** are based on a mathematical instrument, which offers best solutions to different targets, depending on the parameters considered. In the most complex cases, in the practice of service demand several simulation techniques are used, resulting in different solutions according to the various scenarios.

The **statistical methods** are used in the series of data analyses, to characterize the real service demand evolution expressed by the consumers in a certain time period.

The **normative methods** are based on the statistically determined use of consumption „norms”. They account for the volume of the individual or/and collective services demand, generally of common interest, such as electricity and gas provision, transportation, mailing, etc.

These methods are not used separately, the study of the service demand requiring all the three of them, depending on the given situations and information available, thus generating a complex analysis.

The services expenditure represents an average of 24.7 per cent in the amount of the consumption expenditures of the households (24.9 per cent in 2006). The lowest service expenditures is represented by the farmers' households (13.2 per cent), and the highest by the employees (27,3 per cent), the amplitude of this variation being of 14.4 per cent.

An important factor to differentiate the consumption expenditures per person in the household is the **size of the household**, actually the number of the persons in the household. Thus, in 2007, the share of the average consumption expenditures per person in a household for the services in the amount of the consumption expenditures went down, while the number of the household members went up. This indicator calculated for a six or more member household is 17.2 per cent of the total consumption amount,

compared to the 21.6 per cent (five member household), 25 per cent (four member household), 26.2 per cent (three member ones), 25.5 per cent (two member ones), and 26.2 per cent (one member household).

The service total consumption expenditures are significantly differentiated by the household categories: 28.95 per cent in the **urban area**, 16.6 per cent in the **rural** one, as compared to the average of the household amount (24.7 per cent).

In terms of the **total consumption expenditures structure, by destinations, in 2007**, the expenditures for the household, water supply, electricity, gas and other fuels reached 15.5 per cent, the transport costs reached 5.9 per cent, communications – 5.1 per cent, household furnishing, equipping, maintaining as well as recreation, leisure and culture costs - 4.6 per cent each, while 3.9 per cent was spent on the medical care, 1.2 per cent on hotels, coffee houses and restaurants, and 0.8 per cent on education etc.

4. Types of offer

The service supply, in the basic economy terms, is the amount of what the service market could offer an apparently simple definition with many economic implications and connotations.

There are two ways to present the service supply in the field literature: **the individual service supply and the aggregated supply** (Zaharia, 2005).

The individual supply is:

- the service supply of only one provider or supplier;
- the amount of a service a supplier can offer to his customers.

A service provider organization should respect several **conditions** to create a service supply:

- **availability** to create a certain service, as any businessman enjoys the freedom to develop a business in the service field;
- **the capacity** of the organization to produce a certain service, this needing human resource with a field professional training, material resources, I.T and financial resources. In the most frequent cases, the organization should face its capacity to offer services, by making proof of certificates, licence, warranty or patent;
- **competent management** to ensure the recuperation of the costs of producing and trading of services, from the income and profit generated by the said activity;

The aggregated supply represents the services total quantity made available for the consumers or for the users at a given time and it includes the individual supply of all the organizations.

The peculiarities of the service supply come out from its features and they are presented below, as they are common to the majority of services:

- **the nontransferability of the supply** derives from the service immateriality and nonstockability characteristics. Not being material and stockable, services cannot be transferred from one market to another. For instance, the hotel accommodation services could not be transferred into another location where the demand is higher, or vice versa, when the accommodation demand goes much too high,

beyond the number of the accommodation places, such services cannot be transferred from such locations.

- **the difficulty of the service legal protection** comes out from the immateriality and the intangibility of certain services. These two characteristics generate conditions to increase the possibility of imitation. Due to their immateriality and to the consumer's participation to the service creation, the supplier can easily individualize the offer, thus both in theory and in practice there are real opportunities to get another service. The legal protection is limited to the trade mark, in such cases.
- **the consumer's involvement in producing services** generates:
 - the creation of individualized services, which may generate difficulties for the supplier;
 - a special system of relationships between the supplier and the consumer, with benefic consequences for the both parties.

The organization of the production and of the company structure starting from the consumer is determined by:

- the inseparable link of service between the supplier and the consumer;
- the production and consumption simultaneity;
- the service immateriality;
- the service nonstockability;
- the ever growing competition on the service market.

The supplier is the most important person to the customer, providing the latter the expected joy and satisfaction.

- **the service supply is a potential supply**, it may become real only at the consumption time, a fact generated by the nonstockability of the service and by the simultaneity of the service production and consumption.

Zaharia (2005) stated that the service supply is influenced by a set of complex factors, acting at the same time. The most important **factors** are presented below:

- **the volume and the structure of the demand** influence the service supply and can embody several forms.

The unsatisfied demand appears when it has not found an equivalent supply for a period of time. From this perspective, it is important to know it, from both quantity and structure as well as from time and location points of view. The investors' orientation to initiate and develop business in the direction of service supply required by the consumers and which had not been met yet might be very successful, for both the suppliers - who dispose of great chances to make a profit -, and the consumers - who meet their social needs.

The effective demand is an extremely important service supply factor of influence. To transform a potential demand in a real demand, it is important to know the compound elements of the potential demand, as well as the reasons for the social need which have not become obvious in the demand. Among these reasons, there are the lacks of the financial support the lack of the social need service suppliers, the service quality, the tariffs, the price-quality ratio etc.

The growth of the volume and diversification of the real service demand can be achieved through:

- reducing tariffs;
- improving the price-quality ratio;
- raising the number of the suppliers;
- informing the consumers permanently, with regard to the service supply.
- **the production cost** represents a factor of a major importance, especially for the starting point of a business in the service field (for example, in telecommunications, dentistry, beauty saloons etc). Yet, there are some services for which the production cost has not got such a special importance (for example, in consultancy, translation services etc).
- **the market tariff of the service** is a factor of influence, and it has a set of peculiarities generated by the service features. Usually, the service tariff is mostly determined by the consumer. The outcome of the encounter between the demand and the supply is less significant, to the advantage of the consumer.

The simultaneity of the production and the consumption of some services will lead to monopoly or the oligopoly, in most of the frequent cases. This peculiarity of the service tariff is greatly to the disadvantage of the consumer.

The provided quantity actually refers to the volume of a certain service that the suppliers want to provide to the consumers at the moment of pricing. Thus, the essential element in determining the supply is rendered by the correlation between the price and the quantity of a service provided on the market.

The target of all the service suppliers is gaining the highest possible profits. The end of the twentieth century and the beginning of the twenty-one century made obvious a series of **trends** in the evolution of the service supply (Ionciă, 2002a):

- a rapid growth of the service supply as compared to other sectors;
- association/dissociation of the goods and service supply;
- the ever growing role and importance of quality in the field of services;
- different dynamics of services.

The rapid growth of the service supply as compared to other sectors is a trend to be noticed on either the Romanian or the international markets. The development of the tertiary sector has been supported by the development of economy as a whole, which generated a positive output of the living standard, and consequently, the coming out and the diversification of the social need for services. This trend is determined by:

- the growth of the population employed in the service sector in Romania;
- the growth of the service share in the Gross National Product in Romania;
- the ever growing trend of the services contribution to the gross added value.

The association/dissociation of the goods and service supply reflects contradictory trends nowadays; yet, due to the development and dynamism of the social and economic phenomena they could be considered as normal, and all this owing to:

- the intense technical progress that has become a must in all the domains of activity;
- the growth of the living standard and of the life quality;
- the diversity of the social needs;

The dissociation trend of the goods and service supply can be noticed:

- **between the service supply and the goods supply**, for instance the software service used to be sold together with the computer, but at present this service is produced and delivered separately, and even became a distinct activity.
- **inside the service supply**, for instance the development of the catering services inside the common food network;

The association trend has been noticed and determined by the complementary relation between goods and services, and only between services;

- the goods and services supply: for example, the transportation, equipping, maintaining and the service during the warranty and post warranty time;
- inside the service supply: for example, the house decoration, painting, tilling, equipping with air conditioning, with a new furniture, etc.

The growth of the role and importance of the service quality has become a major target for any market economy. On a competitive market, where the companies are in a permanent competition of goods, services and prices, quality is one of the obvious conditions to gaining a competitive advantage. If the customers are provided the expected quality, they will manifest their loyalty, by resorting to the same provider, and recommending the services to their friends and relatives. Also, the sound competition will determine the service providers to relate and adapt themselves to the ever dynamic social and economic environment.

Different dynamics of services: the analyses of the Gross National Product related to resources categories in 2008, as compared to the instant year, revealed different indexes as follows: 113.5 per cent in the financial field, 108.1 per cent in the educational field, 105.1 per cent in transportation, storing and communication fields, 1033 per cent in the medical assistance field, etc.

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