

## Concept of Productivity in Service Sector

Jonas Rutkauskas, Eimenė Paulavičienė

Kauno technologijos universitetas  
K. Donelaičio g. 73, LT- 44309, Kaunas

*Productivity shows whether the activity of an organization is efficient and effective. Though the terms like productivity, efficiency and effectiveness are used together and practitioners sometimes alternate their meanings, however we must not identify productivity with efficiency and/or effectiveness. Productivity requires both efficiency and effectiveness, because a certain activity will not be productive if it is only efficient, but not effective, or effective, but not efficient. Productivity in economic position is defined as the relation between output and input. Input element in an organization consists of resources used in the product creation process, such as labour, materials, energy. Output consists of a given product, service and the amount of both.*

*Mostly productivity is analyzed in manufacturing sphere. Productivity in the service sector was not analyzed before the end of the twentieth century, while productivity in manufacturing has been analyzed for more than two hundred years. Many researchers argued that application of productivity concept in service sector is more complicated task than its application in manufacturing.*

*Productivity concept in manufacturing is analyzed in the scope of organization, but in the service sector this scope is larger and involves an external element from the organizational position – customer. Some of the service organizations reduce an input element by including customer to their activity and thus boosting service productivity.*

*The quality aspect in manufacturing is not gauged, because input and output are measured by quantity units which quality is seemingly the same. The quality in service sector is very important. Customers often evaluate a given service not only by its amount. If only one unit or package of service is purchased, output is mostly gauged only by the quality aspect. Input commonly is gauged both by the quantity and quality aspects. Quantity and quality aspects in the determination of productivity will differ in different spheres of service sector.*

*Service sector input elements such as materials, machines and energy are not as important as in manufacturing. The main element in service sector is labour because service sector is more personnel-intensive comparing to manufacturing. Output in manufacturing is measured by quantity units and boosted by increasing the amounts of production, its realization. Service sector output usually has no high values by the quantity aspect, therefore it is mostly increased by the attempt to provide higher quality services to the customer, seeking for better customer satisfaction.*

**Keywords:** *productivity, service sector, quality, quality and productivity ratio.*

### Introduction

The origin of productivity management is deeply rooted in the context of mass production therefore issues of productivity are mainly analyzed in this sphere. This may be the main reason for the prolonged neglect of the productivity issues in the sphere of service. Service organizations are recognized as the largest and fastest-growing segment of the economy in the world (Sahay, 2005). Johnston and Jones (2004) states, that despite the importance of productivity management in service organizations it is surprising that there is relatively little empirical research on this topic.

Organizations that deliver service must broaden their examination of productivity from the conventional organization-oriented perspective to a dual organization – customer perspective. This broadened approach can help reconcile conflicts between improving service quality and boosting productivity (Sahay, 2005). According to Parasuraman (2002), customers are often involved into activity of an organization providing some amount of input in the form of time, physical effort and mental energy.

With the expansion of point of view towards the examination of productivity to the point of organization – customer perspective, the problem of quality productivity ratio becomes more relevant. Some researches state that quality and productivity are two unrelated concepts (Brignall et.al., 1996), (Heskett et.al., 1994). However, most researches state that quality and productivity can not be approached as separate concepts (Sahay, 2005), (Kontaghiorghes, 2003), (Parasuraman, 2002), (Muruges, 1997).

Productivity of manufacturing organizations is measured in quantitative units of input and output with relatively the same quality. There were several attempts to measure service sector productivity in the same way, i.e. using only quantitative dimensions of input and output (McLaughlin, 1990).

At least there are two reasons for inadequacy of this type of service sector productivity measures. The first reason is the fact that input and output of service sector productivity consist not only of quantitative elements but also qualitative (Reid, 2005). The second reason is the fact that quality and productivity in all the sectors of service are strongly correlative (Gummeson, 1992). Customer involvement to the organizational activity in the service sector generates many output quality variations. Therefore, output of service sector in many cases could be measured only by measuring its quality variations. How can service sector productivity be determined? What parameters are primary in the determination of service sector productivity? How are these parameters related? What are the singularities in the determination of service sector productivity?

These topics illustrate the core of **the research problem**.

The concept of productivity has been analyzed for more than two hundred years, though only in the manufacturing sector. The concept of productivity in the service sector was not analyzed before the end of the twentieth century and only a few resources have been detected after comprehensive literature analysis concerned with research topic. These literature resources provide the analysis of productivity service in specific service sector spheres. Nachum (1999) analyzed issues of productivity measures of consulting firms, while Gupta (1995) in health-care environment. Regarding the level of the problem analysis, it is important to render a conceptual analysis of service sector productivity. Lithuanian researchers have not done such researches and the concept of productivity was analyzed only in the manufacturing sector. These reasonings illustrate **scientific novelty**.

**The aim** of the article is to accomplish the analysis of productivity concept in the service sector, to perform the conceptual analysis of service sector productivity determination, and to provide the analysis of quality and productivity ratio in the service sector.

**The objective** of the article is the use of productivity concept in the service sector.

The chosen **research method** is logical analysis of scientific literature.

### **The definition of service productivity**

The term of productivity economically is defined as the ratio between output and input (Mohanty, 1998).

$$Productivity = \frac{Output}{Input};$$

On the one hand productivity is related to utilization of resources, on the other hand productivity is related to the creation of value. Therefore good productivity is achieved when activity of an organization and resources in the product creation process create value for getting product. Productivity can also be related to loss, which must be eliminated if productivity increases (Sauian, 2002). A common mistake is to relate productivity to the amount of services offered. Therefore a common mistake is to think that the more products are made the more productivity increases. It is important to keep in mind the fact that productivity is a relative concept and it cannot be said to increase or decrease by making such comparisons. Productivity depends on variations from competitors or other standards at a certain point of time or on changes over time. According to Misterik et.al. (1992), an increase in productivity can be caused by five different relationships of input and output:

- Output and input increases, but the increase in input is proportionally less than increase in output;
- Output increases while input stays the same;
- Output increases while input is reduced;
- Output stays the same while input decreases;
- Output decreases while input decreases even more.

It is also important to understand the ambiguous nature of productivity. There exist a few types of productivity as well as different hierarchical levels where productivity can

be discussed within. Almost any process in an enterprise is fed with several types of input (e.g. labour, capital, material and energy) and has more than one output (e.g. product A, product B). We must be able to separate partial productivity (output related to one type of input) from total productivity (output related to multiple types of input). Considering existing hierarchical levels, it is not difficult to comprehend that the strategical perspective management towards productivity will differ from operational view of productivity among operators (Tangen, 2005).

The literature shows that the concept of productivity is important in order to understand it properly and to distinguish it from most related terms of efficiency and effectiveness (Salck, 2001), Sumanth (1998), (Koss, 1993), (Misterik, 1992), (Sink, 1989). The terms often have not a clear definition and are even identified with the term of productivity.

ISO 9000 series standard defines productivity as an extent to which planned activities are realized and planned results achieved (LST EN ISO 9001:2001). The concept of productivity is often confused with the efficiency term. Therefore it is important to understand that efficient performance of unnecessary work is not productive. Therefore productivity requires both efficiency and effectiveness (Sumanth, 1998).

ISO 9000 series standard have defined efficiency and productivity very similarly (LST EN ISO 9000:2001). Output is the result achieved and input is the resources used. Therefore it could seem that the same subject has different titles.

Actually there is no single accepted view about these terms. Usually effectiveness is described as “doing the right things”, while efficiency means “doing things right” (Sink, 1989). Efficiency is strongly linked to the utilization of resources and it mainly influences the input of the productivity ratio. This means that efficiency in manufacturing can be seen as the minimum resource level that is theoretically required to run the desired operations in a given system, compared to how much resources are actually used. The efficiency ratio is rather simple to measure, whether it is based on time, money or something other.

Effectiveness is a more comprehensive term and in most cases it is very difficult to quantify it. It is often linked to the creation of value for the customer and affects the output of the productivity ratio. Therefore a single focus on effectiveness does not seem to be a fruitful way to increase productivity. Only the combination of high values of both efficiency and effectiveness in the transformation (producing manufacturing product or service offered) process leads to have the higher productivity values. Thus, it is possible for an effective system to be inefficient and for an efficient system to be ineffective.

According to the basic principle of economic rationality, the purpose is to achieve a given result with minimal resources, or to get the maximum result with a given set of resources (Vourinen et.al., 1998). However, it is very difficult to talk about the maximum level of performance in the production of services. Hence, it is important to elaborate the economic evaluation of service operations on the basis of the concept of productivity.

Despite the importance of productivity to many service organizations, it is surprising that there is relatively little

empirical research on this topic (Johnston and Jones, 2004). According to Adam et.al. (1995), the concept of productivity mostly analyzed in manufacturing is too narrow in the case of service sector. Therefore, we have to interpret the analysis of productivity in the service sector in a broader way than in the traditional manufacturing sense. We must include quality to our definition in the analysis of the productivity of service operations (Grönroos, 1990). We can define service productivity at the outset of analysis as the ability of a service organization to use inputs for providing services with quality matching the expectations of customers (Järvinen et.al., 1996).

The quantity and quality of service sector cannot be treated in isolation, because it may be impossible to separate the impact of service process on conventional productivity from its impact on service quality (Kontaghiorghes, 2003). Hence, both the quantity and quality aspects must be considered together to provide a joint impact on the total productivity of the service organizations.

We can define service sector productivity to the following ratio:

$$\text{Service productivity} = \frac{\text{Quantity of output and quality of output}}{\text{Quantity of input and quality of input}};$$

In order to understanding the ratio better, we will analyze it in a more detailed fashion factors (quantitative and qualitative aspect) inside ratio.

### **The quantity aspect of service productivity**

The quantity aspect of service productivity is identical to the manufacturing productivity and consists of material, labor, capital. Service business is personnel-intensive, therefore productivity of many service spheres is low compared to manufacturing sphere. Therefore many providers of services investing to technologies as alternative of using labor (e.g. automated teller machines replace operators, World Wide Web business replace sellers in the shops). It shows a way to increase productivity through investing to the technologies in expenses of input element of capital. Though capital mostly impacts service productivity, we have no use for only this partial (capital) productivity measures.

It might seem that output, amount or quantity is the primary factors to measure productivity. When a proposed service consists of one or several standardized components, output of service is easy to measure (Quinn and Paquette, 1990). Therefore output can consist of a number of standardized services adapted to individual customers (e.g. in the case of a unique service package). Therefore defining the service output is a difficult task.

It is strategically important for the service provider to have enough of resources in order to match demand for the service. This strategy is oriented towards the quantity. However, from the customer's view, the volume of the service output is hardly a significant issue, because the customer usually buys only one unit of output (e.g. haircut) or one package of service (e.g. holiday tour). The customer is therefore inclined to give priority to service quality instead of quantity (Sahay, 2005). Yet, the actual volume of operations is determined by the variation of demand over time (McLaughlin, 1996). As a consequence, the produc-

tivity ratio of service operations may vary greatly from one time period to another, if it is measured as a quantity ratio. Due to the variation in the amount of the total demand across time, the service provider has to solve two basic problems related to the quantity aspect: capacity size and capacity scheduling (McLaughlin et.al., 1991).

### **The quality aspect of service productivity**

The quality aspect is a dimension that is difficult to define objectively. According to Gummesson (1992), there is a humanistic quality approach. At the one extreme we must pay more attention to the customers, personnel, leadership and culture, whereas at the other end lies a technical approach concerning operations management, statistics and methods of measurement. Lehtinen and Lehtinen (1991) talk about physical quality, interactive quality and corporate quality, and on the other hand they talk about the quality of process and output. As our ratio suggests, we divide quality into input and output dimensions, which are parallel to Lehtinen and Lehtinen's latter division of quality aspect. Therefore we could state that output consists of a total service offering in terms of quality, and the input includes both tangible and intangible elements.

The output in the form of quality is what the customer in fact pays for, which is mostly intangible and may be difficult to quantify (Adam et.al., 1995). Service quality is generally defined as customer perceived quality which stresses the individuals' assessment of the value of the total service offering (Gummesson, 1994) and there is difference between expected service quality and experienced service quality (Grönroos, 1982). When purchasing services, customers' attention is often limited to a small number of tangible inputs (Zeithalm, 1984). Physical environment – buildings, offices and interior design – affects customer beliefs, attitudes and satisfaction (Zeithalm and Bitner, 1996), and provides an opportunity to tell the "right" story about a given service (Berry, 1984). It is also very important how contact personnel dresses, articulates, writes, designs and presents proposals (Levitt, 1983).

As intangible input, the service personnel represent the service, the organization and the marketers in the customer's eyes (Zeithalm and Bitner, 1996). The quality management of personnel includes such things as motivating, managing information, training, career planning, recruiting and retaining the right people (Normann, 1991; Zeithalm and Bitner, 1996). Service business is personnel-intensive, meaning that quality supplied to the customer is essentially a result of the way personnel perform (Normann, 1991). Both employees and customers will experience more positive outcomes when the organization operates with a customer service orientation and management supports it (Blois, 1989).

According to Gummesson (1994) there are attempts to include customers in the service organization activity. Martin and Horne (2001) refer to it as a common phenomenon. It provides an opportunity to utilize customers as free inputs in order to increase productivity from the viewpoint of service provider. Therefore customer cannot be considered in isolation from the organization of offering and delivering services.

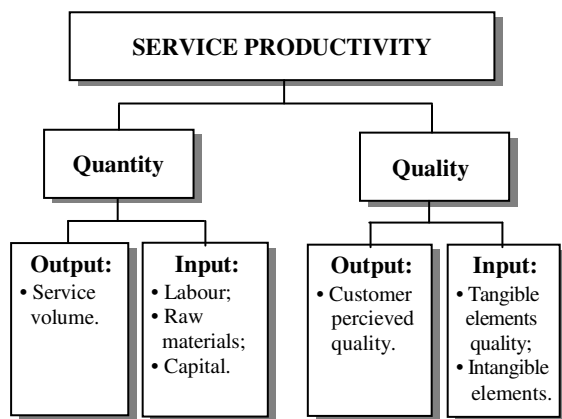
Another important intangible element is service cul-

ture. By participating in the service delivery process, customers influence and even create perceived service culture. High levels of intangibility call for image building and maintenance to attain reliance based on reputation and subjective impressions of the service (Cowell, 1988). In the long run, image depends mainly on what the organization actually provides but in the short run image can be used as a tool for the creation of new reality (Normann, 1991).

Service sector productivity is heavily dependent on fast developing technologies and automation (Gummesson, 1998). Customers, instead of interacting with a contact person, they transact using an automated teller machine or a computer. According to Normann (1991), there are five main reasons for using information technologies:

1. Reducing costs by substituting service officers for information technologies
2. Standardizing services
3. Increasing availability (24-hour access to services using appropriate machines or computers)
4. Linking customers into the service system
5. Affecting customer and personnel relationships and behavior.

Figure summarizes analyzed service sector productivity concept.



**Figure.** Principal scheme of service productivity

Different service sector spheres demand different formulations of the service productivity (Vourinen et al., 1998). Therefore, dependent on service sector sphere quantity and quality aspects weights of service productivity will differ.

Further research area could show productivity measurement problems. Foremost we have to answer to the questions in the research process how to measure input and output quality and how to relate different input and output factors.

## Conclusions

1. The literature analysis concerned with research topic showed the prolonged neglect of the productivity concept in the service sector.
2. Determining productivity of service sector, we must evaluate output and input elements in the aspects of quantity and quality. Quality of service sector is analyzed in the two aspects: humanistic and technical. Therefore output consists of a total service offered in terms of quality, and the input includes

both tangible and intangible elements.

3. Analysis of productivity concept in service sector helps to reconcile conflicts between improving service quality and boosting productivity.
4. The most important element in the determination of productivity of service sector is not quantity, but quality. It is especially clearly revealed in determination of output. From the customer's view, the volume of the service output is hardly a significant issue, because the customer usually buys only one unit of output or one package of service and quality becomes the most important aspect of output. Determination of service output could be a difficult task because of its intangible nature.
5. One of the most effective ways of boosting productivity is investing to new technologies, which helps to reduce labour element of input and to reach higher values of productivity.
6. Input element is decreased with including customers to the organization service delivery system and thus boosts the service productivity.

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Jonas Rutkauskas, Eimenė Paulavičienė

### Produktyvumo samprata paslaugų sferoje

Santrauka

Produktyvumas ekonominiu požiūriu apibrėžiamas kaip įvesties ir išvesties santykis. Įvestį organizacijoje sudaro sunaudoti išteklių produkto gavimo procese, tai yra darbas, kapitalas, medžiagos, energija; išvestis – gautas produktas, jo apimtis.

Produktyvumas paslaugų sferoje pradėtas nagrinėti tik XX amžiaus pabaigoje, nors gamyboje jis pradėtas nagrinėti daugiau nei prieš du šimtus metų.

Gamybos sferoje produktyvumo koncepciją nagrinėjama organi-

zacijos viduje, o paslaugų sferoje šios ribos platesnės: apima organizacijos požiūriu išorinį elementą vartotoją. Nustatant produktyvumą gamybos sferoje, kokybės aspektas nėra svarbus, nes įvestis ir išvestis matuojama fiziniiais vienetais, kurių kokybė tariamai yra vienoda. Paslaugų sferoje kokybės aspektas labai svarbus. Paslaugų sferoje išvestis kiekybiniu aspektu dažniausiai būna nedidelė ar net lygi vienetui, todėl išvestis dažniausiai didinama stengiantis suteikti kuo aukštesnės kokybės paslaugas vartotojui, siekiant kuo geriau patenkinti jo poreikius ir lūkesčius.

### Įvadas

Nepaisant didelės produktyvumo vadybos svarbos paslaugos sferoje, empirinių tyrimų šiuo klausimu atlikta stebėtinai mažai.

Paslaugas teikiančios organizacijos privalo praplėsti požiūrį į produktyvumo nagrinėjimo sferą nuo įprasto „organizacija“ į dvilypį „organizacija – vartotojas“. Dauguma mokslininkų mano, kad kokybė ir produktyvumas negali būti nagrinėjami kaip atskiros, nesusijusios sąvokos paslaugų sferoje. Gamybinėje organizacijoje produktyvumas matuojamas fiziniiais įvesties ir išvesties vienetais, kurių kokybė tariamai vienoda.

Tokie matavimai nėra tinkami produktyvumui nustatyti paslaugų sferoje. Pirmiausia – paslaugų sferoje ir įvestį, ir išvestį sudaro ne vien kiekybiniai elementai, bet ir kokybiniai. Antra – kokybė ir produktyvumas visose paslaugų sferos srityse yra glaudžiai susijusios. Kaip nustatyti produktyvumą paslaugų sferoje? Kurie kriterijai svarbiausi nustatant produktyvumą paslaugų sferoje? Kaip šie kriterijai siejami vienas su kitu? Kurie ypatumai svarbiausi nustatant produktyvumą paslaugų sferoje? Šie klausimai ir sudaro **mokslinės problemos** esmę.

Paslaugų sferoje produktyvumo koncepcija pradėta nagrinėti tik XX amžiaus pabaigoje, o atlikus išsamų literatūros, susijusios su nagrinėjama problema, tyrimus, aptikta tik keletas šaltinių, tiesiogiai susijusių su nagrinėjama tema. Esant tokiam problemos tyrimo lygiui, svarbu konceptualiai išnagrinėti produktyvumo koncepcijos taikymo ypatumus paslaugų sferoje. Lietuvos mokslininkai tokio pobūdžio tyrimo nėra atlikę, ir produktyvumas buvo nagrinėjamas tik gamybos sferoje. Šie samprotavimai parodo straipsnio **mokslinį naujumą**.

Šio straipsnio **tikslas** – atlikti produktyvumo koncepcijos taikymo paslaugų sferoje analizę, konceptualiai paaiškinti, kaip galima būtų nustatyti produktyvumą paslaugų sferoje, atlikti produktyvumo ir kokybės ryšio paslaugų sferoje analizę.

Straipsnio **objektas** – produktyvumo koncepcijos taikymas paslaugų sferoje. Pasirinktas **tyrimo metodas** – mokslinės literatūros loginė analizė.

### Paslaugų produktyvumo apibrėžimas

Terminas **produktyvumas** paprastai apibrėžiamas kaip santykis tarp išvesties (pagamintos prekės ar suteiktos paslaugos) ir įvesties (sunaudotų išteklių) produkto gavimo procese.

Aukštas produktyvumas pasiekiamas, kai organizacijos veikla ir išteklių produkto gavimo procese sukuria vertę gaunamam produktui. Produktyvumas dar gali būti siejamas su nuostoliais, kurie didinant produktyvumą turi būti pašalinami. Produktyvumas priklauso nuo pokyčių konkurentų pusėje ar kitų matų konkrečiu laiko momentu, arba nuo pokyčių laike.

Dvi labiausiai susijusios su produktyvumu sąvokos yra rezultatyvumas ir efektyvumas. Tačiau šios sąvokos dažnai nėra aiškiai apibrėžiamos ar net sutapatamos su produktyvumo sąvoka.

ISO 9000 serijos standarte rezultatyvumas apibrėžiamas kaip planuotų priemonių įgyvendinimo ir planuotų rezultatų pasiekimo laipsnis, o efektyvumas – kaip pasiekto rezultato ir panaudotų išteklių santykis. Produktyvumui reikia efektyvumo ir rezultatyvumo kartu.

Pagrindinis ekonominio racionalumo principas yra pasiekti numatytą rezultatą, sunaudojus kuo mažiau išteklių arba gauti maksimalų rezultatą, sunaudojus numatytus išteklius. Tačiau paslaugų sferoje labai sudėtinga nustatyti aukščiausią pasiekimų lygį. Todėl svarbu remiantis produktyvumo koncepcija ekonomiškai įvertinti paslaugų operacijas.

Nagrinėjant produktyvumą paslaugų sferoje, turime jį interpretuoti plačiau nei jis pateikiamas tradicinėje gamybinėje sampratoje. Analizuojant produktyvumo sąvoką paslaugų sferoje, į apibrėžimą reikia įtraukti kokybę. Analizės pradžioje galime apibrėžti paslaugų produktyvumą kaip paslaugų organizacijos gebėjimą panaudoti savo įvestis siekiant suteikti kokybiškas paslaugas vartotojams patenkinant jų poreikius ir lūkesčius.

Produktyvumą paslaugų sferoje galima apibrėžti šia formule:

$$\text{Paslaugų produktyvumas} = \frac{\text{Išvesties kiekybė ir išvesties kokybė}}{\text{Įvesties kiekybė ir įvesties kokybė}}$$

Kiekybė ir kokybė paslaugų sferoje negali būti nagrinėjamos atskirai viena nuo kitos, kadangi neįmanoma atskirti paslaugų proceso poveikio produktyvumui nuo poveikio paslaugų kokybei.

#### **Kiekybinis paslaugų produktyvumo aspektas**

Kiekybinis aspektas paslaugų produktyvume yra toks pats kaip ir gamyboje; jį sudaro šie pagrindiniai įvesties elementai: žaliavos, darbas, kapitalas. Dėl intensyvaus darbo jėgos panaudojimo paslaugų sferoje daugelyje šios sferos sričių produktyvumas yra labai žemas, palyginti su gamybinės srities. Todėl daugelis paslaugų teikėjų daug investuoja į technologijas, kurios būna alternatyva darbo jėgos naudojimui.

Vartotojo požiūriu, paslaugos išvesties apimtis dažniausiai nėra reikšminga, nes vartotojas neretai perka vieną išvesties vienetą arba paslaugos komplektą. Todėl vartotojas teiks prioritetą paslaugos kokybei, o ne kiekybei. Produktyvumo santykis paslaugų operacijose skirtingais laikotarpiais gali žymiai keistis, jei bus matuojamas kiekybiniu aspektu. Keičiantis bendrajai paklausai laike, paslaugos teikėjas turi spręsti dvi pagrindines problemas, susijusias su kiekybiniu aspektu: pajėgumų dydžio ir pajėgumų kalendorinio planavimo.

#### **Kokybinis paslaugų produktyvumo aspektas**

Kokybę paslaugų sferoje reikia nagrinėti humanistiniu požiūriu, be to, viena vertus, ypatingą dėmesį skirti vartotojams, personalui, lyderystei ir kultūrai, o kita vertus, nagrinėti techniniu požiūriu siejant ją su operacijų vadyba, statistika ir matavimo metodais. Kokybė yra dalijama į įvesties kokybę ir išvesties kokybę. Todėl galime teigti, kad išvestį sudaro bendrasis paslaugos pasiūlymas kokybiniu požiūriu, o įvestis – matuojami ir nematuojami elementai.

Paslaugos kokybę galima apibrėžti kaip vartotojo suvokiamą kokybę, kuri pabrėžia individualią bendro paslaugos pasiūlymo vertę ir yra skirtumas tarp tikėtios ir patirtos paslaugos kokybės. Pirkdami paslaugą, vartotojai savo dėmesį dažniausiai atkreipia tik į mažą dalį apčiuopiamų įvesčių. Paslaugas teikiantis personalas reprezentuoja paslaugą, organizaciją ir paslaugos pardavėjus vartotojų požiūriu kaip

neapčiuopiamą įvestį. Kartais bandoma įtraukti vartotojus į paslaugas teikiančias organizacijų veiklą kaip laikinus darbuotojus. Tai leidžia panaudoti vartotojus kaip laisvas įvestis didinti produktyvumui paslaugos teikėjo požiūriu.

Vartotojai, dalyvaudami paslaugos teikimo procese, daro įtaką ar net kuria paslaugos kultūrą.

Produktyvumas paslaugų sferoje didinamas dėl sparčiai besivystančių technologijų ir automatizavimo. Vartotojai, užuot bendravę su kontaktiniu asmeniu, gali sąveikauti su automatine atsakymų į pasiteiravimus mašina ar kompiuteriu.

Tolimesnių tyrimų gaires gali nurodyti paslaugų produktyvumo matavimo problemos.

#### **Išvados**

1. Mokslinės literatūros, susijusios su nagrinėjama tema, analizė parodė, kad produktyvumo sąvoka paslaugų sferoje ilgą laiką nebuvo taikoma.
2. Nustatant produktyvumą paslaugų sferoje, reikia įvertinti įvesties bei išvesties elementus ir kiekybiniu, ir kokybiniu aspektu. Todėl išvestis susideda iš bendrojo paslaugos pasiūlymo kokybiniu požiūriu, o įvestis – iš matuojamų ir nematuojamų elementų.
3. Produktyvumo koncepcijos nagrinėjimas paslaugų sferoje padeda spręsti prieštaravimus tarp kokybės gerinimo ir produktyvumo didinimo.
4. Dažnai nustatant produktyvumą paslaugų sferoje svarbiausias aspektas yra ne kiekybė, o kokybė. Vartotojo požiūriu paslaugos išvesties apimtis dažniausiai nėra reikšminga, nes vartotojas dažniausiai perka vieną išvesties vienetą arba paslaugos komplektą, ir svarbiausiu išvesties aspektu tampa kokybė.
5. Vienas veiksmingų produktyvumo didinimo metodų paslaugų sferoje yra investavimas į įvairias naujas technologijas; tai padeda sumažinti didelį darbo įvesties elementą ir siekti didesnio produktyvumo.
6. Vartotojo įtraukimas į organizacijos veiklą gali padaryti ją įvesties elementu, sumažinti bendrą įvestį ir tokiu būdu padidinti produktyvumą.

Raktažodžiai: *produktyvumas, paslaugų sfera, kokybė, kokybės ir produktyvumo santykis.*

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