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The process approach to service quality management

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Abstract
In this paper a model of service quality management based on the process approach has been presented. The first part of the article contains the theoretical framework of service quality and the process approach in management. Next, quality of service process has been presented in reference to a process-based definition in quoted literature. Finally, the outcomes of a customer questionnaire concerning the validity of particular quality attributes has been presented. The collected data in relation to service process quality stages have enabled the development of a of service quality model for process management.

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1. Introduction

The importance of service sector in modern economy is constantly increasing. Two main trends in this area can be observed. First of all, the majority of developed countries perceive the service sector as the dominant one. Moreover, customers' needs have continuously been changing and the necessity of adapting to them appears as the only way of enabling enterprises stable functioning the market with changeable environment (NOWACKI, R., SZOPIŃSKI, T.S., BACHNIK, K, 2017).

According to recent studies, ensuring the quality of services in rapidly growing service sector is understood as the basis of service enterprises' functioning (MEIDUTĖ-KAVALIAUSKIENĖ, I., ARANSKIS, A., LITVINENKO, M. 2013). Taking this into consideration, the term *service quality* should be precisely and clearly defined.

Service quality, as a complex and comprehensive issue, is the result of theoretical reviews of production quality adapted to the service specification. Multidimensionality of a service quality has resulted in the creation of many different definitions based on five main sets (GULC, A. 2017).

First of them, product-based, considers service quality as an amount of the attributes possessed by the service. The attributes of a service are identified, described and measured individually by each customer. Therefore, service quality is the result of this assessment - the higher assessment equals a better quality.

The next, value-based, refers to the analyzes of the relationship between the benefits of the service and the cost of acquiring them. Service quality is described as the relationship between profit and the acceptability of price and other costs connected to the service delivery.

The philosophical definition characterizes service quality as the manifestation of perfection of service delivery.

The last but one set is a demand-approach. Demand-based definitions are considered the most popular and valuable because of their customer orientation. Service quality is understood as the fulfillment of the needs and expectations of customers.

What is particularly worth mentioning is that process-based characteristics, also termed manufacturing-based, are perceived as the most technical approach. Service quality depends mainly on the level of conformance to standards and requirements (LOVELOCK, C., WRITZ, J. 2007).

Managing service quality has also been developing over the years. The lack of a homogeneous service quality has resulted in the elaboration of various service quality models based on of the presented sets.

One of the most modern and approved management concepts is process approach. The key word in this phrase, which is *process* may be defined as a group of interacting or interrelated value-added activities that transform inputs into outputs by means of adequate resources such as materials, machines, people, energy, information, and others (SANTAREK, K., OBŁUSKA, I. 2012). Based on it, process approach to the management has been presented as a systematic identification, measurement, evaluation and constant improvement of processes which, with theirs correlation, are managed by means of suitable process-based methods and

tools to achieve the desired results (JOHNSON, R.L., TSIROS, M., LANCIONI, R.A. 1995. KLEMENTOVA, J., ZAVADSKY, J., ZAVADSKA, Z. 2015, KOWALIK, K, KLIMECKA-TATAR, D. 2017, ULEWICZ, R. 2014).

The main goal of the process management is to improve process efficiency by reducing costs, shortening the time of service delivery and strengthen in the quality as a result of many-sided perspective on all the resources involved in process. Horizontal way of management and a holistic approach to the enterprises' functioning result in activities being managed in order to create value required by inside and outside customers (MENDLING, J., BAESENS, B., BERNSTEIN, A., FELLMANN, M. 2017).

The system approach, commonly used in manufacturing enterprises, has been increasingly introduced to services. Its requirement is to treat a service as a process. Process-based service definitions distinguish three main elements of service quality: input quality, process quality and output quality. First of them, input quality, includes the quality of technical and organizational conditions. The quality of process, principally shaped by staff, is defined as the interaction between service provider and the service recipient. The quality of output mainly depends on the outcome of the service and the benefits (tangible and intangible) that a customer obtains (SHARABI, M. 2013).

2. Experimental

The purpose of the case study was to develop the idea of a model for quality management in services based on the system approach. The service process defined by process-based characteristic has been the subject of the research. The process previously was determined as very important in modern economy.

The first part of the study includes the presentation of service quality's stages based on process approach in reference to the quoted literature.

Next, the results of the anonymous customer survey has been presented. The questionnaire was conducted electronically among 100 respondents referred to as clients of service enterprises. The structure of survey respondents is shown in table 1.

Table 1. The characteristics of respondents - percentage structure of respondents' features

Age	Males , %	Females, %	Total, %
18-24	22	26	48
25-39	18	16	34
40-59	10	8	18
60<	0	0	0
			100

The aim of the questionnaire was to gain customers feedback on the importance of particular attributes of service quality. The questionnaire sheet was composed of 5 statements whose ratings were made by typical five point Likert scale in which 1 means „strongly disagree" and 5 means „strongly agree". The collected data, translated into determined stages of service process, made it possible to develop an idea for a system management model of service quality.

3. Results and discussion

Process-based definition of service quality distinguishes three main stages of the process: input, process and output. With reference to the service and its quality these phases can be perceived as follows (Fig. 1):

- input quality i.e. including quality of technical (place of service delivery: building, equipment: machines, devices, tools, and staff-depended features: knowledge, experience and preparation) and organizational conditions (the way and time of waiting for the service, staff's attitude, atmosphere etc.),
- process quality i.e. quality of interaction between the service-provider and service-receiver at the place where service is delivered dependent mainly on aspects such as time, faultlessness, reliability, assurance and safety in service provided with an emphasis on employees' contact with the customer based on mutual understanding, empathy, involvement, adjustment, and helpfulness,
- output quality i.e. primarily related to tangible and intangible benefits from the service, and strictly dependent on customer satisfaction.

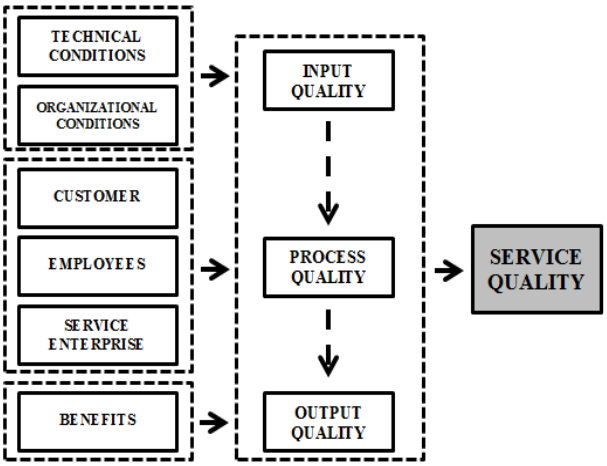

Fig. 1. Quality of service process

A customer survey was conducted for the purpose of analysing literature data and the premises for applying systematic approach to managing services as processes.

In Fig. 2-6 the results of the questionnaire are presented. The first statement is: *Service quality has huge influence on market success of service enterprise* (Fig. 2). The aim of this statement was to acknowledge customers' opinions of the impact of quality of services on the effective functioning of an enterprise in the modern economy.

According to the data presented in Fig. 2, more than a half of the respondents (71%) agree (60%) or strongly agree (11%) with this sentence. It is worth mentioning that every fourth respondent has no view on this subject. Only 4% of them disagree and no one strongly disagrees. It means that customers perceive quality of services as an important attribute of a business' success.

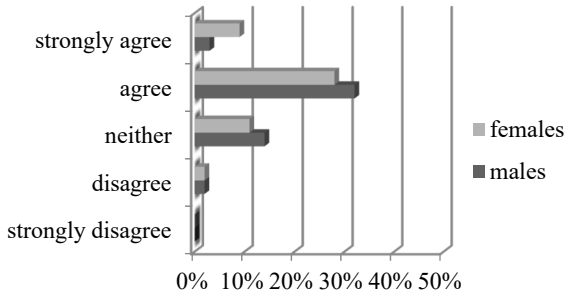

Fig. 2. The percentage structure of respondents' opinion to statement of the questionnaire: Service quality has influence on enterprise's market success

The second statement of the questionnaire is: *Service quality is a complex issue depended on many attributes and features* (Fig. 3).

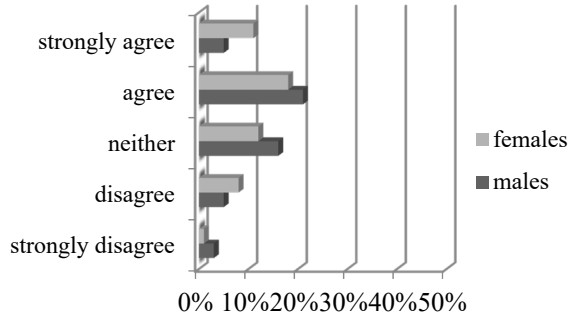

Fig. 3. The percentage structure of respondents' opinion to statement of the questionnaire: Quality of service is depended on many attributes and features

The data presented in Fig. 3 show that 55% of the respondents agree (39%) or strongly agree (16%) with the statement, while one third of them does not have any opinion. It may stem from too short time given to think about the question or not perceiving a specific quantity of attributes in terms of a lot of or a few. It should also be underlined that the group of people who do not agree with this statement is much larger in case of this question as compared to the previous one(17% of respondents disagree or strongly disagree).

The last three statements are related to management in services. The third statement is: *The approach and method of management has influence on service quality* (Fig. 4). This question is aimed at getting to know the opinion of respondents about the perception of the importance of management in shaping the quality of services. As the data show, respondents appreciate the role of management in shaping service quality. Every fifth respondent (21%) strongly agrees and almost half of the respondents (49%) agree with this sentence. The answers to this question are also characterized by high number (30%) of neutral notes. It should be noticed that no respondent disagrees. For most respondents management is responsible for service quality.

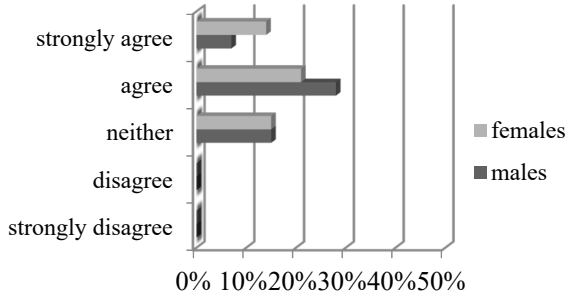

Fig. 4. The percentage structure of respondents' opinion to statement of the questionnaire: Quality of service is depended on managements' approach and method

The next statement analysed by respondents is: *Service enterprise should be managed by the most modern methods* (Fig. 5).

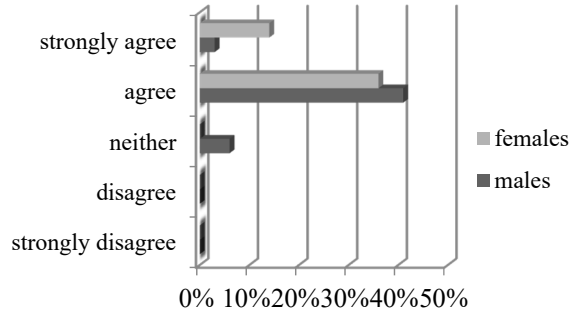

Fig. 5. The percentage structure of respondents' opinion to statement of the questionnaire: Service enterprise should be managed by the modern methods of management

The purpose of including this statement in the questionnaire was to get to know respondents' opinion on the advantages of modern methods of management over traditional ones. The data presented in Figure 5 show that respondents are convinced that modern methods of management should indeed be used in service enterprises. Nearly 95% of them agrees (77%) or strongly agrees (17%) with this sentence. Only 6% of the respondents (the whole group is men) do not have any opinion. It should also be noticed that no one disagrees.

The last statement was: *The manager should organize and control each stage of the service process* (Fig. 6).

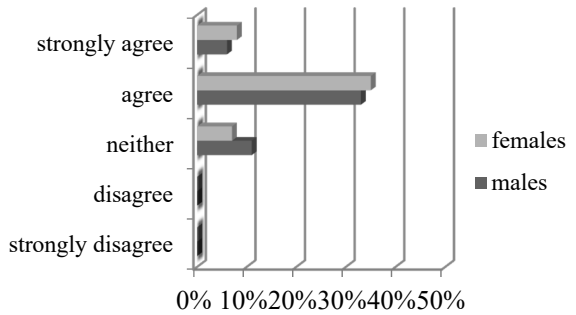

Fig. 6. The percentage structure of respondents' opinion to statement of the questionnaire: Each stage of the service process should be organized and control by the manager

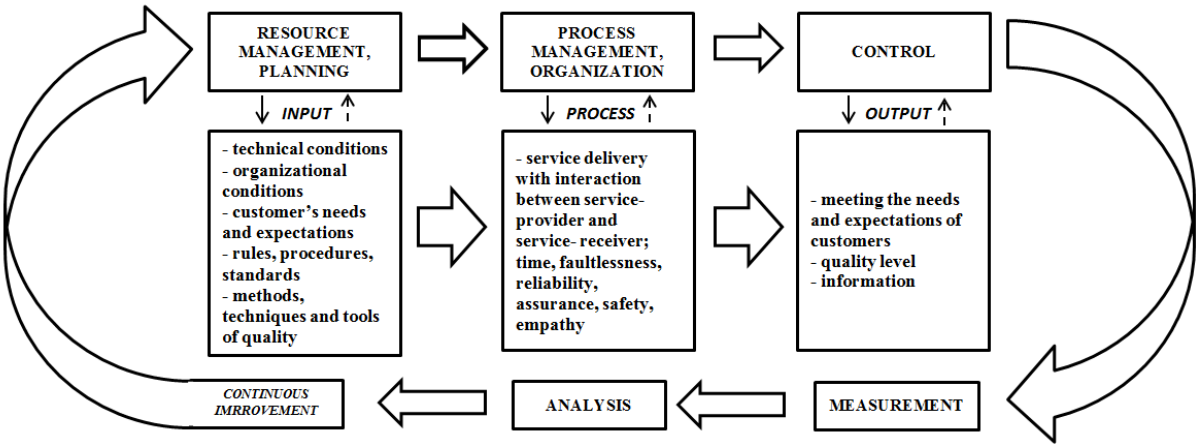

Fig. 7. The authors' proposition of system management model of service quality

According to the data, most respondents agree (82%, including 14% of strongly agree answers) with this statement. Less than one fifth of them (18%) is neutral and none of them disagrees. It means that the respondents require supervision over the course of the service process at every stage.

The results of customer questionnaire confirmed the validity and complexity of the issue of service quality and the importance of appropriate management. The result of literature and empirical research resulted in the authors' idea of a system management model of service quality (Fig. 7).

Service, treated as a process with its input, transformation and output is managed at every stage by process management practices based on the theory of management including resource management, planning, organization, control, measurement and analysis. The cycle is endless because of a continuous improvement as a natural consequence of analysis of previous actions.

4. Summary and conclusion

The results presented in the paper show that process approach can also be used in service quality where service may be treated as a process and managed at each stage by process management rudiments.

Resource management and planning is precisely related to the input of service (technical and organizational conditions, customers' needs and assumptions of quality and process management. The transformation in service depends on an organization. The output should be controlled and measured and the results of these processes, being analysed, are the foundation for continuous improvement.

The paper may be the basis for further research into the implementation of process management into service quality.

Reference

GULC, A. 2017. *Models and methods of Measuring the Quality of Logistic Service,* Procedia Engineering, 182, 255-264, DOI: 10.1016/j.proeng.2017.03.187.

JOHNSON, R.L., TSIROS, M., LANCIONI, R.A. 1995. *Measuring service quality: a system approach,* Journal of Services Marketing, 9(5), 6-19.

KLEMENTOVA, J., ZAVADSKY, J., ZAVADSKA, Z. 2015. *The Measurement and Evaluation of the Service Quality through Customers 'Satisfaction,* Procedia Economics and Finance, 26, 126-130.

KOWALIK, K., KLIMECKA-TATAR, D. 2017. *Process management of service safety,* W: Legal and Intangible Aspects of Safety, M. Niciejewska, J. Lewandowski (red.), Oficyna Wydawnicza SMJiP, Częstochowa.

LOVELOCK, C., WRITZ, J. 2007. *Service Marketing-People, Technology, Strategy*, Pearson Prentice Hall.

MEIDUTĖ-KAVALIAUSKIENĖ, I., ARANSKIS, A., LITVINENKO, M. 2014. *Customer Satisfatcion with the quality of logistics services,* Procedia – Social and Behavior Sciences, 110, 330-341, DOI: 10.1016/j.sbspro.2013.12.877

MENDLING, J., BAESENS, B., BERNSTEIN, A., FELLMANN, M. 2017. *Challenges of smart business process management: An introduction to the special issue*, Decision Support Systems, 100, 1-5, DOI: 10.1016/j.dss.2017.06.0090167-9236.

NOWACKI, R., SZOPIŃSKI, T.S., BACHNIK, K. 2017. *Determinants of assessing the quality of advertising services- The perspective of enterprises active and inactive in advertising,* Journal of Business Research, DOI: 10.1016/j.jbusres.2017.12.017.

SANTAREK, K., OBSŁUSKA, I. 2012. *Process approach to the evaluation of information system effectiveness,* Information Systems in Management, 1(2), 148-159.

SHARABI, M. 2013. *Managing and improving service quality.* International Journal of Quality and Service Sciences, 5(3), 309-320.

ULEWICZ, R. 2014. *Application of Servqual Method for Evaluation of Quality of Educational Services at the University of Higher Education*, Polish Journal of Management Studies, 9, 254-264.

服务质量管理的过程方法

關鍵詞
流程管理
服务管理
服务质量
服务质量模型

摘要
本文提出了一种基于过程方法的服务质量管理模型。 文章的第一部分包含服务质量的理论框架和管理过程方法。 接下来，参考引用文献中基于流程的定义，介绍了服务质量过程。 最后，介绍了有关特定质量属性有效性的用户问卷调查结果。 所收集的与服务过程质量阶段相关的数据已经使得过程管理服务质量模型的发展成为可能。