Quality Measurement in Public Sector Organisations

Liliana Hawrysz[1*]

[1]*Opole University of Technology, Opole, Poland.*

Author's contribution

The sole author designed, analyzed and interpreted and prepared the manuscript.

Short Research Article

ABSTRACT

Public services have a significant influence both on the life of citizens and on the functioning of the whole economies. It is not possible to talk about the improvement of the quality of the services rendered by the public sector without measuring it. The measurement is the starting point to improve and increase the quality and to continuously improve the organisation activities. There is no ideal assessment method, thus it is worth using several at a time in order to achieve a more or less objective view. If the quality assessment is to be valuable for the organisation, it should result from the inner need to verify the quality of services in order to improve them. It should thus result from the quality consciousness and responsibility for it. The aim of this article is to answer the question whether the public sector organisations measure the quality and if that is the case, how often they measure it and what kind of tools do they use for the measurement. The survey results have been used in the paper. The survey has been conducted among 102 public sector organisations in Poland. The first part of the paper is theoretical and aims at presenting the methods and indicators applied to measure quality and classifying them. The second part presents the survey results concerning the use of these measurements by different kinds of organisations (e.g. state or self-government, public finance sector and organisations of different sizes).

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*Corresponding author: E-mail: l.hawrysz@po.opole.pl;

1. INTRODUCTION

Public services have a significant influence both on the life of citizens and on the functioning of whole economies. The quality of services rendered by public sector organisations has interested researchers for a very long time. However, emphasis placed on the efficient use of public money contributed to much bigger focus on this subject. It is impossible to talk about the improvement of the quality of services rendered by public sector organisations without measuring it. The quality measurement is the starting point to improve the life quality and continuously improve the organisation activity. In order to assess the quality, it is possible to use holistic self-assessment methods as well as indicator analysis, surveys, analysis of documents, participant observation, etc. [1]. Without knowing the present shape of the object which we want to model, it is not possible to make it in an efficient way. In case of material products, the quality assessment is based mainly on technical aspects, possible to express in quantitative categories [2,3]. The quality measurement of services, in particular of public services, is not easy. Public sector organisations must serve a differentiated group of users, the expectations of whom are very different and sometimes even contradictory. This is why, public sector organisations must often provide services which reflect a difficult compromise. In such a case, the user's satisfaction is a very difficult and ambiguous aim.

There is no ideal assessment method, thus it is worth using several methods at the same time in order to achieve more or less objective effect in this way. In order to obtain an assessment useful for the organisation, it should result from the inner need of checking the quality of services in order to improve them. It has to result from the conscience of quality and responsibility for it [4]. The aim of this article is to answer the question whether public sector organisations measure quality. If so, how often they measure it and what kind of tools do they use for the measurement? The results of a survey made in 102 public sector organisations in Poland have been used in this paper. The first part of the paper is theoretical and aims at presenting methods and indicators, used for the quality measurement, and their classification. The second part is a presentation of survey results concerning the use of these indicators by public sector organisations of different kinds such as state or self-governing bodies, the public finance sector and organisations of different size.

2. MEASURING THE QUALITY OF PUBLIC SERVICES

The improvement of quality is not possible without its measuring. The quality measurement aims at providing information on the institution, makes it possible to identify chances and threats as well as strong and weak sides [5]. In order to evaluate the quality it is possible to use both total self-assessment methods and analysis of indicators, surveys, analysis of documents, participant observation, etc. Due to the fact that none of these methods or tools gives total assessment, it is good to use several, complementing methods at the same time.

Kujawiński, J. suggests the following criteria to classify the measuring tools and to assess the quality of services:

- Research from the point of view of clients or those offering services – is based on collecting data from clients or from employees of organisations,
- Research from the point of view of objectivism – in case of objective analysis, indicators are unambiguous (e.g. the kind of products used when the services are being rendered), in case of analyses made on the basis of subjective criteria, it is assumed that quality is a subjective category, thus its evaluation by the clients is subjective,
- Discriminatory and non-discriminatory testing – a significant difference in these two approaches is based on the quality assessment perspective – in the discriminatory testing a unitary scale has been adopted in order to assess particular components; in the non-discriminatory testing we focus on the general quality assessment,
- Research focused on strong and weak sides – the services quality analysis focus on the identification and analysis of assets or weak sides of a given service [6].

The most frequently used measuring tools are methods focused on subjective criteria. Kujawiński, J. divides them into three basic groups:

- Multi-attribute measurement methods – are subjective and discriminatory analyses,

made from the client's point of view, and they are based on the assumption that the total assessment of a service is a consequence of a sum of individual assessments of particular quality attributes. These methods are, among others, multi-attribute measurement methods focused on the client's attitude, multi-attribute measurement methods focused on client's satisfaction, SERVQUAL, penalty and reward method, Vignette method.

- Event analysis method – it is based on the assumption that clients treat certain situations, which take place during the process of rendering services, as particularly important from the point of view of quality. Among such methods are sequential events method, Critical Incidents Technique (CIT), problem identification method, the Frequency Relevance Analysis of Problems (FRAP).
- Complaints measurement – taking into consideration a general complaint indicator [6].

The quality measurement can be made by means of:

- Collecting the defined indicators – surveys conducted among internal and external clients, internal audits in organisations, classic quality management tools (e.g. Pareto-Lorenz analyses, histogram, correlation graph, Shewhart control cards, Ishikawa diagram, flow chart, data counting sheet) and new quality management tools (e.g. affinity diagram, Process Decision Program Chart, relations graph, matrix diagram, arrow diagram, decision tree, matrix data analysis) [7],
- Assessment methods - Balanced Scorecard (BSC) [8], Failure Mode and Effects Analysis (FMEA), Quality Function Deployment (QFD), statistical acceptance inspection, Critical Incident Technique (CIT) [9], service quality assessment by means of the SERVQUAL method [10], [11], Six Sigma [12], statistical quality management methods (SPC - Statistical Process Control) [13], Design of Experimentation (DOE), mystery shopping [14,15,16].

Tools used in the quality assessment are used to aggregate and process data connected with different quality aspects.

In order to make it possible for the specific tools and quality assessment methods to be used in private sector organisations, it is necessary to adjust them from the point of view of:

- Various, non-financial, colliding and ambiguous aims of these organisations,
- Lack of understanding concerning expense limitation,
- Environmental turbulence,
- Effects that are hard to measure,
- Effects of unplanned interventions [17].

3. METHODOLOGY

3.1 Survey

The basis of collecting data in the scope of research was a questionnaire aimed at quality management representatives or other people responsible for the implementation of quality management tools, purposefully chosen public sector organisations. All Polish organisations identified in the database of the European Institute of Public Administration (EIPA) were invited to take part in the survey. The survey was carried out within the years 2012-2013 in 102 public sector organisations, among which it is possible to enumerate ministers, central offices, voivodeship offices, Marshal Offices, County Offices, town and municipal offices, tax chambers and offices, Customs Offices. The analysis of relationships between variables was carried out by means of the chi-square independence test together with the measure of correlation (C Contingency coefficient, Cramer's V). The significance level $\alpha=0,05$ has been assumed. Results considered to be statistically significant where those in case of which the calculated test probability p fulfilled the following inequality $p<0.05$.

4. RESULTS

It is impossible to talk about the successful implementation of the quality management support tool or system without evaluating and verifying the quality level. The achieved results are the starting point for the increase of quality and continuous improvement of the organisations activities. The frequency of evaluation can differ depending on the applied tool/tools and the evaluation aim. Organisations most often evaluate quality management systems, methods or tools used by them once a year. Most organisations, which took part in the survey, control their system, method or tool with such a

frequency. The evaluation frequency also results from the maturity of the applied quality management system. At the beginning of the evaluation implementation, they should be carried out often in order to verify the implementation validity. After some time, when the system starts to be an inherent part of the organisation, the amount of evaluations should be reduced. In the analysed organisations, 10% of representatives do not know if the quality system management assessment was carried out. Taking into consideration the representatives' key role, which has been determined during the survey, for the implementation and functioning of the quality management system, this result means that organisations do not assess their system operation. 15% representatives acknowledge that organisations for which they work do not assess their quality management system operation. When we add these two results, they show that one quarter of organisations do not assess their system, which means that they do not improve or increase the quality and do not improve the organisation operation. The system plays the role of a trophy and not of the real, successfully used tool.

The analysis of the quality management system assessment frequency in state and self-government organisations shows that these organisations most often assess the operation of their quality management system once a year (26.39% of self-government organisations and 26.61% of state organisations). 18.58% of self-government organisations and 19.37% of state organisations assess the system operation continually, whereas 5.9% of self-government organisations do not assess their quality management system (2.35% of state organisations), and 9.55% of self-government organisations assess the system once every few years (6.56% of state organisations). The result of the research carried out by means of the chi-square independence test shows that there is a statistically important correlation between the supervision (by the state or self-government) and the frequency of the quality management system operation assessment ($\chi^2=26,89$; df=7; p=0,00035). State organisations more often assess the operation of the implemented quality management system. However, the power of the observed correlation is low (C=0,13, V=0,13). The analysis of the quality management system operation assessment in organisations running

business activity of different specificity (public finance and other organisation) shows that public finance sector organisations assess the quality management system operation mostly once a year (29.95%) but it also happens that such assessments are carried out more frequently (7% every half a year, 7% once a quarter and 20.77% continually). The result of the analysis made by means of the chi-square independence test indicates a statistically important correlation between the specificity of running business activity and the frequency of the quality management system operation assessment ($\chi^2=21.78$; df=7; p=0.00277). The public finance sector organisations more often assess the operation of the implemented quality management system. However, the power of the observed correlation is low (C=0,116, V=0,117). A frequency analysis of assessing the quality management system operation in organisations of different sizes shows that the largest organisations (employing over 250 employees) measure the quality management system the least often. However, a huge discrepancy concerning quality measurement has been identified, at the same time, among the smallest organisations. 13.48% of the smallest organisations do not measure the quality management system, what is the biggest percentage when compared with the organisations of other sizes. At the same time, 31.91% of the smallest organisations measure the system once a year, what is the biggest percentage among organisations of different sizes. We are dealing with different approaches to quality measurement in the smallest organisations. The quality measurement in medium-sized organisations most often takes place once a year (28.35%). 18.96% of organisations measure the quality of their services continually and 7.13% of them only once a quarter. Medium-sized organisations, when compared with small or large organisations, measure the quality of their services more often than once a year (see Fig.1). The result of the analysis made by means of the chi-square independence test indicates a statistically significant correlation between the organisation size and the frequency of assessment of the quality management system operation ($\chi^2=80.64$; df=14; p=0.0000). Medium-sized organisations more often assess the operation of the implemented quality management system. However, the power of the observed correlation is low (C=0.22, V=0.16).
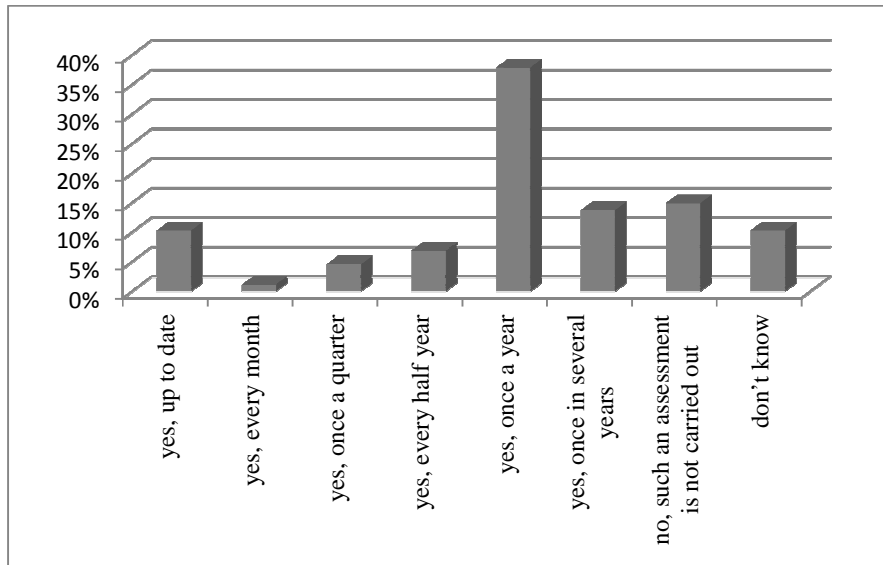
Fig. 1. Frequency of assessing the quality management system
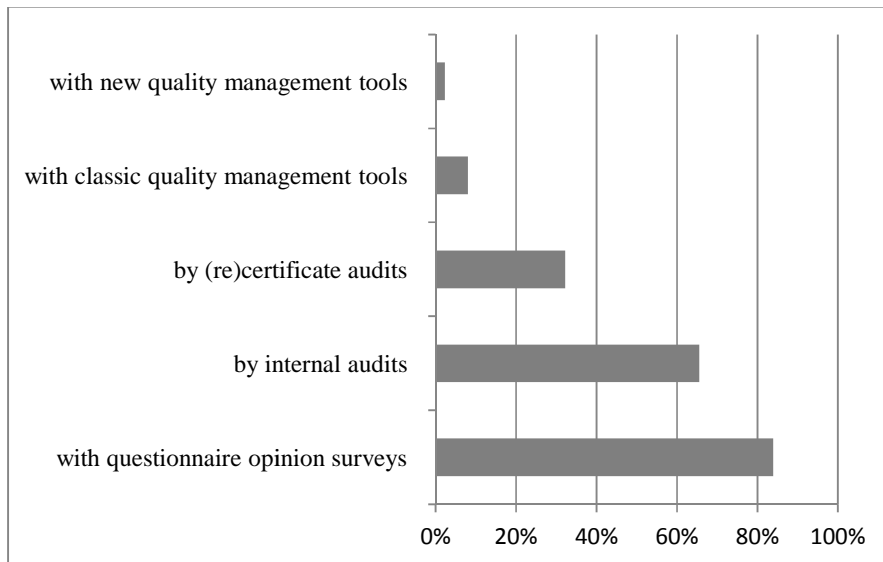*Source: Own elaboration on the basis of survey results*

Fig. 2. Monitoring the quality management system with the use of the defined indicators set
Source: Own elaboration on the basis of survey results

Surveys carried out among clients and employees are monitoring tools most often used to monitor the quality management support system operation. 84% of these tools are used by surveyed entities. The popularity of surveys results from their simplicity and the ease of use. However, there is an important limitation that is public services perception depending on the level of users' expectations. The fact that someone is satisfied with the way he has been served in an office, does not have to mean that the quality of

services rendered by this office is high but it can mean only that there were, for example, low expectations as far as the office operation is concerned. According to the estimate by CBOS, average citizens are much more satisfied with the service quality in a given office than owners of companies [18]. Asking questions about the clerks' politeness, competence and look is justified by the fact that it is hard for clients to differentiate the service quality and the intangible asset of the process during which the service has
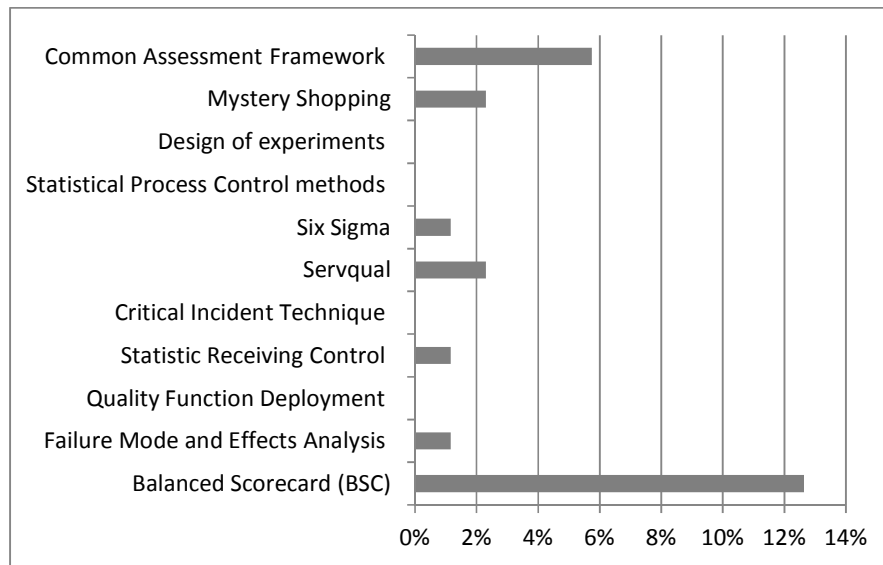
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Fig. 3. Monitoring the quality management system with the use of assessment methods
Source: Own elaboration on the basis of survey results

been rendered. This is why, politeness and friendliness, on which offices mainly focus while creating the survey in order to examine the client's satisfaction, are not the aims in themselves but are strictly connected with the perception of the real quality of the service. Due to the fact that its creation, providing and consumption take place at the same time, the ability and willingness to render services has become the most important in order to understand the clients' needs and react to them properly, that is the needs which cannot be seen in surveys and which require much bigger effort than the standard action. Bearing this in mind, gathering data concerning the level of clients' satisfaction only on the basis of survey data, even the very detailed ones, does not authorise us to draw conclusions that it has been improved. The surveyed organisations also use internal audits (about 65.52%) and certification audits/ recertification audits (32.18%) (see Fig. 2 above). Classic quality management tools such as Pareto-Lorenz analyses, histograms, correlation graphs, Ishikawa diagram, flow charts, data counting sheet as well as new quality management tools such as affinity diagram, Process Decision Program Chart, arrow diagram, decision tree and matrix data analysis were more often used in foreign than in other kinds of organisations.

Among assessment methods organisations mainly use the Balanced Scorecard (BSC) (14%) and the self-assessment by means of the CAF

method (6%). The other practical methods are not used (see Fig. 3 above).

5. CONCLUSION

The analyses showed that 25% of public sector organisations do not measure quality in their organisations. This is why, they do not have a possibility of improving their organisation. What is more, it has been noticed that small organisations differ in actions undertaken to measure the quality. There are organisations which measure their quality at least once a year and those which do not measure it at all. Such extreme approaches have not been noticed in any other group. The public finance sector organisations measure the quality most often. These organisations measured the quality of their services at least once a year but also every half a year, once a quarter or continually. The tools which are most often used for the monitoring of the quality management system operation are surveys aiming at getting to know the clients' and employees' view, as well as internal audits. However, organisations use assessment methods only to a limited degree. It can result from the lack of knowledge on the methods themselves but also from the necessity to make a detailed diagnosis of the organisation's initial situation. Most probably, organisations did not have time to do it because they took part in the system project, the aim of which was to implement the quality management system in a strictly determined time limit. A fast

implementation of the quality management systems in the surveyed organisations, did not leave much time for preparation from the methodological point of view and setting detailed measurements on which these methods are based. Moreover, the mentioned methods are much more time-consuming and labour intensive than the set of defined indicators used by the surveyed organisations and they require a new systemic approach to implementation. Organisations use the set of indicators typical for the beginners.

COMPETING INTERESTS

Author has declared that no competing interests exist.

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