RESEARCH ON NEED AND PECULIARITIES OF QUALITY MANAGEMENT TOOLS IN PUBLIC SECTOR
THE CASE OF LITHUANIA

Abstract

Purpose – the objectives of this research are: 1) to present the integrated model of CAF and BSC methods, 2) to carry out whether Lithuanian public institutions require the integrated method and whether they are able to install this method. The article analyses the potential of implementing the integrated Common Assessment Framework (CAF) and Balanced scorecard (BSC) method to public sector organizations. The benefit and main challenges of implementing the quality management techniques are mentioned as well as the linkage between Common Assessment Framework and Balanced scorecard. In order to substantiate the modeling and instrumentat

Design/methodology/approach - the methods of the research are the following: analysis of Lithuanian and foreign scientific literature, formulation of hypotheses, questionnaire survey and statistical data processing methods.

Findings - the survey revealed that there is indeed a real need for the integrated method (more than 81 % of respondents evaluated demand for the integrated method average or higher for their organization. Moreover, 91 % of respondents rated their organization having an average or higher potential to implement the integrated method. However, authors determined the paradox: the higher the need of implementing the integrated method for public sector institution was identified, the less abilities it had to implement mentioned method.

Research limitations/implications – further research on the field should be developed on a wider scale.

Practical implications – the research is carried out by conducting a questionnaire for top-managers, quality managers and employees working in public sector of Lithuania.

Originality/Value – The paper provides an integrated CAF and BSC method model for public sector institutions.

Keywords: integrated method, Common Assessment Framework, Balanced scorecard, public sector, Deming's cycle for continues improvement, efficiency.

Research type: research paper.

JEL classification:
C1 – Econometric and Statistical Methods and Methodology: General

Introduction

The quality of performance is an increasingly important competitive factor for developing organizations. Public sector organizations are obliged to reach impeccable level of service provision, which is directly related to an increase in the stakeholder satisfaction
(Wisniewska et al., 2013). Therefore, in public sector of European countries, there is a tendency - a growing need to install quality management system (QMS) by devoting full attention to the main consumers - the society (Vrabkova, 2013). QMS and various quality management (QM) methods provide methodological references and ways to improve the day to day activities in public organizations: determining the mission, vision, goals, reshaping its structure in order to allow employees to make independent decisions, defining or improving internal processes, understanding the society as a customer, creating partnerships with a private sector (McNary, 2008). Moreover, these management tools have an impact on the improvement of organization’s financial activities (Pimental et al., 2014).

One of the most widely occurring quality management philosophies is total quality management (TQM). Lithuanian and foreign academic literature covers many examples of good practice in the fields of QM and TQM. There are suggestions in literature to integrate QM methods with performance measurement systems such as balanced scorecard in order to establish quality management in public organizations and to achieve the result more efficiently. In public sector of Lithuania, Common Assessment Framework (CAF) model and Balanced Scorecard system (BSC) method have the highest demand, not mentioning QMS in accordance with ISO 9000 series of standards (source: Kokybės..., 2013). However, the problem is that in Lithuania there are no researches carried out on the need of integrated Common Assessment Framework (CAF) and the Balanced Scorecard System (BSC) method for public sector institutions. Moreover, there is no clue whether they are ready to implement it. Two aspects should be taken into account in order to successfully implement an integrated CAF and BSC method in Lithuanian public sector: 1) organization's need to install this method, 2) intellectual and motivational possibilities of organization to successfully implement it. Furthermore, it is significant to examine an existing relationship between organization's need and opportunities. Therefore, the survey for top-managers and staff of Lithuanian public institutions, in particular, would determine need and opportunities to install the integrated method. Moreover, it would disclose managers and staff approach to the mentioned method.

The purpose of this research is: 1) to present the integrated model of CAF and BSC methods, 2) to carry out whether Lithuanian public institutions require the integrated method and whether they are able to install this method. The following methods were used in order to achieve objectives of the study: analysis of Lithuanian and foreign academic literature, formulation of hypotheses, questionnaire survey and statistical data processing methods.

The importance of quality management in public sector institutions

QMS focuses on an organizational structure, processes, resources that are necessary for operational and quality result to achieve (Pociute, 2002). The public sector is responsible for a provision of public goods in order to meet society expectations. Therefore, QMS has to ensure organization's ability to provide public goods and services that meet required standards, as well as it must provide an economical and efficient use of resources (Wilfred et al., 2014). The public administration reforms wave in Europe in 2000 had a significant influence on QMS implementation in public sector (Karyotakis et al., 2014). The main common features of these reforms were:

- quality improvement of public services;
- goals setting and performance evaluation - in order to increase public service efficiently and effectively;
- improving human resources;
- public sector control and transparency strengthening.
It should be noted that authority of state has a significant impact on achieving mentioned goals. The influencing factors: social problems, changes in the legal framework, an economic downturn, a low public confidence level on government and public institutions. It is important not only to involve the leadership of public institutions, but also to make sure that state authority is aware of benefits of this management direction for public sector, as well as it supports organizations in taking strategic actions. Public Administration Development Strategy in 2004 and developed action plans for its implementation can be seen as a quality initiative basis in Lithuanian public sector. But despite that fact, a conducted research by authors (Civinskas et al., 2008) shows negative authority’s preconceptions on efforts to promote quality management instruments. Moreover, it reveals respondents low disposable level of information about QM. Therefore, the perceived meaning and attitude to QM and its benefits in public sector is different than in private sector. Information is confirmed by the highest instances, as well as the organizations do not have full autonomy to make strategic decisions. In this way QMS installation must be facilitated by providing related information as well as encouraging a positive attitude and motivation towards innovations in public institutions (Astrauskaite et al., 2015).

However, A. Tonkunaite (2011) raised the question whether a quality of service for customers can lead to poorer public services in general. It cannot be agreed with this author's opinion. Technology has become an integral component of the QMS, as it provides the opportunity to speed up, simplify and optimize work processes in order to modernize public sector by enabling QM philosophy. Therefore, the modernization of public sector leads to more efficient and affordable public services than they were before. It can also be argued that author's thoughts contradict one of the directions of the project "Open Government Partnership" - consistently bring state government to needs of citizens of the Republic of Lithuania and ensure that the society is provided with friendly, high-quality and easily accessible public administrative services (Lietuvos..., 2014). Furthermore, it could be argued that author's thoughts contradict one of the TQM principles - customer orientation - society. It is also noted that an implementation of QM in the public sector does not undermine the quality of public services in general. On the contrary, it attempts to enable access to services for all citizens on the basis of technology and educational tools.

The most common methods of QM are the business (activity) excellence model, CAF, ISO 9000 series of standards and one-stop shop principle, while the balanced scorecard accepted less in public sector of European countries (Cerniauskiene, 2011). According to the research (source: the Ministry of Internal Affairs, 2013), the most popular QM methods in Lithuania - one-stop shop principle and ISO 9000 series of standards. Worth mentioning, that there is an increasing number of public institutions that have installed or intend to install a multi-dimensional QM models, such as CAF and the BSC. In order to raise the number of organizations that implement those methods one of the essential factors is an exchange of best practice. Not only within a country, but also at the international level, such as the EIPA (European Institute of Public Administration) CAF database (Astrauskaitė et al., 2015).

**Common Assessment Framework**

Common Assessment Framework (CAF) was introduced in the last decade as a new version of EFQM, specially designed for public sector. The process composed of 3 stages and 10 steps includes an evaluation of 9 criteria (abilities: leadership, people, strategy & planning, partnership & resources, processes; people results, citizen / customer-oriented results, social responsibility results, key performance results) and 28 sub-criteria. The evaluation is performed by employees, using E. Deming PDC cycle. Results of estimation are the basis for
the performance improvement plan. In this way, an organization seeks to improve its performance that directly affects the estimated results (General ... 2013; Astrauskaite et al., 2015).

According to literature analysis, it could be stated that this model has received positive reaction, which encouraged authors for profound CAF case study. It revealed strengths and weaknesses of CAF: an identification of organization’s strengths and areas for improvement, an increased job satisfaction in the long run, improvement of an organizational culture (Tomazevic et al., 2014), standardization for performance indicators in order to compare institutions, attitude redirection from internal to external organization perspectives (Wisniewski et al., 2013), no need for an external consultant, minimal or no costs (Vakalopoulou et al., 2013).

However, some of the following advantages can be perceived ambiguously. It would be wrong to assume that this method does not charge additional costs concerning a necessity to install certain tools or software programs after the evaluation (Vakalopoulou et al., 2013). It is recommended to invite an adviser from the outside to provide a successful implementation of CAF for the first time. A. Lukauskiene and J. Ruzevicius (2013) offer to expand implementation instruction: a valuation of an external advisor should be included as well as an official approval after the CAF installation in the organization. Of course, it does not ensure that a self-assessment would provide effective processes to ensure organization’s development. Moreover, a repeated self-assessment would not solve the mentioned issue, since it only provides the organization’s progression or regression difference from a certain period of time. M. Wisniewska and K. A. Szczepanska (2013) argue that the self-evaluation would be effective for internal and external customers only if a feedback and public satisfaction monitoring systems would be installed.

Balanced Scorecard

Balances scorecard (BSC) belongs to performance management systems. It was introduced two decades ago in private sector. Later on it has been identified as a communication, measurement, and strategic management tool in public sector (Kaplan, 2012). It should be mentioned that this method has gained recognition in public sector during reforms period in Europe (Pimental et al., 2014). BSC consists of adjusted and adopted goals in the strategy map for public sector organization and preset indicators to achieve results. Consequently, a strategy is converted into measurable objectives in four connected prospects: customer, internal processes, learning & growth, finance (Astrauskaite et al., 2015).

Learning from other organizations as well as good practice should be emphasized in order to install BSC in public organizations (Northcott, 2012). Many institutions underestimate a demand of communication and learning processes during implementation process. To be more precise, communication process can be described or understood as cooperation between different levels of subordination. Moreover, an organization should obtain a feedback from external customers. Under these conditions, cooperation would be identified as one of the success factors while implementing BSC.

However, it should be emphasized that BSC is offered to be installed together with CAF in order to get the most effective results and generate innovative ideas by establishing QM practices in the organization (Cerniauskiene, 2011; Tomazevic et al., 2013; Vakalopoulou et al., 2013).
Sinergy and integration of Common Assessment Framework and Balanced Scorecard

The implementation of TQM, based on BSC, gives an opportunity to estimate the TQM provided financial and non-financial benefits through a specific system of indicators (Hafeez, et al., 2006). Foreign authors (Kumar et al., 2009) argue that the absence of an evaluation system can create barriers to the successful implementation of TQM measures in organization. If the organization implements TQM, there is more emphasis on employees training. Moreover, the importance of employees involvement in implementation process is highlighted (Kumar et al., 2009).

L. Pimental with co-authors (2014) conducted a research and presented its findings. TQM measures can be successfully integrated in the BSC model, setting targets for organization performance. Thus, the performance improvement plan can be drawn up based on the results of the self-assessment. The model that is created by Lithuanian authors (Astrauskaite et al., 2015) (see. Fig. 1) shows that CAF criteria can be a framework for BSC by setting up indicators to achieve goals in four mentioned perspectives.

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<td>Key performance results</td>
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Source: According to Astrauskaite et al., 2015

Figure 1. CAF criteria integration into four perspectives of the BSC

Research on need and opportunities to implement the integrated method

It is necessary to determine need and possibilities of installing the integrated method in public organizations in order it would be implemented in the most efficient way (Astrauskaite et al., 2015). The need is inversely propotional to the assessment of processes while possibilities reflect institution’s internal environment assesment. Authors made up factors table that makes possible to determine the need and opportunities for innovation provided in this article (see Table 1).
Factors that influence need

- Organizational culture
- Dissemination of strategy to employees
- Conformity of strategy to organization's potential
- Dissemination of mission, vision, values to employees
- Conformity of goals to mission
- Benchmarking
- Strengths maximizing opportunities and minimizing threats
- Strategy implementation
- Financial management orientated to strategy implementation
- Dissemination of information in organization's departments
- Employees feedback
- External customers feedback
- Short-term targets realization
- Employees perception of society expectations' satisfaction
- Encouragement of enhancing employees competence

Factors that influence opportunities

- Employees friendliness on innovations and changes
- Autonomy in setting strategic targets
- Recognition of leader
- Participation in implementing the integrated method
- Integrated method financing
- Relation between an external customer and employee
- Benefit of setting targets related to staff competence improvement
- Benefit of setting targets related to organization's internal processes
- Benefit of setting targets related to external customer

Source: According to Austrauskaite et al., 2015

Factors that affect a potential of organization could be classified into employees' resistance and motivation, financial aspects and organizational solutions. However, there are other circumstances influencing need and opportunities. For instance, respondents job position, knowledge of QM and its methods. These aspects were taken into account during the research. In 2015 a conducted exploratory study revealed that there was an inverse relationship between need and possibilities of implementing the integrated method. However, the study was not based on statistics (Austrauskaite et al., 2015).

After literature analysis, two hypotheses were formulated:

$H_1$: it a is statistically significant, inverted connection between organization's need and abilities to implement the integrated method;

$H_2$: organization’s demand and abilities to implement the integrated method depends on: respondent’s job position, the CAF, BSC and other quality management methods implemented in organizations.

It should be noted that these hypotheses were divided into sub-hypotheses during the analysis.

**Research methodology**

Research purpose: 1) to determine how employees and employers estimate organization’s processes and internal environment in public sector organizations in Lithuania; 2) determine factors that have impact on need and possibilities evaluations.

Research object – operational processes and internal environment of public sector organizations in Lithuania.
The research was carried out by conducting a web-based questionnaire survey. Respondents: top-managers, quality managers and other employees working in Lithuanian public sector. A selection method - snowball method.

The questionnaire consists of three parts of questions:

1) *institution’s need for the integrated method* – 15 questions determining organizational culture, strategy, mission, vision, values, and their interaction with the purposes and opportunities. Questions are based on E. Deming PDCA cycle;

2) *institution’s possibilities of implementing the integrated method* – 9 questions determining the attitude towards innovations, internal and external customers, leadership, management’s involvement in activities of quality improvement processes, financial prospects;

3) 9 *general questions* about the organization.

**Research sample and statistical methods**

In 2014 376 107 persons worked in public sector of Lithuania (source: the Ministry of Internal Affairs). A size of the sample in this case (with 10 % of survey error) shall consist of 96 respondents according to K. Pukėnas (2009) recommended sample size table.

Statistical correlation analysis was used in this research. Mathematical data analysis was conducted and graphs were designed by *Microsoft Office Excel 2007* software. Correlation analysis was calculated by *SPSS Statistics 17* program. Following tests were used: *Cronbach Alpha, Kolmogorov and Smirnov, Shapiro-Wilk, Kruskal-Wallis H, Pearson, Spearman and Fisher*.

**Research results and findings**

100 respondents managed to fulfill the questionnaire. However, 7 questionnaires were declared unfit. A validity of questionnaire's content was tested by an exploratory study. Respondents expressed their opinion on questions' clarity. Consequently, some of questions were removed or content was modified.

The largest part of respondents consisted of employees - 81 %. Only 19 % of respondents were quality managers / top-managers (see Figure 2). This could lead to a misrepresentation of data since not all employees could be informed / aware of the processes taking place in public institutions.

![Figure 2. Distribution of the respondents according to their job position](image-url)
The Evaluation of demand and possibilities of implementing the integrated method

Firstly, *Cronbach alpha* coefficient was calculated which determined *internal consistency* of the set of questions. A reliability score of 0.905 was calculated for variables reflecting need, while reliability score of 0.804 was calculated for variables determining possibilities. Therefore, data is reliable, because the Cronbach alpha coefficient is greater than 0.6. Secondly, ranks of need and opportunities were aggregated by transforming them into new variables.

Hypothesis (H₁) - it is a statistically significant, inverted connection between organization’s need and abilities to implement the integrated method - null and alternative hypotheses were formulated for testing:

H₀ – there is no connection between organization’s need and possibilities;
H₁ – there is a link between organization's need and possibilities.

In order to test hypotheses, normality test was carried out. Since the number of respondents was over 50, *Kolmogorov and Smirnov* test were used (see Table 2). Sig (set of scores reflecting need) = 0.200, Sig (set of scores reflecting abilities) = 0.099. Consequently, both of sets were normally distributed (Sig> 0,050), as well as *Kurtosis* and *Skewness* coefficients were close to 0. According to Shapiro Wilk test, Sig values of both sets of score satisfied the condition (Sig >0,050), although close to a limit.

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<th>Table 2. Tests of Normality</th>
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<td><strong>Set of scores</strong></td>
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<tr>
<td>Organization’s need</td>
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<td>Organization’s abilities</td>
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Source: According to research data, 2016

In order to indentify the correlation between variables *Pearson correlation coefficient* was calculated which was equal to \( r = -0.682 \), when Sig (2-tailed) = 0,000 <0,050. Therefore, H₀ hypothesis was rejected and H₁ was accepted - there is a link (inverse) between organization’s need and possibilities. However, a link was moderate.

In order to test H₂, interval sets of scores were converted to ordinal sets (see Table 3).

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<th>Table 3. Need and opportunities evaluation by points</th>
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<td><strong>Points</strong></td>
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<td>15–30 – no need</td>
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<td>31–55 – average need</td>
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<td>56–75 – high need</td>
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Source: According to research data, 2016

In order to make sure that a link between sets of scores remained the same after transformation *Spearman’s rank* correlation coefficient was calculated, which is equal to \( r = -0.490 \) (when Approx Sig = 0,000). Consequently, H₀ hypothesis was rejected, while H₁ was accepted - there is a link (inverse) between organization’s need and possibilities. The link remained moderate.
Institutions that required no need for the integrated method, tended to have the most suitable organizational environment to implement the mentioned method (72.2 percent). On the contrary, organizations that expressed the highest need did not have the highest abilities to implement the integrated method (see Fig. 3).

![Abilities evaluation](image)

**Source:** According to research data, 2016

**Figure 3. Abilities distribution by groups**

It is worth mentioning that in group of institutions with a strongly expressed need there was a potential identified, as only 7.1 % of organizations had low abilities while 93 % of organizations had average abilities to implement the integrated method (see Fig. 3). Consequently, there was a phenomenon of institutional development identified: organizations paid attention not only to internal processes improvement, but also to organizational environment.

Moreover, research results revealed, that 66 % of respondents rated their organizations as demanding an average need for the integrated method. Only 15 % of respondents evaluated their institutions processes as poorly operating - it reflected the highest need. However, 19 % of respondents evaluated their institutions processes as highly operating - it determined no need (see Fig.4).

![Need evaluation](image)

**Source:** According to research data, 2016

**Figure 4. Distribution of the respondents by evaluating organization's need**

Consequently, the need was identified for the mentioned instrument in public sector organizations of Lithuania since the evaluation of processes definitely revealed existing problems in institutions.
Factors affecting need and abilities to implement the integrated method

H₂ hypothesis was tested: organization's demand and abilities to implement the integrated method depends on: respondent's job position, the CAF, BSC and other quality management methods implemented in organizations. Firstly, it was determined whether need and opportunities evaluations depend on respondent's job position. Null and alternative hypotheses were formulated:

H₂.1: evaluation of need to implement the integrated method depends on respondent’s job position:
   H₂.1.0: evaluation of need to implement the integrated method does not differ;
   H₂.1.1: evaluation of need to implement the integrated method does differ.

H₂.2: evaluation of possibilities of implementing the integrated method depends on respondent's job position:
   H₂.2.0: evaluation of possibilities of implementing the integrated method does not differ;
   H₂.2.1: evaluation of possibilities of implementing the integrated method does differ.

It was determined, that both sets of scores in respondent's job position group were not normally distributed (as Sig <0,050), Kruskal-Wallis H test was calculated. An obtained data led to the conclusion that there were no significant differences in evaluations of need and opportunities, as Sig (opportunities) = 0,527> 0,050, Sig (need) = 0,490> 0,050. Consequently, hypotheses H₂.1.0 and H₂.2.0 were accepted in both cases. Evidences showed that there was no subjectivity in evaluating organization's processes and organizational culture.

It was estimated whether need and opportunities estimations depended on whether the institution had used for other QM methods. Null and alternative hypotheses were formulated:

H₂.3: evaluation of need to implement the integrated method depends on whether the institution has used for other quality management methods:
   H₂.3.0: evaluation of need to implement the integrated method does not differ;
   H₂.3.1: evaluation of need to implement the integrated method does differ.

H₂.4: evaluation of possibilities of implementing the integrated method depends on whether the institution has used for other quality management methods:
   H₂.4.0: evaluation of possibilities of implementing the integrated method does not differ;
   H₂.4.1: evaluation of possibilities of implementing the integrated method does differ.

It was calculated that both sets of scores in had used/ had not used QM methods groups were not normally distributed (as Sig <0,050). Thus, Kruskal-Wallis H test was conducted. It should be mentioned that question’s "Have you implemented other QM methods in your organization?" optional answer "I do not know" was eliminated. Since the frequency of this answer was equal to 1, therefore, it could skew test results. An obtained data led to the conclusion that there were significant differences in evaluations of need and opportunities, as Sig (need) = 0,047 <0,050, Sig (opportunities) = 0,013 <0,050. Therefore, hypotheses H₂.3.0 and H₂.4.0 were rejected and alternative hypotheses H₂.3.1 and H₂.4.1 were accepted in both cases. It was evident that respondents, whose institutions had used other QM methods, identified organizations’ processes more favorably than persons, whose institutions had not used QM methods (see Fig. 5).
According to research data, 2016

**Figure 5. Evaluation of need to implement the integrated method depending on whether organizations have used other QM methods**

Thus, institutions that relied on other methods of QM could be identified as less demanding need for the integrated method (30.8 %), than institutions that had not used other QM methods (2.5 %). The differences were significant, as Fisher exact criteria = 18,569, when Sig (2-sided) = 0.000 < 0.050.

Evaluating possibilities of installing the integrated method, it could be stated: respondents, whose institutions had used other QM methods, estimated organizational environment more favorably (40.4 %), than respondents whose organizations had not used other QM methods (15.0 %) (see Fig. 6). It should be noted that the differences were significant, as the Fisher exact criteria = 9,913, when Sig (2-sided) = 0.035 <0.050.

Finally, it was identified, if assessments of need and opportunities depended on whether the institution had already used the CAF and BSC methods. Null and alternative hypotheses were formulated:

- $H_{2.5}$: evaluation of need to implement the integrated method depends on whether the institution has used CAF method:
  - $H_{2.5.0}$: evaluation of need to implement the integrated method does not differ;
  - $H_{2.5.1}$: evaluation of need to implement the integrated method does differ.

- $H_{2.6}$: evaluation of possibilities of implementing the integrated method depends on whether the institution has used CAF method:
  - $H_{2.6.0}$: evaluation of possibilities of implementing the integrated method does not differ;
  - $H_{2.6.1}$: evaluation of possibilities of implementing the integrated method does differ.

- $H_{2.7}$: evaluation of need to implement the integrated method depends on whether the institution has used BSC method:
  - $H_{2.7.0}$: evaluation of need to implement the integrated method does not differ;
  - $H_{2.7.1}$: evaluation of need to implement the integrated method does differ.

- $H_{2.8}$: evaluation of possibilities of implementing the integrated method depends on whether the institution has used BSC method:
  - $H_{2.8.0}$: evaluation of possibilities of implementing the integrated method does not differ;
H2.8.1: evaluation of possibilities of implementing the integrated method does differ.

**Figure 6. Evaluation of abilities to implement the integrated method depending on whether organizations have used other QM methods**

Both sets of scores in have used/ have not used the CAF or BSC groups were not normally distributed, as Sig <0.050. Thus, **Kruskal-Wallis H** test was calculated. Consequently, the results revealed: there were significant differences between evaluations of possibilities, considering that an institution had used CAF / BSC methods (Exact Sig <0.050 of both values). However, significant differences between assessments of the need were not identified, considering that an institution had used CAF / BSC methods (Exact Sig> 0.050 of both values). As a result, hypotheses $H_{2.5.0}$ and $H_{2.7.0}$ were accepted, while hypotheses $H_{2.6.0}$ and $H_{2.8.0}$ were rejected and alternative hypotheses $H_{2.6.1}$ and $H_{2.8.1}$ were accepted.

A frequency of answers was calculated (combined with exact Fisher test) in order to analyze how respondents assessed organization's internal environment depending on whether the organization had used CAF / BSC (see Fig. 7 and Fig. 8).

**Figure 7. Evaluation of possibilities of implementing the integrated method depending on whether organizations have used CAF method**
To sum up, institutions that had used the CAF method before, were more in line with possibilities of implementing the integrated method (61.1%), than organizations that had not used the CAF method (23.1%) (see Fig. 7). Worth mentioning, that respondents, who had a negative answer to the question "Have you implemented CAF method in your organization" mainly evaluated institution's abilities as average to implement the integrated method (76.9%). Differences were significant, as the Fisher exact criteria = 11,970, where Sig (2-sided) = 0,007 < 0,050.

Moreover, institutions that had used the BSC method before, were more in line with the possibilities of installing the integrated method (52.6%), than organizations that had not used the BSC method (24.4%) (See Fig. 8). More tendencies are shown up in the Figure 8.

**Figure 8. Evaluation of possibilities of implementing the integrated method depending on whether organizations have used BSC method**

Differences were significant, as the Fisher exact criteria = 8,257, where Sig (2-sided) = 0,043 < 0,050.

To sum up, QM methods (including CAF and BSC) have a positive impact on need and possibilities of installing the integrated method. Above-mentioned methods significantly influence organization's internal environment. Thus, this type of institutions has a greater potential for effective implementation process of the integrated method. The mentioned method can be perceived as a continuous instrument for seeking higher operational quality level in public sector organizations.

**Conclusions**

In European countries there is a growing trend to implement quality management methods and techniques in order to improve operational processes in public sector institutions. The chosen Integrated method (the Common Assessment Framework and the Balanced Scorecard System) is paid a lot of attention in literature, as one of the ways to improve organization’s operations. Based on methodologies, authors developed the CAF and BSC integrated method model, revealing how the CAF methodology and measures could be integrated into the BSC system through setting-up performance improvement indicators in four perspectives: customer, internal processes, learning & growth and finance.

Developed research methodology allowed to evaluate need and possibilities of installing the integrated method in Lithuanian public sector organizations. Internal institutional factors were identified by estimating development of operational processes and organizational
environment. E. Deming PDCA cycle was used in order to identify the development level of organizations.

Based on systematic analysis of an academic literature, 2 hypotheses were formulated for key study:

H₁: it is a statistically significant, inverted connection between organization’s need and abilities to implement the integrated method.

H₂: organization’s demand and abilities to implement the integrated method depends on: respondent’s job position, CAF, BSC and other quality management methods implemented in organizations.

The research revealed that there is a statistically significant, inverted connection between organization’s need and abilities to implement the integrated method in public sector of Lithuania.

Evaluations of need and possibilities of installing the integrated method in organizations do not depend on respondent’s job position. Thus, given answers are not subjective.

The higher assessments of need and possibilities are identified in the organization, where one of the methods has been installed. However, CAF and BSC methods have no influence on need evaluation in institutions. On the contrary, the mentioned instruments have impact on higher possibilities evaluation.

The greatest potential to install the proposed integrated method is dedicated for institutions with the average need for it and the highest opportunities. In this case, there would be less obstacles during an installation process. Moreover, a continuous quality improvement would be provided in the long-term perspective. Furthermore, the implementation process would be more fluent with lower confrontation between internal environmental and principles of proposed method in organizations that have used quality management methods, including CAF and BSC. In this case, it would be lower internal environmental confrontation with the proposed method principles. On the other hand, the preference is given for institutions that were indicated to have the highest necessitate and average capabilities, however, the implementation will take time in this type of organizations.

Considering the adjustments to changes of management, organizational and quality culture and instant employees training, it is presumed that public sector organizations will seek for consistent operational quality improvement and the fulfillment of society’s expectations.

References


