

KNOWLEDGE AND USE OF QUALITY MANAGEMENT TOOLS IN CZECH MUNICIPALITIES

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Abstract:

Quality management has become part of company's management in the private sector already in the 1970. It became early the integral part of management in all organizations. The requirements for effective management of the organization were transferred to the public institutions. In current practice there is an increase of demand for higher performance in public administration and increase the satisfaction of citizens and the quality of services. Every municipality is unique. It has its own specifics, different priorities, problems, advantages and shortcomings, higher or lower number of inhabitants, different civic facilities. Municipalities also have various levels of finances at their disposal; they actually are a limiting factor of their development. The question is: How to manage the development of municipalities? The strategic management of the municipality has to use the tools of quality management. The aim of the paper is to find what is the knowledge and use of quality management tools (CAF model, Balanced Scorecard, Benchmarking, ISO standards) in Czech municipalities (cities and rural). The questionnaire was chosen as a method of data collection. Questionnaires were returned from almost 80% municipalities. Data were analysed using appropriate statistical methods for the analysis of categorical data, which are part of the statistical program Statistica. Based on the results of the questionnaire, we can say, that the knowledge and usage of these instruments is minimal. When asked about the knowledge and use of modern methods and tools of quality management and the best result enjoy an ISO standard. In the second place there was the knowledge and use of benchmarking. Mayor should apply modern methods of management with respect to the fact that the municipality has to get engaged continuously in efficient spending of financial means and in acquiring subsidy titles. A mayor should not hamper introducing and applying modern methods of quality management into use.

Keywords: quality management, balanced scorecard, benchmarking, CAF model, ISO standards

1. INTRODUCTION

Successful development of municipalities and regions is usually the outcome of long-term and intensive work of individuals and organizations in given locations and it rests on mastering conception management and creating an environment of mutual co-operation and support. Management tools are used for support and regulation of development of individual municipalities. In order to maintain competitiveness, municipalities and regions have to look for, take advantage of and develop their inner potential (infrastructure, human resources, environment, sites designated for development).

A fundamental element of every municipality is first of all its citizens whose satisfaction, quality of life together with development of a municipality and creating conditions for economic growth belong among essential strategies of management. Self-government should do everything possible in order to provide citizens with satisfaction. Other important aspects that municipality self-governing is engaged in definitely include development of a municipality, its growth, and last but not least, economic stability and economy of a given municipality.

Current knowledge regarding management on local and regional development do not offer exhaustive nor unambiguous directions or methods how to start or focus process of development on local and regional level. It rather presents an aggregate of findings that can serve as a starting point for managers active in local and regional development.

In the Czech Republic or abroad the author did not find scientific articles dealing with this issue. Most authors evaluated the use of quality management tools in the private sector. In the public sector (in particular on the example of municipalities) was such a large a questionnaire survey done for the first time.

2. LITERARY RESEARCH

Development of any location is very closely connected with an authority that manages it and with its employees. Success of the whole region depends on quality of their work (Veřejná správa, 2005). Principal problems of managing development of municipalities under current situation and conditions in the Czech Republic are insufficient provision of personnel evident particularly in absence of expertise and unsatisfactory level of sought-after qualification (Ponikelský & Novotná, 2010). Improvement of quality of municipal environment is possible to achieve through proper implementation of local strategies and through applying new approaches and management tools of municipalities oriented towards regional development (Rehoř, 2011).

Offer of quality tools is currently very wide; their usage requires personal (and financial) capacity that small communities do not have available (Holeček, 2009). Balanced Scorecard method is used with great success in business and in public sector organizations (Hušek, Šusta & Půček, 2006). Strategic Balanced Scorecard framework is formed by the authors of this method by four perspectives: financial, customer, internal processes and learning and growth (Kaplan & Norton, 2001). When using strategy in practise with the help of Balanced Scorecard, you start with objectives of financial perspective, then continue to customers perspective and to internal business processes up to perspective of learning and growth and then continue back again to finances (Sim & Koh, 2001).

CAF (Common Assessment Framework) is a tool for improvement of the performance of public sector organizations through advance the self-assessment framework (Baláš, 2010). Benchmarking represents a comparison of a target company with a competitive company or organization with the goal of identifying and comparing the differences between the companies and learning from others (Kozak, 2003). The objective of ISO standards is to create a unified national and international guideline for the management and quality assurance organizations and quality assurance in contractual relations supplier - customer and manufacturer - customer (Bednarčík, 2009).

In order to fulfil objectives of development of municipalities, strategies and activities, the co-operation, particularly of local participants is also necessary – that means authorities of public administration, educational sector, partnership of public and private sectors, employment offices as well as participation of the Ministry of Labour and Social Affairs, the Ministry of Regional Development and the Ministry of Industry and Trade. Weak coordination, particularly on regional and local level, is considered to be a serious problem of the system (Hrabánková et. al, 2008).

3. AIM AND METHODOLOGY

The article aim is to find what is the knowledge and use of quality management tools (CAF model, Balanced Scorecard, Benchmarking, ISO standards) in municipalities (cities and rural) in South Bohemia (Czech Republic).

Due to considerable complexity and difficulty of examining the issue was of primary data collection method chosen survey by the mayor. The questionnaire was distributed in person or electronically via e - mail. In the period 2011 - 2012 there were obtained from a total of 488 questionnaires, 622 municipalities, representing about 80% of the communities represented in the sample.

Data were analysed using appropriate statistical methods for the analysis of categorical data, which are part of the statistical program Statistica. For statistical evaluation of the results of the survey there were used programming environment that provides a simple tabulation, charts and procedures for data analysis. There was used for univariate analysis and qualitative analysis based characters, including the test of independence and determine the strength of addiction. To test the dependence of categorical variables there was used in the program Statistica linear model where the response variable has a multinomial distribution. As linked function there was applied Logit (McCullagh & Nelder, 1989). The null hypothesis H_0 states at paper that differences are insignificant in the responses of mayors according to the type of municipality. If the calculated p-value is less than the established α (0.05), then we reject the null hypothesis and we can say that the answers of mayors are significantly different.

4. RESULTS AND DISCUSSION

Strategic management of municipalities should try to put into effect also new managerial tools which can help make strategic management process more effective. Particular managerial tools are:

1. Balanced Scorecard - managerial approach, which is concerned with relation between strategy and operational activities with emphasis on performance evaluation. Essence of the approach is especially elaboration of strategies and definition of their mutual relations in 4 perspectives. It implements system of balanced indicators of performance of local self-government in perspectives: financial, civic, internal organizational processes and in perspective of learning and growth,
2. use of strategic maps – it refers to easy to understand schematic depiction of vision, priorities and objectives of a municipality including depiction of their mutual relations,
3. CAF model - the base of this is the fact that the very assessment of a local authority is carried out by strategic management. This self-assessment can help them identify their strengths and weaknesses and furthermore make overview of activities, which will lead to continuous improvement of quality and performance of an office managed by them. This model can be used for the entire authority office or, for example, for a specifically defined organizational unit. Output is a self-evaluating report and steps whose gradual fulfilment will lead to improvement of efficiency of an office,
4. Benchmarking - this tool of strategic management enables to compare processes with existing processes in different municipalities of the same size (number of inhabitants). In analytical part municipalities can be compared on the basis of selected indicators, from which management of self-government can get necessary data, assess them and interpret them. Indicators can be selected from following areas: demographic, economic, civic facilities, infrastructure, publicity and promotion.

4.1. Can you specify what purpose can this tool be used for?

In the following table 1 there are results of known purpose of individual tools of management and quality applied by mayors of JK municipalities. Only ISO standards purpose is known in more than half of municipalities, particularly in more than 61 % of countryside and 84 % in towns. What other tools

are used for is not known by 80 to 90 % of countryside. Half of a number of mayors is able to say what benchmarking is used for, around 1/3 is able to explain model CAF and 1/5 also BSC.

Table 1: Knowledge of purpose of management quality tools in municipalities in South Bohemia in %

Tools	Type of municipality	Yes	No
Benchmarking	Rural	23,05	76,95
	Cities	50,00	50,00
	In sum	24,74	75,26
ISO standards	Rural	61,77	38,23
	Cities	84,21	15,79
	In sum	63,14	36,86
CAF model	Rural	9,27	90,73
	Cities	33,33	66,67
	In sum	10,58	89,42
Balanced Scorecard	Rural	11,58	88,42
	Cities	20,00	80,00
	In sum	12,04	87,96

Source: author

Hypotheses were also tested in regard to this matter. Zero hypothesis claims that answers of mayors, according to type of municipality, sex and education, are same. Model CAF and method BSC did not show, considering all factors, that answers of mayors depended on whether they knew what those tools were used for. When using ISO we can reject zero hypotheses during answering when considering sex of mayors. Dependence was proved in this case.

Approximately 70 % of men know what ISO standards are used for, that is by a little over 1/3 more than women claim (see table 2). Benchmarking and its use (dependent variable) proved connection between factors explained and sex and education of mayors. Almost 30 % of men know the purpose of this tool that is by 18 % more than women. According to education more than 1/3 of mayors with university degree and about 1/4 of mayors with secondary school or elementary school can specify the purpose of benchmarking.

Table 2: Likelihood test type 3 distribution: binomial, linked function: Probit

Tools	Factors	Chi - square	p value
Benchmarking	Cities, rural	3,209812	0,073198
	Sex	5,966098	0,014584
	Education	6,102842	0,047292
ISO standards	Cities, rural	3,37782	0,066080
	Sex	23,06547	0,000002
	Education	0,36581	0,832846
CAF model	Cities, rural	2,826445	0,092723
	Sex	2,736481	0,098081
	Education	4,632982	0,098619
Balanced Scorecard	Cities, rural	0,000552	0,981258
	Sex	3,438707	0,063686
	Education	4,286664	0,117263

Source: author

4.2. Do you consider using this tool in your municipality?

About 1/4 of town mayors would like to apply ISO standards in the future (that is 18 % more than in countryside), more than 15 % are considering benchmarking and model CAF (see table 3). More than 92 % of countryside doesn't have any need to deal with these tools. It is surprising that almost no municipality considers method BSC that surely is a result of poor knowledge or awareness of this method. It would therefore be suitable that top managers get acquainted with these tools by way of various training, professional lectures and also through presentations on the internet.

Table 3: Do you consider using this tool in your municipality? in %

Tools	Type of municipalities	Yes	No
Benchmarking	Rural	5,56	94,44
	Cities	14,29	85,71
	In sum	5,99	94,01
ISO standards	Rural	7,42	92,58
	Cities	25,00	75,00
	In sum	8,14	91,86
CAF model	Rural	1,55	98,45
	Cities	16,67	83,33
	In sum	2,22	97,78
Balanced Scorecard	Rural	1,93	98,07
	Cities	0	100,00
	In sum	1,85	98,15

Source: author

According to the table 4, no evidence was found that norms ISO show dependence between consideration to use this tool and explained factors (type of municipality, sex, education). P value higher than 0,05 does not allow to reject zero hypothesis. Dependence was proved between sex of mayor and use of benchmarking tool (p is smaller than 0,05). About 8 % of men would be interested in this tool that is by 7 % more than women. Further we can reject zero hypothesis when using model CAF and type of municipality. About 17 % of town mayors consider using this model that is by 16 % more than mayors in countryside.

Table 4: Likelihood test type 3 distribution: binomial, linked function: Probit

Tools	Factors	Chi - square	p value
Benchmarking	Cities, Rural	1,313372	0,251785
	Sex	8,058591	0,004529
	Education	2,149425	0,142623
ISO standards	Cities, Rural	2,912815	0,087878
	Sex	2,410579	0,120518
	Education	0,508461	0,775513
CAF model	Cities, Rural	5,407249	0,020053
	Sex	2,790187	0,094843
	Education	1,398767	0,236930

Source: author

Municipalities that compare themselves find many advantages in benchmarking. During comparison these municipalities monitor the following: what problems other municipalities were solving and how they solved them, what is the appearance of their squares and parks, what they innovated, how they cope with budget, how they acquired financial resources, where they will invest, what their organization structure is, how they procure some services, how they plan development, what their prices for water, heating, waste disposal are and price of rent for residential and nonresidential space.

Smaller municipalities are compared with neighbouring municipalities within microregions particularly in enterprise progress, employment, condition of infrastructure, stability of inhabitants. Mayors can definitely, in positive meaning, find inspiration in other municipalities regarding appearance and maintenance of public property, greenery, collection and disposal of waste, promotion, efficiency of the authority office etc. Moreover some villages take part in competition „Village of the year“. Here comes to visual comparison. Towns are also compared according to the number of crimes and delicts and their seriousness, according to balanced budget, number of unemployed and also on the basis of sport and culture success of youth and adults.

Advantages of comparison lie mainly in better orientation, knowledge and realizing how a given municipality really copes. Municipalities can get inspiration from solution accomplished by other municipalities and they can get new ideas. Furthermore motivation is increased and there is endeavour to have better municipality; information, advice and help in all areas of management are shared. Municipality can thus improve from mistakes of others. Comparison helps during

future decision-making regarding development of a municipality. Strategic management of a municipality tries to continuously manage and develop a municipality in the most effective way and stay within the boundaries of the average.

5. CONCLUSION

Strategic management of municipalities should know and use the tools of modern management to flexibly respond to changes in public administration and effectively deal with the increasing tasks and competences, which is entrusted. These tools they contribute to the improvement and streamlining of the village.

Town mayors are independent and managing town is their job. In countryside, many mayors of small municipalities are dependent, they have different primary jobs. Therefore they have less time for strategic management of the municipality; mayor has to perform this role in his or her own time or at weekends. They manage their municipality and most of the time deal with the situation according to their skills. They have heard in large numbers about quality methods, but majority of them do not know what they are used for, therefore they do not apply them or do not want to use them. They should however understand that these are the methods to improve quality and efficiency of individual public services and processes, quality processes of strategic planning and thus even increasing quality of living of citizens. Mayor should therefore apply modern methods of management with respect to the fact that the municipality has to get engaged continuously in efficient spending of financial means and in acquiring subsidy titles.

A mayor should not hamper introducing and applying modern methods of management into use. Using benchmarking, which is a way to continuous improvement, is one of the methods that can be applied also in public administration. It is a method of comparison with those who are considered to be the best in the given industry or branch through finding suitable model and implementing it into existing municipality office. According to management method BSC municipalities could exploit strategic plan of municipality development and try to reach desired objectives in accordance with this method. By applying method CAF, which is mainly focused on public administration and its primary task is to improve performance and efficiency through self-assessment, municipalities could analyse their weaknesses and threats and subsequently they could take measures in order to eliminate them.

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