

**ANALYSIS OF BUSINESS PERFORMANCE
OF SMALL AND MEDIUM-SIZED ENTERPRISES
IN THE REPUBLIC OF SERBIA ACCORDING
TO THE CRITERIA OF THE EFQM MODEL ^a**

Marija Radosavljević^{1*}, Gorica Bošković¹, Edin Kalač²

¹University of Niš, Faculty of Economics, Niš, Serbia

²United Nations Development Program, Novi Pazar, Serbia

**marija.andjelkovic@eknfak.ni.ac.rs*

Abstract

EFQM business excellence model contains nine criteria by which management of enterprises may conduct self-evaluation to identify the level of business quality in order to achieve business excellence. These criteria also form the basis for evaluating business excellence of enterprises in the process of rewarding quality. This paper is based on theoretical and empirical research aimed at identifying the usefulness of the EFQM model. Through results of empirical research, the paper presents the state of small and medium-sized enterprises in the Republic of Serbia from the perspective of the European Foundation for Quality Management (EFQM) Excellence Model. We measured the level of quality of business excellence elements in small and medium-sized enterprises in the Republic of Serbia according to the methodology of the European Foundation for Quality Management and conducted an analysis of results for each of the nine elements. Subsequently, we gave further recommendations for managers. The aim of the paper is to demonstrate to the scientific and professional community the insufficient level of business excellence model implementation and the need for disseminating information about the EFQM model, especially in small and medium-sized enterprises in the Republic of Serbia.

Key words: business excellence, quality, EFQM, small and medium enterprises, performance

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АНАЛИЗА ПОСЛОВНИХ ПЕРФОРМАНСИ МАЛИХ И СРЕДЊИХ ПРЕДУЗЕЋА У РЕПУБЛИЦИ СРБИЈИ ПРЕМА КРИТЕРИЈУМИМА EFQM МОДЕЛА

Апстракт

EFQM модел пословне изврности садржи девет критеријума на основу којих менаџмент предузећа може вршити самоевалуацију ради идентификовања нивоа квалитета пословања, а у циљу достизања пословне изврности. Ови критеријуми представљају и основу за оцењивање пословне изврности предузећа и у поступку награђивања за квалитет. Рад је резултат теоријског и емпијског истраживања усмереног ка идентификовању корисности EFQM модела. Резултати емпијског истраживања приказују стање малих и средњих предузећа у Србији из угла Европског модела пословне изврности. Ниво квалитета елемената пословне изврности у малим и средњим предузећима у Републици Србији мерен је према методологији Европске фондације за управљање квалитетом и извршена анализа резултата по сваком од 9 појединачних елемената EFQM модела, те су на основу тога формулисале даље препоруке за менаџере. Намера аутора је да научној и стручној јавности укаже на низак ниво примене модела пословне изврности, као и на саму потребу ширења информација о EFQM моделу, посебно у малим и средњим предузећима у Србији.

Кључне речи: пословна изврност, квалитет, EFQM, мала и средња предузећа, перформансе.

INTRODUCTION

In modern times, enterprises are facing global competition, intensive development of science and technology, the need for increased environmental protection, and increasingly demanding consumers. Since consumers are first among the equal stakeholders, the pressure that proceeds from them represents a significant initial impulse for the introduction of changes. In any case, as a result of all these tendencies companies are trying to find an adequate response. Initially, they reach for the adoption of ISO 9000 standards and then implement Total Quality Management principles, business process reengineering, Lean and Six Sigma concepts, as well as models for achieving business excellence.

Total Quality Management philosophy underlies the business excellence model. Through methods, requirements, and techniques, business excellence models help enterprises to continually increase the level of business quality and participate in competitions for prestigious quality awards, and thus prove their commitment to excellence.

Since small and medium-sized enterprises (SMEs) are usually burdened by a lack of capital, this limitation can and must be replaced by a focus either on efficient use of limited resources or on quality (product quality, process quality, and quality of business). Therefore, in SMEs the need to achieve business excellence is even more emphasized compared to large enterprises.

The need for analyzing the success factors of SMEs stems from their importance, which can be quantitatively expressed. Thus, for example, SMEs

represent over 99% of all companies, employing more than two-thirds of total employment, creating about 70% of total sales and 50% of total exports. Based on these data it can be concluded that the attention directed towards SMEs is completely justified. Hence, the objective of the paper is to identify the level of business quality of SMEs, as well as the representation of the business excellence model in this business segment.

BUSINESS EXCELLENCE: THEORETICAL CONCEPTS AND EFFECTS

Excellence models allow internal evaluation of business (Dodangeh et al., 2011), so the management can have available information about the parameters relevant for improving business or about key elements of business excellence at any time. Therefore, the implementation of business excellence model is not a purpose by itself, but its introduction provides guidance for improving performance based on self-assessment. By using a recognized model of excellence for self-assessment, companies can identify the business segments in which there are opportunities for improvement and they can promote a systematic approach to the process of continuous improvement. In this way, through self-assessment, continuous improvement has been promoted (Ford & Evans, 2001). Likewise, with the exception of identifying weak links, it is possible during self-assessment to identify strengths that should be further improved and used as a source of comparative advantage against the competition. In any case, the application of business excellence model is the precondition of economic success and global recognition and image of the company.

Besides being the basis for self-assessment, business excellence models are also the framework for rewarding companies on the basis of achieved business performance. Thus, on the basis of rewards for outstanding performance there are appropriate models of business excellence. Decision on rewarding is made on the basis of certain criteria, which are actually elements of the business excellence model.

According to territorial affiliation, companies in the Republic of Serbia are particularly interested in the elements or criteria of business excellence model formulated by the European Foundation for Quality Management (EFQM). European Foundation was among the first to give the definition of business excellence: "Business Excellence is a way of doing business that enables organizations to achieve a balanced satisfaction of stakeholders (for example, customers, employees, society and shareholders), thus increasing the likelihood of long-term success" (Kanji, 2012, p. 7). The European model of business excellence is known as the EFQM model. The first version of the model was introduced in 1991. Although the principles on which the model is built are the same, it was revised three times, first in 2003, then in 2010, while the current version appeared in 2013 (www.efqm.org).

In addition to the above mentioned model, which is typical of companies in Europe, there are a number of models that are used in other parts of the world and that are the basis of adequate rewards, such as the National Quality

Award in the United States (Malcolm Baldrige National Quality Award – MBNQA), the Deming Prize in Japan, the Juran Medal award in Australia, and the national rewards of New Zealand, South Africa, Canada, Finland, Norway, and so on. However, the basic principles on which these models are based and the elements on which business excellence is assessed are almost identical. Therefore, due to its geographical origin, the model which is accepted in Europe, the EFQM model, is discussed in more detail in this paper and used as the basis for empirical research. In addition, based on the European model of business excellence, a quality award was established in the Republic of Serbia in 1994 (Oscar of Quality).

The positive effects of the implementation of business excellence concept, as well as models through which this concept is formalized, are confirmed by numerous authors. Singhal and Hendricks (1997) show that the implementation of quality management principles, which are bases of business excellence models, has a positive impact on business results. They analyzed the performance of 600 companies, which have been awarded for quality, and concluded that they had managed to increase the value of the shares, operating profit, sales, employment, and value of their assets. Specifically, the awarded companies achieved 44% higher value of the shares. They also achieved 48% higher growth of operating profits and 37% higher increase in sales. According to some authors (Castresana Ruiz-Carrillo & Fernández Ortiz, 2005), the significance of the EFQM model lies in identifying the resources and capabilities whose combination, according to the Resource-based theory, can provide competitiveness, as the basis of competitive advantage. There are authors (Heras Saizarbitoria, 2006) who represent the effects of the EFQM model on a scale that can be both positive and negative. It should also be noted that there are no negative effects and that the greatest positive effect was observed in employee motivation and job satisfaction, reduction of the number of defects and quality costs, increase of product quality and market share, as well as brand image and customer satisfaction. Some authors analysed the influence of the EFQM model elements on the technical and social dimensions of Total Quality Management and, in the conclusions of their research, they confirmed the existence of this influence (Bou-Llusar, Escrig-Tena, Roca-Puig & Beltrán-Martín, 2009).

However, most of the research in the field of business excellence model is aimed at identifying the elements that have a dominant importance, i.e. those with significant increase as a consequence of implementing the business excellence concept. In most studies, the attention was focused on individual elements of the model. Of course, there are authors who sought to identify the connection or causality between the individual elements of the model (Bou-Llusar, Escrig-Tena, Roca-Puig & Beltrán-Martín, 2005; Santos-Vijande & Alvarez-Gonzalez, 2007).

In the case of Swedish and Spanish companies, the connection was confirmed between the implementation of Total Quality Management and the EFQM model, on the one hand, and achieving higher performance under the auspices of the Quality Management, on the other hand, (Lagrosen & Lagrosen, 2005), and it was concluded that the implementation of the EFQM model helps achieve competitive advantage, which allows enterprises to outperform the competition (Santos-Vijande & Alvarez-Gonzalez, 2007). A study conducted

in the UK also confirms the improvement of business performance in both cases, in short and long term, in companies that effectively apply the principles of the EFQM model (Boulter, Bendell, Abas, Dahlgard & Singhal, 2005).

Regarding the application of most management tools and models, and then regarding the EFQM model, the dominant opinion is that the excellence model is applicable only to large companies. However, recently there has been an increasing number of papers whose authors deal with the problems and results of quality management and business excellence model application in SMEs. The research conducted by Singhal and Hendricks suggests the opposite conclusion, which shows that small companies have better results compared to large ones (Hendricks & Singhal, 2001). After the implementation of improvements, smaller companies, award winners, achieved 63% increase in operating income, 39% increase in sales, 17% increase in return on sales, 21% increase in employment, and 42% increase in assets. In the case of Portuguese SMEs (Sousa, Aspinwall, Paulo Sampaio & Guimarães, 2005), the authors show that this sector recognizes the importance of performance and quality measures and use of appropriate tools, and that for the majority of SMEs the initial step is implementation of ISO 9001. The authors who conducted research in Ghana (Fanning, Pešaković & Amaria, 2008), analysed companies that apply quality management tools and principles and concluded that there were no differences in the impact of quality management practices on the performance of small and large companies.

The authors who studied the correlation between the EFQM criteria in Iranian SMEs came to a similar conclusion, with a special emphasis on the importance of two EFQM criteria: Leadership and Employees, which, in this country, have the greatest impact on the concept of excellence (Sadeh, Arumugam, & Malarvizhi, 2013). Unlike authors who sought to identify whether it makes sense to apply the EFQM model and how its use affects the performance of SMEs, there are those who concluded, based on research, that the most suitable model for use in SMEs in developing countries is exactly the EFQM model (Ismail, Darestani & Irani, 2011).

On the other hand, there are authors (Sousa, Aspinwall & Rodrigues, 2006) who concluded during their research that there is a gap between the knowledge about the business excellence model in theory and its practical application. This is supported by the research of the authors according to whom the implementation of quality management systems and the business excellence model in SMEs is at a very low level (Thomas & Webb, 2003). The point is that managers of SMEs are aware of the importance and usefulness of the quality management and business excellence models, but, despite this, principles and tools that these models entail are either not used at all or not used properly.

RESEARCH METHODOLOGY

Bearing in mind that some authors concluded that the EFQM model is adequate for SMEs, particularly in developing countries, but also that others emphasized that the principles and tools proposed within this model are not

applied sufficiently in this category of enterprises, there is a need to examine the situation of SMEs in the Republic of Serbia. The importance of testing and analysing SMEs stems from their importance for economic development of the country, taking into account their contribution and participation in the macroeconomic performance. The research methodology includes the definition of the objectives and framework of research, sample, hypotheses and research methods, methods of analysis, and presentation of results.

Research Framework

The aim of this research is to identify the elements of business excellence that constitute potential sources of competitive advantage of SMEs, on one hand, and the elements that are “weak links” of this business segment, on the other hand. In addition, the EFQM model is used as the research framework, being a tool for business excellence operationalization according to the European Foundation for Quality Management. This model includes nine elements, which are the criteria by which the progress of the company on the road to excellence should be evaluated, as shown in Figure 1. In addition, the elements are divided into two categories: resources and results. The EFQM model is based on the logical assumption that there are interdependent internal links within the criteria of resources and results. From Figure 1 it can be seen that the Leadership is in charge of implementation of Strategy and Politics, managing Employees (People), Partnerships, and resources of the organization, while those three elements further influence Results through proper Processes. Results related to customers, Results related to employees, and Results related to community together affect the accomplishment of Key business results (Bou-Llusar, Escrig-Tena, Roca-Puig & Beltrán-Martín, 2005). The dynamic nature of the EFQM model is reflected through continuous innovation and learning that help the improvement of *Resources*, which in turn lead to improved *Results*.

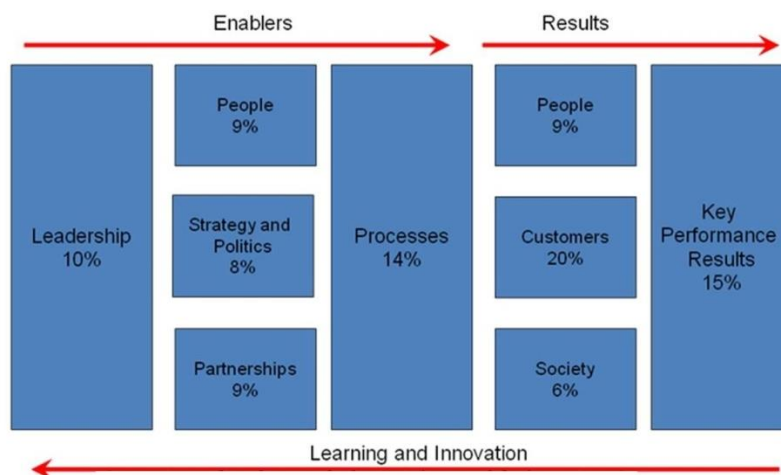


Figure 1. The *EFQM* framework

Source: Adapted according to *EFQM Excellence Model*, 2009, p. 8

EFQM business excellence model expresses the state and level of performance through the summation of 1000 points maximum. The distribution of points shown in percentages per element is given in Figure 1 (Wongrassamee, Simmons & Gardiner, 2003, p. 16), while the distribution of points shown in absolute numbers is given in the following subsection. Based on the distribution of percentages per element it can be seen that Results for Customers have a slight advantage (20%) over other elements, which is logical because without customer satisfaction there are no other business results. The next element is Key Performance/Business Results with 15%, because customers are just the base that provides results for enterprise owners, which are also some of the key stakeholders. Processes (14%) are third in the group of leading elements according to percentages. This confirms that the manner of providing customer satisfaction (the manner in which resources are transformed through business processes) is very important, since it influences customer satisfaction as well as key business results.

Defining the Causes, Hypotheses and Research Methods

The case studies are focused on SMEs in the Republic of Serbia. Requirements for the selection of enterprises in the sample are pre-defined. They are as follows: possession of a certificate, application of the EFQM model, and specific sectorial and geographical representation and size of the enterprise. The most important requirements for enterprise selection were size and possession of a certificate of qualitative standards from the ISO 9000 series. Thus defined conditions confined the observed sample to SMEs that have at least one certificate. Starting from the defined selection requirements for the sample, empirical research was conducted on a sample of 57 SMEs, whose management, business processes, performance, and potential for improvement were evaluated using the "EFQM 2003" model of business excellence. Observed enterprises are engaged in production, processing, and distribution of metal products, electronic and IT industry, and packaging. Their importance and impact on the economic development of the Republic of Serbia is considerable. Data collected by empirical research indicate the current state of SMEs in Serbia in terms of quality management and business excellence. The intention is to establish the degree of use of the EFQM model by SMEs and assess their distance from business excellence and opportunities for achieving business excellence. Consequently, it is necessary to test the following hypotheses:

1. SMEs in the Republic of Serbia apply the EFQM model insufficiently;
2. The level of business excellence of SMEs in the Republic of Serbia, measured based on the EFQM model, is low;
3. Elements of the EFQM model are on the same level of development in the enterprises, in terms of the average number of points, or average mark.

Methods of interview and direct observation were used to collect the empirical data. In accordance with the requirements of the principle of empirical

research, we tried to provide as much objectivity of collected data as possible. In terms of time range, the survey was conducted twice at different time intervals, while the measuring of characteristics was performed against the same set of elements. Between the two measurements, enterprises were given 6 months to improve their business performance by means of the EFQM model. State of the business system in the model is expressed through the sum of a maximum of 1000 points.

The criteria of the EFQM model (Conti, 2007, p. 119.) on the basis of which the evaluation is performed are the following: Leadership (maximum 100 points), Policy and Strategy (80 points), People (90), Partnerships and Resources (90), Processes (140), Customer Results (200), People Results (90), Society Results (60), and Key Performance Results (maximum 150 points). The Business Excellence Model is based on the evaluation of these nine key elements. Each element contains a number of issues in order to perform the evaluation of the business entity – the enterprise. In each enterprise the evaluation is conducted by using a list with a total of 97 items for evaluation.

We used the method of statistical analysis to analyse collected data and applied it to the data that concern the EFQM model elements, all using the SPSS software. Descriptive statistics was applied primarily in order to assess the level of each element of the EFQM model. The results of descriptive statistics provide the basis for decision-making regarding the first and second hypotheses. To confirm or refute the third hypothesis, it is necessary to apply the method of analysis of variance. Through statistical analysis, we described and analysed the results for each EFQM model element and, accordingly, we gave recommendations and made conclusions. The results of application of these methods of statistical analysis are shown below.

RESULTS AND DISCUSSION

The total number of enterprises in Serbia that owned at least one ISO certification in early 2010, according to the Serbian Chamber of Commerce, was 1,327 (Spasojević Brkić et al., 2011, p. 234). Of this number, 567 counts into the category of small and 344 in the category of medium-sized enterprises, which makes a total of 911 enterprises that potentially meet the basic criteria defined by the subject of research. Possession of the certificate was the first elimination criterion. In order to be eligible for inclusion in the sample, it was necessary for the enterprises to fulfil the second condition, which is the implementation of the EFQM model, or the knowledge of the presence of an element of the model. Unfortunately, according to the data obtained from the management, there were only 268 such enterprises. The total number of rated enterprises is 57, which represents 6.3% of the total population of SMEs that possess the ISO certificate, or 21.3% of enterprises that implement the EFQM model. If one takes into account the fact that the number of SMEs in Serbia in 2010 was 11,871, 9,614 of which are small and 2,257 medium enterprises (Report on SMEs and Entrepreneurship in 2010 and 2011), the fact that only 911 possess an ISO certificate is unsatisfactory. This means that only 7.7%

have this certificate. Compared to this, the data on the number of enterprises that implement the EFQM model are devastating, given that their percentage is only 2.3% of the total number of SMEs, or just over 29% of the enterprises with an ISO certificate. Based on these data it can be concluded that the first hypothesis is confirmed, i.e. that SMEs in the Republic of Serbia insufficiently implement the EFQM model. Of the enterprises that make up the sample, 33% or 58% are small, and 24% or 42% are medium-sized enterprises. The average number of employees in the enterprises in the sample was 58 with a standard deviation of 55.25, which represents a significant departure from the average (Table 1).

Table 1. Descriptive statistics of the number of employees in enterprises

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Statistic	57	58.0702	55.24907	6.00	254.00

Source: Authors' calculation

Distribution of enterprises according to the main activity of the organization shows that most organizations work in metal processing (44%), followed by enterprises engaged in the production of packaging (25%), and electronic (19%) and IT industry (12%). Most enterprises are located in Central Serbia, 29 or 51%, followed by those in Vojvodina, where 16 enterprises or 28% operate, while the City of Belgrade contains 12 enterprises or 21% of the sample. In order to test the second hypothesis, we performed the analysis of data concerning the individual elements or criteria of the EFQM model, followed by the analysis of all results, or analysis of the application of the EFQM model as a whole.

1) Analysis of score according to the Leadership criterion

The average score in the first round of assessments is 35.60, representing 35.6% of points out of a possible 100, which, according to EFQM 2003, the company can win for the Leadership criterion. The average score after the second assessment was 42.18, which represents an average improvement of 6.58 points. The maximum increase achieved by an enterprise was 28 points, while in one case a negative result was recorded, i.e. the companies' overall score was reduced by 6 points (Table 2).

Table 2. Descriptive statistics of the Leadership criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Leadership – first assessment (1)	57	35.5965	11.06452	13.00	66.00
Leadership – second assessment (2)	57	42.1754	9.66238	22.00	75.00
Difference	57	6.5789	7.06840	-6.00	28.00

Source: Authors' calculation

2) *Analysis of the score according to the Policy and Strategy criterion*

The average score in the first round of assessments is 25.30, representing 31.625% of points out of a possible 80, which, according to EFQM 2003, a company can win for the Policy and Strategy criterion. The average score after the second assessment was 31.81, which represents an average improvement of 6.51 points. The maximum increase achieved by an enterprise was 24 points, while there was no record of an enterprise reducing the overall score (Table 3).

Table 3. Descriptive statistics of the Policy and Strategy criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Policy and Strategy 1	57	25.2982	8.69927	10.00	50.00
Policy and Strategy 2	57	31.8070	9.43292	12.00	65.00
Difference	57	6.5088	5.88316	0.00	24.00

Source: Authors' calculation

3) *Analysis of the score according to the People criterion*

The average score in the first round of assessments is 28.53, representing 31.7% of points out of a possible 90, which, according to EFQM 2003, a company can win for the People criterion. The average score after the second assessment was 34.40, which represents an average improvement of 5.88 points. The maximum increase achieved by an enterprise was 18 points, and there was no drop recorded, meaning that no enterprise reduced the overall score (Table 4).

Table 4. Descriptive statistics of the People criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
People 1	57	28.5263	9.87621	14.00	52.00
People 2	57	34.4035	9.69142	17.00	59.00
Difference	57	5.8772	4.46442	0.00	18.00

Source: Authors' calculation

4) *Analysis of the score according to the Partnership and Resources criterion*

The average score in the first round of evaluation was 32.02, which represents 35.56% of points out of a possible 90, which, according to EFQM 2003, a company can win for the Partnerships and Resources criterion. The average score after the second assessment was 36.46, which represents an average improvement of 4.44 points. The maximum increase achieved by an enterprise was 13 points, while in one case a negative result was recorded, i.e. one company reduced the overall score by 3 points (Table 5).

Table 5. Descriptive statistics of the Partnerships and Resources criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Partnership and Resources 1	57	32.0175	9.49716	17.00	55.00
Partnership and Resources 2	57	36.4561	8.70769	20.00	62.00
Difference	57	4.4386	3.32210	-3.00	13.00

Source: Authors' calculation

5) Analysis of the score according to the Processes criterion

The average score in the first round of evaluation was 49.18, which represents 35.13% of points out of a possible 140, which, according to EFQM 2003, a company can win for the Processes criterion. The average score after the second assessment was 55.02 – an average improvement of 5.84 points. The maximum increase achieved by an enterprise was 22 points, while there was no negative result, i.e. there were no enterprises that reduced the overall score (Table 6).

Table 6. Descriptive statistics of the Processes criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Processes 1	57	49.1754	15.32519	21.00	84.00
Processes 2	57	55.0175	14.35953	25.00	88.00
Difference	57	5.8421	4.51501	0.00	22.00

Source: Authors' calculation

6) Analysis of the score according to the Customer Results criterion

The average score in the first round of evaluation was 39.42, which represents 19.71% of points out of a possible 200, which, according to EFQM 2003, a company can win for the Customer Results criterion. The average score after the second assessment was 47.96, which represents an average improvement of 8.54 points. The maximum increase achieved by an enterprise was 35 points, while there was a negative result, i.e. one company reduced the overall score by 3 points (Table 7).

Table 7. Descriptive statistics of the Customer Results criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Customer Results 1	57	39.4211	19.80886	6.00	88.00
Customer Results 2	57	47.9649	19.87458	6.00	100.00
Difference	57	8.5439	8.61077	-3.00	35.00

Source: Authors' calculation

7) *Analysis of the score according to the criterion of People Results*

The average score in the first round of assessments was 12.12, representing 13.47% of points out of a possible 90, which, according to EFQM 2003, a company can win for the People Results criterion. The average score after the second assessment was 17.51, which represents an average improvement of 5.39 points. The maximum increase achieved by an enterprise was 24 points, while there was no negative result, i.e. there were no enterprises that reduced the overall score (Table 8).

Table 8. Descriptive statistics of the People Results criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
People Results 1	57	12.1228	6.22802	0.00	28.00
People Results 2	57	17.5088	7.59493	3.00	39.00
Difference	57	5.3860	6.04080	0.00	24.00

Source: Authors' calculation

8) *Analysis of the score according to the Society Results criterion*

The average score in the first round of evaluation was 21.74, which represents 36.23% of points out of a possible 60, which, according to EFQM 2003, a company can win for the Society Results criterion. The average score after the second assessment was 23.67 – an average improvement of 1.93 points. The maximum increase achieved by an enterprise was 15 points, while there was no negative result, i.e. there were no enterprises that reduced the overall score (Table 9).

Table 9. Descriptive statistics of the Society Results criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Society Results 1	57	21.7368	7.65209	8.00	45.00
Society Results 2	57	23.6667	7.98063	8.00	45.00
Difference	57	1.9298	3.57001	0.00	15.00

Source: Authors' calculation

9) *Analysis of the score according to the Key Performance Results criterion*

The average score in the first round of evaluation was 32.58, which represents 21.72% of points out of a possible 150, which, according to EFQM 2003, a company can win for the Key Performance Results criterion. The average score after the second assessment was 39.95, which represents an average improvement of 7.37 points. The maximum increase achieved by an enterprise was 35 points, while two enterprises recorded a negative result of 6 and 7 points (Table 10).

Table 10. Descriptive statistics of the Key Performance Results criterion

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Key Performance Results 1	57	32.5789	15.21858	5.00	77.00
Key Performance Results 2	57	39.9474	15.29988	5.00	80.00
Difference	57	7.3684	7.80483	-7.00	35.00

Source: Authors' calculation

10) Analysis of the overall results

The average score in the first round of assessments is 276.47, which represents 27.65% out of a possible 1000, which a company can win according to EFQM 2003. The average score after the second assessment is 328.95 – an average improvement of 52.4737 points. The maximum increase achieved by an enterprise between the two assessments was 130 points, while the minimum was an increase of 7 points (Table 11).

Table 11. Descriptive statistics of overall results

	Sample size	Mean	Std. Deviation	Minimum	Maximum
Overall results 1	57	276.4737	78.06433	140.00	449.00
Overall results 2	57	328.9474	78.79957	171.00	576.00
Difference	57	52.4737	31.23877	7.00	130.00

Source: Authors' calculation

Based on the presented results of descriptive statistics, it can be concluded that the level of business excellence of SMEs in Serbia is unsatisfactory. Specifically, the majority of the criteria were achieved at about 30% of the possible score, but there are some criteria that were achieved at 20% or less, or only over 13% in the People Results criterion, where the situation is the worst. These data confirm the second hypothesis that the level of business excellence of SMEs in Serbia, measured on the basis of the EFQM model, is low.

The third hypothesis refers to the existence of differences between the quality level of the individual elements, or criteria, of the EFQM model. In order to determine whether there is a difference between average estimates of the level of quality of the criteria, we applied the variance analysis. The null hypothesis is formulated as “There is no difference in the level of quality of individual elements of the EFQM model” and the alternative “There is a difference in the level of quality of individual elements of the EFQM model”. The results of variance analysis are presented in Table 12.

Table 12. Results of variance analysis

	Sum of squares	df	Score of variance	F	Sig.
Between the elements	61001.333	8	7625.167	52.437	.000
Within the elements	73289.649	504	145.416		
Total	134290.982	512			

Source: Authors' calculation

The variance analysis shows that the significance equals to 0.000, which means that there is a difference among the elements of the EFQM model regarding quality level. Consequently, this means that the null hypothesis formulated in the context of the variance analysis is rejected, or that the third hypothesis is also rejected. On this basis it is possible to draw another unfavourable conclusion – there is uneven development of model elements, which slows down the movement of enterprises towards business excellence.

CONCLUSION

This study demonstrated that the model of business excellence in SMEs is used only at the initial level and that the level of business excellence is low. The assumption is that the SME sector continues to improve and develop, and that there will be an increasing number of enterprises to implement a system of business excellence, which will further contribute to the development of the economy of our country. The reason for this situation lies in the fact that the EFQM model is relatively difficult to implement, especially for small organizations that have problems with constant pressure of the environment and lack of adequate manpower. Furthermore, the advantages of the model are visible only in the long term. Practice shows that the road to achieving excellence is long – business excellence can be achieved only by enterprises that are committed to continuous improving and that, at best, is for a period of three years (Goh & Ridgway, 1994).

Expectations are that with the continuous improvement and systematic approach, enterprises from Serbia in the future will be ready to compete for the EFQM award. A survey shows that most enterprises fall into the category of “committed to excellence” and “recognized for excellence”. However, the reality is that there is potential that in 3-5 years some enterprises will exceed the level of 500 points and compete for the award for business excellence. Such a claim is substantiated by the fact that all the companies made significant progress in a relatively short period between the two measurements. On the other hand, it is necessary to ensure compliance of elements of the EFQM model, or identify the elements that are “weak links”. Based on this study, it can be concluded that these are Customer Results, People Results, and Key Performance Results. If one takes into account

that customers are considered the most important asset of enterprises, and the attributes of employees are the basis for achieving competitive advantage, it can be concluded that the elements that should be the basis of business excellence in SMEs in the Republic of Serbia are unjustifiably neglected and underdeveloped.

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АНАЛИЗА ПОСЛОВНИХ ПЕРФОРМАНСИ МАЛИХ И СРЕДЊИХ ПРЕДУЗЕЋА У СРБИЈИ ПРЕМА КРИТЕРИЈУМИМА ЕФQM МОДЕЛА

Марија Радосављевић¹, Горица Бошковић¹, Един Калач²

¹Универзитет у Нишу, Економски факултет Ниш

²Програм за развој Уједињених Нација, Нови Пазар, Србија

Резиме

Промена услова у којима предузећа послују може бити велики проблем за велика предузећа, али је игнорисање промена у окружењу сасвим сигурно погубно за мала и средња предузећа. Како се мала и средња предузећа обично суочавају са проблемом недостатка капитала, односно материјалних ресурса, ово ограничење могу и морају надоместити адекватним управљањем нематеријалним ресурсима, односно фокусом на квалитет и све факторе који на њега утичу. Примена EFQM модела један је од начина да предузеће идентификује нематеријалне ресурсе на

које се може ослонити у процесу унапређења квалитета, односно достизања пословне изврности. Овај модел посматра пословање предузећа кроз девет елемената: лидерство, стратегија и политика, запослени, партнерство и ресурси, процеси, резултати везани за купце, резултати везани за запослене, резултати везани за друштво и кључни пословни резултати. При томе, првих пет елемената има улогу ресурса, док друга четири елемента имају улогу резултата, у смислу да начин употребе ресурса детерминише резултате. Примену овог модела неки аутори су оспорили, истичући да је он намењен превасходно великим предузећима. Међутим, истраживања аутора из различитих земаља показала су да примена EFQM модела значајно утиче на унапређење перформанси малих и средњих предузећа. Да би се оценио утицај примене EFQM модела на перформансе малих и средњих предузећа у Републици Србији, спроведено је емпиријско истраживање. Резултати истраживања показују да је број малих и средњих предузећа која поседују ISO сертификат изузетно мали (у поређењу са овим подацима у развијеним земљама), али да је број предузећа из ове категорије која примењују EFQM модел још мањи. Позитивно је то што предузећа која су се определила за примену EFQM модела, у два узастопна мерења нивоа квалитета елемената показују побољшање, чиме се потврђује позитиван ефекат модела на пословање малих и средњих предузећа. Оно што се не може сматрати позитивним резултатом истраживања јесте чињеница да постоји разлика у нивоу квалитета појединих елемената модела. То значи да међу њима не постоји усклађеност, односно да има елемената који представљају „слабе карике“ или „уска грла“ која треба елеминисати како би предузећа наставила пут ка достизању пословне изврности. Према резултатима истраживања у малим и средњим предузећа у Србији то су Резултати везани за купце, Резултати везани за запослене и Кључни пословни резултати.