# KNOWLEDGE OF THE EFQM EXCELLENCE MODEL: CASE STUDY OF THE CZECH ENTERPRISES

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Abstract: The excellence models provide a framework for understanding which levers we need to pull to achieve the results we want. EFQM business model is one of the models which deal with the assessment of the performance of an organization. The EFQM excellence model has a critical effect on the success, and competitiveness of Czech enterprises. The paper focuses on the EFQM business excellence models. The objective of this paper is to determine the level of knowledge of the EFQM excellence model by Czech enterprises. The study based on primary data collected from a recent survey of 210 Czech enterprises. The paper based on data collected in interviews with managers and founders of Czech enterprises. The enterprises included in the study are those enterprises that are incorporated in the Czech Republic. A total of 210 enterprises participated in the study, and the main primary data collection instrument was a questionnaire-interview. The findings of the statistical analysis show the influence of selected internal variables on the knowledge of the EFQM excellence model. Results of the research study confirm that level of knowledge of the EFQM excellence model in Czech enterprises is low.

**Keywords:** Business Excellence, EFQM Excellence Model, Czech Enterprises, Knowledge, Performance.

JEL Classification: F23, M16.

#### Introduction

Generally speaking, excellence means that what we are doing well today should be done even better and more wisely tomorrow, especially compared to the competition, to fully satisfy all interest groups. Business excellence frameworks can be described as an integrated set of proven business practices designed to increase business performance across a broad range of organizations (Gloet and Samson, 2017). Certainly, the concept of business excellence has, for at least three decades, been at the center stage of management theory and practices. Business Excellence is defined as a high level of maturity of a company/organization regarding management and result achievement (Zdrilić and Dulčić, 2016). Business excellence is about developing and strengthening the management systems and processes of an organization to improve performance and create value for stakeholders. Business Excellence is much more than having a quality system in place. It is about achieving excellence in everything that an organization does (including leadership, strategy, customer focus, information management, people, and processes) and most importantly achieving superior business results. Business Excellence is often described as outstanding practices in managing the organization and achieving results, all based on a set of fundamental concepts or values. The concept of business excellence has, for at least three decades, been at the center stage of management theory and practices and there is no shortage of models and frameworks that explain it. Business Excellence, accordingly to Mann et al. (2012), is about developing and strengthening the management systems and processes of an organization to improve performance and create value for stakeholders. Business excellence is a management philosophy based on performance improvement and meeting and surpassing stakeholder needs. It is a belief in a set of core values and concepts that over time has delivered success for many organizations. Business excellence is much more than having a quality system in place; these models help organizations to assess their strengths and areas for improvement and guide them on what to do next. The EFQM (European Foundation for Quality Management) Excellence Model offers a holistic view of the enterprise, highlighting its strengths and opportunities to improve.

Various empirical studies have been done to investigate the relationship between business excellence models and enterprise performance with varied conclusions. In this research study, knowledge of the EFQM excellence model was investigated as factors influencing the success of enterprises. This paper offers several contributions to business excellence models and attempts to answer calls for studies that span across the disciplines. In particular, the paper pays attention to the key role of selected factors for the knowledge of the EFQM excellence model. Therefore we extend the studies by suggesting that the knowledge of the EFQM excellence model depends not only on their identification variables (size, age, industry) but also on performance measurement system.

The objective of this paper is to investigate awareness/knowledge of the EFQM excellence model of Czech enterprises. The ambition is to answer the central research question: "which factors affect the knowledge of the EFQM excellence model of Czech enterprises"? The study based on primary data collected from a recent survey of Czech enterprises; the data analyzed by the appropriate analytical method: categorical data analysis. The paper structured in three parts. The first part of the paper outlines selected theories dealing with the business excellence models, especially EFQM excellence model. The second section of the contribution presents and interprets results of the survey carried out among Czech enterprises. Finally, the last section provides the conclusion of the research results and offers the discussion of the most important implications. The results of the analysis discussed, and recommendations provided for managers in the last section.

### 1 Statement of a problem

Business excellence is about achieving excellence in everything that an organization does (including leadership, strategy, customer focus, information management, people, and processes) and most importantly achieving superior business results. Business Excellence Models, according to Mann et al. (2012) were first called Total Quality Management models. Today they are usually referred to as Business Excellence Models – this term helps to communicate the importance of "excellence" in all aspects of business, not only product and process quality. Business excellence models organizations use to understand and assess which processes need to be improved to improve results. TQM can involve all organizational levels in developing quality systems; ISO can help to define and document the processes; EFQM is strong for balanced development and learning from the best; BSC is helpful for defining control and monitoring models (Farzandi et al., 2010).

Today there exist 100 excellence models and national quality awards in 82 countries (Talwar, 2011). The most employed and recognized models at an

international level are the Deming Prize, introduced by JUSE (Union of Japanese Scientists and Engineers) in 1951, which is the first globally known excellence model. Malcolm Baldrige National Quality Award (MBNQA) in the USA established in 1987 and the European Quality Award (known as "European Excellence Award" since 2004), based on the European Foundation for Quality Management (EFQM) model, established in 1991 (Benavent, 2006). A recent study (Tanner, 2012) found a positive relationship between Business Excellence (EFQM Model) and Performance, and between Strategic Agility and Performance. The study also revealed that there was also evidence that Strategic Agility was related to Business Excellence. The findings suggested organizations that successfully implement Business Excellence develop the ability to respond to change, a capability that was becoming more critical as the pace of change increases. According to Bandyopadhyay and Nair (2015) this capability leads to benefits for many of the organization's stakeholders. The most widely used approaches to measuring the business excellence are the EFQM's Business Excellence Model and the Malcolm Baldridge Excellence Model established in 1987 in the USA (Lu et al., 2011). Some other awards are: Australian Business Excellence Award introduced in 1988 in Australia; European Quality Award introduced by EFQM in 1992 in Europe; CII-EXIM Bank Business Excellence Award introduced in 1994 in India, and Singapore Quality Award in 1994.

In fact, EFQM has been used as a health check tool and BSC for regular monitoring of the performances to reach the goals and objectives (Goswami and Mittal, 2013). EFQM is one of the models which deal with the assessment of the performance of an organization, using a self-assessment method for measuring nine criteria and 32 subcriteria throughout the organization. The self-assessment procedure needs properly trained auditor from the company, and the questionnaire is developed in a manner to quantify all relevant performances. (Farzandi et al., 2010) The EFQM model measures the "Enablers" (Leadership, People, Strategy, Partnerships & Resources, and Processes, Products & Services) and the "Results" (People Results, Customer Results, Society Results and Key Results). To achieve sustained success, an organization needs strong leadership and clear strategic direction. They need to develop and improve their people, partnerships and processes to deliver value-adding products and services to their customers. If the right approaches are effectively implemented, they will achieve the results they, and their stakeholders, expect. The Model provides a framework for understanding which levers we need to pull to achieve the results we want. It helps us understand the role each part of our organization needs to play in effectively implementing our strategy; whether that is in an SME, a school or a global company. While there are numerous management tools and techniques commonly used. The model can, therefore, be used in conjunction with any number of these tools, based on the needs and function of the organization, as an overarching framework for developing sustainable excellence. Excellent organizations achieve and sustain outstanding levels of performance that meet or exceed the expectations of all their stakeholders. The EFQM Excellence Model allows people to understand the cause and effect relationships between what their organization does and the Results it achieves. All organizations strive to be successful, some fail, some achieve periods of success but ultimately fade from view, and a few achieve sustainable success, gaining deserved respect and admiration. The EFQM Foundation was formed to recognize and promote sustainable success and to guide those seeking to achieve it. This is realized through a set of three integrated components which comprise the EFQM Excellence Model: The Fundamental Concepts of Excellence, The Model Criteria, The RADAR Logic (EFQM, 2017). A year in 1999, the EFQM Model and the CII-EXIM Model for Business Excellence, went through a major change with the introduction of RADAR (Results, Approach, Deployment, Assessment, and Review). It was introduced for measurement, and 39% change was in the areas to address bringing more emphasis on the performance and organizational excellence. The model is based on the principle factor that, "Excellent resulting concerning performance, customers, people, and society are achieved through leadership driving policy and strategy, people, partnerships and resources, and processes" (Goswami and Mittal, 2013).

#### 2 Methods

This research study is a part of the research focused on the selected aspects of the entrepreneurial activities of Czech enterprises. The objective of the research study is to present the results of primary research focused on the knowledge of managers of Czech enterprises regarding the EFQM excellence model. The method of the oral questioning and a questionnaire as the principal instrument applied for researching the knowledge of managers of Czech enterprises regarding the EFQM excellence model. The research was carried out in the Czech Republic in the period between September 2016 and May 2017.

To fulfill the aim of this study, the following hypotheses were suggested:

**Hypothesis 1**: The degree of knowledge of the EFQM excellence model is affected by the inclusion of the financial area into the enterprise performance measurement system.

**Hypothesis 2**: The degree of knowledge of the EFQM excellence model is affected by the inclusion of the customer area into the enterprise performance measurement system.

**Hypothesis 3**: The degree of knowledge of the EFQM excellence model is affected by the inclusion of the internal area into the enterprise performance measurement system.

**Hypothesis 4**: The degree of knowledge of the EFQM excellence model is affected by the inclusion of the employee area into the enterprise performance measurement system.

**Hypothesis 5**: The degree of knowledge of the EFQM excellence model is affected by the foreign business activities of the enterprise.

**Hypothesis 6**: The degree of knowledge of the EFQM excellence model is affected by the implementation of the process management in the enterprise.

The research includes primary data collection from top managers of selected Czech enterprises. The sample consists of 210 Czech enterprises located in the Czech Republic. Selection of companies under research based on the method of non-probability purposive sampling, by occasional selection. The researched enterprises were established in the Czech Republic, and all of them are private enterprises. The instrument used in the survey, a structured questionnaire, contains three fields of varying degrees of complexity relating to the area of business management. The

questionnaire consists of closed, semi-closed and open questions. The questions were designed while based on the information gained from experts from business and universities and previous research. In some questions, particularly those related to the EFQM excellence model, simple and complex scales were used, mostly the Likerttype scale (4 = strongly agree to 1 = strongly disagree). Aso, the questionnaire also included four questions related to the enterprise background (the type of a business sector; the size of the enterprise measured by the number of employees, and the revenue; the year of establishment enterprise). The questionnaire was pre-tested for the instrument validity by ten managers. In interviews, the managers were asked to respond to the items measuring the theoretical construct. They were also requested to identify any ambiguities revealed in the questionnaire draft. Based on the feedback some minor changes of wording were made. Because of the relatively low response rate in mail surveys in the Czech Republic, and sensitivity to Czech managers' concerns about industrial espionage, a high level of personal involvement consisting of telephone calls and personal delivery and pickup of questionnaires was necessary. First, telephone calls were made with general managers or CEOs of the Czech enterprises to explain the purpose of the study and to ask for their participation. The questionnaire was hand-distributed to the general managers and CEOs after a telephone appointment. Trained research assistants helped the managers and CEOs complete the questionnaire, and explained any items that the respondents wished to have clarified. This procedure resulted in 300 matched questionnaires, out of which 90 were eliminated due to the incompleteness of responses. Thus 210 (a response rate of 70.0%) questionnaires were used in the subsequent data analysis and statistical processing. The final research sample consisted of 51.9% of companies representing manufacturing, 26.7% of service enterprises, and 21.4% of the commercial enterprises. The companies differed in their size assessed by the number of employees: 23.8% of the sample consists of micro enterprises, 38.6% of the sample consists of small enterprises, 26.2% of medium enterprises, and 11.4% of large enterprises. The Eurostat (2011) and Czech Statistical Office (2013) classify enterprises by a wide range of variables such as sales revenues and the number of employees. This research study follows the conventional idea (European idea) that the size of companies is defined according to EU norms. A company with 1 to 10 employees and 2 million euro of turnover per year referred a micro enterprise. A company, which has 11 to 50 employee and at most 10 million euro of turnover per year, is called a small enterprise. A company, which has 51 to 250 employees and at most 50 million euro of turnover per year, is known as a medium enterprise. A company, which has more than 250 employees and more than 50 million euro of turnover per year, is called a large corporation. The average age of respondents is nineteen years.

The dependent variable is the KNOWLEDGE of EFQM excellence model of managers of Czech enterprises. Respondents/managers were asked how well they know the EFQM excellence model. The level of knowledge of the EFQM excellence model was rated by the managers of each enterprise along four-point scales (1 = definitely I do not know, 2 = rather I know, 3 = rather I known, 4 = definitely known). The Cronbach alpha for the knowledge measure was 0.82, and inter-rate reliability was 0.88. The group of **independent variables** consists of the areas included in the enterprise performance measurement system: FINANCIAL area, the CUSTOMER area, the INTERNAL area, and the EMPLOYEE area. Questions on the inclusion of

these areas (financial, customer, internal, employee) in the enterprise performance measurement system were presented in the form of four-point scales (1 = we do not include it at all, 2 = we do not include it, 3 = we include it, 2 = definitely we include it)to ensure maximal respondent specificity. All multi-item measures achieved superior or adequate reliability scores in tests using Cronbach's alpha. The alpha values range from 0.78 to 0.83. In addition to the independent variables, we also include the realization of FOREIGN business activities and implementation of PROCESS management in the enterprise. For foreign and process we used a dummy variable, which took a value of ",1" if the enterprise is actively committed to foreign activities and "0" otherwise, passive attitude to foreign activities. Guided by previous literature and empirical evidence, we have included several control variables. Among the enterprise-level determinants of are the three widely used demographic characteristics of enterprises. Therefore, we include enterprise SIZE (natural logarithm of the number of employees) and enterprise AGE (in years). In addition to the enterprise-level determinants, we also include INDUSTRY level of the enterprise: whether the enterprise operates in the manufacturing or service sector. We included a dummy variable for industry level, as Acquaah and Yasai-Ardekani (2007), did because the distinction between manufacturing and services obviously has a considerable effect on the enterprise. The statistical classification of economic activities in the European Community NACE classified industry of the companies. Tab. 1 shows descriptive statistics for variables.

Tab. 1: Descriptive Statistics for Variables

	Minimum	Maximum	Mean	Standard Deviation	Median	Mode
Knowledge	1	4	2.00	1.014	2	1
Financial	1	4	3.61	0.801	4	4
Customer	1	4	3.51	0.790	4	4
Internal	1	4	2.82	0.883	3	3
Employee	1	4	2.94	0.884	3	3
Foreign	0	1	0.59	0.494	1	1
Process	0	1	0.55	0.499	1	1
Size	2	20 000	373.74	1816.314	34.50	3
Age	1	192	18.96	20.969	17.50	25
Industry	1	19	6.34	4.537	6	3

*Source: (personal research)* 

The data obtained via the questionnaire research were processed by using the IBM SPSS statistical program.

### 3 Problem solving

The authors of the research study found that the level of knowledge of the EFQM excellence model among the respondents is relatively low. Less than a third of respondents admitted knowledge of the EFQM excellence model. Knowledge of the EFQM excellence model was proven by managers particularly in small and medium-

sized enterprises, in younger enterprises (younger than twenty years), and manufacturing enterprises with foreign business activities and with the implemented process management. Furthermore, a higher level of knowledge of the EFQM excellence model was proven, by managers from these enterprises that include the financial, internal, customer or employee area into the enterprise performance measurement.

To determine the effect of the selected variables on knowledge of the EFQM excellence model were used adequate analytical methods. The research subsumes a two-stage analytical method. The analysis began by examining the correlation between variables. All variables were screened to reveal their distribution through Pearson correlation coefficients deviations for the variables (Tab 2). It is important to realize that the correlation between the identified variables has a profound impact on the knowledge of the EFQM excellence model of the managers of Czech enterprises. The second phase of research includes the analytical method: Categorial Data Analysis.

This initial analysis of the control study variables shows that all of the variables were significantly associated with the level of the knowledge of the EFQM excellence model. A similar situation was also observed for the majority of independent variables.

Tab. 2: Correlation Coefficients

<u> </u>	1 tot. 2. Corretation Coefficients									
	1	2	3	4	5	6	7	8	9	10
Knowledge	1									
Size	-0.432**	1								
Age	-0.426**	0.365**	1							
Industry	0.349**	-0.035	-0.080	1						
Financial	0.102*	0.084	0.075	-0.079	1					
Internal	0.348**	0.044	0.056	-0.077	0.549**	1				
Employee	0.246**	0.005	0.041	-0.090	0.556**	0.697**	1			
Customer	0.140	0.063	0.011	0.097	0.520**	0.290**	0.473**	1		
Foreign	0.367**	0.137*	0.082	0.084	0.230**	0.266**	0.209**	0.151*	1	
Process	0.335**	0.053	0.035	0.204**	0.083	0.334**	0.332**	0.114	0.304**	1

<sup>\*</sup> Correlation is significant at the 0.05 level, \*\* correlation is significant at the 0.01 level.

*Source: (personal research)* 

The hypotheses 1 to 6 were tested through categorical data analysis. Tab. 3 presents the results of the analysis. The results of categorical data analysis (Tab. 3) support and complement the results of correlation analysis: enterprise age, enterprise size, and industry are significant factors influencing the level of knowledge of the EFQM excellence model. Managers of smaller and younger enterprises have a greater level of awareness of the EFQM excellence model than managers of larger and older enterprises. The strength of the relationship between enterprise size and knowledge of the EFQM excellence model is strong (V = 0.770). The strength of the relationship between enterprise age and knowledge of the EFQM excellence model is medium (V = 0.510). A similarly strong relationship (V = 0.411) is between industry, and knowledge of the EFQM excellence model. This finding is in harmony with the results of other research studies on the flexibility of small enterprises in the field of management.

Hypothesis 1 assumes that the knowledge of the EFQM excellence model is affected by the inclusion of the financial area into the enterprise performance measurement system. This hypothesis is supported: the strength of this relationship is low (V = 0.180). Hypothesis 2 assumes that the knowledge of the EFQM excellence model is affected by the inclusion of the customer area into the enterprise performance measurement system. This hypothesis is not supported. Hypothesis 3 assumes that the knowledge of the EFQM excellence model is affected by the inclusion of the internal area into the enterprise performance measurement system. This hypothesis has been confirmed: the strength of this relationship is low (V = 0.276). In Hypothesis 4 it was assumed that the knowledge of the EFQM excellence model is affected by the inclusion of the employee area into the enterprise performance measurement system. This hypothesis has been confirmed: the strength of this relationship is low (V = 0.213).

Tab. 3: Categorical Data Analysis

		Pearson Chi-Square Value	df	Cramer's V Value	Asymp. Sign
Size		373.108	261	0.770	0.000
Age		163.764	111	0.510	0.001
Industry		106.571	42	0.411	0.000
Financial H	Н1	20.343	9	0.180	0.016
Customer 1	H2	12.923	9	0.143	0.166
Internal 1	Н3	47.952	9	0.276	0.000
Employee I	H4	28.496	9	0.213	0.001
International H5		30.023	3	0.378	0.000
Process I	Н6	28.580	3	0.369	0.000

Source: personal research

Hypothesis 5 assumes that the knowledge of the EFQM excellence model is affected by the realization of business activities on foreign markets. This hypothesis was confirmed: the strength of this relationship is medium (V = 0.378). Hypothesis 6 presumes that the knowledge of the EFQM excellence model is affected by the implementation of the process management in the enterprise. This hypothesis was confirmed: the strength of this relationship is medium (V = 0.369).

#### 4 Discussion

The objective of the research study is to present the results of primary research focused on the knowledge of managers of Czech enterprises regarding the EFQM excellence model. The study provided support for hypothesized relationships suggesting the importance of selected variables for the level of knowledge of the EFQM excellence model. The results summarized in Tab. 4 show that the knowledge of the financial area (H1), the internal area (H2), the employee area (H4), foreign activities (H5), and the process management (H6) are significantly associated with the knowledge of the EFQM excellence model.

Tab. 4: Summary Results of Hypothesis Testing

Hypothesis	Relationship	Finding
H1	Knowledge of the EFQM → Financial area	Supported
H2	Knowledge of the EFQM → Customer area	Not supported
Н3	Knowledge of the EFQM → Internal area	Supported
H4	Knowledge of the EFQM → Employee area	Supported
Н5	Knowledge of the EFQM → Foreign activities	Supported
Н6	Knowledge of the EFQM → Process management	Supported

Source: (personal research)

This study shows that level of knowledge of the EFQM excellence model of Czech enterprises was proven by managers particularly in small and medium-sized enterprises, in younger enterprises (younger than twenty years), and manufacturing enterprises with foreign business activities and with the implemented process management. Furthermore, a higher level of knowledge of the EFQM excellence model was proven, by managers from these enterprises that include the financial, internal, customer or employee area into the enterprise performance measurement.

According to Samardžija and Fadic'(2009), the EFQM model gives the right direction; it helps companies to struggle through and encourages them to develop in the way they want. From a general point of view, we can see two different approaches: one based on improving the public sector, and the other on improving the private sector. Implementation of EFQM in companies makes them a desirable supplier and creates accreditation for the country, which enables development and export. Learning and competition are based on the same management framework. The model forms a good base for benchmarking and structuring processes in companies and improving them without making a restrictive framework and blocking the growth of companies and society. The fundamental thought, underlying business excellence is the idea that quality should not be focused only on products and services produced by the organization (Evans, 2008). It should be actually embedded in the practice of organization management, or, in other words, quality should be the fundamental value of the organization's management. If good management principles are designed and implemented, the consequence should be good results. This idea leads us to the term of performance excellence that can be considered a synonym for business excellence. Performance excellence is associated with the integrated approach to management of organizational performances resulting in the delivery of continuously improved values to customers and stakeholders, thus contributing to organizational sustainability, increase in the overall organizational efficiency and capacity, as well as organizational and personal learning. The results of the research are consistent with the results of the study researchers. According to Calvo-Mora et al. (2015), there is a growing interest in knowledge management as a strategic weapon. There exist two extreme approaches to change management (Castka and Belohoubek, 2001): the revolutionary one and the evolutionary one. While the former is fundamental, radical, fast, top-down oriented and socially incompatible, the latter is a continuous, long-term procedure with high social compatibility. Both approaches have their strengths and weaknesses. The results of the assessment are benchmarked against the best companies, and such a comparison

provides relevant information about the quality of process measured. Furthermore, training of all employees is necessary for the understanding of a new environment.

According to Bandyopadhyay and Nair (2015), the findings suggested organizations that successfully implement business excellence develop the ability to respond to change, a capability that was becoming more critical as the pace of change increases. This capability leads to benefits for many of the organization's stakeholders. For an organization, excellence should mean clear dedication of leaders and managers to continuous improvement of all key processes, creativity and innovation, work conditions, teamwork, motivation level and general organizational culture (Zdrilić and Dulčić, 2016).

#### Conclusion

This paper examines the knowledge of the EFQM excellence model by Czech enterprises. Organizations everywhere, of all types and sizes, are under constant pressure to improve their business performance. It can be used to assess and improve any aspect of an organization, including leadership, strategy and planning, people, information and knowledge and other aspects. To help in this process, many are turning to business excellence models, such as the EFQM Excellence Model. The business excellence models can be used as a business-wide framework in a holistic, focused and practical way. Business excellence models are frameworks that when applied within an organization can help to focus thought and action in a more systematic and structured way that should lead to increased performance.

This study has some contributions, including theoretical contributions and managerial implications. This study has provided some theoretical contributions as follows: It gives additional insight into the relationship between selected variables and knowledge of the EFQM excellence model. Furthermore, we also provide some implications for managers and owners of Czech enterprises. This study helps the managers to understand how the selected variables affect the knowledge of the EFQM excellence model. Managers and owners should give more attention to the business excellence models.

This study also has some limitations. First, this study has been conducted only in one small country, in the Czech Republic. Indeed, this will affect the generalizability issue. This study only examined the relationship between selected characteristics of enterprises and knowledge of the EFQM excellence model. Hence, the researcher cannot justify it as a generalization for all European countries. Due to time and cost limitations, this study employed a cross-sectional study. Thus, it only portrays the phenomena at a single point in time, and it will not be able to reflect the long-term effects of the change.

This research study suggests several recommendations for future study. The study might be extended to multiple countries in Europe. The future study might use the longitudinal study which describes phenomena in the long-term. The longitudinal study may lead practitioners and academicians to understand the causal relationship between the EFQM excellence model and performance of enterprises.

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