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# A Comparative Analysis of the Performance of the Czech Excellence Award Winners

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## Abstract

The purpose of this paper is to assess whether the implementation of excellence approach in area of a total quality management (TQM) positively affects the financial performance of the Czech companies. This paper test whether the adoption of excellence model approach from European Foundation of Quality Management (EFQM) has the impact on companies in the monitored indicators of the level of excellence in the Czech Republic represented by the group of emerging countries. This study is based on information gathered through an extensive literature review using print media, research databases, and we employed the available reporting for awarded companies. We systemized the variables of business excellence with the higher impact on organizational performance. As an example was involved the Czech companies awarded in National Quality Award (NQA) in the area of excellence. The main findings of this study shows the positive relation in selected financial indicators after receiving NQA and implementation excellence approach. In terms of the Czech Republic, although the NQA system is in place, Czech companies are not so interested, even though they can get feedback and work on their approach within the set criteria of the EFQM model in NQA. Based on selected performance indicators, the positive development of the companies was demonstrated on performance achieved by the TQM-oriented award winning companies.

**Keywords:** EFQM Model Excellence, total quality management, emerging country, performance management

**JEL classification:** M10, M11, M19

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## Introduction

Total Quality Management (TQM) and Business Excellence Models (BEM) are approaches to react on the competitive environment and companies seek the possibilities in the management field how they could be more competitive and cost-effective (Dahlgaard et al., 2013). These models for strategic management are

implemented in many countries and different modifications. Their use and applications bring positive developments to companies and offer sustainability strategies on a long-term basis. BEM are approaches which are focused on the core activities and values of the companies or organizations in the sense of a comprehensive approach so as to have a positive impact on performance - both financial and other (e.g. process, quality assurance, resource utilization, etc.). These approaches are internationally accepted and are reflected in a number of countries, both in Europe, America and Asia. Companies that receive various awards based on BEM approaches show positive impacts on their performance.

This paper provides a general approach to explore an appropriateness of business excellence models (BEMs) in Czech environment and investigates whether there is a approach to the implementation and utilization of the management practices in companies and organizations in the EFQM Excellence Model including as a part of national quality awards (NQAs) and evaluate impact on their key performance financial indicators. The aim of the paper is to find out whether the companies that received the Excellence Award achieved a positive development of selected financial indicators. The aim of the paper is to contribute, on the one hand, to the presentation of the issue and also to present a partial study with effect on the financial impact of TQM in the Czech Republic, and to present our own empirical evidence that sheds light on this phenomenon.

The structure of the paper is logically linked, when the introductory part follows the literature review with the focus on the area of TQM, business excellence issues in connection with improvement organizational performance. A qualitative methodology by Araújo et al. (2013) for the research, filtration and selection of the research, and an analysis has been used and is introduces in methodology part. The next section encompass the findings and results of the study and the research. Thereafter, in the following part the discussion and the conclusions of the main findings with their practical implications on the example of the Czech Republic and also research and data mining limitations are presented.

## Literature review

BEM approaches are established for integration of the activities in sense of the continuous increasing performance in companies or organizations (Gloet et al., 2017). The business excellence is currently seen as an important approach, and many studies and publications are exploring the practical impact but is also being the subject of management development. Mature organizations that use elements of excellence as grown in managing and achieving their goals (Zdrilić et al., 2016). BEMs approaches are presented of the functionality and perfection of the company in a number of areas that everybody must achieve to be successful (including resources, management, strategy creation, stakeholders' approaches, knowledge management, process, quality and others). In Europe is BE understood as the superior management approach for achieving superior business results.

According to Bandyopadhyay et al. (2015), the outcomes show that organizations with implementation of the excellence approaches are excellent in change management and could use of the basic pillars of the capabilities for their maximizing the result in the long term view. All is based on the continuous improvement in all pillars of the each organizations (Zdrilić et al., 2016). One of the most influential managerial approaches is achieve the excellence status, this is only possible with use of the Business Excellence Models (Dahlggaard-Park et al., 2007; Mohammad et al., 2009, 2012). In Europe is as the core of the excellence approach used the EFQM Excellence Model which is seen as a practical tool for achieving different levels of excellence.

According to Araújo et al. (2013), the self-assessment approach of the EFQM Excellence Model in strategy creation is the basis for development and continuous improvement. Organisations and companies are taken into the cyclical path for assessment for achieving genuine and sustainable improvement (EFQM, 2016).

The EFQM Excellence Model was actualized in 2012 and its specific framework is available on the EFQM website (the model includes nine criteria that are grouped into Enablers and Results). Additionally, the EFQM Model is offered as a managerial tool applicable as self-assessment or as a third party rating (Samuelsson et al., 2002; Van der Wiele et al., 2000). Both approaches differ in the implementation horizon, when self-assessment is more numerous, but both enable them to identify weaknesses or strengths and thus respond appropriately to changes or challenges so that organizations achieve the required performance.

Based on the development of managerial approaches and the linkages between financial and other outputs, it is possible to identify a number of options for how to access and evaluate enterprise performance. The EFQM Model is accepted as TQM synonymous by many researchers (Adams et al., 1999; Forza et al., 1998; Hendricks et al., 1996) and is a superstructure after ISO 9001 certification. TQM approaches are in more concern in deep analysis of the structure and impact performance. According to Duh et al. (2012) are developed the several studies from different researchers that are focused on this issues (Cheng, 2009; Eklof et al., 1998; Greising, 1994; Sohal et al., 1993; Wayhan et al., 2007). Speculative can also be from the point of view according to Van Looy et al. (2011) that the TQM could be understood as a complex approach or also ambiguously determined (meant in the nine general factors identified). Nevertheless, we identified according to the different approaches and studies (Gómez et al., 2011; Reed et al., 2000; Sousa et al., 2002) that exists the alike issues or factors in the TQM Models. Mohammad et al. (2012) sees importance in evaluation and improvement related to the performance based on the TQM initiatives. Achieving the right performance indicators and actions based on the evaluation system is a challenge to achieve success (Läätts et al., 2011). According to Kasie et al. (2013), there are some limitations where outputs can be evaluated, but the steps or sub-variables that these hard financial outputs determine are no longer evaluated.

To sum up, the above findings emphasize the clear the link between the elements of the business excellence model and the performance of organizations in the long run. This is also a reason to verify these approaches to the practical application of awarded companies in the Czech Republic.

## Methodology

A qualitative methodology by Araújo et al. (2013) for the research, data mining, and an analysis has been used. We processed the case study methodology (Eisenhardt, 1989). The stages are the following: (1) Formulation of the problem to be solved with EFQM associated with financial performance indicators; (2) identification of awarded companies; and (3) evaluation of the selected performance indicators.

### *Defining a problem are to be solved*

This first stage is focused on the question that is attempted to be answered, as well as to define the linkage of EFQM framework and financial performance indicators. No studies are being conducted in the Czech Republic to directly investigate the implications of the implementation of the EFQM management model, so it is significant to focus on NQA-awarded companies and to find out if there are some consequences in financial outcomes. From the formulation of the question, arise the objectives to be

reached. Due to a lack of studies or research to systemize and demonstrate a positive implementation of the EFQM model, the aim of the research is to carry out an evaluation within the established indicators for the awarded companies (during the years 2009-2016) in the NQA in the Czech Republic and to identify the main impacts on financial performance indicators. For research purposes, the research question was formulated: Whether the EFQM model implementation has positive impacts on performance in the monitored indicators?

### *Identification of the research sample in area of the excellence managed by National Quality Award*

By identifying companies that are at a certain level of excellence, access has been used - identifying organizations and companies that have been placed in the NQA system. The selection criteria were set for inclusion in the research. We include the award-winning companies within the NQA during the period (2010 to 2016). Next step was selection of the companies with mandatory disclosure to obtain data from annual reports. The award-winning companies that have not been published annual reports yet, they are not included in the research. For comparison, a year before the award was made and then always until to 2016. Based on this selection, a total number of eight companies were selected that received awards in the EFQM Award, category R4E 3 \*\*\*, R4E 4 \*\*\*\*, and R4E 5 \*\*\*\*. Specifically, the companies such as AHOLD CR, KERMI, and Hyundai Motor Manufacturing Czech (HMMC) have received more awards during the period and are therefore included once. In particular, we included the following: 2010 award (ARAMARK), awards in 2011 (AHOLD Czech Republic, Bosch Diesel, Hyundai Motor Manufacturing Czech, KERMI, the 2013 award (Donghee Czech), the 2014 award (Hyundai Motor Manufacturing Czech, and AHOLD Czech Republic), and in the 2015 was awarded AHOLD Czech Republic, and KERMI).

### *Performance measures in selected financial indicators*

To establish the link between TQM and organisational performance it is important to consider financial measures (Boulter et al., 2013). The financial performance of an organisation will be among its most important Key Performance "Outcomes" (EFQM, 2016). However, based on the selection of the companies and the availability of annual reports, five indicators were selected to be used for portability before and after the implementation of the EFQM model in award-winning companies. We mainly focus of are of "business outcomes" of the EFQM with the ratios: EBIT, EAT, ROA, ROS, and Sales (Revenues). ROA, ROS are displayed as a percentage, the other are listed in thousands of Czech crowns. Due to the impossibility of extending non-financial indicators (companies do not publish this information and these data are not involved in the annual reports or other reporting issues within the years and types of organizations monitored – in the Czech Republic does not exist such a complexity database). We gathered the relevant annual reports (with the start of monitoring in 2010, subsequently each year before the award, and then the following years until 2016). Then we used the data in profit and loss accounts and balance sheets for calculation the four selected indicators.

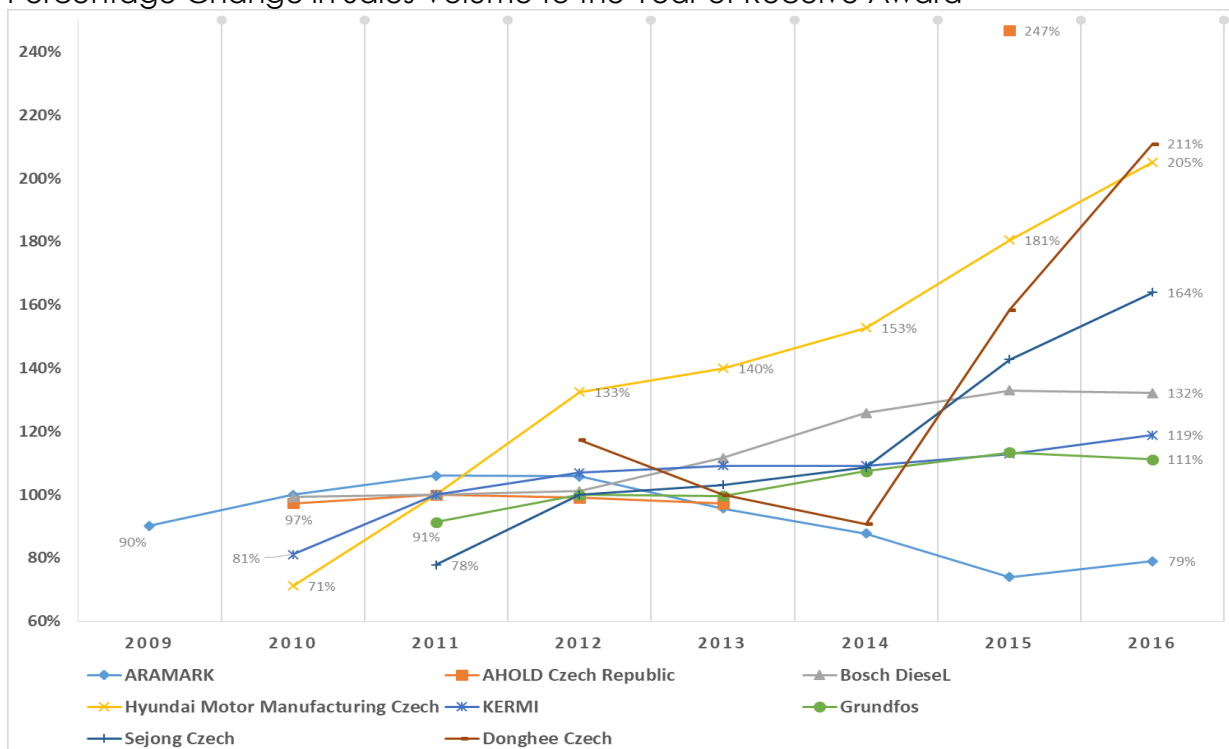
Firstly, we calculated Earnings Before Interest and Taxes (EBIT) measures the profit a company generates from its operations. We followed by the indicator EAT, that measure of a company's net profitability. It is calculated by subtracting all expenses and income taxes from the revenues the business has earned. For this reason EAT is often referred to as "the bottom line." Thirdly, the ratio of Return on Assets (ROA) was used for profitability of the organizations. Calculated by dividing a company's EBIT by

its total assets. The fourth ratio involved in calculation was ROS (Return on Sales). ROS is used to capture the development over time (static ratio), but it can be presented as operational efficiency. This allows conducting trend analysis and comparing internal efficiency performance over time. The above indicators are based on "profitable" factors issues. Subsequent research will take into account several factors and ratios, including the collection of non-financial indicators. We have calculated the significant financial ratios under which companies are rated in period with business outputs. The following section already presents the results.

## Results

The presented results are based on the calculated values of the selected indicators and are gradually evaluated. The first is defined in Figure 1 based on the value of sales (revenues) growth in terms of percentage changes relative to the base year (NQA award, value 100%). This depiction was shown for tracking revenue growth before earnings, up to 2016.

Figure 1  
Percentage Change in Sales Volume to the Year of Receive Award



Source: Authors' illustration

Based on revenue growth, there is a positive tendency expressed by growth. Almost all companies have grown, only AHOLD CR in 2012 and 2013 stagnating (although they received additional awards) and ARAMARK have negative development (decrease from the time he won the award to 79%). In 2015, the results (when the SPAR was taken over by AHOLD) were already projected, therefore this marked increase revenue of 246% compared to 2011, which was negatively affected by other EAT indicators, to the loss of 1.2 billion Czech crowns. Due to the acquisition, the AHOLD CR for 2014 did not published annual report (a two-year summary report). The results for 2016 show that companies have grown and increased their sales, with Sejong Czech, HMMC and Dongee Czech (all from automotive industry). From the point of



view of revenue growth, positive trends can be observed, specifically for manufacturing companies.

Table 1 shows one of the key performance indicators of the EAT monitored by companies. The values stated are presented a year before the award and subsequent periods until 2016. Great fluctuations can be found with AHOLD CR, which is due in 2015 to the already mentioned acquisition with SPAR. If, but we are focusing on results from 2011, in 2012 and 2013, the company was in positive numbers and achieved a significant increase in net profit compared with 2011 (this increase was over 5400 percentage points in 2013). Positive developments are also observed in other companies, except for Grundfos - the decrease in the net sales of CZK 12.5 million compared to 2012. The development of Donghee Czech was also negative, but this was due to significant investments in the company. Overall, the values are positive and companies achieve higher EAT values relative to the values of the initial valuation year.

Table 1  
The EAT Indicator (in thousands CZK)

	2009	2010	2011	2012	2013	2014	2015	2016
ARAMARK	7 319	<b>8 851</b>	10 948	13 006	14 696	18 126	26 122	16 184
AHOLD CR		-116 122	<b>5 766</b>	156 225	311 641	*	-1 238 363	*
BOSH DIESEL		698 640	<b>205 459</b>	545 832	86 933	396 661	596 219	534 769
HMMC		2 042 632	<b>2 913 630</b>	7 010 019	7 332 731	8 973 365	5 501 276	8 473 229
KERMI		81 855	<b>-18 696</b>	30 882	59 167	33 211	46 160	52 047
GRUNDFOS			25 366	<b>17 644</b>	22 170	15 680	20 810	5 137
SEJONG CZECH			12 252	<b>28 666</b>	8 994	32 411	62 526	23 699
DONGHEE CZECH				88 145	<b>20 333</b>	35 986	58 052	-15 836

Note: bold numbers indicate the year of getting the award, \* annual report for this year is not published

Source: Authors' illustration

ROA ratios (see Table 2) were not counted when negative EBIT occurred (only in two companies: Donghee – in the year 2016, and AHOLD CR – in 2015).

Table 2  
The ROA Ratio (as a percentage)

	2009	2010	2011	2012	2013	2014	2015	2016
ARAMARK	7,4	<b>7,8</b>	7,8	8,8	10,9	13,4	14,6	6,7
AHOLD CR		0,7	<b>2,8</b>	3,2	4,0	*	**	*
BOSH DIESEL		5,4	<b>3,0</b>	4,1	3,0	5,0	5,5	5,8
HMMC		4,0	<b>9,8</b>	15,2	15,1	16,1	11,2	14,8
KERMI		10,6	<b>1,0</b>	5,2	7,5	4,8	6,2	5,6
GRUNDFOS			14,0	<b>13,4</b>	12,5	12,5	17,4	11,6
SEJONG CZECH			4,3	<b>4,1</b>	4,6	4,9	5,7	2,8
DONGHEE CZECH				9,6	<b>6,8</b>	3,9	2,1	**

Note: bold numbers indicate the year of getting the award, \* annual report for this year is not published, \*\* the results is negative

Source: Authors' illustration

Overall, it can be stated that the values up to the two monitored periods are positive, that the companies achieve positive results, the profitability of the assets is heterogeneous, values are significantly higher in the company Grundfos (11.6%) in

2016, ARAMARK (14.6%) and HMMC (14.8%). At HMMC, there is a noticeable increase and in 2016 it has reached almost 15%. Positive developments since were found at Aramark, KERMI, AHOLD CR, Bosh Diesel, and Sejong Czech. In summary, the positive developments have been observed, with the development of Donghee Czech's asset profitability, even with the negative EBIT value in 2016.

At the monitored indicator of return on sales (ROS) there are positive results (see Table 3), even if they are not in the required amount, for us there is a significant positive trend, that the companies achieve positive and slightly rising values (the first calculated value is before the year of the valuation obtained). ROS in the monitored periods is positive and only moderate values have been found, only with Donghee, a negative, declining trend is observed. Due to the variables monitored, this indicator shows that the valuation gains obtained, companies either retained the same ROS or slightly increased, with the exception of ARAMARK, which reported profitability of 24.19% in 2015, while other companies have a lower score on the percentage score, with this trend being positive in four companies. The second half of companies (Grundfos, Sejong czech, Dongee czech, and Ahold CR) has a negative development in 2016. Generally, the results of ROS ration do not directly indicate a significant positive increase in the indicator.

Table 3  
The ROS Ratio (as a percentage)

	2009	2010	2011	2012	2013	2014	2015	2016
ARAMARK	1,7	<b>1,9</b>	2,1	2,3	2,7	3,6	5,3	4,0
AHOLD CR		0,3	<b>1,0</b>	1,2	1,5	*	**	*
BOSH DIESEL		3,9	<b>2,3</b>	2,8	1,7	2,6	2,9	2,9
HMMC		2,7	<b>6,0</b>	8,0	8,6	10,0	5,9	7,1
KERMI		10,4	<b>0,9</b>	4,3	6,0	3,9	4,8	4,8
GRUNDFOS			5,6	<b>4,6</b>	4,8	4,4	5,0	2,8
SEJONG CZECH			3,8	<b>2,8</b>	3,0	2,9	3,8	1,7
DONGHEE CZECH				6,0	<b>4,8</b>	3,0	1,6	**

Note: bold numbers indicate the year of getting the award, \* annual report for this year is not published

Source: Authors' illustration

Based on monitored trends of selected indicators, we can summarily state that the positive trend in selected financial indicators is valid. From a deeper and more detailed analysis, it can be observed that negative EAT and EBIT values are due to large investments in production (Donghee Czech), which was negatively reflected in other monitored indicators. For other companies, especially ROA, positive trends apply.

## Discussion

The positive developments and tendencies can be confirmed, except for ROS ratio. The answer for research question can be formulated as the results shows the positive trends prevail, that is, the companies have gained positive results in the following monitored periods since their received NQA, only in ROS ratio there are not very significant results (very slight increase and half of the companies has a decrease). We identify the area of report availability, for example, the unavailability of reports with AHOLD CR, including the realization of its acquisition with SPAR, which was negatively reflected in the monitored EAT and EBIT indicators. The values of the EBIT and EAT



indicators may be somewhat distorted, such as high investment costs, reinvested free funds, or the impact of the type of industry on the target B2B or B2C markets, static outputs in monitored periods, including pre-acquisition, then until 2016.

It has also been confirmed that only selected indicators cannot be examined as a complex approach, which is a limitation of the research carried out. These backgrounds will be further developed to identify other EFQM output categories. From the perspective of availability of information, we refer to publicly available information from the report. Subsequent research will be focused on the projection of the partial examining characteristics and the search for connections in terms of customer, employee, and other KPIs.

## Conclusion

This paper presented the research result and practical impact of the organizations involved in the category of the Excellence in the Czech NQA program, specifically of the Czech companies recognised by the EFQM Excellence Model. The model is a managerial tool for continuous improvement for the path of the excellence with identifying the both problematic and positive approaches for long term improvement and development.

Summary, we found the positive relation in selected financial indicators after receiving awards (except for ROS ration, it was only half of the researched companies). In terms of the Czech Republic, although the NQA system is in place, Czech companies are not so interested, even though they can get feedback and work on their approach within the set criteria of the EFQM model in NQA. In conclusion, excellence is a modern and useful approach based on the ideal mix of the culture, people, and values, it differs in each organizations but it has the common factors (Enables and Results). The sample of Czech awarded organization was identified a positive trend, at the same time it will be linked to the research that has already been carried out in the possibilities of expanding the monitored indicators and co-operation with the awarding subjects on the creation of the best practices.

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