

## THE INFLUENCE OF APPLYING THE TQM PRINCIPLE ON THE BUSINESS RESULTS OF BIG CROATIAN COMPANIES

Ivica Zdrilić  
Adriatic Security d.o.o., Croatia,

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### ABSTRACT

Companies in the modern environment which constantly changes competitiveness, have to devote significant time and resources, financial and human, as well as the energy to measure their own performance in achieving the preset strategic goals.

Although the methods of managing business have significantly changed over the past few decades, the approaches to measuring and handling results of business activities have remained unadapted to new circumstances.

However, it is not enough only to introduce new theoretical knowledge from the field of organisation and management but it is also necessary to find a way how to measure the introduced changes. Nowadays, the feedback is the key to success, because it gives the concrete information about the success of introducing news into a company as well as the information about performances of a company on the whole. That is why today great attention is given to the methodologies which try to evaluate the performance of a company.

The results of the conducted research show that companies with a low level of performance in the research from the year 2000 went bankrupt or shut down during the following two four-year-cycles (2001-2008).

The results of the empirical research have shown a significant correlation between the performances investigated in 2000 and the financial results in the period until 2008.

JEL clasiffication: L15, P17

**Keywords:** Total Quality Management, TQM, MBNQA, Performance management, Croatian companies, large retailers and wholesalers

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## 1. INTRODUCTION

In the past, the success of companies was assessed on the basis of long-term and other assets reported in the accounting balance sheet. During most of the twentieth century, the traditional management and control systems were applied in an environment of mature products and stable technology. At that time, almost all accounting procedures that exist today were in use.

Measuring the success of the organisation or the process shows whether what has been done is good or not, it shows whether it is necessary to take some action or not, and gives the guidelines which actions should be taken (Wealleanus, 2001, pp. 3). These claims gain a special significance if we know that business performance influences the behaviour, both of managers and employees of an organisation (Lin, 2007, pp. 1069).

Bearing all the above mentioned in mind, it becomes clear that the evaluation of performance is the primary **wheel** to the success of each company. Without measuring the organisation it is not possible to determine the deviation of the current state from the one aimed at, or to detect bad parts of the organisation in order to implement measures for its improvement.

A famous sentence reads: „*Kada nešto ne mjerite, onda to ne možete ni znati. Ako nešto ne znate, onda time ne možete upravljati. Kada ne možete upravljati, tada ste prepušteni na milost i nemilost.*“<sup>1</sup> (Oslić, 2008, pp. 160)

## 2. PRINCIPLES OF TQM THROUGH MBNQA

The American Quality Award is based on the principles of Total Quality Management, the methodology which takes continuous improvement as its basic value.

How can the term Total Quality Management be defined? Total Quality Management is the philosophy *of commitment and loyalty of the whole organisation to constant improvement in all areas*. The results of application are *Delight Customers, Empowered Employees, Higher Revenue and Lower Costs* (Figure 1).

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<sup>1</sup> Eng. : ”When you do not measure something, then you cannot know it. If you do not know something, then you cannot manage it. If you cannot manage, then you are left at mercy.”

Figure 1: Results of TQM-a



Source: (Juran, M.J., 1999, 14.5.)

The world's most important award for quality - MBNQA offers the methodology how to measure the success of the implementation of Total Quality Management in a company, i.e. it gives feedback how successful the implementation of Total Quality Management is, and provides information on company's performances.

**Malcolm Baldrige National Quality Award** was established in 1988, and founded in 1987. It was named after Malcolm Baldrige, the American Minister of Trade in the period from 1981 to 1987. He improved the efficiency and effectiveness of the U.S. government.

The award is given each year for three categories of companies: manufacturing companies, service companies and small companies. MBNQA is divided into seven categories which represent a comprehensive framework for quality management (Table 1). No standard approach is required in order to obtain MBNQA. Each company is free to choose its own, specific techniques and approaches, within the overall objectives and the criteria described above. The winners so far are very different. The power of MBNQA lies in the fact that it does not require any special principles, but allows the flexibility to each individual company in the definition of "good quality management."

**Figure 2:** Criteria for Performance Excellence — Item Listing, 2000.

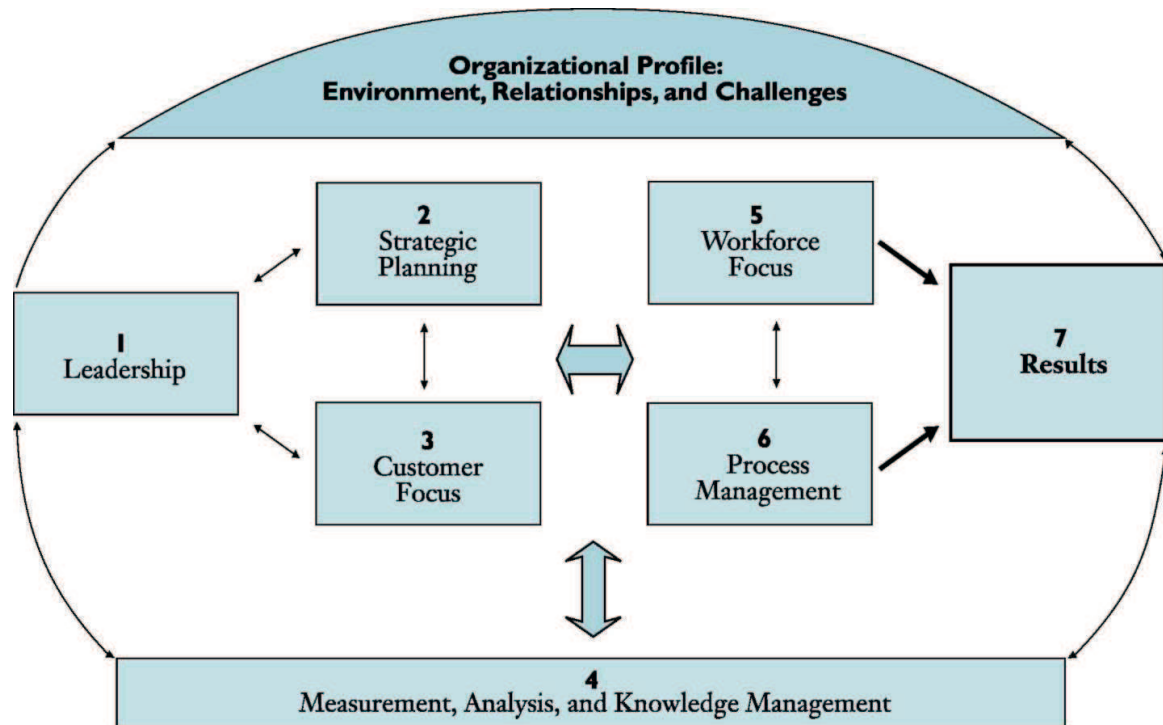
<b>1</b>	<b>Leadership</b>		120
	1.1 Senior Leadership	70	
	1.2 Governance and Societal Responsibilities	50	
<b>2</b>	<b>Strategic Planning</b>		85
	2.1 Strategy Development	40	
	2.2 Strategy Deployment	45	
<b>3</b>	<b>Customer Focus</b>		85
	3.1 Customer Engagement	40	
	3.2 Voice of the Customer	45	
<b>4</b>	<b>Measurement, Analysis, and Knowledge Management</b>		90
	4.1 Measurement, Analysis, and Improvement of Organisational Performance	45	
	4.2 Management of Information, Knowledge, and Information Technology	45	
<b>5</b>	<b>Workforce Focus</b>		85
	5.1 Workforce Engagement	45	
	5.2 Workforce Environment	40	
<b>6</b>	<b>Process Management</b>		85
	6.1 Work Systems	35	
	6.2 Work Processes	50	
<b>7</b>	<b>Results</b>		450
	7.1 Product Outcomes	100	
	7.2 Customer-Focused Outcomes	70	
	7.3 Financial and Market Outcomes	70	
	7.4 Workforce-Focused Outcomes	70	
	7.5 Process Effectiveness Outcomes	70	
	7.6 Leadership Outcomes	70	
	<b>TOTAL POINTS</b>		<b>1.000</b>

Source: (Brown, 2008, pp.72-73)

*Leadership*, *Strategic Planning*, and *Customer and Market Focus* represent the leadership triad. These categories are placed together to emphasize the importance of the leadership focus on strategy and customers. *Human Resource Management*, *Process Management*, and *Business Results* represent the results triad. Employees of a company and its supplier partners accomplish the work of the organisation through its key processes that yield the business results. All company actions point towards business results – a composite of customer, financial, and nonfinancial performance results, including human resource results and public responsibility. *Information and*

*Analysis* is critical to effective management and fact-based system for improving company's performance and competitiveness. *Information and Analysis* serve as the foundation for the performance management system. (Figure 2)

**Figure 3:** Baldrige Criteria for Performance Excellence Framework: A Systems Perspective



(Source: Brown, 2008., pp.48)

The implementation of TQM requires loyalty, discipline and the constant effort of all employees, taking into account that TQM involves (and depends on) everyone. Each activity should be performed correctly and directed toward the common goal. Therefore, TQM can be considered as a system, which enables an enterprise to improve all the work processes systematically and continuously, as well as product (and service) quality and the quality of life. It assures avoiding useless efforts and resource waste by assisting employees to reach the designated goals within the allocated time and budget.

## CORE VALUES

- visionary leadership
- customer-driven excellence
- organisational and personal learning

- valuing workforce members and partners
- agility
- focus on the future
- managing for innovation
- management by fact
- societal responsibility
- focus on results and creating value
- systems perspective

The main purpose of new systems of measuring company's success, i.e. business excellence, are innovation, learning, and consequent improvement in accordance with the objectives and orientation of the organisation. These major changes in the measuring systems can be viewed as guidelines for establishing criteria.

Persistent implementation of selected models of excellence such as the MBNQA provides the company with systematic introduction of TQM, and the possibility of permanent comparison with the best. Besides serving for the competition for the American award for quality, MBNQA becomes the real view of the situation in the company and the processes that desperately need changes and improvement.

What happens in Croatian companies? What are their results in the implementation of continuous improvement? These and other questions are the subject of this research that aims at answering what their competitive ability is like.

### **3. RESEARCH METHODOLOGY**

#### **3.1. Research form 2000. – questionnaire**

The research concentrated on the large enterprises, which were expected to possess the satisfactory potential for the TQM implementation. The sample consisted of 52 selected large retailers and wholesalers (in 14 of 20 Croatian counties), with more than 250 employees.

The data were collected by means of a questionnaire, mailed to the top managers (or presidents of the management boards) of the companies included in the sample. The questionnaire, consisting of 29 items, was designed in order to obtain information about eleven core values of TQM (visionary leadership, customer-driven excellence, organisational and personal learning, valuing workforce members and

partners, agility, focus on the future, managing for innovation, management by fact, societal responsibility, focus on results and creating value, systems perspective). For most questions multiple answers were provided, although some questionnaire items allowed the respondents to formulate the answers as they saw fit. The multiple-answer questions were directed toward establishing facts (regarding organisation, its performance, etc.), while the managers' perceptions were measured by the multiple-answer questions in the form of a standardised Likert's scale, which is theoretically regarded as an optimal solution in constructing such a questionnaire (Zelenika, 1998, pp.371).

Out of 52 questionnaires mailed, **17 were returned**, i.e. the return rate is **32,69%**. Therefore, we believe that the *obtained results may be considered representative*.

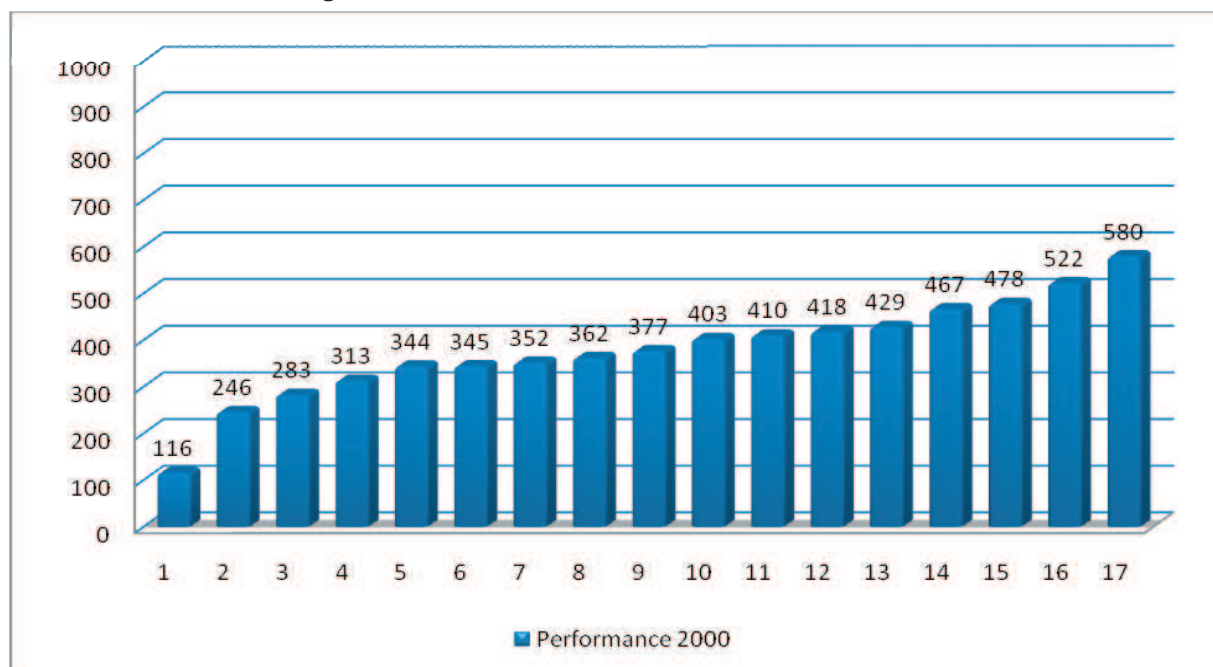
The secondary data sources include the Croatian chamber of commerce's data on individual company performance in 1998., as well as the Croatian agency for payments' data on industry performance in 1998. and first three quarters of 1999. The data collected were processed with the Microsoft Excel 2007 and the statistical analysis software for social sciences (SPSS v.15.0).

### **3.2. Investigation of the financial results for the period 2001-2008**

Financial results, RDiG, balance, secondary sources of CCC, Trade Croatia. The results were analyzed on the basis of standard reports. In order to confirm the results of applying the TQM principles in business, an analysis of financial results of business for the period of 8 years after the survey questionnaire and company's assessment was made. The actual financial results of business are grouped according to various indicators of business and are ranked. When ranking companies the results of the last five annual reports on business were considered (2004-2008).

#### 4. RESEARCH RESULTS

Based on responses from the survey questionnaire in 2000 and grouping the answers, the following results were obtained:



Source: Survey results (N=17)

The results show that 9 out of 17 companies have the performance lower than 400 points which is considered a poor score, while only 2 of 17 companies are over 500 points.

Following the financial results of the investigated companies through the next period of 8 years, it was shown that 10 of 17 companies went bankrupt or were closed.

**Table 1:** Performance of Croatian big trade companies in 2000 and number of bankruptcy until end of 2008.

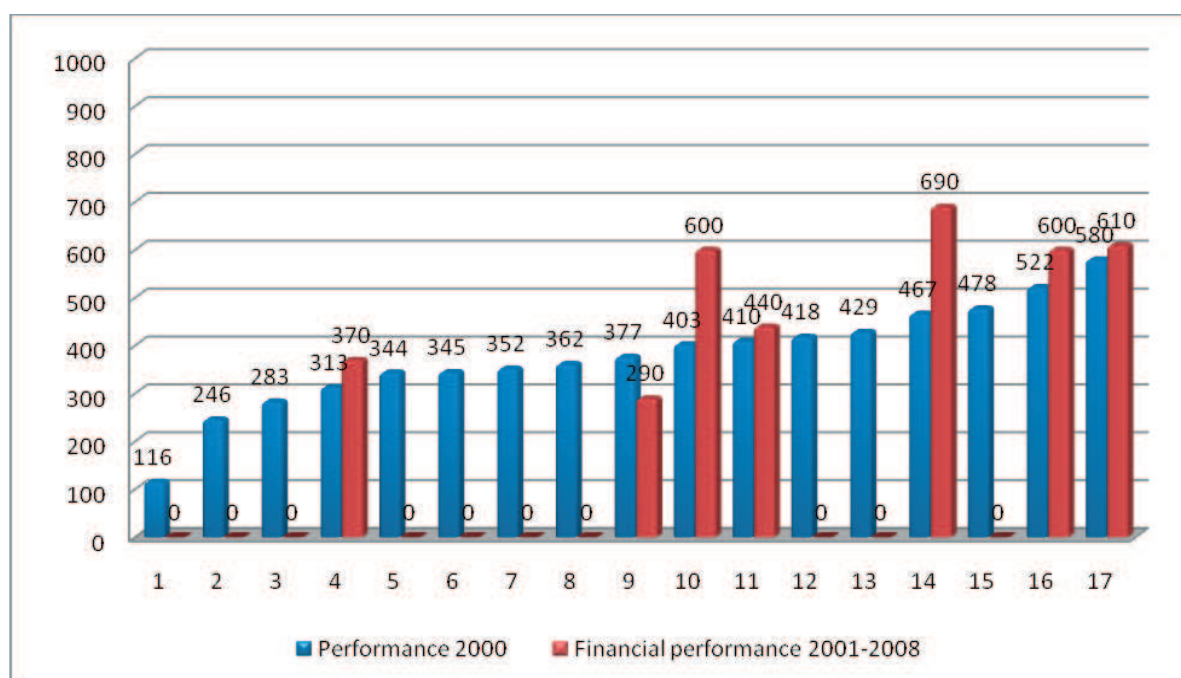
Points			Performance 2000.	Bankruptcy	%
0	-	100	0	0	-
101	-	200	1	1	100,0%
201	-	300	2	2	100,0%
301	-	400	6	4	66,7%
401	-	500	6	3	50,0%
501	-	600	2	0	0,0%
601	-	700	0	0	-

701	-	800	0	0	-
801	-	900	0	0	-
901	-	1000	0	0	-
Total			17	10	58,8%

Source: Survey results (N=17)

From the above table it is obvious that there is a very significant negative correlation ( $R = -0.9525$ ) between the performances of companies in 2000 and what happened in the next eight years, i.e. that companies which achieved a lower value of the performance in 2000 failed to survive on the market in the next period. Individual results of companies are the following:

**Figure 5:** Financial Performance of large trade companies and their relationship to the performances in 2000.



Source: Survey results (N=17)

The results show that companies with low performances in 2000 disappeared from the market (bankruptcy or extinction), while companies which had the best performances managed to survive. Significant progress was made only by two companies, while in the new measurements three companies are located in the “dangerous zone”. It is important to note that the results of research are related to the period when the global financial crisis was not present, so it had no impact on the results of the research.

**Figure 6:** Linear correlation between performance in 2000 and financial results 2001-2008.

<i>Regression Statistics</i>	
Multiple R	0,567858599
R Square	0,322463389
Adjusted R Square	0,277294281
Standard Error	92,10372459
Observations	17

ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	60561,04	60561,04	7,139025	0,017412023
Residual	15	127246,4	8483,096		
Total	16	187807,5			

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	331,9656046	28,47296635	11,65897506	6,40387E-09
X Variable 1	0,222759981	0,08337152	2,671895401	0,017412023

Source: Survey results (N=17)

The value of Pearson coefficient of linear correlation is  $R=0,568$ . As significance is 0,017 and is less than 0,050, the conclusion can be made that the obtained Pearson coefficient of linear correlation is significant, i.e. there is a statistically significant connection between performance in 2000 and financial performance 2001-2008.

## 5. CONCLUSION

The presented results of research show that the use of TQM methodology as a means of improving the organisation and measuring performances can help in assessing the overall performances of a company.

Measuring performances of a company can detect faults within the company, which may lead to negative business results.

The conducted research showed that there is awareness about the key values of TQM and they are not respected. The research showed that such companies went bankrupt within next 8 years.

By applying improvement methods like TQM, the companies will get new wind in its sails and a better position on the market. However, there is still large space for progress.

## 6. REFERENCES

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