

# WHY DO FIRMS ENGAGE IN QUALITY MANAGEMENT SYSTEMS: AN EMPIRICAL INVESTIGATION OF ORGANIZATIONAL DECISION INCENTIVES

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**Abstract:** A sustainability perspective is a practical today's goal for collaboration of state, business and society. The special role within this triad belongs to business companies, which integrate the sustainability principles into their strategies to improve organizational processes and long-term growth. Quality management system (QMS) is an important tool to ensure sustainability through business performance. According to the International standard organization survey of QMS, more than 1 million certifications issued in 178 countries by 2010. The position according to which corporate management of sustainability by the help of QMS, which corresponds to international standard ISO 9000 is presented in the paper. The aim of the paper is to examine the factors, which affect organizational decision of the companies in the emerging countries to implement QMS ISO 9000. The impact of internal and external factors which influence managerial decision of QMS implementation is analyzed in the paper. Specifically, the similarities and differences between the motivations of companies from the Commonwealth of Independent States (CIS), new members of the EU countries and countries of the Southern Europe (which aren't the members of the EU) within the implementation of the QMS ISO 9000, are discussed. The empirical cross-country analysis is based on 2002–2009 data from the Business Environment and Enterprise Performance Survey (BEEPS), conducted by the World Bank and the European Bank for Reconstruction and Development (EBRD). Binary logistic regression was

used to analyze the data. The study identifies the role of economic development and institutional environment in the QMS ISO 9000 implementation. There are highlighted three “portraits” of companies, which implemented QMS: (a) from the Commonwealth of Independent States (CIS) countries; (b) from the new EU members countries; (c) from the Southern Europe countries, which aren't the members of the EU. The results show that QMS ISO 9000 implementation leads to increase of competitive ability and investment attractiveness of the company, to improvement of product quality and stakeholders communications, to human resources development. These business processes improvements, as a QMS implementation result, can potentially activate the company's sustainable effects and then - national and global sustainability transformations.

**Keywords:** Quality management system, QMS ISO 9000 implementation, Sustainability, Transition economies

## INTRODUCTION

The sustainability perspective is a practical today's goal for collaboration of state, business and society. The special role within this triad belongs to business companies, which integrate the sustainability principles into their strategies to improve organizational processes and long-term growth. Quality management system (QMS) is an important tool to ensure sustainability through business performance. According to the International

standard organization survey of QMS, more than 1 million certifications issued in 178 countries by 2010. The position according to which corporate management of sustainability by the help of QMS, which corresponds to international standard ISO 9000 is presented in the paper.

According to the annual review of International organization for standardization, by the end of 2009 more than 1 million ISO 9001 certificates were issued in 178 countries of the world [ISO Survey of Certifications, 2010]. Transitional economies countries joined the process of quality management system (QMS) implementation and its certification relatively recently, although for these countries benefits, associated with certification in the conditions of weak market infrastructure, are extremely important.

There exist lots of research papers, which analyze factors of company motivation to implement QMS ISO 9000. Research spectrum is very wide.

Using pair "variable - function", as a classification indicator, it is possible to divide all the researches into two groups: "research object descriptions - implementation/certification motivations" [1], [10], [15] and «motivations – effects of implementation/certification» [4], [9], [12], [16]. There are analyzed in the first group of papers the specifics of motivations of firms, which have different internal characteristics: size and property type [1], [10], age [15], industry [1] and country in which the firm operates [10], [15].

The second group of ISO 9000 motivational aspects researches [4], [9], [12], [16] specifies the relations between motivations and effects from QMS implementation.

The following parameters of firms - research objects are thus taken into account: size [4], [12], age [12], property type [4], technological status [4], [9], industry, in which firm operates, version of implemented standard - ISO 9001:1994 and ISO 9001:2000 - [12], [16], variants of ISO 9000 and TQM practices [4], [9].

Research materials and practical achievements testify that QMS implementation orients a company on permanent development of all its elements, methods and management facilities, and also allows company to obtain long-term positive results, that are expressed in the profits increase, efficiency of the resources use and other factors. [3], [5], [6], [8], [11], [13], [14]. QMS positively influences both the internal company processes (productive, technological, organizational) and its cooperation with the wide circle of parties (consumers, suppliers, partners, state organizations, local society and other stakeholders) concerned.

## METHODOLOGY

Dynamics of the QMS implementation and the results, which this implementation shows, turned QMS into one of the key factors of company worldwide successfulness. For companies that are out of this process, as well as for the state institutes interested in the success of national business, it is important to understand reasons of organizational decision incentives of QMS implementation.

The aim of the research was to analyze factors, which influence company decision to implement QMS in the countries with transitional economies.

Joint initiative of the European bank of Reconstruction and Development and the World bank -questioning BEEPS for 2002, 2005 and 2009 years was used as an information data of the research. Data set included from 6,7 to 11,7 thousand firms from 29 countries of Central, Eastern and Southern Europe and Central Asia. Questionings conducted during research include productive sector, trade and services and are representative presentations of firms' population according to their location and industrial sector in each country.

Also in research there was used the World Bank database of World Development Indicators<sup>1</sup>, containing information about the index of GDP per capita in the investigated countries for the indicated years (indicator of the economic development level of the countries).

29 countries, analyzed in the research, were divided into three groups, according to their location, level of economic and institutional development, historical pre-conditions : countries - new EU members , CIS countries and countries of Southern Europe, which aren't included in none of stated above unions.

Five hypotheses about the impact of different factors on company decision to implement QMS ISO 9001 were checked.

*Hypothesis H1(human resources):* the firm which has highly qualified and trained employees is more likely to implement QMS ISO 9001.

The insufficient level of employees qualification will not allow them to execute new tasks, which are the consequences of QMS implementation

*Hypothesis H2 (Finance):* Loans availability positively affects decision of a firm to implement QMS ISO 9001.

QMS implementation often requires considerable financial resources, availability of which is usually

<sup>1</sup> <http://data.worldbank.org/data-catalog/world-development-indicators>

related to access of the firm to loans (especially in the transitional economies countries).

*Hypothesis H3 (Property type):* private pattern of ownership and its high concentration, and also the presence of foreign (co)owner motivates firm to implement QMS ISO 9001.

In the search of facilities for QMS implementation private firms show greater mobility, than state ones. However, in an analyzed sample it is possible to expect an opposite result, as in countries with transitional economy state companies often have a greater access to the financial resources.

If company doesn't have QMS ISO 9001 it can become reason of doubts in solvency of its management for a potential foreign owner. In addition, such a company is limited in the possibilities of new markets development. Therefore company with a foreign capital in its assets, with a greater probability will have a certificate.

*Hypothesis H4 (Market):* competition at the internal market and orientation to the foreign market motivate a company to implement QMS ISO 9001.

Corporate image improvement concern, caused by the presence of competition between producers and relations with consumers, influences firm decision about QMS implementation. Wide recognition of ISO 9000 standard in many countries increases the attractiveness of corresponding certificate for exporters, who consider it as the best evidence of the high quality of products shown to the foreign partners and potential consumers.

*Hypothesis H5 (company size and country):* large companies located in developed countries are more likely to implement QMS ISO 9001

Large and medium companies are more oriented to take into account market situation that is characterized by importance increase of ISO 9001 certificate as a factor of competitiveness. Thus they have large resource possibilities for the adequate reacting on such changes.

High economic development level of the country supposes greater degree of companies' corporate responsibility, that shows up, in particular, in priority of tasks of satisfaction of clients demand in high quality for them and in the solving of this task, besides other, by implementing the QMS certification.

All stated above hypotheses were tested on a general sample, and also for the groups of countries.

Research methodology includes checking number of regressive models on annual data for obtaining "a portrait" of firm, which has a certificate. There is

used a binary logistic model which is estimated in programmatic package STATA 10.

### EMPIRICAL FINDINGS

As a result of research conducted on the basis of BEEPS database for 2005 and 2009 (these years reflect both active growth and crisis), three "portraits" of the companies, which implemented QMS ISO 9001, were formed.

In new EU members countries – this company is medium or large, most likely state company, which has bank loans and is characterized by relatively low level of property concentration. It operates in a country with low economic development level, has big share of employees with higher education, experiences strong pressure from the side of small number of competitors and actively exports its products.

In the Commonwealth of Independent States (CIS) countries company, which implemented QMS is large or medium state or foreign (fully or partly) company, with low concentration of capital, which has bank loan, exports and imports its products, experiences high pressure from the side of consumers. It has big share of employees with higher education and is located in a country with low level of economic development.

In Southern Europe countries, which aren't the members of the EU, company with QMS ISO 9001 is a large or medium state company, which has bank loan, many employees with higher education and low level of property concentration. This company has the small amount of competitors and experiences strong pressure from the side of consumers, operates in a country with low level of economic development.

### CONCLUSIONS

In general the results of empirical research confirmed and specified assumptions about the complex of factors, which predetermine organizational decision of company about ISO 9001 certification, although not all research hypotheses were confirmed. Cross-countries differences weren't always sufficient, but results on group samples weren't the same across the groups.

The unexpected result of research deserves attention: negative influence of country economic development level on the presence of QMS ISO 9001 in the company throughout all the years, both on whole sample and on the group samples. It might be explained by the fact that companies from the less developed countries, aiming to get into foreign markets with the purpose of expansion of sale and increase of profitability, hope to use the ISO 9001 certificate as a signal for consumers and foreign partners of the high quality level their products.

Result, which shows negative role of property concentration, looks unexpected and steady in time over the tested samples. During further research it is assumed to check a hypothesis about nonlinear influence of level of property concentration.

As conducted study showed, companies in transitional economies countries strengthen attention to management quality and realization of QMS certification. This can play an alarm role on markets in the conditions of global competition.

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