

QUALITY MANAGEMENT

- Luis Miguel Fonseca, José Pedro Domingues, Joana dos Guimarães SÁ, *Leading Quality in the 21st Century: Profiles of Quality and Organizational Excellence Managers*

To ensure ISO 9001 remains up to date, ISO has revised the International Standard, issuing the ISO 9001:2015 edition. Research suggests that, on one hand, it promotes, facilitates, and emphasizes an improved alignment between quality and business best practices, thereby adding value to certified organizations and, on the other hand, it will require new approaches and competencies for Quality and Organizational Excellence Managers. To ascertain the competencies demanded for today Quality and Organizational Excellence Managers, a survey was held amidst ISO 9001 certified organizations, from different sizes, and across all activity sectors, in Portugal. The results highlight that “the knowledge of culture and the organizational process” is the most highly required competency and skill for today’s Quality and Organizational Excellence Managers. The master of the quality systems (Quality management soft factors: e.g. ISO 9001) and the quality tools & techniques (Quality engineering hard factors: basic and advance quality tools, improvement methodologies such as Lean, Six Sigma and Kaizen) are also of critical importance. The statistical tests performed to ascertain the statistical significance of the differences between the two groups of respondents (Quality and Organizational Excellence Managers and CEOs) shows no evidence of statistical differences between the perceptions of the two groups concerning the most desirable skills and competencies that a Quality and Organizational Excellence Manager should reveal. This research should be replicated in other countries and cultures contributing, hopefully, to better Quality and Organizational Managers that can successfully lead the 21st-century organizations.

Keywords: *ISO 9001:2015, quality and organizational excellence managers, competencies and skills, management systems.*

- Zdeněk Čujan, Daniela Marasová, *Differentiated Quality Management*

In the current competitive environment, quality is regarded as one of the main attributes contributing to the success in all sorts of enterprises; therefore, quality-related issues are being paid adequate attention. The importance of quality has increased, especially in the last two decades, not only in our country but also at the global scale. This trend was evident in the western European countries as early as in the late eighties of the last century. The present article is dealing with one of potential methods how to manage the quality of manufacturing processes and reduce the frequency of detected faults.

Keywords: *quality (class), capability analysis, process capability, checkpoint, differentiated management.*

- Carmen Păunescu, *How Prepared are Small and Medium Sized Companies for Business Continuity Management?*

The necessity of adoption of a business continuity management system is now well recognized by organizations all over the world. Businesses are increasingly subject to incidents and disruptions, which can severely impact their growth and performance. Even so, companies tend to prepare only the plans for response due to their financial constraints and lack of experiences. The development of well-established business continuity plans that take into consideration the potential interruption risks and threats to an organization and their associated impacts to business operations, as well as that promote proactive management and preparedness to respond to disruption should be a key goal for each organization. This paper proposes a framework for developing and implementing a business continuity management system, in conformity with the international standard ISO 22301, for efficient and effective resuming and recovering of critical operations after being disrupted. Particularly, the paper analyzes the extent to which companies of small and medium size operating in the capital of Romania are

prepared for and consider implementation of a business continuity management system. For this purpose, 48 questionnaires completed by companies through face-to-face interviews have been analyzed and further interpreted in the paper. Results indicate that the companies investigated are aware of what a business continuity management means and take into consideration to some extent its development and adoption. Thus, while 65% of the companies researched identify the variety of risks or threats that could cause their business interruption, only 46% actually assess those risks or threats. Also, only 25% of the companies investigated exercise their whole business continuity plans.

Keywords: *business continuity management system, ISO 22301, business continuity planning, risk assessment, small and medium companies, Romania.*

- Cosmin Dobrin, Vasile Deac, Ruxandra Dinulescu, *Quality Management in the Romanian Healthcare System II. Basic Quality Tools applied in the Romanian Healthcare System*

In a healthcare institution quality can be described, measured and analyzed. This action is possible with the help of quality tools and quality management basic techniques, and their use in the Romanian clinics and hospitals will allow us to determine the main causes for patients' dissatisfaction related to medical processes, for the improvement of the medical act. Their use allow the creation of a vision easy to understand, of the patients' needs, useful for building a sanitary environment centered on patients' needs and expectations.

The seven basic quality tools, applied in the healthcare system, are useful for clinics' and hospitals' managers as well as for medical staff, because some of them present a "picture" of the situation at a certain point, and others present process oscillation, fact that shows if the medical process falls within normal limits or not. In consequence, using these quality management tools in the managerial practice of the sanitary system represents a real help for Romanian clinics and hospitals and their facile use creates more reasons for using them for taking decisions coming from the improvement plans and programs for the activity of the sanitary units.

Keywords: *sanitary system, quality tools, medical process, patients.*

- Vladimir Kozlovskiy, Dmitriy Aydarov, *System of Customer Satisfaction Monitoring by New Cars in View of Perceived Quality*

Development and implementation of the integrated customer satisfaction management systems within the framework of existing quality management systems of the world automotive corporations are the critical tasks today. Solution of these tasks ensures achievement of new horizons of competitiveness. In modern conditions, quality determines competitiveness. It is therefore so important to ensure the creation of quality product that best meets the customer wishes. And for this, an integrated customer satisfaction management system is needed, among other things. The article presents results of development and implementation the system of customer satisfaction monitoring by new cars taking into account perceived quality. This study is based on results the first months of cars operation.

Keywords: *perceived quality, customer satisfaction, questionnaire survey, quality indicators, SWOT analysis, automotive industry.*

- Elizabeta Mitreva, Nako Taskov, Zdravko Krivokapić, Jelena Jovanovic, *The Key to Macedonian Competitiveness Success*

The standardization in the management system has become a key task for the managers and a priority question for survival of the companies in the twenty-first century. Beside the process of fulfilling the wishes and the needs of the buyers, the contemporary market conditions imply the analysis of the competitors and their strategy.

The research in this paper was done with the aim to analyze the condition in the Macedonian companies in the domain of their competitiveness on the home and the global market. The data received from the research showed the Macedonian reality in the business world.

The analysis of the data as well as the principles and strategies derived from this research have helped and gave useful directions for the construction of an integral methodology for the projection and implementation of the TQM (Total Quality Management) system, which can be implemented in the Macedonian companies in order to increase their competitiveness.

Keywords: *quality, TQM (Total Quality Management) strategy, methodology, competitiveness.*

- Mikhail Vladimirovich Karmanov, Anatoly Vladimirovich Korotkov, Natalya Vladimirovna Gryzunova, Irina Anatolyevna Kiselyova, Vladimir Ivanovich Kuznetsov, *Price Indices Simulation for the Purpose of Managing the Quality of Consumer Behavior*

This article is devoted to the study of price indices that are used as a tool for monitoring and managing the financial behavior of consumers found in various segments by the categories of received income. The paper explores the peculiarities of price behavior in developed and developing countries on the basis of the consumer price index (CPI). The dependence of behavior of the CPI of individual countries depending on the behavior of the international market was analyzed, and an attempt to estimate the influence of the dominant countries on the behavior of regional and international prices was made. A comparative axiomatic analysis was conducted in order to identify the most desirable behavior of consumer prices for systematic economic growth and adjustment of the market system, and a comparative analysis of the price behavior by individual countries was conducted. Key conclusions can be structured as follows:

- price indices can be used as a tool for managing the behavior of consumers (inhabitants) and organizations;
- model of consumer behavior management should include the content of socialization; and
- behavioral models differentiated by financial strategies can be constructed.

Keywords: *quality, management, price, consumer price index, price behavior, diffusion index, regression, consumer behavior, consumer equilibrium.*

- Natalia Aleksandrovna Zavalko, Veronika Olegovna Kozhina, Alexander Georgievich Zhakevich, Olga Evgenievna Matyunina, Olga Yevgenievna Lebedeva, *Methodical Approaches to Rating the Quality of Financial Control at the Enterprise*

The article is dedicated to developing methodic approaches to estimating the quality of financial control at the enterprise. It is determined that in order to achieve and support the required level of quality of control and analytical measures, it is necessary to have a system to manage their quality. During the research the methodic approach to estimating the quality of financial control at the enterprise was developed. It was proved that in order to provide a high level of financial control at the enterprise, it was necessary to develop an accurate strategy of selecting staff, strive for attracting qualified employees to work, provide efficient professional preparation, approve forms of working documents related to financial control, provide accurate, objective and short recommendations based on the results of financial control at the enterprise, and control the work of the team members by the head of the financial control or the authorized officer.

Keywords: *estimation, quality, financial control, rating, activity, enterprise.*

- Monica Liliana Arteaga Sierra, Myladis Cogollo Flórez, Juan Miguel Cogollo Flórez, Andrea Lucia Flórez Rendón, *Optimal Estimation of Process Capability Indices with Non-Normal Data and Inaccurate Parameters using Metaheuristics*

The current methods for estimating Process Capability Indices are based on the assumptions of normality and accuracy of process data. Under actual production conditions the data of quality characteristics of the products may be non-normal and/or have imprecise parameters. Therefore, in this paper we propose a new methodology for estimating Process Capability Indices when the data are non-normal and the specification

limits are not crisp numbers. The methodology was validated using experimental data. The proposed methodology uses the Clements's method assuming a Burr type XII distribution, whose parameters are estimated through metaheuristic techniques, and considers the obtaining of fuzzy numbers using the statistical inference theory.

Keywords: *statistical quality control, process capability indices, non-normal data, fuzzy data, metaheuristics.*

- Shahryar Sorooshian, Siti Aissah Mad Ali, *Lean Practices Pertaining Hard and Soft Factors in Service Sectors*

Many of Lean manufacturing tools and practices are being implemented in the different sectors with and without being realized nowadays. This research objective is double folded. Employing 10 predictor variables, the relationship and impact of Lean practices on Lean performance was identified. The second objective was conducted to identify the significance disparity in the impact of soft and hard factors; whether to give priority to either one or equal priority. A lean performance model was built with soft predictor variables comprising of quality leadership, group problem solving, training, worker empowerment and multi-skilling developing and hard predictor variables comprising of standardized operations, 5S, reorder point, supplier development and continuous flow. Although this study failed to find enough support for some of the factors, a few factors find enough evidence to be part of lean performance predictors.

Keywords: *total quality, acceptance, lean performance, lean tools.*

- Geethalakshmi PM, Lewlyn L.R. Rodrigues, *Exploring the Nature of Employee Engagement*

The purpose of this study is to explore the nature of employee engagement through the experiences of employees. Grounded theory approach was the research methodology (Creswell, 2007). The objective of this research was to add value to the existing literature on engagement with a focus on individual. There are very few research studies applying grounded theory on employee engagement. This research study is an attempt to understand the phenomenon of employee engagement grounded in the experiences shared by the participants. Accordingly, interviews were conducted on site to understand the nuances of engagement from the past experiences of the employees. The content analysis was undertaken to interpret how unique experiences shape the engagement for employees.

Organizations can use the emergent frameworks to understand what helps and what hinders to enhance engagement among the employees.

Three themes were identified namely, 'Self', 'Organization' and 'Role' from the content analysis of the interviews. Two conceptual frameworks have been developed; the interplay between the themes was captured through one conceptual framework and another conceptual framework captured the constitution of the theme 'Self'.

Keywords: *employee engagement, self, role, organization, grounded theory.*

- Roxana Constantin, Liana Anica-Popa, *Enhancing Business Services' Performances by using Domain Ontologies*

The continuous companies' need to find and apply methods of processes improvement in a business services center has generated research aiming at modeling information systems managing knowledge acquired during the offer/ supply process.

In this paper we proposed a methodological framework for capturing the main elements of a domain ontology describing and documenting the supply process in an outsourcing industry's company. Based on it, a specific ontology for each type of business services center (BPO, SSC, ITO) could be developed. Also, the framework offers a dynamic-adaptable basic structure of knowledge to the rapid changes occurring in the industry. Some ways of capitalizing on such ontology content were discussed at the end of the article.

Keywords: *domain ontology modeling, business services, business process, outsourcing industry.*

- Ľudmila Lysá, Anton Lisnik, Michal Jenčo, Milan Droppa, *Quality Assessment in a Selected Service Sector*

The paper characterizes basic aspects of determination and measurement of customer satisfaction with emphasis on Kano Model application. Kano Model divides customer requirements into three main and additional forms. Main requirements include requirements of "must-be" type, then "attractive" and "one-dimensional" ones. The second category includes requirements marked as "indifferent" which can be understood as unfilled and the last group is presented by "reverse attribute". Kano Model was used to identify customers' requirements in a selected service company with the aim to increase their customers' satisfaction and guarantee growth of their competitiveness and market stabilization.

Keywords: *Kano model, customer needs and requirements, customer satisfaction, attributes quantification, coefficients of importance /significance/ of selected attributes.*

- Petr Rehacek, *Quality Costs as an Instrument of Verifying the Effectiveness of Quality Management System*

The paper presents the essence and usefulness of a QMS in the process of managing a company which should lead to guaranteeing liquidity, production growth and cost optimisation as well as a stable position on the competitive market. Quality costs which enable quality improvement and increase of management effectiveness are an important instrument for an assessment of system effectiveness. The paper shows the essence of quality costs, a calculation and analysis of quality costs as well as conditions for their introduction, pointing at their usefulness in decision making. The importance of an account of quality costs and their analysis from the point of view of practical experience of the company was also discussed. It was emphasised that an assessment of the effectiveness of a QMS in an enterprise is performed on the basis of an analysis of realisation of goals contained in a quality policy and through the quality costs which are subject to registration and analysis.

Keywords: *calculation, cost, management, quality, system.*

- Tatjana Boshkov, Ljubomir Drakulevski, *Addressing the Role of Risk Management and Digital Finance Technology on Financial Inclusion*

Financial inclusion focuses on population which is "unbanked" to get into the formal financial system. The new patterns of financial inclusion rely on digital technologies, and "fin-tech" continues to revolutionize the nature of provision. Very important fact is that 78% of access on financial services in developing countries involves mobile money. Financial digital technologies improve data transmission, analysis and give the small companies the opportunity to develop low-cost distribution models and risk-management practices. Taking into account that there are two major reason for financial exclusion – high cost and non price barriers, we are encourage to examine the necessity of managing the use of finance digital technologies due to the opportunities for all of society. Further, we examine these questions because bureaucracy and cost are some of main barriers in accessing banking and financial products and services by biggest part of society, using linear regression analysis to process the collected data.

Keywords: *financial inclusion, management, digital technology, finance, linear regression.*

- Peter Madzík, Anna Chocholáková, Karol Čarnogurský, Milan Droppa, Ľudmila Lysá, *Is Quality a Philosophy or rather a Mind-set? Empirical Study*

There are basically two at first sight antagonistic approaches when it comes to define what causes quality. First approach (quality as a mind-set) states that quality results from an internal approach of an individual – i.e. is a pull system – if an individual is properly motivated it is reflected in his outcomes and their quality. Second approach (quality as philosophy) claims that quality is an output

of rational focus on following rules, principles and procedures – i.e. a push system – if an individual has clearly defined rules of his work it is reflected in his outputs and their quality. Which of the two above mentioned approaches is more accurate has not been surveyed yet. The aim of this study is to review mutual links between final quality and the two approaches. In the research a questionnaire was used and its results are interpreted by regressive analysis. The results present a possible view on interpretation of topics related to basic questions concerning quality.

Keywords: *quality, definition, relationship, pull system, push system, motivation, stimulation, survey.*

- Alevtina A. Simonova, Svetlana L. Fomenko, *Evolution of Integrated Quality Management System at Higher School*

The objective of the paper is presentation of the evolution of quality management system development at Ural State Teachers' Training University, providing achievement of the maximum compliance of parameters of higher school functioning and final results of its functioning with corresponding requirements of all groups of consumers, norms, and standards.

Methods. In the paper, theoretical methods of research, providing system analysis of scientific-methodical literature, empirical methods when studying normative, instructive-methodical documents and the modelling method, consisting in reproduction of the qualities, structure, and functions of the object under research on the basis of the specially developed model, were used.

Results. A model of quality management system development of a modern higher school on the basis of successive introduction of different models of the quality management system into practice was presented. The content of the process model of the functioning of the quality management system (hereinafter QMS) of higher school and advantages of the process approach during its building was revealed.

Discussion. Detailed characteristics of the QMS models, used by Ural State Teachers' Training University at different stages of formation of the university QMS, are provided: QMS models by GOST R ISO 9001-2008; QMS models on the basis of standards and guidelines for ensuring the quality in the European area of higher education (European Standards and Guidelines (ESG)); models of quality management on the basis of criteria of the award of the Russian Federation Government in the field of quality, harmonized by the European Foundation for Quality Management (EFQM) model; QMS models on the basis of principles of the Total Quality Management (TQM).

Conclusion. Evolution of introduction and development of the quality management system at Ural State Teachers' Training University represents introduction of innovations in the form of separate elements of different QMS models, widely applied in foreign and domestic practice. Introduction and development of QMS enhances the effectiveness of the higher school activity in all directions and creates a synergetic effect in achievement of common business goals.

Keywords: *innovative process, quality management system, process approach, model, education quality, development.*

- Doina Popescu, *Social Responsibility and Business Ethics V. The Faces of Social Responsibility*

The article presents one of the ways to study the proactive and, respectively, reactive approaches to social responsibility, namely the four faces of social responsibility. There are presented examples of socially responsible companies, but also a famous example of illegal and irresponsible actions of a large company, doubled by irresponsible marketing communications. Also, examples of ethical lapses and social irresponsibility are presented, with emphasis on the recent financial crisis, but also actions by managers to reduce unethical and irresponsible behaviors, namely ethical leadership and protection of those who report deviations.

Keywords: *ethical lapses, social irresponsibility, financial crisis, ethical leadership, ethics hotline.*

FOOD SAFETY MANAGEMENT

- Nadjivat Magomedovna Alieva, *The Food Quality and Safety as Indicator of the National Food Safety Assessment*

The food security is a multifaceted issue affecting every person. The food security is one of the key problems in Russia, as its provision is necessary not only from the economic, but also from the social and political positions. The article considers one of the most vital constituents of the food security - the food quality and safety. The attention is focused on this issue due to the fact that the provision of the country's population with quality and safe food is directly related to the physical and mental development of the human being and the expanded replacement of the country's population. During the study, the general scientific methodology was used, as well as such study methods as the expert analysis and monographic analysis. The issue of the food quality and safety should be considered as a comprehensive, multifaceted and interrelated one, beginning from the quality evaluation of the primary products to the inspection of the product manufacturing. The article focuses on genetically modified foods, and their effect on the human health. The conclusions and proposals concerning the food safety provision have been made.

Keywords: *food quality, food safety, genetically modified foods, embargo, importation.*

- Enrica Donia, Angelo Marcello Mineo, Danilo Cesarini, Filippo Sgroi, *Agri-food Consumer Models: The Case of the Responsible Consumer*

The profile of the responsible consumer, that is, an individual whose purchases strive to satisfy altruistic aims above and beyond one's merely personal consumer necessities, is closely correlated to the one's socio-economic conditions. All subjective aspects considered, the correlation between responsible consumption in the agri-food sector and the level of education of the individual was studied herein by way of a statistical survey, conducted on a sample of 108 individuals. Likewise, the correlation between the level of responsible consumption and the average monthly expenditures was also elucidated. The study was carried out using the statistical software environment R and the results indicate that responsible consumption is positively correlated with both of the aforementioned variables. The study is suited to identify which segment of the population has the possibility of making informed choices in the market based on the fact that its income allows better access to certain markets, and by virtue of the fact that a higher cultural level allows one to have better access to information, which makes for a more thorough understanding of the issues.

Keywords: *agri-food, food consumption, linear regression, responsible consumer.*

- Damiano Cortese, Maria Beatrice Pairotti, Chiara Giachino, Alessandro Bonadonna, *The Art of Craft Beer in a Traditional Wine Nation: A Preliminary Study in a Model Area*

This research analyzed the craft beer sector and the position of microbrewers in a specific Piedmontese area i.e. the province of Biella. This area is famous for its textile production, due to its favourable territorial position and climate. The authors discuss the microbrewing phenomenon and identify some actions that may be implemented to promote this handcrafted beer production. The beer producers of the Biella province were interviewed using an ad hoc semi-structured questionnaire. These interviews provided some information on the importance of having good raw materials, maintaining a high standard of quality and the necessity for investments in the various activities to increase and create more value, also for the territory itself. Moreover, the data obtained enriches the present literature as to the microbrewery production in an emerging beer country.

Keywords: *craft beer, microbreweries, Biella Province, social and economic development.*