UNIVERSITATEA BABEȘ - BOLYAI FACULTATEADE ȘTIINȚE ECONOMICE ȘI GESTIUNEA AFACERILOR DEPARTAMENTUL DE MANAGEMENT

PhD THESIS SUMMARY

Impact of the Quality Management System on the SME's Organizational Performance

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1.Introduction

SMEs play a dominant role in world's economy and they have been considered as the the basic structure for most developed countries and especially for developing countries. They play an important role in creating and distributing the national wealth on the current global market, both in developed countries and in developing ones. (Herbane, 2010).

The SME sector represents the basis for all economies all over the world, mainly in emerging economies, which are confronted with major challenges in ensuring the balance of the workforce. SMEs contribute to the welfare of the society; innovation; environmental protection and sustainable development; increasing added value and jobs, representing a solid basis for the selection of future large enterprises. (OECD, 2016).

SMEs represent "the spine" of the economy and are considered important "engines" for innovation, employment and economic growth, both in developed and in developing countries, because:

- they achieve the greatest weight of the private economic activity, contributing with over 50% to GDP and over 60% to workforce occupation
- they contribute significantly to increasing employment opportunities, social inclusion and poverty reduction (G20/OCDE 2014).

The SMEs strategic importance, at the level of world economy, can be emphasized through the following:

- they contribute to creating jobs to a larger extent than big companies;
- they represent the foundation of a market economy, and in the case of long-term transition economies they can ensure most new workplaces;
- the strenghtening of the SME sector will facilitate the restructuring process of big enterprises;
- they eliminate the monopoly of large companies and take over the staff fluctuations in the economy;
- the cooperation with different companies ensure the increase of SMEs competency level, generating important benefits;
- they produce mostly for the local market, using national resources and valuing local resources;
- they play an important part in generating economic growth, especially towards the increase of life standards etc.

If we refer to the difficulties/barriers SMEs were confronted with in 2018, in the view of managers/investors, we can notice that these have been, according to the entrepreneurs' perception: bureacracy 47,41%; employing, training and retaining staff 45,97%; excessive fiscality 40,97%; disloyal competition 40,97%; inflation 40,25%; the decrease of internal demand 38,64%; the increase of salary expenses 32,92%; the low quality of infrastructure 29,70%; delays in paying bills to private enterprises 27,73%; high cots of credits 23,43%; difficult access to crediting 17,17%; obtaining necessary consultancy and training 16,82% etc. (SMEs White Chart, 2018).

2. The research context

In the last decade the SMEs have been preoccupied by improving quality, which they approach holistically, together with environmental issues, health, occupational security and social responsibility issues, having as main objectives:

- continuous improvement of product and service quality according to customers' changing demands;
- implementing and developing QMS, based ISO 9001 international standards, by identifying and implementing good practices regarding quality improvement;
- improving organizational performance;
- supporting SMEs by implementing ISO international standards;
- eliminating non-quality costs;
- developing training programs for managers and employees, in order to increase awareness about the importance of improving quality and using quality instruments adequately;
- innovating both in SMEs production processes and in their development etc

An important part in improving quality is played by the Quality Management System, which must provide information for all interested parties and promote suitable approaches to ensure competitiveness through quality.

Our study intends to identify good practices in quality management and facilitate the good functioning and efficiency of the Quality Management System based on ISO 9001:2015, in SMEs from Romania, in order to improve performance.

3. The research methodology

Approaching research in the field of quality management is both theoretical, through the study of literature by creating a suitable framework for the empirical study, and by exploring the theoretical aspects, and practical, based on observation and measurement. The study is an exploratory one, because it identifies and analyses facts and develops hypotheses to be examined, referring to SMEs implementation and explanatory, considering that it studies the relations between variables to explain and predict SMEs behaviour, to improve quality and efficiency, respectively.

The study intends, on one side, to analyse SMEs preoccupations for implementing and developing a functional and effective QMS, and, on the other side, to emphasize the specific SME aspects and problems in order to implement and develop SMEs as a premise of organizational performance.

The purpose of the study is to analyse and evaluate QMS, according to the requirements of ISO 9001:2015 international standard, as a voluntary instrument, in order to identify and implement good management practices in industrial SMEs from Romania. Although ISO 9001 standard is voluntary, there are many situations when it may become obligatory, considering that this demand can be imposed by clients or other interested parties. At the same time we wish to test empirically and explain the effect of the variables which define QMS, respectively; the organizational system, leadership, planning, support/assistance; operrations, performance assessment; improving the efficiency of SMEs management practices which are the object of the study and the effect on organizational performance expressed with the help of non-financial indicators. The obtained results facilitate emphasis on factors which affect significantly QMS efficiency and the efficiency of management practices as good predictors for performance improvement.

We proposed as general objective of the study to develop an analysis and evaluation model for the effectiveness of implementing and making SMEs operational, according to the requirements of ISO 9001:2015, based on a suitable scientific managerial foundation, in order to identify and implement good management practices, which will ensure the increase of organizational performance by promoting a competitive and sustainable business model, in SMEs from the industrial sector in Romania.

Based on a survey results, having as research instrument the questionnaire and interviews in 93 SMEs from the industrial sector, the study intends to present the current

situation of implementing and certifying QMS, on the basis on of ISO 9001 in SMEs, with the purpose of developing an analysis model to determine the impact of implementing and making QMS operational effectively according to ISO 9001:2015 requirements, upon SMEs performance.

The study is based on the premises that SMEs encounter many problems in implementing the principles of total quality management, in their business models, QMS respectively, which can affect their performance and profitability. Consequently, the research question is: To what extent are SMEs implementing and making a QMS operational effectively in their business? To this purpose we conducted an empirical study, using a quatitative method based on questionnaires and a qualitative one based on intervies, to collect data from SMEs in the industrial production sector from Romania. The main objectives refer to the role of management practices from SMEs in ensuring the effectiveness of QMS and of organizational performance, measured with non-financial indicators. The study recommends that SMEs should concentrate not only on improving quality and reducing costs, but also on good management and leadership practices.

The research sample is made of SMEs from the industrial production sector from Romania as analysis unit. To ensure the quality and credibility of information, we required that the respondents should be managers in charge of quality (quality managers). It is based on obtaining a representative and comparable sample, for which reason it includes both SMEs with a certified QMS and those which have an implemented QMS, but it was not certified at the date of the study according to ISO 9001:2015 international standards.

4. Personal contributions

The paper stands out through the practical contributions regarding ways of solving complex problems in order to improve QMS efficiency in SMEs from the industrial production area. The obtained results allowed us to formulate consclusions and recommendations for ensuring the efficiency of QMS in SMEs (micro-enterprises were not the object of the study), for improving quality, respectively, in a holistic manner.

The main contributions in approaching and solving the research topic refer to:

- emphasizing the relative implementation stage of the total quality management and also how to implement and make QMS operational in SMEs from the industrial production area;
- identifying the main motivations for implementing QMS in SMEs from the industrial production area, as well as the main difficulties/barriers in ensuring its effectiveness;;

- identifying the main factors and management practices which ensure the efficiency of making QMS operational;
- identifying important directions for improving the efficiency of the quality management, QMS respectively, in SMEs, which are imposed by the current context of the business activities in Romania;
- analysing the efficiency of the management practices and of the quality culture, as important support in the strategic decision-making process;
- developing a suitable model based on statistical analysis regarding the evaluation and analysis of QMS efficiency and of its impact on the efficiency of management practices within SMEs
- regression analysis regarding the impact of the management practices efficiency and QMS effectiveness, with all its components upon non-financial indicators of organizational performance (organizational efficiency, customer satisfaction, employees satisfaction)
- identifying, with the help of non-financial indicators, the key success factors in implementing QMS and making it operational etc.

SELECTIVE BIBLIOGRAPHY

- 1. Ahire, S., Golhar, D. and Waller, M. A. (1996), *Development and validation of TQM implementation constructs*, Decision Sciences, Vol. 27 No. 1, pp. 23-56.
- 2. Armstrong, M. (2010). *Strategic Human Resource Management: A Guide to Action*. London: United Kingdom. Kogan Page Ltd.
- 3. Al-Tit, A. A., (2017), Factors affecting the organizational performance of manufacturing firms, International Journal of Engineering Business Management, Volume 9.
- 4. Bell, M. and Omachonu, V. (2011). *Quality system implementation process for business success*. International Journal of Quality & Reliability Management, Vol. 28 No. 7, pp. 723-34
- 5. Boiral, O. (2012). *ISO 9000 and organizational effectiveness*: A systematic review. Quality Management Journal, 19(3), 16-37
- 6. Boiral, O. (2012). *ISO 9000 and organizational effectiveness*: A systematic review. Quality Management Journal, 19(3), 16-37
- 7. Cameron, K. S. & Quinn, R. E. (2011). *Diagnosing and Changing Organizational Culture:* Based on the Competing Values Framework (3rd ed.), CA: John Wiley & Sons
- 8. Carroll, W. R., Dye, K., Wagar, T. H., (2011). *The role of organizational culture in strategic human resource management*. In N. M. Ashkanasy, C. P. M. Wilderom, & M. F. Peterson (Eds.), *The handbook of organizational culture and climate*, pp. 423-440. Thousand Oaks, CA: Sage.
- 9. CNIPMMR, 2018. Carta Albă a IMM-urilor din România, Raport de cecetare nr.16 Ed. Sigma
- 10. Croft, N. H. (2012). *ISO 9001:2015 and beyond Preparing for the next 25 years of quality management standards*. ISO.http://www.iso.org/iso/news.htm?refid=Ref1633
- 11. Crişan, L., Popescu, S., Brad, S., Lemeni, L., (1999), *Techniques and methods of Quality Management*, Publishing House of the Book of Science, Cluj-Napoca
- 12. De Waal, A., Kourtit, K., (2013). *Performance measurement and management in practice: Advantages, disadvantages and reasons for use.* International Journal of Productivity and Performance Management, 62(5), 446-473.
- 13. Dougherty, Christopher (2011), *Introduction to Econometrics*. New York: Oxford University Press. pp. 280–299
- 14. Drăgan, M., Ilieş, L. & Pitic, D., 2012. *Methods, techniques and tools of quality management used in the quality assurance of a study program. Cluj-Napoca*: University Press Cluj.
- 15. Drăgulănescu, N., (2002), The impact of the transposition of the quality system in the European Union in certain industrial sectors in Romania, Edit.European Institute of Romania, p186
- 16. Drăgulănescu, N., (1996), From controlled quality to total quality, Alternative Ed., 1996, Bucharest, 280
- 17. Drāgulānescu. N., Ciurea. S., (1995), Total quality management, Economica Ed., Bucharest
- 18. Drucker, P.F. (2004), Strategic Management, Teora Ed.,
- 19. Drucker, P., (2010)., The practice of management. Editura Harper Collins
- 20. DuBrin, A. J., (2012)., Essentials of Management. 9th ed. Mason, USA: South-Western
- 21. Eurostat, (2017), National Statistical Offices, and DIW Econ Note: The data for Ireland reflect the recent revisions to the economy-wide and sectoral value added and GDP
- 22. Evangelos Psomas & Jiju Antony (2015) Eficiența calității ISO 9001 sistemul de management și influența sa critică factori în companiile de producție din Grecia, International Journal of Production Research, 53: 7, 2089-2099
- 23. Evans, J.E., (2008). *Quality & Performance Excellence. Management, Organization and Strategy*. 5th ed. South-Western U.K: Cengage Learning

- 24. Favaretti, C. și alții., (2015), *An EFQM excellence model for integrated healthcare governance*. International Journal of Health Care Quality Assurance, 28(2), pp. 156 172.
- 25. Fonseca, L. (2015a). From Quality gurus and TQM to ISO 9001:2015: a review of several quality paths. International Journal for Quality Research, 9(1), 167-180,.
- 26. Fonseca, L. (2015b). Relationship between ISO 9001 certification maturity and EFQM Business Excellence Model results. Quality, Innovation and Prosperity, 19(1), 85-102.
- 27. Fonseca, L., Domingues, J.P., (2017)., *ISO* 9001:2015 Edition-Management, Quality And Value, March, International Journal for Quality Research 11(1) 149–158
- 28. Fotopoulos, C. and Psomas, E. (2010). *The structural relationships between TQM factors and Organizational performance*. The TQM Journal, Vol. 22 No. 5, pp. 539-52.
- 29. Foundation of the Romanian Prize for Quality 〈J.M.JURAN〉 (PRC-JMJ), (2015). Available.at:((http://www.fundatia-juran.ro)
- 30. Ginker, T.; Lieberman, O. (2017). Robustness of binary choice models to conditional heteroscedasticity. Economics Letters. 150: 130–134
- 31. Ghobadian, A, Gallear, D., Woo, H. and Liu, J. (1998), *Total Quality Management: Impact, Introduction and Integration Strategies*, CIMA Publishing, London.
- 32. Ghobadian, A and Gallear, D. (1996), *Total Quality Management in SMEs, OMEGA* International Journal of Management Science, Vol. 24 No. 1, pp. 83-106.
- 33. Gluck, A., Aston, B., Briggs, S., Cianfrani, C., Desai, D., Palmes, P., Robitaille, D., & West, J. (2015). *Keep Calm and Prepare for ISO 9001:2015*. Quality Progress, September, 19-28
- 34. Griffin, R. W. & Moorhead, G.,(2014). *Organizational Behavior: Managing People and Organizations*. 11th ed. Mason, USA: South-Western, Cengage Learning
- 35. Ilieş, L. (2003). Total quality management, Edit. Dacia Cluj-Napoca.
- 36. Ilieş, L., Stegerean, R., Osoian, C., Lungescu, D., Management of the firm, Ed. Risoprint, Cluj-Napoca, 2005;
- 37. Ilieş, L., Crisan, E., (2011). *Total quality management*, Edit. Risoprint, Cluj-Napoca.
- 38. Juran, J.M., Quality Planning, Teora Ed., Bucharest, 2000
- 39. International Organization for Standardization, (2015). ISO 9001:2015 Quality management systems Requirements. International Organization for Standardization, (2015). ISO 9000:2015 Quality management systems -Fundamentals and vocabulary. International Organization for Standardization, (2015). ISO Survey 2015. (http://www.iso.org.)
- 40. ISO (2015c). 9000: 2015: *Quality management principles*. ISO, Geneva, Switzerland. (ISBN 978-92-67-10650-2).
- 41. ISO (2015d). *The process approach* IN ISO 9001:2015. ISO, Geneva, Switzerland. ISO (2015e). ISO 9001: *Reaping the benefits* of ISO 9001. ISO, Geneva, Switzerland. (ISBN 978-92-67-10641-0).
- 42. ISO (2016), ISO 9001:2015 for Small Enterprise. What to do? Advice from. Published in Switzerland. Geneva ISO/TC 176 (www.iso.org)
- 43. Juran, J.M., (2000), Quality Planning, Teora Ed., Bucharest
- 44. Joseph M. Juran, A. Blanton Godfray, (2004), The Juran Quality Manual, edited by SRAC, Bucharest
- 45. Kinicki, A., (2016). *Organizational behavior: a practical, problem-solving approach*. First edition, Arizona State University, Mel Fugate, Southern Methodist University
- 46. McAdam, R. (2000). *Quality models in an SME context: a critical perspective using a grounded approach*. International Journal of Quality & Reliability Management, 17(3)
- 47. Neyestani, B., & Juanzon, JBP (2016). *Identification of A Set of Appropriate Critical Success Factors (CSFs) for Successful TQM Implementation in Construction, and Other Industries*. International Journal of Advanced Research, 4(11), pp. 1581–1591.
- 48. Neyestani, B., & Juanzon, JBP (2016a). *Identification of A Set of Appropriate Critical Success Factors (CSFs) for Successful TQM Implementation in Construction, and Other Industries*. International Journal of Advanced Research , 4(11), pp. 1581–1591.

- 49. Neyestani, B., & Juanzon, J. B. P. (2016b). *Identification of A Set of Appropriate Critical Success Factors (CSFs) for Successful TQM Implementation in Construction, and Other Industries*. International Journal of Advanced Research, 4(11), pp. 1581–1591.
- 50. Neyestani, B., & Juanzon, JBP (2016c). Developing an Appropriate Performance Measurement Framework for Total Quality Management (TQM) in Construction and Other Industries. IRA-International Journal of Technology & Engineering, 5(2), pp. 32-44.
- 51. Nicolescu, O., (2007), SME Management, 3rd edition, Edit. Economica, Bucharest
- 52. Nicolescu. O., (2018), White Paper for SMEs in Romania, Annual Research Report no.16, CNIPMMR, Ministry for the Environment of Business, Trade and Entrepreneurship
- 53. Olaru, M., (2004), Quality Management, Economic Publishing House, Bucharest,
- 54. Popescu, S et al. (1999). Quality management. The basics of quality management, vol. 1. Ed. House of Science Book Cluj-Napoca.
- 55. Popescu, S., (1999), Quality management, Science Books Ed., Cluj-Napoca.
- 56. Robbins, S. P. & Coulter, M., 2012. *Management*. 11th ed. ed. New Jersey,: Prentice Hall, USA.
- 57. Ross, J.E., Total Quality Management, Kogan Page Limited, London, 1994.
- 58. Rusu, B, (2001), Managementul Calității Totale în firmele mici și mijlocii, Ed. Economică, București.
- 59. Schein, E. H., (2010). *Organizational culture and leadership*. 4th ed. San Francisco: Jossey Bass,(http://ec.europa.eu/eurostat/web/productsstatistics-in-focus/-/KS-SF-09-071)
- 60. Schmiemann, M. (2009). SMEs were the main drivers of economic growth between 2004 and 2006, Eurostat statistics in focus 71/2009. (http://ec.europa.eu/eurostat/web/productsstatistics-in-focus/-/KS-SF-09-071)
- 61. Singh, P. (2008). Empirical assessment of ISO 9000 related management practices and performance relationships. International Journal of Production Economics, Vol. 113, No. 1, pp. 40-59.
- 62. Souza. R., Mekbekian. G., Silva. M., Leitão., Santos, MM., (1995), *Quality management system for constraints*. São Paulo, Pini Editor. Souza, UEL (2005) How to reduce losses in the beds. São Paulo, Publisher Pini. 578
- 63. Terziovski, M. (2010). Innovation practice and its performance implications in small and medium enterprises (SMEs) in the manufacturing sector: a resource-based view. Strategic Management Journal, 31(8), 892-902
- 64. Yusof, S. M. and Aspinwall, E. (1999). Critical success factors for total quality management implementation in small and medium enterprises. Total Quality Management, 10, S803-S809.
- 65. Zairi, M., 2013. The TQM legacy Gurus'contributions and theoretical impact. *The TQM Journal*, 25(6), pp. 659-676.