

SUCCESS FACTORS FOR QUALITY MANAGEMENT SYSTEMS: CERTIFICATION BENEFITS

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Abstract. Despite the numerical success of ISO 9000 quality management systems, the certification is much criticized, as it is not a risk-free undertaking. A review of the literature on this issue indicates that organizations often lack flexibility in the design and implementation of quality management systems, the level of the utilization of employees' skills and knowledge is low. This is because organizations usually approach this process of implementation in an empiric way. ISO 9000 certification can deliver business and financial benefits, but the managers of organizations should carefully design the ISO 9000 implementation strategy. To develop a mature quality management system, critical success factors for ISO 9000 certification benefits should be considered in the early phases of their planning and designing processes. The article presents the critical success factors for ISO 9000 certification benefits which can help plan and implement quality management systems according to the 9000 standard most successfully. The investigation has shown that very important for ISO 9000 financial benefits is a well-developed ISO 9000 implementation strategy. Strategic orientation is a moderating factor influencing the relationship between ISO 9000 certification benefits and the firm's financial performance. In the present study, a strong interdependence between the companies' certification motivation factors and the results obtained was determined. From the overall findings of the investigation, it can be concluded that strong internal motivation or willingness to improve a company's quality helps establish a quality management system that leads to external benefits (such as the improvement of the company's position in the market) as well as to internal benefits. Continuous improvement of processes, people and system, the reward system, team work, the measurement of performance and communication during the post-certification period are all critical success factors for the sustainable quality management system and for successful results of ISO 9000 certification. Quality auditors are in a powerful position to increase the value of certifications. Value-added audit may not only produce data for the use in granting a certificate, for improving documentation or for enforcing conformity, but also for making managerial decisions concerned with economy, staff development, technology, growth, product and processes, because these decisions are based on current performance.

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Introduction

The ISO 9000 family of standards has been developed to assist any organization in all sectors regardless of size, type and activity to implement and operate effective quality management systems (EN ISO 9000:2005, 2005). The application of international standards benefits manufacturers, service providers, users, consumers and regulators as well as supports sustainable development. Certification based on international standards gives confidence and facilitates access to world markets, and its popularity continues today. According to the ISO Survey (2009), 'up to the end of December 2008, at least 982,832 ISO 9001 certificates had been issued in 176 countries and economies' and '[t]he 2008 total represents an increase by 3% over 2007. Services have significantly increased their share of certificates, with service providers accounting for 40% of all ISO 9001 certificates compared to 32% in 2007.'

To improve competitiveness around the world, ISO 9000 has been widely adopted as a quality management system, but with mixed success (Kuo et al., 2009). Despite the numerical success of

ISO 9000, the certification is much criticized, as it is not a risk-free undertaking. ISO 9000 certification does not guarantee improved performance due to the high explicit and implicit costs associated with its implementation (Van der Wiele et al., 2005). Lately, various studies have confirmed that ISO 9000 certification is too expensive, too time-consuming, resource-consuming, too formalized and impersonal, and that costs are greater than the benefits derived (Bhuiyan and Adam, 2005; Casadesus and Karapetrovic, 2005).

The management systems standards ISO 9001 (quality) and ISO 14001 (environment) have gained recognition in Lithuania. On one hand, ISO 9001 alone up until the end of January 2010 approached 1,013 certifications across a diverse range of organizations in the manufacturing, service and government areas. On the other hand, the numbers of certifications to ISO 14001 have substantially jumped in the last few years to as high as 530. The Lithuanian business and organizations of all kinds have been rapidly changing over recent years. Organizations and companies are becoming increasingly dependent on each other and foreign partners for business, prosperity and socioeconomic change and environmental responsibility. To remain effective and relevant, standardization and standards' processes need to meet the changing expectations of industry, regulatory authorities, society and multiple stakeholders.

Under these changing conditions, there is an essential necessity for the usage of international standards. The risks of not doing things right are high, so the management systems have to be carefully positioned according to international standards and guidelines. These management systems help organizations address increasing regulation on environmental, quality, trading and societal fronts and growing stakeholders' demands on industry. The management systems based on international standards are a part of the process of moving forward. The demands of organizations have intensified over recent years due to rapid social, political and environment changes, and standards play a role in determining corporate performance and license to operate.

The implementation of a quality management system and its subsequent certification is a voluntary process supported by the organization's own strategy, motivations, policies and goals. To have more benefits from ISO 9000 certification, organizations may to take into consideration that the design and implementation of an organization's quality management system is influenced by the organization's strategy, its size and structure, organizational environment and its changes as well as the risks associated with that environment (EN ISO 9001:2008, 2008). In this connection it can be stated that although ISO 9000 has become a common knowledge in organizations and the standard is widely adopted in different industries and sectors, it can be a source of competitive advantage, because ISO certified organizations can implement the standard in very different ways. It is reasonable to believe that some factors such as corporate vision and strategy, motivation and continuous improvement as well as competitiveness in the marketplace could have a crucial influence on the strategy of the implementation of ISO 9000.

The purpose of this article is to try to identify the critical success factors for ISO 9000 certification benefits which can help successfully plan and implement quality management systems according to the 9000 standard.

1. Influence of Strategic Factors

The key to customer satisfaction and competitive success has been discovered to lie in emphasizing and achieving product and service quality (Lai et al., 2002). Quality may be considered as a strategic competitive tool, and organizations cannot afford to ignore the strategic implications of quality for their competitive position. Lee et al. (2009: 653) analyzed the implementation and performance outcomes of ISO 9000 in service organizations and showed that managers in organizations 'must realize that ISO 9000 is capable of generating a competitive advantage only if top management is fully committed to the program implementation from a strategic perspective'. The most important factor is the way the certification is perceived by top/senior management, as this is classified as the most influential factor for implementing the standard. If certification is perceived in a negative way, top management would not implement the standard, accordingly, if the standard is perceived positively, top management will provide full support to ISO 9000 certification. This is evidenced through the fact that top management acts as a driver of the implementation of quality management systems through the provision of necessary resources as well as a key to continuous improvement through the creation of values, goals and systems to satisfy customer expectations and improve organization performance (Chin and Choi, 2003). In order to achieve the true value associated with certification, it should be made consistent with an organization's strategic directions and should not stop at ISO 9000:2000, and the identified barriers should be reduced or eliminated in order to have an effective implementation (Magd, 2008). This, in turn, will result in the expected outcome. What is more, in enhancing the level of the true value of the standard and its effective implementation, instruction by professional organizations/institutions on the true meaning of the standard and the new changes as well as on how these changes can impact organizations is strongly recommended (Magd, 2008).

Some studies deal with the relationship between the values and requirements that underpin the ISO 9000 standard and important strategic and organizational dimensions. Control or creativity orientation is an important dimension that supports many strategic management choices of organizations (Ghani et al., 2002). Control-orientation in organizations is synonymous with bureaucracy; control-oriented organizations are centralized, characterized by extensive departmentalization, high formalization, mainly downward communication and the usage of processoriented strategies, while their operational excellence is mainly marked by a highly disciplined and structured way of doing business. The ISO 9000 standard, by requiring all processes and procedures to be documented undoubtedly, is commonly associated with control-oriented organizations (Molina et al., 2004). This standard enhances the control of management systems by documentation and formalization (manuals, procedures, instructions, protocols, etc.) and systematization (hierarchical, orderliness, sequentially interacting processes) (Anwar and Jabnoun, 2006). Organizations of this type get benefits from ISO 9000 certification very easily.

In the opposite side of a strategic spectrum are the creativity-oriented organizations. Organizations of this type use cross-hierarchical, flexible and functional teams, are characterized by low formalization, lateral, upward and downward communication system, almost continually search for market opportunities and, accordingly, institute or need to institute highly flexible structures and practices (Donaldson, 2001). The normative values of institutionalization, documentation and systematization embodied in the ISO 9000 standard militate the options for structural fluidity' creativity and innovation (Mallak et al., 1997). Therefore, organizations of this type face certain difficulties in implementing quality management systems according to the ISO 9001 standard.

Abdullah and Ahmad (2009) analyzed the fit between organizational structures, management orientation, knowledge orientation and the values of ISO 9000 standard. They postulated that the more mechanistic and explicit knowledge-based organizations would enjoy ISO certification, while the more organic and tacit knowledge-based organizations would experience tensions arising from the lack of fit. Hence, conceptually, the standard would work best in more mechanistic and routine knowledgebased settings. Creativity-oriented strategies would find the standard quite dysfunctional, while control and operation-based strategies would be likely to benefit the most from the certification.

Some authors classify organizations into three categories of strategic orientation, namely, cost lead-

ership, market differentiation and focus strategy, and conclude that strategic orientation is a moderating factor influencing the relationship between registration to a quality scheme such as the ISO 9000 and the organization's financial performance (Dimara et al., 2004).

The latest version of ISO 9000 indicates that the standard is constituted by eight principles (ISO 9000: 2005). Thus, it is possible that 'certified organizations may not implement these principles in similar extents and may exhibit varying patterns of implementation by paying extra attention to some principles that are in the line with their corporate strategies' (Lee et al., 2009: 647). Therefore, the managers of organizations should carefully design the ISO 9000 implementation strategy. With a well-developed ISO 9000 strategy, the implementation of the standard can be better aligned with the environment of an organization so as to accomplish competitive advantages and optimal performance.

2. Influence of Motivation Factors

ISO 9001 certification benefits can be classified into external and internal. The first ones are related to improvements in terms of marketing and promotional aspects, increase in customer satisfaction and the improvement of market share, while internal benefits are related to organizational improvements, the reward system, team work, the measurement of performance and communication, continuous improvement (Coleman and Douglas, 2003; Gotzamani and Tsiotras, 2002).

As an external motivation factor, ISO 9001 certification is frequently used as a marketing tool (Poksinska et al., 2006). Some companies state that without ISO 9000 certification they would not be able to sign a significant number of contracts (Douglas et al., 2003). Bhuiyan and Alam (2004), with reference to the results of their survey, concluded that concerning U.S. companies, one of the most important underlying reasons for becoming certified was the existence of commercial relationship with European markets. Customer pressure is also one of the main motivations to achieve ISO 9000 certification mentioned by companies (Martínez-Costa and Martínez-Lorente, 2003).

A strong interdependence between the companies' certification motivations and the results obtained exists. When firms simply react to external pressures for getting certified, they may treat ISO 9000 certification as a prime goal in itself, adopt a minimalist approach to achieve it and thus achieve limited internal performance improvements (Quazi and Jakobs, 2004). Rodríguez-Escobar, González-Benito and Martínez-Lorente analyzed the 'dissatisfaction that ISO 9000 has created in small companies' (2006: 509). According to them, 'for small companies, certification is only a guarantee that the company is using a quality management system according to a list of requisites and procedures. However, the benefits that have been attributed to ISO 9000 have often been overstated, so that companies tend to generate high expectations that are difficult to realize completely' (Rodríguez-Escobar, González-Benito and Martínez-Lorente, 2006: 515). Biazzo (2005) suggests that there must be an evolution towards the so-called performance/management audit model, in order to increase the ability to unveil conformity and thus increase the value of certifications. The evolution of the logic of audits assumes particular importance in the context of small and medium-sized enterprises, since these companies tend to implement formal quality systems only when there is a significant external pressure to do so, and when they do, their approach to the implementation of ISO 9001 standards tends to be minimalist.

Organizations that see certification as an opportunity to improve internal processes and systems rather than merely seek to get a certificate on the wall will get broader positive results from ISO 9000 certification (Llopis and Tarí, 2003). Lundmark and Westelius (2006) revealed that the strongest, most obvious and most valued effects of the ISO 9000 standards were clearer and more apparent working procedures and responsibilities. The most apparent problem was found to be bureaucracy, which can lead to reduced flexibility. The findings of the studies by Van der Wiele et al. (2005) showed an overall positive perception of the value of the ISO 9000:2000 quality management system standards and a consistently higher appreciation of the 2000 version compared with the 1994 version.

The value of quality management systems, according to the 9001 standard, depends on the way they are implemented. The performance of quality management systems could improve, if companies would diligently adopt the new standard rather than attempt to incorporate it into the existing quality management systems (Michaela et al., 2007). Leadership style also influences performance. Leadership styles that support the implementation of ISO 9000:2000 are empowerment and contingent reward (Naceur and Abdullah, 2005). Lin and Wu (2005) propose a knowledge-creating model for ISO 9001:2000 that an organization can use to gain the knowledge needed to enhance quality and performance. It also provides a prepared framework for ordering and structuring an organization's knowledge. Llopis and Tarí (2003) suggest that companies concerned about internal reasons are those which:

• obtain higher profits deriving from the implementation of a quality system;

• reach a greater practical implementation of quality management principles;

• are most likely to progress towards total quality management.

Fotopoulos and Psomas (2010) investigated ISO 9001:2000 implementations in the Greek food sector and showed that the major reasons for certification, unlike benefits, concerned firstly the internal and then the external business environment, and no particular difficulties were observed during the standard implementation. From the overall findings of the study, the authors concluded that strong internal motivation or willingness to improve a company's quality could help establish a quality management system that leads to external benefits such as the improvement of a company's position in the market as well as to internal benefits. Similar results were obtained by Ruževičius et al. (2004). Their research revealed that the implementation of quality management systems mostly resulted in internal benefits of intangible nature. In addition, although the main reasons to start implementing a quality system are the pursuance of external advantages, the implementation generally results in an increase in internal benefits such as improvement of the definition of the responsibilities and obligations of employees, a decrease in non-conformities, better communication among employees and increased efficiency.

White et al. (2009) examined the rationale for establishing a quality management system by obtaining ISO 9001:2000 certifications in non-profit small to medium enterprises in the UK and showed that through a correct development of a quality management system a company was able to generate bottom-line savings and business performance enhancement. The study identified the process of the preparation for certification and showed that when the quality management system is developed as part of a coherent initiative, lasting performance improvements are achieved.

Magd (2008) analyzed the implementation of ISO 9001:2000 in the Egyptian manufacturing sector and indicated that Egyptian manufacturing organizations were aware of ISO 9001:2000 and considered it to be relevant. The main motives for seeking ISO 9000 certification were the improvement of the efficiency of quality systems and the achievement of customer's satisfaction. The vital benefits received from the implementation of the certificate were improved documentation and improvement in the efficiency of the quality management system.

3. Influence of Financial Factors

There is a multitude of variables that could influence a company's business financial performance. Thus, it is very important to define a group of variables which must reflect the impact of quality management system implementation over company financial performance (Heras et al., 2002). The studies carried out in this area and the conclusions made so far are of a contradictory nature (Sampaio et al., 2009). Some authors conclude that there is a positive relationship between ISO 9001 certification and companies' financial improvements. Musa et al. (2007) examined the long-term impact of ISO 9000 certification on business performance. The study compared the monthly stock returns and variability of the returns of ISO 9000 certified and non-ISO 9000 certified firms traded on the Istanbul Stock Exchange from January 1997 to September 2005. The results of the analysis of annual two-year, threeyear, four-year averages of monthly stock returns indicated that ISO 9000 certified firms generally had higher returns and lower variability of returns than non-ISO 9000 certified firms.

Dimara et al. (2004) examined the impact of the implementation of a quality management system over a company's financial performance in a framework of strategic orientation and concluded that if all the firms under investigation were pooled together, there would be no significant difference in their financial performance indicators after a period of six years following the implementation of ISO 9000. However, if the firms were examined separately according to their strategic orientation, in firms pursuing a cost leadership strategy a statistically significant growth of financial profitability indicators would be noticed, while in firms pursuing a market differentiation strategy a statistically significant growth of their turnover and market share would be observed. Thus, strategic orientation is a moderating factor influencing the relationship between ISO 9000 certification benefits and a company's financial performance.

However, as it has already been stated, various studies confirmed that ISO 9000 certifications are too expensive, too time-consuming, resource-consuming, too formalized and impersonal, and that costs are greater than the benefits derived (Bhuiyan and Adam, 2005; Casadesus and Karapetrovic, 2005).

Despite the definite benefits of ISO 9001, its main flaw is the reliance on third-party audits that waste a company's resources (Dearing, 2007). Wu and Lui (2010) proposed measurement indicators and a relationship model for the evaluation of ISO 9000 certified companies. The evaluated indicators are comprised of five perspectives: finance, customer, internal processes, learning and growing and corporate mission. A causal relationship is found to exist among the five perspectives. The analysis of the effect of ISO 9000 certification on corporate performance showed that ISO certification positively enhanced all five proposed performance perspectives: • from the financial perspective, ISO certification would be beneficial to the promotion of activities, improvement of profitability and the productivity of facilities;

• from the customer perspective, ISO certification would create positive customer sentiment for specific manufacturing industries, promote customer's long-term support and enhance customer satisfaction and loyalty;

• from the internal process perspective, ISO certification would effectively improve the standardization and systematization of production processes and further reinforce the overall working environment;

• from the learning and growth perspective, ISO certification would allow enterprises to effectively use market information to understand customers' behaviour and reactions, make corporate goals more compliant with social needs and improve corporate reputation and brand image;

• from the corporate mission perspective, ISO certification would definitely and effectively establish trust between enterprises and customers to enhance customer satisfaction. Through the standardization and systematization of operations, production processes could be improved along with corporate and brand image.

4. Influence of Continuous Improvement Factors

Very important is the continuous improvement stage of the post-certification period. The continuous improvement stage is actually the phase where the maintenance of the quality system is carried out. This phase is important if an organization wants to continuously improve and reap the long term benefits of having a quality management system in place (Nanda, 2005). Ab Wahid and Corner (2009) investigated critical success factors and problems in ISO 9000 maintenance. The results showed that top management, other employees, the reward system, team work, continuous improvement, the understanding of the ISO 9000 itself, the measurement of performance and communication are all critical success factors for ISO 9000 maintenance and for successful results of certification. Continuous improvement of processes, people and system are also very important factors for the sustainable quality management system. It is useful to apply other methods and tools to achieve the demanded quality. Miguel and Dias (2009) proposed a framework for combining ISO 9001 requirements with quality function deployment. The main results indicated that the proposed framework could assist in developing products and prioritizing critical operational functions and ISO 9001:2000 requirements.

Organizations that implement ISO 9000 quality management systems willingly and have a positive attitude towards it are more likely to report improved organization performance than those organizations that implement ISO 9000 certification in a reactionary mode due to customer pressure. Terziovski and Power (2007) analyzed the impact of the continuous improvement approach to ISO 9000 certification benefits and arrived at several important conclusions. The high-level finding was that organizations that sought ISO 9000 certification with a proactive approach driven by continuous improvement strategy were more likely to derive significant benefits. as a result. What is more, noteworthy is their finding that organizations can effectively use ISO 9000 certification as a means of promoting and facilitating quality culture, where the quality auditor is an important player in the process. The strongest positive association was found between a continuous improvement strategy and improved business performance.

5. Influence of Auditing Factors

Quality auditors are in a powerful position to increase the ability to unveil conformity and thus increase the value of certifications. The main reason for conducting audits is to obtain factual input for management decisions, but the vast majority of audits only produce data for use in granting a certificate, for improving documentation or for enforcing conformity. Most auditors have been exposed to conformity auditing where the sole objective is to establish if a specific requirement has been met. They invariably do not provide data for making managerial decisions concerned with staff development, technology, growth, product and processes, because these decisions are based on current performance and often all the audit reveals is current conformity, not current performance.

There are a number of approaches generally used in conducting internal and external quality system audits, and not all of them are successful. Element-based auditing provides evidence that an organization has introduced the elements of the standard into procedures and that the procedures are being followed but not that planned results have been achieved. Department-based auditing provides some evidence that an organization has embedded the standard in departmental responsibilities and procedures but not that planned results have been achieved. Task-based auditing provides evidence that specific tasks have been accomplished but not that planned results have been achieved.

More effective is processes-based auditing. The auditor seeks to establish the results an organization desires to achieve, determines whether these results take into account the needs of the customers and the interested parties and then examines the way processes are managed to achieve these results and improve performance. Therefore, the auditor takes into consideration every requirement in the ISO 9001:2000 standard. If it is revealed that the organization satisfies the customers and other interested parties and applies the eight quality management principles in its activities, there is no sound basis to report nonconformities (Kaziliūnas, 2008).

The investigation of the relationship between motivations for seeking ISO 9000 certification, quality culture, management responsibility, and the perceived benefits derived from ISO certification shows that ISO 9000 certification can deliver significant business benefits if it is implemented as a part of a continuous improvement strategy where quality auditors are important players in the process (Terziovski and Power, 2007). Certification audits help improve quality management systems and increase the motivation for quality work. However, at the quality system maintenance stage, internal quality audits must be utilized not merely to verify the adherence to the defined quality management system but also to explore opportunities to continuous improvement (Nanda, 2005). The audit and inspection processes that the certification entails help further the homogenization and standardization of organizational processes (Power, 2003). Certified organizations want auditors not only to issue a certificate, but also to share their own experience and give suggestions for improvement. For example, original equipment manufacturers (OEMs) require auditors of QS-9000 to identify opportunities for improvement in their audit report. This adds value and benefits the auditee's customers (Reid, 2004). There exist great differences regarding the required conditions for certification. The differences primarily depend on the auditors, but also on the certification bodies (Poksinska and Dahlgaard, 2006).

Conformity assessment is becoming more difficult even for the best auditors. Increasing questions from auditee's about governance, corporate responsibility and reputation risk management issues are putting new strains on auditors as the boundaries between quality, environmental and safety issues are blurring. Various quality and environmental management system auditing specifications were rolled up into the ISO 19011:2002 standard. The auditing principles of ISO 19011:2002 call for ethical conduct, fair presentation, professional care, independence and evidence-based approach. The credibility of the audits depends on both ethical factors and fair presentation. Continual review of these basic principles keeps auditors on track and helps assure audits are effective (Russell, 2007). Further new and lucrative opportunities will undoubtedly present themselves in emerging disciplines like anti-corruption, where there is growing recognition that independent assessors will be essential for the success of integrity management systems and transparent pacts between all parties involved in development processes.

Pivka (2004) considered that quality audits brought value-added in the attempt of increasing process efficiency and effectiveness. Dereli and Baykasoglu (2006) came to the same conclusion. Their studies showed the ISO 9000 certification process being a cybernetic system where the feedback part is quality auditing, and an effective auditing can therefore improve and accelerate the certification process. Lin and Wu (2006) saw quality auditing as a point of departure for creating innovation within organization.

Conclusions

ISO 9000 certification can deliver business benefits, but the managers of organizations should carefully design the ISO 9000 implementation strategy. In this respect, it is important to realize the necessity to align quality programmes with business strategies to ensure that efforts reflect the long-term goals of an organization. A critical point in this effort is the commitment of top management to set priorities in appropriate resource allocation during the design and implementation of the ISO 9000 quality system. There is relationship between the values and requirements that underpin the ISO 9001 standard and important strategic and organizational dimensions. Control-oriented organizations get benefits from ISO 9001 certification more easily than creativity-oriented organizations.

A strong interdependence between the companies' certification motivation factors and the results obtained exists. ISO 9001 certification is frequently used as a marketing tool, while customer pressure is also one of the main motivation factors. The major reasons for certification, unlike benefits, concern firstly the internal and then the external business environment. Organizations that see certification as an opportunity to improve internal processes and systems will get broader positive results from ISO 9000 certification.

The studies carried out in financial area and the conclusions made so far are of a contradictory nature. On one hand, some authors conclude that there is a positive relationship between ISO 9001 certification and companies' financial improvements. On the other hand, various studies confirm that ISO 9000 certification is too expensive, too time-consuming, resource-consuming, too formalized and impersonal, and that costs are greater than the benefits derived. Very important for ISO 9000 financial benefits is a well-developed ISO 9000 implementation strategy. Strategic orientation is a moderating factor influencing the relationship between ISO 9000 certification benefits and a company's financial performance.

During the post-certification period very important are continuous improvement factors. Those factors are important if an organization wants to continuously improve and reap the long term benefits of having a quality management system in place. Continuous improvement of processes, people and system, the reward system, team work, the measurement of performance and communication are all critical success factors for the sustainable quality management system and for successful results of ISO 9000 certification.

Quality auditors are in a powerful position to increase the value of certifications. Certification audits help improve quality management systems and increase the motivation for quality work. Certified organizations want auditors not only to issue a certificate, but also to share their own experience and give suggestions for improvement. A successful audit may not only produce data for use in granting a certificate, for improving documentation or for enforcing conformity, but also for making managerial decisions concerned with staff development, technology, growth, product and processes, because these decisions are based on current performance.

There are a number of approaches generally used in conducting internal and external quality system audits, and not all of them are successful. A more effective is processes-based auditing. The auditor seeks to establish the results the organization desires to achieve, determines whether these results take into account the needs of the customers and the interested parties and then examines the way processes are managed to achieve these results and improve performance.

References:

- Ab Wahid, R.; Corner, J. (2009). Critical success factors and problems in ISO 9000 maintenance. *International Journal of Quality and Reliability Management*, 26(9): 881–893.
- Abdullah, H. S.; Ahmad, J. (2009). The fit between organizational structure, management orientation, knowledge orientation, and the values of ISO 9000 standard. *International Journal of Quality and Reliability Management*, 26(8): 744–760.
- Anwar, S. A.; Jabnoun, N. (2006). The development of a contingency model relating national culture to total quality management. *International Journal of Management*, 23(2): 272–280.
- Bhuiyan, N.; Alam, N. (2004). ISO 9000:2000 implementation: the North American experience. *International Journal of Quality and Reliability Management*, 53(1): 10–17.
- Bhuiyan, N.; Alam, N. (2005). An investigation into issues related to the latest version of ISO 9000. *Total Quality Management*, 16(2):199–213.

- Biazzo, S. (2005). The new ISO 9001 and the problem of ceremonial conformity: how have audits methods evolved? *Total Quality Management* & *Business Excellence*, 16(3): 381–399.
- Casadesus, M.; Karapetrovic, S. (2005). An empirical study of the benefits and costs of ISO 9000 compared to ISO 90001/2/3:1994. *Total Quality Management*, 16(1): 105-120.
- Chin, S. K.; Choi, W. T. (2003). Construction in Hong Kong: success factors for ISO 9000 implementation. *Journal of Construction Engineering and Management*, 129(6): 599–609.
- Coleman, S.; Douglas, A. (2003). Where next for ISO 9000 companies? *The Total Quality Management Magazine*, 15(2): 88–92
- 10. Dearing, J. (2007). ISO 9001: Could it be better? *Quality Progress*, 40(2): 23–27.
- Dimara, E.; Sakuras, D.; Tsecouras, K.; Goutsos, S. (2004). Strategic orientation and financial performance of firms implementing ISO 9000. *International Journal of Quality and Reliability Management*, 21(1): 72–89.
- Donaldson, L. (2001). *The Contingency Theory of* Organizations. Thousand Oaks, CA: Sage Publications.
- Douglas, A.; Coleman, S.; Oddy, R. (2003). The case for ISO 9000. *The Total Quality Management Magazine*, 15(5): 316–324.
- Fotopulos, C. V.; Psomas, E. L. (2010). ISO 9001:2000 implementation in the Greek food sector. *TQM Journal*, 22(2): 129–142.
- Ghani, K. A.; Jayabalan, V.; Sugumar, M. (2002). Impact of advanced manufacturing technology on organizational structure. *Journal of High Technol*ogy Management Research, 13 (2): 159–175.
- Gotzamani, K.; Tsiotras, G. (2002). The true motives behind ISO 9000 certification: their effect on the overall certification benefits and long term contribution towards TQM. *International Journal of Quality and Reliability Management*, 19(2): 151– 169.
- Heras, I.; Casadeus, M.; Dick, G. (2002). ISO 9000 certification and the bottom line: a comparative study of the profitability of Basque region. *Managerial Auditing Journal*, 17(1): 72–88.
- International Organization for Standardization (2005). EN ISO 9000:2005 (E), Quality Management Systems – Fundamentals and Vocabulary. Brussels: CEN Management Centre.
- International Organization for Standardization (2008). EN ISO 9001:2008 (E), Quality Management Systems – Requirements. Brussels: CEN Management Centre.
- International Organization for Standardization (2009). *The ISO Survey of Certification* [accessed 12-02-10]. <www.iso.org>.
- Kaziliūnas, A. (2008). Problems of auditing using quality management systems for sustainable development of organizations. *Technological and Eco-*

nomic Development of Economy: Baltic Journal on Sustainability, 14(1): 64–75.

- 22. Kuo, T.; Chang T. J.; Hung, K.; Lin, M. (2009). Employees' perspective on the effectiveness of ISO 9000 certification: a total quality management framework. *Total Quality Management & Business Excellence*, 20(12): 1321–1335.
- Lai, H. K.; Weerakoon, S. T.; Cheng, C. C. T. (2002). The state of quality management implementation: a cross sectional study of qualityoriented companies in Hong Kong. *Total Quality Management*, 13(1): 29–38.
- Lee, P. K. C.; To, V. M.; Yu, B. T. W. (2009). The implementation and performance outcomes of ISO 9000 in service organizations: an empirical taxonomy. *International Journal of Quality and Reliability Management*, 26(7): 646–662.
- Lin C.; Wu, C. (2005). A knowledge creation model for ISO 9001:2000. *Total Quality Management & Business Excellence*, 16(5): 657–670.
- Lin, C.; Wu, C. (2006). Case study of knowledge creation contributed by ISO 9001:2000. *International Journal of Technology Management*, 37(1-2): 193–213.
- Llopis, J.; Tarí, J. J. (2003). The importance of internal aspects in quality improvement. *International Journal of Quality and Reliability Management*, 20(3): 304–324.
- Lundmark, E.; Westelius, A. (2006). Effects of quality management according to ISO 9000: a Swedish study of the transit to ISO 9000:2000. *Total Quality Management & Business Excellence*, 17(8): 1021–1042.
- Magd, H. A. E. (2008). ISO 9001:200 in the Egyptian manufacturing sector: perceptions and perspectives. *International Journal of Quality and Reliability Management*, 25(2): 173–200.
- Mallak, L. A.; Bringleson, L. S.; Lith, D. M. (1997). A cultural study of ISO 9000 certification. *International Journal of Quality and Reliability Management*, 14(4): 328–348.
- Martínez-Costa, M.; Martínez-Lorente, A. (2003). Effects of ISO 9000 certification on firms performance: a vision from the market. *TQM and Business Excellence*, 14(10): 1179–1191.
- Michaela M. C.; Lorente M.; Rafael A. (2007). ISO 9000:2000: Key to quality? An exploratory study. *Quality Management Journal*, 14(1): 7–18.
- Miguel, P. A.; Dias, J. C. S. (2009). A proposed framework for combining ISO 9001 quality system and quality function deployment. *TQM Journal*, 21(6): 589–606.
- Molina, L. M.; Montes, F. J. L.; Fuentes, D.M.F. (2004). TQM and ISO 9000 effects on knowledge transferability and knowledge transfer. *Total Quality Management*, 15(7): 1001–1115.
- Musa, P.; Ceyhun, O. (2007). The long-term impact of ISO 9000 certification on business performance: a longitudinal study using Turkish stork market returns. *Quality Management Journal*, 14(1): 21–36.

- Naceur J.; Abdullah A. H. (2005). Leadership styles supporting ISO 9000:2000. *Quality Man*agement Journal, 12(1): 21–29.
- 37. Nanda, V. (2005). *Quality Management System Handbook for Product Development Companies*. Boca Raton, FL: CRC Press.
- Pivka, M. (2004). ISO 9000 value-added auditing. Total Quality Management & Business Excellence, 15(3): 345–353.
- Poksinska, B.; Dahlgaard, J. J.; Eklund, J. A. E. (2006). From compliance to value-added auditingexperiences from Swedish ISO 9001:2000 certified organizations. *Total Quality Management & Business Excellence*, 17(7): 879–892.
- 40. Power, M. (2003). Evaluating the audit explosion. *Law and Policy*, 25(3): 185–202.
- Quazi, H.; Jakobs, R. (2004). Impact of ISO 9000 certification on training and development activities. *International Journal of Quality and Reliability Management*, 21(5): 497–517.
- 42. Reid, R. D. (2002). Tips for automotive auditors. *Quality Progress*, 37(5): 72–75.
- Rodríguez-Escobar, J. A.; González-Benito, J.; Martínez-Lorente, A. R. (2006). An analysis of degree of small companies' dissatisfaction with ISO 9000 certification. *Total Quality Management & Business Excellence*, 17(4): 507–521.

- Russell, J. P. (2007). Know and follow ISO 19011's auditing principles. *Quality Progress*, 40(2): 29–34.
- Ruževičius, J.; Adomaitienė, R.; Sirvidaitė, J. (2004). Motivation and efficiency of quality management systems implementation: a study of Lithuanian organizations. *Total Quality Management & Business Excellence*, 15(2): 173–189.
- Simpaio, P.; Saraiva, P.; Guimaraes Rodrígues, A. (2009). ISO 9001 certification research: questions, answers and approaches. *International Journal of Quality and Reliability Management*, 26(1): 35–58.
- 47. Terziovski, M.; Power, D. (2007). Increasing ISO 9000 certification benefits: a continuous improvement approach. *International Journal of Quality and Reliability Management*, 24(2): 141–163.
- Van der Wiele, T.; Van Iwaarden, J. (2005). Perceptions about the ISO 9000:2000 quality system standard revision and its value: Dutch experience. *International Journal of Quality and Reliability Management*, 22(2): 101–119.
- 49. White, G. R. T.; Samson, P.; Rowland-Jones, R.; Thomas, A. J. (2009). The implementation of a quality management system in the not-for-profit sector. *TQM Journal*, 21(3): 273–283.
- Wu, S.; Lui, S. (2010). The performance measurement perspectives and causal relationship for ISO-certified companies. *International Journal of Quality and Reliability Management*, 27(1): 27–47.

KRITINIAI ISO 9000 KOKYBĖS VADYBOS SISTEMŲ SERTIFIKAVIMO SĖKMĖS VEIKSNIAI

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Santrauka. ISO 9000 kokybės vadybos sistemos yra labai populiarios tiek pasaulyje, tiek Lietuvoje, bet ne visada ir ne visoms organizacijoms šių sistemų diegimas ir sertifikavimas atneša laukiamą naudą. Taip atsitinka todėl, kad dažnai organizacijos nepakankamai atidžiai planuoja kokybės vadybos sistemos diegimą, iki galo neįvertina visų svarbių veiksnių. Siekiant, kad kokybės vadybos sistema duotų didesnę naudą, patartina jau pirmose sistemos planavimo ir diegimo stadijose įvertinti kritinius sėkmės faktorius. Straipsnyje pateikiami kritiniai sėkmės veiksniai, į kuriuos verta atsižvelgti planuojant ir diegiant ISO 9000 kokybės vadybos sistemą. Analizės parodė, kad ISO 9000 kokybės vadybos sistemos diegimo finansinei sėkmei ypač svarbūs organizacijos strateginiai faktoriai. Didelę įtaką turi ir tai, kokiais vidaus ar išorės motyvais vadovaujamasi siekiant sertifikuoti ISO 9000 kokybės vadybos sistemą. ISO 9000 sertifikavimas dažnai panaudojamas kaip išorinis motyvavimo veiksnys, rinkodaros priemonė, padedanti padidinti vartotojų pasitikėjimą ir praplėsti rinkos dalį. Išorinis motyvuojantis veiksnys, verčiantis siekti sertifikuoti ISO 9000, dažnai būna ir klientų spaudimas. Organizacijos, kurios siekia sertifikuoti ISO 9000 atsižvelgdamos į vidinius motyvuojančius faktorius, siekdamos pagerinti vidaus procesus ir sistemas, pasiekia geresnių rezultatų ir patiria daugiau naudos nei tos, kurios vadovaujasi tik išorės motyvuojančiais faktoriais. Toliau tobulinti kokybės sistemą svarbu ir gavus ISO 9000 sertifikatą. Straipsnyje pateikiami nuolatinio procesų ir sistemų gerinimo kritiniai sėkmės faktoriai, padedantys nuolat gauti gerus rezultatus sertifikavus ISO 9000 kokybės vadybos sistemą.

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