JISMA

JOURNAL OF INFORMATION SYSTEMS AND MANAGEMENT

Vol. 2 No.1 February 2023 https://jisma.org

THE EFFECT OF SHORT-TERM AND LONG-TERM LEARNING ON QUALITY MANAGEMENT AND INNOVATION

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Abstract

Abstract *– Quality oriented management change and innovation is the main strategy for the company. The implementation of quality improvement and innovation has an organizational and managerial role significant technical, and may also involve significant delays before both are realized. In this literature study, we used a descriptive method with a qualitative approach. Our study highlights the short-term and long-term beneficial effects of QIM (Quality improvement management) adoption on product innovation performance. In addition, we found evidence of complementarity and learning effects using QIM adoption. Results show that maximizing innovation returns and improving quality requires consideration of Soft and Hard properties Individual QIM and the timing and sequence of their application. In addition, we find evidence of complementarity and learning effects using QIM adoption. Our results suggest that maximizing innovation returns and improving quality requires the severity of individual QIM and the timing and sequence of their implementation .*

Keywords : *Quality improvement management , Innovation, Short-Term and Long-Term Effects.*

1. Introduction

As market competition intensifies, successful change management is critical to a company's survival and success. Therefore, quality improvement and innovation are imperative. Quality improvement and innovation are central concepts of corporate economic theory and business behavior models. Quality is an important component of business strategy, and quality improvement is a strategic variable used in international business competition. And with innovation, companies cannot abandon innovation by chance. Instead, management is forced by market pressures to systematically support innovation activities. The result is a fierce arms race among companies in the fastest growing sectors of the economy, with innovation as the main weapon.

In the change management literature, two paradigms of 'hard' and 'soft' change management emerge. Hard managerial change emphasizes rules, standardization, conformity, discipline, stability, and formality, while knowledge diffusion, engagement, reflection, empowerment, and intelligence gathering reflect soft managerial change. We use this contrast to further explore in depth the relationship between product innovation performance and quality improvement (QIM) methods. Quality improvement and innovation are clearly interrelated although there is little agreement as to whether they are complementary or contradictory. Technical changes that do not improve quality are illusory because they do not contribute to a sustainable strategy and do not increase the value creation potential of available resources through quality creation. Where the relationship between quality improvement methods (QIM) and product innovation has been explored empirically the relationship is generally positive (Martínez -Costa and Martínez-Lorente, 2008). However, other studies have found a neutral or negative relationship between QIM and product innovation. With the increasing recognition of the complementary nature of hard and soft managerial processes, recent studies highlight the benefits of combining a combination of hard and soft quality management practices for product innovation and corporate performance. With the growing recognition of the complementary nature of hard and soft managerial processes, recent studies highlight the benefits of combining a combination of hard and soft quality management practices for product innovation and firm performance (Gadenne and Sharma, 2009; Calvo-Mora et al., 2013).

Pekovic and Gaul (2009) comment, that the application of the ISO 9000 standard concerns the entire organization and involves changes in the fundamental behavior and routines of employees. Likewise, innovation can have a short-term effect before the long-term effect of the company's performance benefits (Roper et al., 2008). We made some analysis. First, the data we use allow us to identify temporal profiles of individual QIM performance benefits, highlighting differences in short-term (negative) and long-term (positive) impacts. Second, analyze the short-term and long-term aspects of the quality of the innovation relationship in the context of the contrasting paradigm of hard and soft managerial change.

2. Research and Hypotheses

2.1. Hard and Soft Change Management

With increasing market competition and technological developments, business characteristics are changing drastically (Pekovic and Gaul, 2009). Successful change management is critical to surviving and succeeding in a highly competitive and constantly evolving business environment (Todnem By, 2005). Organizational change management has been defined as 'the process of continually updating an organization's direction, structure and capabilities to serve the ever-changing needs of external and internal customers, this means entering new territory and "playing by new rules" and moving the organization away from its current state. this to a more desirable state of repair. Two paradigms of organizational change emerged from the literature. In general, the objectivist, scientific approach is harsh, while the subjectivist, social approach is soft.

The terms hard and soft are commonly used in various organizational change practices, such as HRM (Human Resource Management) practices, Information and Communication Technology improvement practices, and project management. In practice, hard paradigms often take a top-down approach, following a rational hierarchical model that emphasizes control and is expressed through formal structures and systems. His language acts to place logic, order, and structure into irrational social processes. The soft paradigm stems from the interpretivist and constructivist schools of thought that emphasize the creation of people's subjective knowledge to develop and refine their views and actions.

This bottom-up model of organizational change recognizes non-linear, political, and irrational processes. Models can be characterized as dynamic and fragmented. While organizational practices can be very different. For example, in project management, the hard paradigm assumes that goals and methods are well defined, and the goal is to find the best solution to a particular problem, but the 'best' is defined and measured.

In general, soft management practices encourage knowledge sharing, engagement, empowerment, and encourage intelligence gathering and reflection whereas hard management practices are often rules based and require conformity, standardization, discipline, and stability. In addition, there is a growing awareness throughout the organizational change literature that hard and soft practices are more beneficial when introduced together. In the project management literature, there is a need for hard and soft perspectives when managing complex organizational change projects, especially when changing aspects of the organization, such as work practices and culture.

2.2. Quality Oriented Change Management

Many companies have responded to the challenges they face by incorporating quality-based strategies into their change management. Commitment to quality can encourage companies to make significant improvements in profitability, productivity and competitiveness . Hard quality management is mechanistic and emphasizes stability, conformity, and discipline, comprising processes such as work design and statistical process control. These hard components relate to process and product control to maintain uniformity, meet quality standards and meet manufacturing specifications). Soft quality management emphasizes employee engagement, partnership, and comparison with market leaders.

Soft quality management promotes more human aspects and the development of quality systems that enable companies to adapt to a changing environment and promote continuous improvement. Three of the most widely recognized QIM (quality improvement methods) , which include soft-hard. various change management practices, are Total Quality Management (TQM), Quality Certification (such as ISO9000) and Quality Circle. TQM has been described as a management philosophy that fosters an organizational culture committed to customer satisfaction through continuous improvement. The TQM philosophy basically consists of three key elements: customer focus, people engagement, and continuous improvement (Moura E Sá and Abrunhosa, 2007).

Quality Certification is the most rule-based, mechanistic, or hard QIM that lacks the soft elements of TQM or quality circles. Although, there is no clear consensus regarding the impact of QIM on companies, many experts conclude that TQM positively affects business performance (Sousa and Voss, 2002; Kaynak, 2003). For example, (Sadikoglu and Zehir 2010) in a comprehensive literature review, there was a positive relationship between TQM and business performance, including metrics such as market and financial performance, employee performance and customer satisfaction. standard is based on eight principles that address the core values and concepts of quality management: customer focus, leadership, people involvement, process approach, systems approach to management, continuous improvement and a factual approach to decision making (Kartha, 2004). Quality Circle members are generally given training in quality control and evaluation techniques (Trott, 2008). QC improves problem solving skills through employee participation and teamwork (Bodas Freitas, 2008).

In the investigation of hard and soft quality management, overall performance improvement appears to be influenced by a combination of hard TQM factors such as quality benchmarking and measurement, continuous improvement, and efficiency improvement comprising top management and supplier philosophy, supporting employee training and increased interaction with employees and customers. . They concluded that it was necessary to focus on a combination of soft or behavioral aspects and hard 'systems oriented' aspects of quality management to achieve overall performance improvement, and that to maintain customer satisfaction and return on assets were equally important.

2.3. Innovation and Quality Management

Innovation has been identified as an important driver of business productivity and economic growth. Innovation involves the transformation of knowledge into new products, services or business processes. Managerial ability has been highlighted as an important factor in enterprise-level innovation. Successful innovation requires that companies and managers provide clear and consistent signals to employees about the company's goals and objectives the company (Barnes et al., 2006). There is also ample evidence of the importance of external sources for innovation output (Mansury and Love, 2008). These external sources of knowledge include relationships with customers, suppliers, competitors. Innovation in processes is needed when companies want to increase productivity.

A potential link between innovation and quality management in the context of the hard and soft dimensions of quality management, the level of process management activity in the firm is associated with an increase in exploitative innovation and the share of exploitative innovation of total innovation in the paint and photography industry. Meanwhile, Pekovic and Gaul (2009) also found that ISO 9000 certification was significantly and positively associated with seven of the nine innovation indicators. In terms of the relationship between soft quality management and innovation, we are not aware of any quantitative studies specifically linking Quality Circles to innovation. However, small group problem solving, employee suggestion schemes and employee training, have been shown to encourage collaborative problem solving, empowering employees and encouraging them to make process improvement suggestions and update employee skills and knowledge.

Hypothesis

H1: Implementation of QIM will cause short-term disruptive negative effects on product innovation performance.

H2: Implementation of QIM will produce a long-term positive beneficial effect on product innovation performance.

2.4. Results and Discussion

Perdomo -Ortiz et al. (2009) stated that 'generally business practices incorporate quality management concepts and then gradually integrate innovation'. This argument draws on the resource-based and dynamic capabilities theory (RDBC) of firms, which suggests that management priorities

depend on paths and that improving innovation performance requires greater organizational complexity than quality management (Perdomo -Ortiz et al., 2009). Our literature review shows that there are conflicting arguments regarding the relationship between quality management (hard and/or soft) and product innovation performance. The argument for a positive relationship between quality management and innovation suggests that companies that embrace quality in their systems and culture will provide a fertile environment for innovation (growth) because quality embodies principles compatible with innovation (Pekovic and Gaul, 2009).

The quality management philosophy is that employees will be more satisfied and productive if they can contribute their thoughts and ideas to the achievement of company goals, showing that the two processes are interrelated. Consequently, quality can be seen as creating an environment that encourages innovation. On the other hand, it can be argued that quality improvement processes which may involve mechanistic routines and standard business processes - limit creativity and innovation. The implication here is that the outcomes of implementing any QIM , be it hard and/or soft QIM, can only last in the long term. Because managerial attention is initially focused on the successful implementation of QIM, managers tend to have less capacity to devote themselves to innovation with potential short-term effects and negative product innovation outcomes. In the long run, quality system principles and practices tend to be embedded in the mindset and behavior of both management and shop floor workers, reducing the level of managerial resources needed to maintain quality, freeing up resources to concentrate on activities such as products.

Conclusion

Our paper draws on the research literature on quality and innovation that highlights the short- and long-term beneficial effects of individual QIM on product innovation performance. It also highlights the complementary role and effects of learning by using in shaping the quality-innovation relationship. Our analysis of the quality-innovation relationship concluded that complex temporal effects were not evident from previous studies. We find that soft QIM has a weaker short-term nuisance effect than hard QIM on product innovation performance. Quality improvement strategies and implementation plans need to consider the implications of innovation and its impact on company performance. Second, the synergies we identified between QIM demonstrate value in strategies that maximize the complementarity and benefits of *learning by using*. Soft QIM stimulates initial focus or interest in quality improvement in the company which is then formalized in hard QIM implementation. The adoption of soft QC or QIM can also help companies overcome attitudinal barriers associated with changing and implementing a more formal quality management system.

Reference

Barnes et al., (2006). *Successful innovation requires that companies and managers provide clear and consistent signals to employees about the company's goals and objectives the company.* J. Bus. 33, 119–135.

Bodas Freitas, IM, (2008). *Sources of differences in the pattern of adoption of organizational and managerial innovations from early to late 1990, in the UK.* res. Policy 37.131–148.

Gadenne, D., Sharma, B., (2009). *An investigation of the hard and soft quality management factors of Australian SMEs and their association with firm performance*. int. J. Qual.Reliab. Manag. 26, 865–880

Kartha, CP, (2004). *A comparison of ISO 9000:2000 quality systems standards, QS 9000, ISO/TS 16949 and baldridge criteria.* TQM Mag. 16, 331–340.

Kaynak., (2003). T*he impact of QIM on companies, many experts conclude that TQM positively affects business performance.* J. Opera. Manag. 20, 91–109

Mansury and Love., (2008). *Importance of external sources for innovation output*. J. Bus. 33, 119–135.

Martínez-Costa, M., Martínez-Lorente, AR, (2008). *Does quality management foster or hinder innovation?* An empirical study of Spanish companies. Total Qual Manag. Buses. Excel. 19, 209–221.

Moura, E., Sá, P., Abrunhosa, A., (2007). *The role of TQM practices in technological innovation: the Portuguese footwear industry case. Total Qual. Manag* . Buses. Excel. 18 57–66.

Pekovic, S., Gaul, F., (2009). *From quality to innovation* : *evidence from two french entrepreneur surveys.* Technovation 29, 829–842.

Perdomo-Ortiz, J., Galende, J., (2009). *An analysis of the relationship between total quality management-based human resource management practices and innovation* . int . J. Hum. resorts . Manag. 20, 1191–1218.

Roper et al., (2008). *Innovation short-term effect before the long-term effect of the company's performance benefits* Mid-Atlantic J. Bus. 33, 119–135.

Sadikoglu and Zehir (2010). *Positive relationship between TQM and business performance.* int. J. Prod.Res. 39, 43–63.

Sousa, R., Voss, CA, (2002). *Quality management re-visited: a reflective review and agenda for future research.* J. Opera. Manag. 20, 91–109

Todnem By, R., (2005). *Organizational change management: a critical review* . J. Change Manag. 5, 369–380.

Trott,. (2008). *Quality control and evaluation techniques.* in the UK. res. Policy 37.131–148.