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EMPLOYEES MOTIVATION AND TRANSITION OF ISO 9001 QMS TOWARDS TQM

Marija Stanojeska[1], Robert Minovski [2], Zvonko Sajfert[3], Dragan Ćoćkalo[3], Sanja Stanisavljev[3], Bojan Jovanoski[2]
[1]Zito Polog AD, Tetovo, Macedonia,
[2]Faculty of Mechanical Engineering, University of Cyril and Methodius, Skopje, Macedonia
[3]Technical faculty "Mihajlo Pupin", Zrenjanin, University of Novi Sad, Serbia

Abstract. *Employees motivation enables improvement in the effectiveness of the implementation process of Total Quality Management (TQM). Orientation towards process and their control, without significant emphasis of the employees, generates problems with the team work and communication, failure to meet or delaying of deadlines, increasing the total costs etc. Emplyee motivation means incentive for their complete and dedicated inclusion in the operation that contributes towards improved quality implementation of the TQM practices in a shorter period of time. Although aforementioned aspects are treated in the literature, still, the influence of the employees motivation on the transition from ISO 9001 QMS towards TQM is almost not covered at all. In that direction, the main objective of the paper is to create a generalized conceptual model for considered transition. For that sake, identification of the influential factors of ISO 9001, TQM and employees motivation as well as their analysis and determination of the most influential factors is carried out. The final set of factors is used as initial set of variables for creation of generalized conceptual model. The model introduces the correlation dependencies between the variables of treated areas. The created conceptual model in the advanced research will serve as a basis for design of a dynamic SD model which will enable experimentation in direction of transition of ISO 9001 towards TQM practices depending on the motivation of employees.*

Key words: *TQM, ISO 9001, transition, employees motivation.*

INTRODUCTION

In the contemporary dynamic environment, the traditional business organizations are not capable of coping with the challenges of the modern corporate operations. Advanced managerial concepts emerged in many world-class companies as mechanisms for reaching the objectives. One of them is the Total Quality Management (TQM). Oakland (1995) defines TQM as an approach for market sustainability of the organisations which improves the efficiency, flexibility and the working competitiveness, and for which meeting the clients' requirements represents a major objective. The TQM implementation enables the organizations the ability for rapid adaptation to the changes in the environment, which enables TQM organizations to become competitive on the global market. Quality management systems like the ISO 9001 standard in many organisations represent additional stimulation for further TQM development. The ISO 9001 standard became commonly accepted in the management of the organizations. Indeed, with the ISO 9001 standard, organisations demonstrate quality and confidence while meeting the expected requirements of the clients. Adequate preconditions are needed for introduction of advanced managerial concepts. Employee motivation is one of them. Inclusion of employees gives them an opportunity to improve their personal abilities, to gain appropriate knowledge, to increase their confidence, to express the individual creativity and to participate in solving specific problems. The opportunity to participate represents an inspiration for active engagement of the employees, thus generating drastic quality approach change in their performance. TQM philosophy represents an integral part of the creation of a climate in which employees are encouraged to locate the quality problems and find a solution for them.

CONNECTION BETWEEN TQM, ISO 9001 AND EMPLOYEE MOTIVATION

Numerous studies in the last period are oriented towards determination of the connection between the ISO 9000 series and the human resources management in the context of quality management (Spasojević-Brkić, 2009). Papers that are of concern are found by searching the literature

available at Ebsco and Scopus. Key words of the research are the following: connection, TQM, ISO 9000, employees motivation. The paper of the author Martinez-Costa (2008) investigates the connection between the TQM and the ISO 9000 series, their reflection on the performance and implementation motive, however, it does not treat the level of effective operation of ISO 9001 as a basis for transition to TQM. In the paper of Brown et al. (1996) it was concluded that the motive for certification of the ISO 9000 series stimulates the introduction of the TQM concept. Thus, the role of the top management whose responsibility is to provide adequate training for the employees for transition from the ISO 9000 series towards the TQM is emphasized. The paper of Sila and Ebrahimpour (2003) claims that the top management plays a crucial role in the successful implementation of the TQM within the organizations. A similar view is confirmed in the paper of Fotopoulos et al. (2010), which states that the role of the top management in the application of the TQM practices in the performance is significant. However, the inclusion of employees is not treated. According to Pool (2000), the implementation of the TQM principles in organisations with developed organisational culture is proportionally dependenton the organizational learning, which enables successful start in introducing advanced methodologies. The view of Rice (1993) is that "only the employees can improve the process, and just only if they are motivated". Tang et al. (2010) highlights that TQM practices increase loyality of the employees, which leads towards increasing of their level of satisfaction. Chen (2009), represents similar views in his study. The continuous improvement within the organisations is enabled through introduction of mechanisms for motivation of the employees, according to Swartling (2013).

In the reviewed papers the assumption suggests that the introduction of ISO 9001 is a precondition for transition into TQM and the motivation of the employees has a positive impact on the successful implementation of TQM. This brief literature overview brings several conclusions. The successful operation of ISO 9001 is a precondition for integration of TQM practices in the organization. The role of the employees as operation carriers can be of significant importance in the process of transition from ISO 9001 to TQM within the organizations. Therefore, inclusion of employees should be continuously encouraged and strengthened. Motivation is the mechanism that can increase the involvement and dedication of the employees in the process of transition from ISO 9001 to TQM. Still, no papers with structuralized generalized conceptual model of the transition from ISO 9001 towards TQM depending on the motivation of the employees, have been found.

RESEARCH METODOLOGY

In order to identify influential factors, analysis of the literature in the field of TQM, ISO 9001 and employee motivation has been conducted. Upon identification of numerous key factors, a selection of the most influential factors has been made and the connection between them has been studied. In the following step, the conceptual model for the transition from ISO 9001 towards the TQM depending on the motivation of the employees has been created.

IDENTIFICATION OF THE INFLUENTIAL FACTORS IN THE AREA OF TQM, ISO 9001 AND EMPLOYEE MOTIVATION

After the conducted comprehensive research of the literature based upon Emerald, Scopus and Ebsco, in the period from August 2012 to February, 2015, a total of 25 papers in the area of TQM, published in English, have been found, according following key words: TQM, elements, influential factors and critical factors, used during the research. Eight TQM influential factors, whose importance is confirmed by various authors, have been identified (Table 1).

Table 1. TQM influential factors

TQM influential factors	Literary source
Strong commitment of top management	Soltani (2005), Talib et al. (2010), Kanji (2001), Saraph et al. (1989), Flynn et al. (1994), Anderson et al. (1994), Chase (1993), Yasamis et al. (2002), Black et al.(1996), Koh et al. (2009), Burati et al. (1992) Spasojevic-Brkic et al. (2012).
Customer focus	Oakland (1994), Flynn et al. (1995), Ahire et al. (1996), Chase (1993), Yasamis et al. (2002), Black et al.(1996), Koh et al. (2009).
Employee involvement	Randy (1993), Chang (2010), Chen (2009), Psychogios et al. (2009), Dubey (2012), Swartling et al. (2013), Pool (2000), Saraph et al. (1989), Ahire et al. (1996), Arawati (2005), Chase (1993), Yasamis et al. (2002), Black et al.(1996), Koh et al. (2009), Burati et al. (1992).
Supplier management	Zhang et al. (2000), Saraph et al. (1989), Flynn et al. (1994), Ahire et al. (1996), Chase (1993), Yasamis et al. (2002), Black et al.(1996), Koh et al. (2009), Burati et al. (1992).
Quality information management	Flynn et al. (1994), Saraph et al. (1989), Ahire et al. (1996), Yasamis et al. (2002), Black et al.(1996), Koh et al. (2009), Burati et al. (1992).
Process management	Mardani et al. (2012), Yasamis et al. (2002), Black et al.(1996), Koh et al. (2009), Chase (1993)..
Organizational learning	Senge (1990), Edmondson et al. (1999), Andersson (2011), Barson et al. (2000), McLaughlin et al. (2008), Sila et al. (2002), Black et al.(1996).
Continuous improvement	Das et al. (2008), Pheng et al. (2004), Juran et al.(1995), Powell (1995), Anderson et al. (1994), Crosby (1979), Chase (1993), Yasamis et al. (2002), Black et al.(1996), Koh et al. (2009), Burati et al. (1992).

TQM concept is based on quality management principles of ISO 9000 series of standards, which are stimulation for

further implementation of TQM. The eight quality management principles of ISO 9000 series are:

1. Customer focus
2. Leadership
3. Involvement of people
4. Process approach
5. System approach to management
6. Continuous improvement
7. Factual approach to decision-making
8. Mutually beneficial supplier relationships

The influential factors in ISO 9001 are listed in the requirements of the quality system i.e. they are included in the items of the standard and referring to Table 2.

Table 2. ISO 9001 influential factors

ISO 9001 influential factors	Point
Responsibility, authority and communication	5.5
Planning	5.4
Management review	5.6
Resource management	6.1
Human resources	6.2
Infrastructure	6.3
Work environment	6.4
Planning of product realization	7.1
Customer – related processes	7.2
Design and development	7.3
Purchasing	7.4
Production and service provision	7.5
Monitoring and measurement	8.2
Conform of nonconforming product	8.3
Analysis of data	8.4
Measurement, analysis and improvement	8.5

If employees are familiar with the benefits of TQM, their motivation to participate in the TQM implementation is on a higher level. Research of the literature based upon Ebsco and Scopus, in the period from July, 2014 to February, 2015 has been conducted in order to identify the influential factors in the area of motivation of employees. A total of 29 papers published in English have been found, according to key words: motivation, involvement, satisfaction and employees. It has been determined that the authors are oriented towards researching the effects of the different factors that affect the motivation of the employees and are represented in Table 3.

Table 3. Employees motivation influential factors

Influence factor of employee motivation	Literary source
Training	Chapman (1991), Daily (2003), Hynes (2012), Miller (2006), Spasojevic-Brkic et al. (2012).
Teamwork	Murphy et al. (1996), Daily (2003), Pietrese (2013), Osterloh (2002), Spasojevic-Brkic et al. (2012).
Empowerment	Manzoor (2011), Baldoni (2005), Hill (2004).
Rewarding	Aselstine (2006), Bonnie (2002), Rice (1993).
Working Environment	Korzinsky (2013), Yajaweera (2015).
Recognition	Manzoor (2011), Milne (2007).
Encouragement	Milne (2007).
Respect	Maslow (1954).
Well-being	Lu (1999), Sheperd (2013), Rice (1993).
Trust	Manzoor (2011), Jafri (2015).
Autonomy and skill variety	Hackman et al. (1976), Sultan (2012), Osterman (2001).
Job satisfaction	Chen et al. (2009), Elias (2012), Johnson (1997), Sultan (2012), Christ (2012), Yperen (2002), Chang (2010).

CONCEPTUAL MODEL OF TRANSITION

The identified influential factors in the area of TQM, ISO 9001 and the motivation of employees are used for the creation of the conceptual model presented in Figure 1. It can be noticed that the model is too complicated and up to a level of non-functionality.

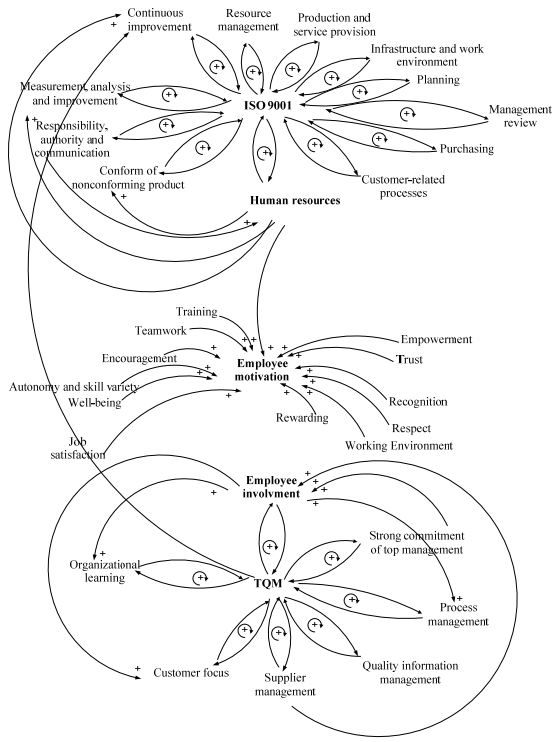

Figure 1. Conceptual model of transition from ISO 9001 towards TQM depending on the motivation of employee by all influential factors

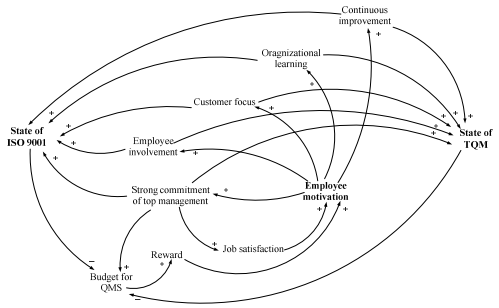

Figure 2. Conceptual model of transition from ISO 9001 towards TQM depending on the motivation of employee by critical factors

Therefore, a process for simplification of the model has been initiated, which means, assumption of the most critical influential factors and deciding which factors can be simplified due to their low-level impact on the treated area or because some of the factors are part of previously identified features. Factors with status "critical" are listed in the List of included factors (Table 4). All remaining factors that have a certain influence on the treated areas and which can be simplified in accordance with chosen criteria are part of the List for simplification (Table 5).

The conceptual model constructed only by the critical factors is presented in Figure 2:

The validation of the model of transition from ISO 9001 towards TQM under the influence of the motivation of employees is made based upon the existing studies with quantified correlation dependencies between most of the specific variables (Table 6).

DISCUSSION

Numerous influential factors have been identified in the study. The simplification enables a kind of filtration of the essential factors that have strongest influence on the treated problem out of all identified influential factors. In doing so, the study becomes oriented and strongly focused.

A total of eight influential factors have been identified in the area of TQM, out of which, five have been identified as critical and the remaining three factors have been evaluated as factors with an impact on the successful implementation of TQM. However, they are not of significant importance for the motivation of employees. Sixtheen influential factors have been identified in the area of ISO 9001. Nevertheless, each one of them represents an integral part of some of the TQM factors in accordance with the eight principles of quality management in the ISO 9000 series. Eleven factors that lead towards increase of the motivation have been identified in the area of motivation of employees. Only two factors (rewarding and work satisfaction) that can impact the increase of motivation in a short period of time have been separated due to their similar nature.

The positive mutual influences of the critical factors in the area of TQM, ISO 9001 and motivation of employees are presented in the conceptual model. It is obvious that the inclusion of the employees shall increase if their motivation is on a higher level. On the other hand, the motivation of the employees will increase through rewards and work satisfaction. The rewarding depends on available budget for the system of quality management, which positively affects to the state of the ISO 9001 and TQM. Based on the positive correlation it is very clear that the increase of the motivation will lead towards higher level of inclusion of employees, higher dedication of the top management, strengthening the focus on the clients, intensifying the organizational learning that leads towards continuous improvement of the quality management system, and generally improvement of the organizational performance. The states of TQM and ISO 9001 are negatively correlated with the budget for QMS, because the higher investment in QMS, cause budget cuts.

The validation of the model is made in accordance with literary sources. Thus, for most of the mutual connection between the variables certain correlation dependencies studied from different authors have been found.

CONCLUSION

From the created conceptual model one can conclude that the inclusion of the employees is one of the critical factors for successful implementation of the TQM, and the motivation of the employees represents a sort of "initiator" that encourages their involvement and dedication to the work. The top management is responsible for identification and provision of the necessary resources for successful operation of ISO 9001 and transition towards TQM. Employees from other hierarchical levels are also implementers of decisions adopted by the top management, enforcers of defined principles and objectives of the highest level to the other organisational levels and direct participants and carriers of the operations. If the employees are not motivated enough, their participation in the improvement of ISO 9001 will be only formal and will not lead to further development of the system for quality and integration of the TQM practices in the process. Poor motivation of the employees may cause inertia and resistance to change leading to introduction of new methodologies such as the TQM. For those reasons, the creation of the conceptual model of the influence of the level of motivation of the employees who can, with their inclusion, influence the transition of the organizations from ISO 9001 towards TQM, is of significant importance. In the next study, this model will serve as a basis for designing a dynamic model for transition of the organisations from ISO 9001 towards TQM, under the influence of the motivation of employees.

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Table 4. List of factors

TQM critical factor	Description of TQM critical factor
Strong commitment of top management	According to Kanji (1998), the commitment of top management is a key driver for TQM implementation and successful business. The employee`s motivation of is very addictive with top management.
Customer focus	Customer focus is expressed as the production of goods that fulfill the customer`s need. Market research is essential because it is not easy to meet customer expectations (Oakland, 1995). Organizations have to express customer`s concerns and respond to the customer demands and to measure their satisfaction (Zhang, 2000). Collecting the informations about customer needs is one of the TQM practices to improve the business performance (Hackman et al., 1995). Customer focus is closely related with employees motivation because employees are customers at the same time.
Organizational learning	Organizational learning covers skill for creating, acquiring and transferring knowledge to employees, and ability to create the new knowledge (Senge, 1996). Organizational learning is positively correlated with TQM concept (Hafeez 2010), enables successful TQM implementation (Pool, 2000) and significantly affect the employee motivation.
Continuous improvement	The factor of continuous improvement means evaluation of the processes performance and collection of all data related to the quality (Das et al., 2008). According to TQM concept, quality is the measurable category. The effect of the improvement means measurement of the initial and the expected level (Pheng et al., 2004). The process of the employee motivation to participate in the implementation of TQM practicies is a dynamic process, with the point of beginning, but without the point of end. The only way to keep the level of customer satisfaction is the continuous improvement (Talib et al., 2010). According to Swartling (2013), motivation affect to the continuous improvement. The emloyees are treated as a customers, because they are internal customers.
Employee involvment	Involvement of employees allows usege of the entire capacity of the employees and encourage their commitment to organizational success (Cotton, 1993). Part of the TQM philosophy is motivating employees to locate problems in terms of quality and find a solution for them. The integral part of TQM philosophy is the motivation of the employee to identify the problems related to quality. Motivating employees lead to higher quality, better productivity and increase the competitiveness of the market organizations (Daily, 2003).
Rewarding	The system of rewarding should be tailored to the needs of the organization according to the achievements of the employees.
Job satisfaction	Job satisfaction leads to better organizational performance and have a significant impact on employee motivation (Chen et al., 2009).

Table 5. List of simplification

Influence factor	Description of the influence factor	Reason for simplification
Process management	The production process should be organized to ensure the defined quality products and prevention of nonconformities, so the quality should be built into the process. Quality product can be produced in the quality process.	Top management is responsible for the process approach and therefore, this factor will not significantly affect to the motivation of employees.
Quality information management	Access to data is very important in terms of sharing the informations and knowledge between employees or customers and it is one of the preconditions for the implementation of TQM (Koh, 2010).	Quality information management increase the motivation of employees, but it not be treated in the simplified model, because the impact on motivation is not so high, compared to other TQM included factors listed in Table 4.
Supplier management	TQM philosophy supports the principle of long term relationships with suppliers (Zhang, 2000).	The supplier management have a influence on the TQM implementation, but it have not major impact on the employee motivation.
Responsibility, authority and communication	ISO 90001:2008 (5.4) Top management have a fully involvement in the quality management system. They have to make sure that the requirements of the management system are integrated into the organization's processes and that the policy and objectives are compatible with the strategic direction of the organization	It will be treated within the factor strong commitment of top management.
Purchasing	ISO 90001:2008 (7.4) The organization shall ensure that purchased product conforms to specified purchase requirements. The type and extent of control applied to the supplier and the purchased product shall be dependent upon the effect of the purchased product on subsequent product realization or the final product.	It will be treated within the factor supplier management.
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Training	The training enables strengthening of teamwork and involvement of employees in TQM implementation (Chapman, 1991). According to Daily (2003), the training of employees, indirectly by the teamwork, have a positive impact on reinforcing the employee involvement.	It will be treated within the factor organizational learning.
Teamwork	Team working, is a kind of tool for expansion of the knowledge base. Team working increase the individual contributions of employees and provides solving of the organizational issues (Murphy et al., 1996). According to Daily (2003), teamwork is positively correlated with successful employee involvement in TQM implementation.	It will be treated within the factor employee involvement.
Well-being	Emotional decline of the employees have impact of the work performance and leads to achieving poor results (Lu, 1999).	Well-being is closely related to job satisfaction factor, because the welfare of employees arise from their satisfaction due remuneration. Well-being will be treated within the factor rewarding.
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Table 6. Validation of correlations in the conceptual model

Correlation between variables		Author	Factor analysis value
Substantial commitment of top management	State of ISO 9001	Kimutal et al. (2013)	>0,5 (significant correlation), confirmed by 76% of interviewed organizations
	State of TQM	Das et al. (2008)	>0,815 (>0,50 significant correlation)
	Employee motivation	Mezher (2004)	0,551 (0-1)
Organizational learning	State of ISO 9001	Tamayo-Torres (2014)	0,57 (>0,50 significant correlation)
	State of TQM	Das et al. (2008)	>0,850 (>0,50 significant correlation)
	Employee motivation	Malik et al. (2010)	0,68 (>0,5 significant correlation)
Customer focus	State of ISO 9001	Piskar (2007)	0,69 (>0,5 significant correlation)
	State of TQM	Das et al. (2008)	>0,838 (>0,50 significant correlation)
	Employee motivation	Ugboro et al. (2000)	0, 5103 (>0,50 significant correlation)
Continuous improvement	State of TQM	Das et al. (2008)	>0,830 (>0,50 significant correlation)
Employee involvement	State of ISO 9001	Respati (2014)	0,77 (>0,50 significant correlation) addict between behavior and ISO 9000
	State of TQM	Das et al. (2008)	>0,828 (>0,50 significant correlation)
Employee motivation	Reward	Das et al. (2008)	>0,844 (>0,50 significant correlation)
	Job satisfaction	Kappelman et al. (1995)	0.343 1 (>0,9 significant correlation) chi square method