

## **TQM AND KAIZEN FOR CONTINUOUS QUALITY MANAGEMENT**

*UDC 005.6*

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**Abstract.** *There is almost a generally accepted view that quality is one of the most important factors of company competitiveness. For this reason, quality needs to be managed. In response to the need for management and requirements for high quality, theory and practice have developed several concepts. Total Quality Management (TQM) and Kaizen are two basic concepts directly involved in continuous improvement of product and process quality in the company, aimed at achieving positive transformation in the minds and actions of employees and managers. The focus of this paper is the analysis of the mentioned concepts and their contribution to the program of continuous quality improvement. Hence, the goal set by this paper is to review the basic characteristics of TQM and Kaizen, and, on the basis of a comparative analysis, draw conclusion about the distinction between them in terms of essence and practical application in the field of quality management.*

**Key words:** *quality, continuous improvement, concept, Total Quality Management, Kaizen*

**JEL Classification:** M21, M41

### INTRODUCTION

The end of the second millennium was characterized by dramatic changes in all spheres of life and work, and omnipresent globalization. Under the pressure of global competition, companies increasingly seek solutions and outputs in continuous improvement of their capacities and performance, in order to preserve and even improve their business and position on the globalized market. Rapid technological advancement, along with global competition, drives managers to produce products and deliver high-quality services at the

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Received August 25, 2017 / Revised January 15, 2018 / Accepted January 24, 2018

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lowest average cost (Domanović, 2016a, 474). That is, the key to success for many companies around the world is quality, so 21<sup>st</sup> century will with good reason be marked by quality and aspiration to establish higher standards. Quality is becoming one of the important aspects of company adaptation to environmental changes, and quality management is one of the most important tasks of company management. That is, improving and mastering quality is set as a priority task of management. One of the basic requirements of quality management is precisely the requirement for continuous improvement. To strive for continuous quality improvement means working to meet the wishes and expectations of customers by improving process capacities, to result in higher quality of products and/or services. Continuous improvement should be a daily task and practice, i.e. an integral part of the company's business philosophy motivated by competition, a desire to increase the level of quality and profit, and customer satisfaction. Hence, the subject of research in the paper is quality, as an important and key factor of business success, which cannot be viewed as isolated from other forms of improvement, such as maximizing quantitative results, as well as from changing the social and cultural dimension of company operations. Specifically, the subject of the analysis are *Total Quality Management (TQM)* and *Kaizen*, as two basic concepts that directly deal with continuous quality improvement of products and processes. The aim of the paper is to point out the importance of complementary application of these concepts, make their comparative analysis, and show their contribution to the program of continuous quality improvement.

Due to the similarity in practical application, it is necessary to point out the specifics of individual concepts. The key hypothesis in this paper is that only the integrated and complementary application of these two concepts will have synergistic effects on the quality of the overall company operations. Testing the starting hypothesis will rely on qualitative methodology, based on the study of relevant domestic and international literature involving theoretical generalization and experience of authors who explored the subject under consideration.

The structure of the paper is conceived in accordance with the defined subject, basic goal, and starting hypothesis. In the *first part*, the issue of quality management is considered. The *second part* includes the discussion about continuous quality improvement through *Kaizen* concept. The *third part* deals with the practical application of the *Kaizen* concept. The *fourth part* deals with the *TQM*. The effects and analysis of the practical application of *TQM* are given in *part five*. The last, *sixth part*, deals with a comparative analysis of two concepts and points to similarities and differences between them.

## 1. QUALITY MANAGEMENT – THE IMPERATIVE OF THE MODERN ERA

An important determinant of the competitive advantage of profit-oriented companies in modern market relations is the quality of products and services. Today, in professional literature and business practice, there is almost a general consensus that quality is one of the key strategic variables, which directly affects the level of customer satisfaction. Companies that achieve a high quality of their products can achieve greater profitability thanks to the ability to charge a higher price for higher quality. Quality is becoming a paradigm of competitiveness, bearing in mind the quality of products and services and the quality of business processes, and its realization requires coordination of work of all

employees, from direct executives to top management. Customer criterion becomes dominant when choosing a supplier and it does not represent luxury, as it used to be thought, but economical and adjusted response to the stated needs. It is becoming clear that quality is now more important than ever before. Hence, quality is globally considered to be the most important phenomenon of our age, with the tendency of its further emphasis and importance. Improving the process quality and maintaining an acceptable level of work quality are key success factors for each company.

Quality management, as a multidimensional approach to company management, is the basis for achieving and improving the quality of products as well as business processes. Quality management, as a business management subsystem, includes coordinated activities to guide and manage the organization from a quality point of view. It is a systemic mode of operation that guarantees that all company activities will take place in a planned manner. It implies the definition and implementation of the procedures necessary for the creation of products/services with the desired characteristics. In other words, it means managing the activities and their results. It is oriented towards creating a quality culture, delivering superior value to stakeholders, and creating a lasting competitive advantage in the company. Such an approach includes “increased product functionality, reliability, perseverance, and serviceability” (Domanović, 2016b, 252).

The quality management function, as part of the total quality management function in the company, is achieved through quality planning, operational quality management, quality control, and quality improvement. Quality planning is the first phase of quality management and a function that meets quality goals and tasks. Operational quality management is a function that relates to operational activities and procedures for achieving quality requirements. Internal and external quality system control involves quality assurance. Quality improvement is undertaken throughout the company in order to increase the efficiency and effectiveness of activities and improve the process in order to achieve success for both the company and customers. Establishing a quality system within the business system, through the process of continuous improvement, opens the way to the development of *TQM* and *Kaizen* concepts.

## 2. CONTINUOUS QUALITY IMPROVEMENT THROUGH KAIZEN CONCEPT

Changes for the better are an inevitable and necessary path if the company wants to survive and succeed in conditions of competitive economic environment. Changes can be perceived as gradual or sudden. The key difference between how changes are understood in Japan and in the West lies in *Kaizen* concept. *Kaizen* history began in 1950, when Deming - the advocate and creator of *Kaizen* concept, began his work in Japan, first in Toyota, where the quality control cycle in production was first implemented. Deming's idea was to encourage managers to find opportunities for small product quality improvements and cost reduction in the production process. Small and continuous improvement, small steps and progress in productivity, quality, and cost reduction soon became apparent and significant. The Japanese named the total changes made and the resulting success *Kaizen*, with the general term having more meanings: *Kaizen* philosophy, costing, technique, and concept (Janjić, 2009, 108-110; Domanović, 2016b, 251-252).

*Kaizen* concept is part of a business philosophy in the field of business with a set of relevant components aimed at satisfying customer expectations (Rof, 2011, 151-167). The process of its implementation is simple, based on the sound mind of employees and no-high-cost approaches, providing in turn incremental progress by applying small innovation, payable in the long run (Janjić, Todorović & Jovanović, 2013, 226-230). One component of *Kaizen* concept is total quality control (see: Masaaki, 1986, 3-8). Applying *total quality control* (TQC) emphasizes quality in companies as a priority in relation to other goals. TQC emphasizes the role of human resources in producing a high-quality product. Building quality in people means building awareness of the existence of *Kaizen*, as an opportunity to identify and solve problems in companies. TQC can be defined as a systematic and statistical approach in implementing *Kaizen* concept and problem solving, which puts perfect quality of products and services in the first place, but also their continuous improvement, which is implemented at the level of the whole company and takes place everywhere in the company, from managers to employees (Janjić, 2009, 170-173).

In addition to the TQM, several other *Kaizen* concept components positively affect company performance by improving quality, reducing costs, increasing sales volume, and increasing profits. The effects of *Kaizen* concept in the business process are numerous, and for the addressed issue the impact on the product quality is the most important one. In order to achieve this effect, *Kaizen* concept should provide a positive impact on the development of cooperation, communication, and mutual harmony between employees, managers, experts, and executives, strengthening of business morale and establishing discipline in the workplace, more productive use of resources, labour, working area, and more economical use of material (Janjić, 2009, 185). Changes occurring through *Kaizen* are not large in scope, and are usually caused by workers themselves in their workplace (in *gemba*). Therefore, all workers need to be involved in the process of quality creation. Otherwise, there are defects that cause delays in the delivery of products/parts and require the existence of inventory to replace defective products or parts. Hence, the basis of *Kaizen* concept is quality in the first place, not profit. *Kaizen* concept puts emphasis on improving quality through small changes in processes and workplaces, and the result is reflected in reductions in different types of waste, lower operating costs, lower price, increased sales volume, and increased profits.

### 3. APPLICATION OF KAIZEN CONCEPT IN PRACTICE

Experience in applying *Kaizen* concept in developed market-oriented countries should be followed using the Japanese industry example, as well as the one from the US industry (although examples of applications exist in the UK, Sweden, but also in Montenegro, Indonesia etc.). Examples of *Kaizen* concept application are companies from the automotive industry, aviation industry, electrical industry, with the tendency of spreading the application in the non-productive areas. The practical implementation of *Kaizen* concept began at Toyota Corporation, while producing Toyota's best-selling car of the 21<sup>st</sup> century, Toyota Corolla. Today, there is hardly any bigger company in Japan that does not apply *Kaizen* concept (for example: Olympus Optical Company, Daihatsu, Canon, Komatsu, Hitachi, etc.). In USA *Kaizen* has been applied by Ford Motor, Boeing, Dana Corporation, in Germany, it is Mercedes, in Great Britain, Dieselco, in Montenegro, Daido, and, more recently also Japan

Tobacco International-Senta in the Republic of Serbia. In recent times, Japan has been supporting the development of *Kaizen* concept in developing countries, with assistance first focusing on East Asian countries, South Asia, Latin America, and Eastern Europe.

When it comes to African underdeveloped countries, knowledge exchange and the use of *Kaizen* are quite limited. Production companies in Africa are not only disadvantaged in terms of technological development, but also regarding lack of knowledge of key management methods. There are several limitations for implementation of *Kaizen* in Africa. First, in countries with socialist elements, such as Ethiopia, company strength is concentrated in the hands of top management, while *Kaizen* concept emphasizes the empowerment of workers in the workplace (in *gemba*). Second, the most common sources of productivity decline are outside the company, especially the delay in the delivery of materials. Improving the business network, both back and forth, should be an important element of improving productivity for most African manufacturers.

The study conducted in the three pilot companies: Mesfin Industrial Engineering PLC (MIE), Almeda Textile Factory PLC, and Sheba Leather Industry (Admasu, 2015, 4) has shown that 59% of respondents accept *Kaizen* and fully understand it, while 41% accept this concept with a certain amount of uncertainty and confusion. As a result of poor education and training, there is a lag in the implementation of *Kaizen* techniques and tools, especially in the application of 5S technique (Asayehgn et al., 2014, 39-57). Based on this observation, it could be concluded that training on the *Kaizen* application is crucial. In general, two measures should be considered for dissemination of *Kaizen* in African countries. First, *Kaizen* must be announced as a national movement. Second, spreading the idea of *Kaizen* through professional institutions will be vital (Admasu, 2015, 2-3).

The experience of underdeveloped countries, developing countries, and developed countries regarding the application of *Kaizen* concept can be of great importance for companies in the Republic of Serbia. It should be expected that *Kaizen* concept will find its place and role in companies in the Republic of Serbia, primarily because of its simplicity, ease of understanding, and small investment. The prospects for its transition into the business environment of the Republic of Serbia are encouraging, provided companies release their long-standing habits, especially those that see employees only on the basis of their status in the company hierarchy, and not according to their efforts to achieve the business goal. Hence, the experience of other countries can be helpful to companies in the Republic of Serbia in implementing *Kaizen* concept, especially because until recently they have had neither theoretical nor practical experience in its implementation.

#### 4. TOTAL QUALITY MANAGEMENT: ESSENCE AND IMPLEMENTATION

Total Quality Management – *TQM* concept is synonymous with business excellence, a new business philosophy that implies access to quality-oriented company management. *TQM* can be described as the most powerful, most demanding, and most complex management approach which evolved in the UK in the 1970s and early 1980s. There are several approaches to *TQM*, such as Juran's, Deming's, Ishikawa's, Crosby's, all of which having a unique view of the development and application of *TQM* in the organization. In this paper we will focus on Deming's approach which is probably the most extensive. The top level of quality can be achieved only through a total quality management model, which shows the

professional and scientific way to achieve business success both in the present and in future, using methods and techniques, improvement, and with the participation of all employees, as well as all stakeholders in the process.

*TQM* is a management approach in the company that seeks to align customer needs and shareholders' interests, motivating all employees to achieve that goal (Antić, Novičević, 2012, 201). Companies, in which management plays a leading role in the realization of this concept, produce higher-quality products in comparison with companies in which management is not committed to quality of the organization itself (Saleem, et al., 2012, 35). In its structure, *TQM* is a multiconceptual discipline that includes the concepts of quality and management. It is an answer to traditional approach to quality and a new way of improving the competitive position through a comprehensive view of quality management. Therefore, quality is the basis of the total quality management concept, and the main goal is the company's ability to satisfy customer needs.

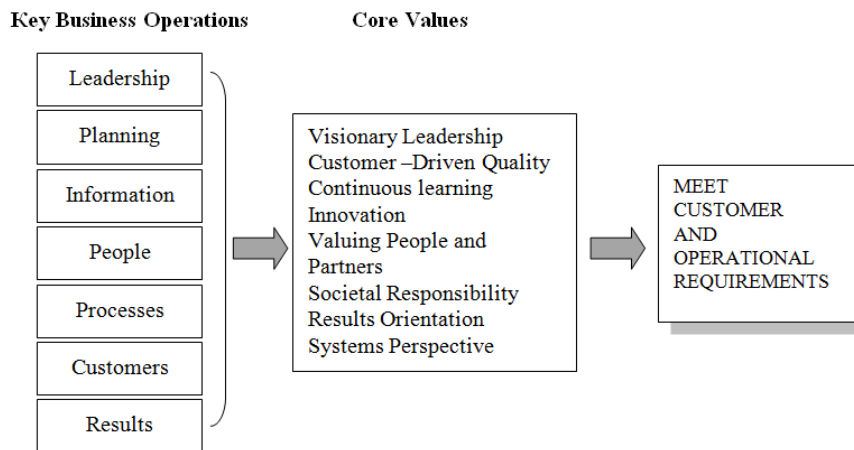
In the present business environment, a large number of companies recognize and see that total quality management is important and useful. It is a method of gradual improvement of the entire organization, using systematic approach based on hard work, discipline, self-discipline, intensive training, application of existing and new techniques and resources. Numerous companies have successfully implemented *TQM* (Woon, 2000), but there are also companies that have never tried to accept it or have given up on its introduction and failed (Mat Naim et. al, 2015). The truth is that companies have problems with implementation. Strict requests for the implementation of *TQM* program have made many companies give up on implementation. Then, companies should consider key factors of implementation, for example: top management's commitment, teamwork, empowering employees, quality education and training, customer focus, continuous improvement, quality systems and policies, relationship with suppliers, process orientation, customer satisfaction, and business result (Ozden, 2003, 345-350).

A survey conducted in Spain shows how structural, internal, and external factors influence the acceptance of *TQM* concept ideas. The research results have shown that larger companies, the ones that form parts of multinational companies, that export most of their products, produce durable goods, unlike those that produce consumer goods, those with higher competition, greater automation, and mass production, with great technological changes, have a higher degree of adoption of *TQM* concept (Merino-Diaz de Cerio, 2003).

The impact of organizational learning on *TQM* implementation is illustrated by a survey conducted in small and medium-sized enterprises in Malaysia in 2014 and in Australia in 1998. The survey has shown that *TQM* implementation rate is low and slow, and that only a small number of middle and small businesses have reached the stage of development and can effectively deal with *TQM* concept. Problems with *TQM* implementation are related to difficulties in the field of finance, technical equipment, and lack of management experience. The high rate of failure of *TQM* implementation is conditioned by limited organizational learning. The most significant challenge is the lack of human capital. Developing skills and knowledge in companies is crucial for development, which can be achieved through organizational learning (Nurazree & Hilmi, 2014).

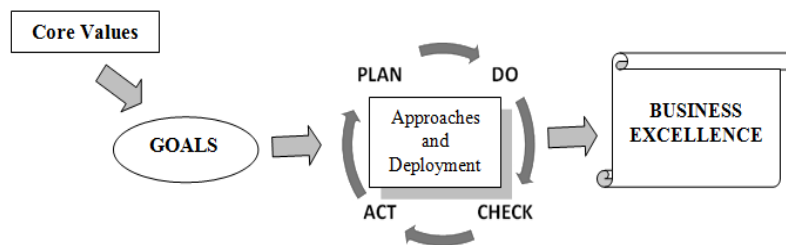
In particular, the important role in promoting and encouraging companies to adopt *TQM* belongs to political structures. National quality awards established in many countries stand for recognition of companies that achieved business success through the acceptance of *TQM* practice. Following the establishment of the National Quality Award, Malcolm

Boldridge (MBNQA), in the United States, the Quality Award in the UK, the European Quality Award (EQA), and Deming’s Quality Awards in Japan, many other countries have established their national awards (Pui-Mun, 2002, 142-149). Most national quality awards use a set of criteria to assess the company quality based on the achieved performance. In order to present the business excellence model of companies that implemented *TQM*, a case study was conducted in four companies, the winners of the Singapore Quality Award (SQA). The basis for developing the business excellence model is a set of quality criteria that encompass all areas of activity carried out in the company. An example of this may be the presentation of the seven main criteria for the Singapore Quality Award, given in Figure 1.



**Fig. 1** SQA criteria  
 Source: Pui-Mun, 2002, 145.

The presented model provides companies with a schematic presentation of the plan for introducing *TQM* in a structured way, with clear and defined goals (Pui-Mun, 2002). The model should be structured to provide the company with core values (quality driven by customers), defined in the Singapore Quality Award workflow, by systematically developing access within the PDCA cycle (*Plan-Do-Check-Act*) (Figure 2). Based on interviews with representatives of award winners, a set of best practices in implementing *TQM* for each phase of the PDCA cycle was made (Pui-Mun, 2002).



**Fig. 2** The framework for excellence model  
 Source (Adapted from): Pui-Mun, 2002, 147.

To apply the excellence model, the company should set goals regarding core values. For example, the core value goal (quality driven by customers) may be to achieve a customer satisfaction rate of 98% over a period of three years. After the established goal, the company enters the “planning” phase. The basis for drawing up the plan should be best practices of quality award winners. For the transition and realization of the “do” phase, the company also starts with experience or best practices. An example can be the selection of one day in a year that will be dedicated to customers, to indicate their importance to the company business. Another initiative is to set up customer satisfaction teams whose role is to continually seek to increase customer satisfaction. The next is a “check” phase, tasked with adopting initiatives to monitor the effectiveness of proposals introduced at the previous stage. For example, a company may choose certain performance measures, also based on best practice, to measure the effectiveness of previous initiatives, such as the number of complaints, the number of rejected products, the number of lost customers, and the like. Finally, after the initiative assessment mechanism is built, the company should focus on the “act” phase. The focus is on continuous improvement based on initiatives, using information obtained based on calculated performance. Experience with quality training, customer management training, and the like can be adopted by companies at this stage. Developing this model for achieving business excellence using the PDCA cycle allows companies to continuously improve their initiatives and programs (Pui-Mun, 2002). Since the core values defined in the Singapore Quality Award are rather universal in terms of quality management, the given model could be adopted by other companies from other parts of the world that would like to use the guiding operating framework for the introduction and maintenance of *TQM* program. This applies in particular as Singapore is the third most competitive economy in the world (The Global Competitiveness Report 2017-2018 - <http://www3.weforum.org/docs/GCR20172018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf>).

An important aspect of implementation is the selection and application of different quality programs. Quality control circles, just-in-time concept, statistical process control, quality audit, and total productive maintenance are the most common quality programs used during *TQM* implementation process. It is interesting to note that as many as 81% of companies that have not introduced *TQM* use quality control circles in Turkey, and in Malaysian companies, quality control circles, 5S, just-in-time and *kanban* are the most popular quality programs introduced. The most commonly used *TQM* tools in the introduction process are the Pareto diagram, statistical quality control, causal loop diagram, and process flowcharts. In a study of 140 manufacturing companies in Saudi Arabia, it was concluded that the flowchart, causal loop diagram, affinity diagrams, and checklists are the most commonly used quality management tools (Ozden, 2003, 346-347). An equally important aspect of implementation refers to the effects of *TQM* application.

## 5. EFFECTS OF *TQM* APPLICATION IN PRACTICE

Literature claims and empirical research confirms, that *TQM* implementation positively reflects on the company performance, especially profitability, and that non-application or inadequate application can lead to high quality costs and inadequate quality levels that directly affect product profitability. The goal of *TQM* concept, zero-defect production is



often emphasized. The relationship between product/service quality and quality costs and company profitability is a basic, elementary assumption of *TQM* (Sila, 2007). Achieving the basic economic goal, expressed through company profitability, is not easy, especially in conditions of high competition, so quality management has become an important business discipline, and the achievement of overall quality a top strategic issue. A number of studies investigating the correlation between *TQM* application and the company financial performance show that the increase in quality has a positive effect on the financial performance measurement (York & Miree, 2004, 291–311), increase the retention rate of existing customers and attracting new ones, leading to increase in market share and sales revenue (Anderson & Sohal, 1999). High-quality products and services can lead to increased customer loyalty, higher prices, reduction in post-sales services, and productivity increase (Santos-Vijande & Alvarez-Gonzalez, 2007, 21-41). Ensuring high quality of products and services requires continuous improvement of organizational processes. Hence, *TQM* strives to form a company that is based on continuous improvement, i.e. the way of life of a company characterized by continuous improvement, positive work environment based on teamwork, system approach, full application of knowledge and experience in process improvement, and inclusion of all employees in the organization and quality management system.

An interesting survey of the presence of *TQM* in large companies in the Republic of Croatia was conducted during the second half of 2008. The results have shown that, among non-financial performance measures, customer satisfaction and loyalty, quality of products and services, and continuous business improvement are most represented. In terms of quality, the results have shown that all companies apply quality standards and possess appropriate ISO certificates. Also, 67% of respondents apply *TQM* in their business. Researchers warn that such a high score could be a subjective top management opinion, and other studies have shown that a large number of companies apply ISO standards, but not *TQM*. Hence, the final conclusion is that more than half of companies applying ISO certificates do not fully apply *TQM* concept (Vrdoljak, 2010)

What is the correlation between customer satisfaction and *TQM* application, as well as between customer satisfaction and financial performance, is shown in a survey conducted in Malaysia on a sample of manufacturing companies publicly trading on the Kuala Lumpur stock market. The results show that the high level of *TQM* implementation improves customer satisfaction, which ultimately increases company's business success. As factors increasing customer satisfaction, commitment of top management, customer focus, good relationships with suppliers, and the role of human factors in the realization of *TQM* have been identified. Also, product quality has been identified as a critical factor of customer satisfaction. The results of high quality are increased market share, sales, and profitability, even when increase in quality implies more expensive material and production process. The price of differentiation exceeds increased costs. In addition, the reputation of high-quality products reduces the elasticity of demand. The key conclusion is that one should strive to ensure high-quality products, as well as other exceptional product characteristics and delivery time (Agus, et al., 2000)

During 2003, a survey was conducted at large manufacturing companies in Turkey, with the main goal of determining the current status of *TQM* application, as well as investigating success factors for the introduction of *TQM*. Of the 100 companies that made the sample, 62% fully implemented *TQM* and in 61.4% of study participants *TQM* introduction was initiated by the top management. The results of *TQM* introduction are expressed by reduced customer complaints, increased customer satisfaction, improved quality, lower prices, zero-defect

production, and increased market share, increased employee satisfaction, achieving teamwork, and reduced costs. Similar surveys carried out in 127 Malaysian companies show that mainly top management and consultants are in charge of introducing *TQM* into company practice. The results of the analysis also show that the average time of introducing *TQM* is between 5 and 7 years, in Malaysian companies 6.33, and in a study conducted in 73 Taiwanese companies, the results indicate that it is between 1 and 5 years. The application of *TQM* in Turkish companies faced certain difficulties and problems, most often seen in inadequate knowledge of *TQM* concept, resistance of some employees to its application, and lack of top management support (Ozden, 2003). Knowing potential barriers should be the basis for their easy overcoming.

#### 6. COMPARATIVE ANALYSIS OF *KAIZEN* AND *TQM*

*Kaizen* and *TQM* concepts are closely related, but not identical. The most important common feature is effort towards continuous improvement in order to achieve the quality of products and processes in the company. They are complementary concepts that share the same philosophy. The most successful companies almost always use them at the same time to maximize benefits. The basis for successful quality improvement in both concepts is the Deming cycle, as a series of related activities – *plan, do, check, and act*. To reach a better quality that meets customers' needs, these four stages (steps) should be constantly rotated, whereby quality becomes the main criterion (Janjić, 2009, 209-210). In the revised version of the Deming cycle, the first step (plan) is replaced by *standardization*. So, the basis for improving quality lies in standards, which, when achieved, are replaced with new, higher standards, relying on improvement. Standardization is one of the most important pillars in implementation of both *Kaizen* and *TQM*. Higher quality, which leads to increased customer satisfaction, which further conditions better business performance, is the goal of both *TQM* and *Kaizen*. Thus, both concepts focus on continuous quality improvement, with *Kaizen* focusing on small and gradual improvement, and *TQM* pointing out that radical improvement is important and crucial for achieving great effects (Saleem, et al., 2012, 36).

These two concepts differ in the way they are implemented. *Kaizen* focuses on step-by-step improvement, while *TQM* focuses on simultaneous operations in all processes, i.e. maintenance and improvement take place in parallel (Saleem, et al., 2012, 38). *Kaizen* means little incremental but continuous improvement, and rests on the idea of “disassembling and reassembling in a better way” in order to improve the process, quality, and performance in a company (Todorović, 2013, 24). There is no discontinuity in *TQM* process of continuous improvement. *Kaizen* alternately performs maintenance and improvement processes. Implementation of the maintenance component is done by assigning tasks to all employees based on standard operating procedures. Improvement implies the establishment of higher standards, and when the establishment of a new standard is completed, then a new process of its maintenance begins.

*Kaizen* puts the human factor at the forefront, i.e. the quality of people, while *TQM* concept is oriented towards quality of products and services. Western business philosophy insists on enhancing and improving technology, in contrast to *Kaizen* that can be used in every aspect of business.

While *Kaizen* is limited to specific projects, *TQM* is present throughout the organization, in all processes, departments, and organizational units. Thus, *Kaizen* is applied in the form of

small improvement projects aimed at a specific business aspect, with the intention of quickly discovering the cause of the problem and effectively applying solution with the help of an independent multifunctional team. When seeking suggestions for improvement, *Kaizen* involves all stakeholders at all organizational levels. *TQM* improvements are performed in all business aspects, including all company employees, who are responsible for improving the product quality. When it comes to suggestions for improvement, *Kaizen* concept follows a bottom-up approach. *TQM* concept follows the bottom-up and top-to-bottom approach, i.e. top management as much as the company's employees suggest and introduce the need for improvement (Saleem, et al., 2012).

Furthermore, *Kaizen* focuses on improving the use of available resources, which implies that its implementation does not require large investment or requires almost none. *TQM* requires investment to improve the quality of products or processes (purchasing a new machine, automation, innovation). What is evident is that *TQM* achieves continuous improvement through the use of *Kaizen* and through innovation. It can be concluded that, despite differences in methodology, focus, and range of activities, *Kaizen* approach is the basis of *TQM*, focused on the production phase in the value chain and continuous improvement of quality, processes, and performance through small changes in processes and in the workplace, thus reducing various types of waste. *TQM* focuses on improving quality by adding value, creating a perfect product, improving productivity, and reducing variations in measures and processes (Saleem, et al., 2012).

#### CONCLUSIONS

Quality should be understood as one of the key factors of business success, i.e. one of the strategic variables, which directly affects customer satisfaction, and contributes to achieving the company goals. Quality, in modern business conditions, becomes a paradigm of competitiveness, bearing in mind that achieving the quality of products, services, and business processes requires the coordination and engagement of all employees. Quality is not once-for-all given value, and it is necessary to take measures for its continuous improvement. In theory and practice, numerous tools for improving and managing quality have been developed. The subject of this paper have been *Total Quality Management* and *Kaizen*. The analysis has shown that these are the concepts that directly enable continuous quality improvement.

Based on the above, it can be concluded that *TQM* and *Kaizen* are two concepts with certain similarities and differences, which can form the basis of successful business of a modern company, and have the potential for integrated application, which confirms the underlying hypothesis. The application of *TQM* and *Kaizen* implies radical changes in business organization, connecting customers and suppliers, and relationships with customers, and the companies that implement them face certain difficulties. The most common problems arising in the application of *TQM* are the lack of qualified quality consultants, the conflict of management structures and *TQM*, expensive and long-lasting application, inadequate knowledge of *TQM*, employee resistance, and insufficient top management support. The conducted research has shown that these problems are most often expressed in the introduction of *TQM* in small and medium enterprises. Although *Kaizen* implementation is much less demanding, it encounters difficulties that are most often seen in the resistance of employees. Employee resistance is often the result of overload, stress, and loss of self-confidence, resulting in a decline in motivation

and rise in dissatisfaction. One of the solutions to overcome these problems and maximize the effects of the application is knowledge. Hence, training and education should include all employees in order to continually improve quality, processes, and effects by joint application of *Kaizen* and *TQM* concepts.

Strong competitive pressure forced many companies, both production and service-oriented, to actively accept *TQM* and *Kaizen* in order to survive and succeed in their business. Given that *TQM* and *Kaizen* have the potential to create a competitive advantage, the number of companies that implement them increases. Experience in the application of *TQM* and *Kaizen* concepts in companies around the world, especially in large ones, has shown significant results, expressed primarily through quality improvement, cost reduction, and enhanced financial performance, and can serve as a good practice for application in companies in the Republic of Serbia.

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## **TQM I KAIZEN U FUNKCIJI KONTINUIRANOG UPRAVLJANJA KVALITETOM**

*Gotovo da postoji opšteprihvaćeni stav da je kvalitet jedan od najvažnijih faktora konkurentnosti preduzeća. Iz tog razloga, kvalitetom je neophodno upravljati. Kao odgovor na potrebu upravljanja i zahteve za visokim kvalitetom u teoriji i praksi razvijeno je više koncepata. Upravljanje ukupnim kvalitetom (Total Quality Management – TQM) i kaizen predstavljaju dva osnovna koncepta koji se direktno bave kontinuiranim poboljšanjem kvaliteta proizvoda i procesa preduzeća kako bi se postigle pozitivne transformacije u razmišljanjima i aktivnostima zaposlenih i menadžmenta. U fokusu ovog rada jeste analiza pomenutih koncepata i njihov doprinos programu kontinuiranog poboljšanja kvaliteta. Otuda, cilj postavljen ovim radom jeste razmatranje osnovnih karakteristika TQM i Kaizen koncepta, te na osnovama uporedne analize izvođenje zaključaka o distinkciji između njih u pogledu suštinskog određenja i praktične primene u domenu upravljanja kvalitetom.*

*Ključne reči: kvalitet, kontinuirano poboljšanje, koncept, upravljanje ukupnim kvalitetom, kaizen.*