TQM AND ORGANIZATIONAL CULTURE AS SIGNIFICANT FACTORS IN ENSURING COMPETITIVE ADVANTAGE: A THEORETICAL PERSPECTIVE

ABSTRACT. The aim of the paper is to analyse TQM and organizational culture as factors influencing business performance on the present demanding markets. It provides more complex view of TQM concept and role of organization culture within successful TQM implementation. The paper presents core principles of TQM and some issues concerning TQM implementation. The core principles of TQM - continuous improvement and customer satisfaction - play vital part in sustaining company’s competitiveness in present competitive environment. Considering the organizational culture is the driving force of TQM implementation, its role is discussed further in the paper.

Keywords: TQM, EFQM Model Excellence, organizational culture, total quality culture, TQM implementation, competitive advantage

1. Entrepreneurial environment and TQM

Nowadays due to highly competing environment, the competitive ability of the company depends first of all on its competence when solving the problems related to external environment, e.g. responding to changes of customer needs and expectations, competitors’ innovations or adjusting to the macroeconomic conditions. Thus it is inevitable for the company to be concerned with the instruments and means improving the company ability to respond to environmental changes and perceive new trends. A company operating on the competitive market must adjust not only its products and services but also its internal processes, systems and sources to customer requirements. It is also important to monitor the competition and its innovations together with new trends. These trends can be characterized as follows (Rudzki, 2004; Vokurka & Lummus, 2003):

- immediate movement of the capital all around the world,
- movement from mass production to customized products,
- product operation cycle declining year by year,
- increased reliance on purchased materials and outside processing connected with the reduction of the number of suppliers,
greater emphasis on organizational and process flexibility,
- necessity of coordinating processes,
- empowerment of employees,
- competitive pressure to introduce new products more quickly.

The trends mentioned above have significantly contributed to the fact that many companies have adopted the motto “doing right things right” and “continuous improvement” which are considered to be the main principles of TQM.

TQM contains no new revolutionary elements, it is a systematic and consistent assertion of some methods within the framework of the organizational structure, clearly aimed at quality and customer satisfaction. TQM is based on the fact that quality is connected with supposed or specified customers needs. Successfully implemented TQM concept activates the employees’ interest to continuously improve all processes in the company.

There is no shortage of views on the present state and also usage of TQM and how it impacts on organizations (McAdam and Henderson, 2004). There are a lot of definitions of total quality management. TQM is a management philosophy with the aim of achieving continuous improvement of all processes in the organization which lead to better business performance. TQM is about creating security for the organisation and giving a better deal for stakeholders (Bertram, 1993). McDonald (1993) suggests that TQM should be viewed as a change agent rather than a business objective in its own right which corresponds with the statement of Bertram (1993) that TQM replaces existing activities and is not an add on. In short, TQM is a management philosophy with the aim of achieving continuous improvement and a better overall performance (Agus, 2005). Similar view on the TQM is represented by Frehr (1999) who states that TQM is based on two basic principles that are customer orientation and continuous improvement. It is obvious that successful implementation of TQM should significantly contribute to reaching the state when everything connected with the production is made first-rate (Ishikawa, 1993).

The results of several surveys proved that successfully implemented TQM has positive impact on business performance (e. g. Sun et al., 2004; Agus, 2005; García-Bernal et al, 2004). The correlations among TQM, ISO 9000 certification and the improvement of performances are shown in table 1.

Table 1: Correlations among TQM, ISO 9000 certification and the improvement of performance
(Sun et al., 2004, p. 143).

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Time of research 2001 - 2002</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>TQM</td>
</tr>
<tr>
<td>Quality improvement</td>
<td>0,253**</td>
</tr>
<tr>
<td>Cost reduction</td>
<td>0,139*</td>
</tr>
<tr>
<td>Flexibility improvement</td>
<td>0,175**</td>
</tr>
<tr>
<td>Delivery improvement</td>
<td>0,140*</td>
</tr>
<tr>
<td>Customer service</td>
<td>0,135*</td>
</tr>
</tbody>
</table>

Notes: *Correlation is significant at the 0,05 level; **Correlation is significant at the 0,01 level

Such results are relatively expected because of the principles on which TQM is based. However, the principles are not always fully implemented. MacDonald (1993, pp. 4 - 5)
identified eleven principle reasons for the disappointment experienced by many companies in connection with TQM implementation:

- lack of management commitment,
- lack of vision and planning,
- satisfaction with the quick fix,
- the process has become tool-bound,
- easy acceptance of packaged methodologies,
- quality has become constraining,
- culture change versus project approach,
- creation of a quality empire,
- management did not change,
- people were not involved,
- lack of real business measures.

It is obvious that if the company wants to implement TQM successfully it is necessary to establish thoroughly and systematically fundamental principles of TQM.

Bertram refers to seven fundamental principles of TQM that are crucial for successful TQM implementation (Bertram, 1993, p. 7):

- meeting customer requirements,
- involvement of all employees,
- support by systems,
- achieving a right first time approach,
- through measurement,
- ensuring continuous improvement,
- management support.

To sum up, customer focus and continuous improvement can be considered as the core total quality management principles.

2. Continuous improvement and customer orientation

It is obvious that one of the company’s most important ability is to respond to changes and adjust to the external environment. The delivery time has become together with quality and price one of significant competitive factors. The customers demand three fundamental product attributes:

- the product should work best,
- it should cost least,
- and should be delivered within as short time as possible.

In principle, the producers view the product attributes almost the same, however, there is one significant difference:

- our product should work better than competitors’ products,
- it should cost less than competitors’ products,
- and it should be delivered more quickly than competitors products.

In ensuring the competitive advantage, it is neccessary to take into account all of three above mentioned categories: price, quality and delivery time. These categories are interconnected and mutually affect each other and cannot be considered separately (see fig. 1).

Taking account of the increasing customer requirements, it is evident that the issue of continuous improvement is of vital importance for companies at highly competitive markets and helps to form and sustain company’s competitive ability. Continuous improvement of quality increases competitiveness (see fig. 2).

However, it is not always valid. The basic presumptions are primarily as follows:
- the company is operating on the competitive market,
the advanced product is still in the same class after the improvement,
- quality orientation brings economic effects (growth of buyers’ interest, saving of materials, productivity increase, cost reduction for rework, ...),
- the company is able to provide premium price but only within a certain limited time,

Figure 1: Relationship of the price, quality and delivery time

- due to the pressure of the entrance of imitated products of the competitors, the company is forced to decrease the price,
- continuous improvement of the product quality connected with the growth of provided value to the customer and providing premium price make effective price policy towards vis-a-vis competitors possible (especially for the older products imitated by competition),
- decrease of the price of older products causes sufficient growth of demanded quantity.

It is obvious that the competitiveness is based on a combination of price and quality. With equal quality and an established reputation suppliers are competitive only if their prices are as low as those of rivals (Dictionary of Economics of the Oxford Reference, 2004). A new supplier without an established reputation may need a lower price than rivals to compete. With lower quality than rivals’ quality, a firm may not be competitive even with a low price; with a reputation for superior quality, a supplier may be competitive even with a higher price than rivals.

In order to understand the statement “the competitiveness is based on a combination of price and quality”, it is important to comprehend the content of the term “quality” appropriately. To meet this condition, quality is therefore defined with correspondence to Juran’s definition (1989) as “fitness for use”. According to Juran, quality consists of freedom from deficiencies and of those product features responding to customer needs.

The component of quality labelled as production quality (Juran’s freedom from deficiencies) cannot be ignored. Costs connected with production with deficiencies (i.e. costs for craps, liquidation, rework and many others) represents within production firms roughly 5 – 35% of the total revenues (Brust and Gryna, 2002).

The implementation of TQM should also help to solve such a problem. Such contention is supported Agus (2005) who confirms that TQM has significant and strong impact on product quality performance and business performance (see fig. 3).

In accordance with fig. 3, TQM is aimed at reaching business performance. It is apparent that the main focus of entrepreneurial subjects is to secure excellent business performance and concurrently to maximize the market value of the company.
Since defect reduction in relation to quality is no longer enough, companies must build their quality programs by integrating and connecting all key quality-work processes to accelerate customer value.

Naturally, the way each company determines achievement of customer leadership depends on the particular conditions of the markets, pricing, product and service maturity, and global competitive forces. Notwithstanding these facts, there are common denominators that create foundations for establishing the necessary initiatives. There should be a focus on the quantification of answers to fundamental questions, such as:

- How can we make our customers continually more satisfied and more secure through what they buy from us?
- How can we make our business and industrial customers more competitive through what they buy from us?

Successful market alignment of a company’s customer quality leadership program requires to focus customer satisfaction strategy on objectives and results for enhanced quality value (Feigenbaum and Feigenbaum, 2004).
Figure 3: Relationship between TQM, Product Quality Performance, and Business Performance (Agus, 2005, p. 94).

Customer-focused performance represents the key dimension and the decisive source of company competitive advantage. Customer value may be the most important factor in determining the superiority of customer-focused performance since customer satisfaction can be generally considered as the consequence of customer value.

The activities best suited to today’s competitive environment may be those that help the company to achieve superior customer-focused performance through which the interests of other stakeholders can be also met (Wang and Lo, 2003; see fig. 4).

Figure 4: Relationship among dimensions of performance (Wang and Lo, 2003, p. 487).
When implementing TQM concept, there is a strong need for measurement. The making steps towards TQM were more difficult as there was widespread confusion about the elements of TQM and how they should be implemented. The reason for this is that TQM is rather an abstract philosophy and has no clear guidelines for its implementation (Mann and Voss, 2000). However, TQM elements are nowadays more clearly understood through the development and worldwide acceptance of quality award models. Researchers and managers agree on the importance of organizations adopting a total quality management model (García-Bernal et al.). The quality award model most widely used in Europe is that developed by the European Foundation for Quality Management (EFQM) (Sun et al., 2004).

3. EFQM Model Excellence

The EFQM was formed in 1988 by fourteen leading European businesses as an instrument for increasing competitiveness through the use of TQM philosophy. The model and the associated self-assessment process have given new direction to the quality movement and have driven deep and lasting changes into participating organizations (Dale et al., 2000). EFQM model is based on nine basic categories (see fig. 5).

The EFQM Model is structured in nine basic criteria, five at an enablers level and four at a results level. Those criteria allow the evaluation of the position of an organisation referring to excellence. Each of them is defined globally and is then structured in a variable number of subcriteria (Martín-Castilla, 2002).

![EFQM Excellence Model](image.png)

Figure 5: EFQM Excellence Model (Committed to Excellence Information Brochure, 2005, p. 17).

The fundamental concepts of excellence are applicable to all organisations regardless of sector, industry or size. The main principles of the EFQM Excellence Model are as follows (Committed to Excellence Information Brochure 2005, p. 14):
Ruiz-Carillo and Fernandez-Ortiz (2005, p. 31) have come to a conclusion that EFQM quality model is an effective tool to measure the basis of the competitive advantage. García-Bernal et al. (2004) state that the firms with a higher level of quality in all of the criteria of the EFQM Excellence Model obtain better results whereas firms with the lowest scores in all of the variables obtain the worst results.

The EFQM Excellence Model is a suitable instrument for self-assessment as the basis for continuous improvement (Grant et al., 2003). Not only improvement but also successful implementation of TQM can be achieved but it is conditioned by involving people and their willingness to participate in change programmes. The issue of change in the organizations is connected with the organizational culture which is discussed further in the text.

4. The concept of culture

The concept of organizational culture is considered to be a complex and multi-layer phenomenon that can be defined in many ways. There exist more than a hundred definitions of culture (Kroeber & Kluckhohn, 1952). However, the concept of culture appropriate for the study of organizations has its origin in anthropology. One of the most cited anthropological definition of culture is that of Tyler ([1871]1958, in Hildebrandt et al., 1991). He defines culture as follows:

„culture or civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilites and habits acquired by man as a member of society“.

It is remarkable that as early as in 1950’s the well-known expert on quality management, Juran, proposed the use of the anthropological concept of culture in organizations in order to create a beneficial change within the organizations (Hildebrandt et al., 1991).

Although there is no agreement on how the organizational culture should be defined, it is possible to summarize the major content components of the organizational culture in Schein’s definition. He asserts that organizational culture is:

„a pattern of shared basic assumptions that the group learned as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems“ (Schein, 1992, p. 12).

It is obvious from Schein’s definition of organizational culture that culture evolves in the organization as the members of the culture deal with problems connected with external pressures and changes, and internal conflicts. The culture is also strongly influenced by the original ideas of the founders of the company as well as by the successful solutions and responses to the critical events. Hence, it is useful to distinguish two major sets of problems that all groups must deal with (Schein, 1992, p.11):

- survival, growth and adaptation in the external environment,
- internal integration that permits daily functioning and adaptability.
Furthermore, Schein (1992) proposed that organizational culture consists of three layers according to the degree to which the culture is visible to the observer (see fig. 6).

![Figure 6: Cultural levels and their content (Schein, 1992, p. 17).](image)

**5. The relationship between total quality management and organizational culture**

Nowadays, the concept of organizational culture is the subject of considerable interest in the literature on quality management. The cultural impacts on quality management and the mutual relationship between TQM and organizational culture have been discussed since the beginning of the 1990’s (Hildebrandt et al., 1991; Westbrook, 1993).

Total quality management and the organizational culture are interrelated (Lukasova et al., 2004; Sousa-Poza et al., 2001). The system of quality management - if it is successfully implemented - influences the content of the organizational culture. On the other hand, the content of the organizational culture influences the quality system implementation and its functionality (Lukasova et al., 2004).

![Figure 7: Relationship between TQM and organizational culture (Sousa-Poza et al., 2001).](image)
Not only there is a link between an organizational culture and total quality management, some authors equate organizational culture to total quality management. E. g. Kanji & Yui claim that “total quality management is the culture of an organization committed to customer satisfaction through continuous improvement” (Kanji & Yui, 1997, p. 417).

6. TQM implementation and cultural change

Nowadays, total quality management is not considered to be simply an implementation of methods, techniques and tools, it is a complex cultural shift from the traditional management to management focusing on the way to total quality company (Lukasova et al., 2004). According to Deming, TQM is a management philosophy that requires a radical cultural change from traditional management to continuous improvement management style in an organization (Deming, 1986).

Implementation of TQM concept is not an easy task because it requires a total change in organizational culture, shifting of responsibility to management, and continuous participation of all in the quality improvement process (Lahke and Mohanty, 1994). Implementation of TQM requires changes to the shared assumptions, frames of reference, and understanding that most organizations have developed through interaction with their environment. These changes will impact basic beliefs and values that employees hold about work (Ngowi, 2000, in Irani et al., 2004). Many companies have realized the importance of diagnosing of organizational culture prior to TQM implementation (Maull et al., 2001) so that they could reveal typical content components of the organizational culture supporting or constraining cultural change.

Lahke & Mohanty (1994) asserted that the following measures are essential for obtaining cultural change:

- the organizational policies, procedures and processes must emphasize quality,
- everyone in the organization must have a clear understanding of the importance of quality in achieving their business objectives,
- people at all levels must be aware of the requirements and needs of the customer,
- the structure of the organization should allow for continuous improvement,
- there should be integration of internal and external customer requirements in the business plan,
- use of customer-based measures of performance is important,
- there is a need to develop strong communication lines,
- customer commitment should be fostered, and
- emphasis on customer-oriented values and beliefs must by supported by top management.

The organization intending to implement TQM successfully needs to possess such a culture that deals effectively with changes associated with adaptation to external environment and responses to internal processes. The concept of total quality management as the cultural phenomenon must be understood in connection with those two mentioned processes - external adaptation and internal integration (Kujala, 2002).

The issue of process of external adaptation and internal integration has been brought forward in Competing Values Model (Quinn and Rohrbaugh, 1981) when explaining differences in the values underlying different organizational effectiveness models. The framework „connects the strategic, political, interpersonal, and institutional aspects of organizational life by organizing the different patterns of shared values, assumptions, and interpretations that define an organization’s culture” (Denison and Spritzter, 1991, p. 3). The competing values model comprises two axes reflecting different value orientations of organizational culture (see fig. 8).
The vertical axis - flexibility-control dimension - is related to the organizational preference toward structuring. Flexibility-oriented organizations support decentralization and differentiation, while control-oriented organizations support centralization and integration.

The horizontal axis - internal-external dimension is related to organizational preference toward change. Internally-focused organizations emphasize maintenance of the existing system, while externally-focused organizations seek improvements in changes in external environment. Each quadrant represents specific culture type: group culture, adhocracy culture, hierarchical culture and rational culture (see fig. 8 for details). Dellana & Hauser (1999) in their research found out that “the ideal cultural profile for supporting TQM may be characterized to a degree by the adhocracy culture type, and secondarily by the group culture type” (Dellana & Hauser, 1999, p. 14). It is obvious that the flexibility-oriented organizations, such as those with group or adhocracy cultures, are related with a climate of trust and a positive attitude toward the organization, therefore less resistance to TQM implementation can be expected (Dellana & Hauser, 1999).

Tata & Prasad (1998) examined the structural and cultural influences on TQM implementation through building blocks of total quality management and suggested that organic structures and flexibility-oriented cultures are more conducive to the success of TQM implementation, compared to mechanistic structures and control-oriented cultures (Tata & Prasad, 1998, p. 704, see fig. 9).
7. Total quality culture

The implementation of TQM concept requires a supportive infrastructure and quality culture (Pun, 2001). The organizations with adaptive culture can satisfy changing demands of customers, employees and shareholders more quickly and can outperform organization without such a culture. Such culture can be labelled as quality culture.

In general, quality culture has certain characteristics which can be described as follows (Kanji & Wallace, 2000, p. 981):

- a quality culture which is lively and progressive can be found to be constantly evolving and helping to change the business,
- a progressive quality culture within a business readily evaluates and responds to stimuli,
- like religious or political groups, business organizations also have the extreme quality culture, i.e. culture tries to preserve what is considered to be the true original set of beliefs,
- large social migration sometimes creates hybrid quality cultures by the multinational companies,
- changes in quality culture of an organization occur when a leader provides stimulation with ideas that challenge tradition, e.g. Henry Ford, David Packard and Walt Disney,
- behind all successful business organizations there have been leaders who revived and changed the quality culture of their organizations,
- in most cases quality cultural changes are based on retaining and developing what is good in an existing quality culture and adding to it new total quality management principles that will stimulate organizational progress and create business excellence.

Fig. 9: A model of relationship between organizational culture/structure and TQM implementation (Tata & Prasad, 1998, p. 708, arranged).
Kanji and Yui (1997) provided the details concerning creating the quality culture (see fig. 10) and framed the model of total quality culture (see fig. 11 for details).

Fig. 10: Creating quality culture (Kanji & Yui, 1997, p. 426).

Fig. 11: Model of total quality culture (Kanji & Yui, 1997, p. 427).
The outcomes of TQM implementation are not only of financial nature but also the change of behaviours, attitudes and processes in the organization. The transformation to total quality culture starts with the awareness of quality management principles and concepts in an organization. The awareness of quality is initiated by quality education and training and supported by structural and progressive change of management systems. The total quality culture must be then nurtured by appropriate management systems (Pun, 2001).

**Conclusion**

Total quality management is an instrument for systematic and efficient interconnection of the subject. TQM is based on the theory of participation and that is why its aim is to create better firm for stakeholders. This fact is reflected in the EFQM Excellence Model that includes also a social responsibility. TQM is strongly oriented to performance and its successful implementation should lead to a better results: improvement both financial and non-financial indicators. To meet this presumption, there is a need to duly and systematically fulfil the TQM principles, i.e. customer focus and continuous improvement. These principles are of vital importance for firm competitiveness. Successful market alignment of a company’s customer quality leadership program requires it to focus its customer satisfaction strategy on objectives and results for enhanced quality value (Feigenbaum and Feigenbaum, 2004). Thus, TQM plays a significant role in ensuring firm competitiveness.

The successful implementation of TQM concept is a long-run endeavor due to the fact that it requires cultural change. Organizations implementing total quality management need at least three to four years for TQM to be accepted by the employees, and eight to ten years for it to be fully implemented (Troy & Schein, 1995). The organizational culture is complex phenomenon which is difficult to change. According to Liberatore (1993), organizational culture resists change because it is so established and ingrained that any attempt to change the culture may “declare war” on the systems. Nevertheless, organizational culture might need to changed in order to facilitate the implementation of TQM concept into the organization so that it can sustain its competitive ability in today’s dynamic market-place.

**References**

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