Abstract:

The article describes the latest trends in quality management in small and medium-sized companies. The author classifies quality as a subset of marketing management, which is known in modern marketing as customer relationship management. The original concept of quality control based on the quality of a product will gradually be replaced by comprehensive quality management based on the wishes, needs and expectations of customers. Increased competition means that it is not possible to consider quality from the so-called transactional perspective, but only the so-called relational perspective. With regard to the whole process management model, the author adds strategic and operational quality controlling to quality management.

Key Words: Quality Management System, Total Quality Management, Balanced Scorecard, Quality Controlling, Customer Relationship Management, M-C Model

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1. Introduction

The aim of most companies is to provide products that meet the requirements of customers. The staff including management should always try to attain the highest quality. **Quality management is always based on customers' needs and expectations.** If they are satisfied with our products or services, it is likely that we can also satisfy their needs. Customers will then become our partners, our defenders (Havlíček, 2009). We can successfully manage quality only when we implement a modern system of customer relationship management. Many companies are considering how to ensure that all designed key processes and systems would provide their customers with high quality and required value. Quality has become a powerful marketing tool for companies that understand that the benefits resulting from quality are associated with successful performance in a particular market and efficiency of the production and distribution process and trade. Therefore, quality management is also regarded as a marketing discipline. Marketing departments in small and medium-sized companies are often directly responsible for implementing the quality policy.

Process management based on the M-C model4 can be defined as the Management Control System that includes a comprehensive view of management on the basis of management accounting, management theory and personnel management. It is an interdisciplinary management system where the most important thing is not the interface of the process but the understanding of business management as a whole, mastering planning tools based on research, objectives, visions and missions (management) and control tools based on evaluation of deviations and proposal of risk management measures (controlling). The M-C model shows that a successful business can work only if you manage to grasp all of its processes and understand their interdependence (Havlíček, 2011).

2. Quality Management

Approaches to quality management developed in the past and we usually distinguish four stages of qualitative trends in companies (Frame and Barnes and Edwards, 2001):

1. Quality monitoring (so-called consecutive control, testing of samples of finished products);
2. Quality control (so-called causal control, testing throughout the whole manufacturing process, with a focus on weak points and corrective measures);

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4 One of the authors (Havlíček) of the article has been interested in process management for several years. The term "M-C process management" was first used in the publication by Havlíček K., 2009, „Role of Managers in Company Management“, Eupress, Prague.
3. Quality assurance (QMS models - Quality Management System);

While the first two stages are already completely inadequate tools of quality management in a hypercompetitive environment, the TQM and QMS models are generally considered as the basic systems in the modern concept of corporate management. In small and medium-sized companies QMS and TQM can be applied individually and collectively, even when QMS becomes a part of TQM. BSC models (Balanced Score Card) have an increasingly important role in quality management and can be applied to business management alone or as a part of TQM.

2.1 QMS Models

QMS (Quality Management System) offers a systematic approach to quality management. In the world and particularly in Europe, QMS models are known as the so-called ISO standards, although this is not always true. In any case, such a system should be:

- a written plan;
- a system ensuring the fulfillment of customers’ expectations in terms of the required quality;
- a system ensuring that all system requirements of the company are satisfied;
- a system valid for all business activities (Frame and Barnes and Edwards, 2001).

Most companies have implemented QMS through the so-called ISO standards, a set of global standards that offers a pre-defined framework on which companies can build a quality management system. The abbreviation "ISO" means that the system complies with the International Organization for Standardization that records and registers all standards.

ISO standards require that companies describe in writing what they are doing, have done and will do to improve quality. They require to describe in writing whether they actually do what was planned in the quality management. It is necessary to mention all company operational procedures, to explain how quality is managed, monitored, recorded and checked. In other words, show how the quality systems are implemented.

Introduction of the QMS system based on the ISO standards typically involves selection of a consultant, preparation of documents, implementation of standards in the company, selection of an auditor and finally an internal audit.
Benefits of implementation of the QMS models:

- the management of the company has defined and introduced a system of rules at many levels of business activities;
- the credibility of the company significantly increases, many foreign clients and consumers perceive a quality certificate holder as trustworthy, some clients (especially customers in industrial markets) even require the quality certificate from their supplier;
- other involved parties (banks, investors, employees, etc.) also perceive the quality certificate as an element of stability;
- implementation of a quality policy in the company and receiving a quality certificate (especially from a reputable certification authority) is undoubtedly a competitive advantage.

Disadvantages of certification according to QMS (ISO) standards:

- relatively bureaucratic;
- time consuming and expensive as it involves paying a certification authority and a consultant; we invest in employees through training of internal auditors, etc., but especially the growing implementation time is consuming the working time of individual employees who could spend it more efficiently;
- it does not necessarily guarantee the quality of the product or service provided.

2.2 TQM Models

TQM (Total Quality Management) is a business and management philosophy based on promotion of the quality and management practices that lead to the global quality of the company (Bovée and Thill, 1992, Pekka Economou and Chatzikonstantinou 2009). The target of the TQM models is to instil a commitment to quality in each employee of the company. TQM accepts the opinion that all departments of the company and all its employees can permanently affect the quality. We assume that the total quality of the company and of our products is influenced not only by those who are in permanent contact with our customers, i.e. traders and marketers, but also people who are involved in other activities, processes and projects. The TQM model and philosophy puts these aspects into direct correlation with the quality expected by a customer. The TQM model is based on:

- a company is a team of people;
- any business activity has an impact on quality;
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- suppliers are an integral part of the quality system;
- we assess quality from the perspective of customers and consumers (Frame and Barnes and Edwards, 2001).

The first introduction to the philosophy of TQM evokes an association with individual marketing concepts. While the QMS models are perceived rather as quality assurance for the customer (manufacturing, product and sales concepts), the TQM philosophy is seen in reverse, i.e. in terms of the requirements and needs of customers with regards to our business (CRM - Customer Relationship Management). While we can imagine QMS as a possible part of the marketing transaction (one-time sale), TQM dominates the relational (long-term) approach to customers. From the perspective of the marketing mix, a shift can be perceived from a mix of factors known as 4P (Product - Price - Place - Promotion), seen from the perspective of the company, to innovative factors 4C (Customers Wants and Needs - Cost to the Customers - Convenience - Communication), seen from the customer's perspective (Kašík and Havlíček, 2009).

To perceive the quality from the perspective of our customers and to fulfill their expectations, we first need to identify customers' needs using systematic market research. Subsequently, the management of the company has to define strategies for implementing quality according to the TQM philosophy, which involves:

- clarifying the long-term targets of implementation of the TQM model;
- defining how the TQM model meets the targets and strategies of the company;
- describing the activities necessary for implementation of the TQM quality management model;
- providing the resources needed for its implementation (Frame and Barnes and Edwards, 2001).

Although the TQM system originated in the United States, it has become very popular in Japan. A Japanese TQM model was regarded for many years as an example of the modern quality management system. It is based on four pillars of quality perception (Figure 1) and became a quality management model for many global corporations.
As TQM is more a philosophy than a norm, there are no general instructions (unlike QMS) to implement the TQM quality policy. It is based on the needs of the company, organization of the company and customers’ needs. To apply the TQM model successfully means to set up its own framework of relevant quality systems and procedures for assessing quality. It is also advisable to prepare incentive plans for employees who will implement the TQM model in their departments. TQM requires all of management to be constantly involved in implementation, i.e. all managers become actively involved in quality improving programs. The result is that the QMS models may be part of the overall corporate quality policy implemented in the framework of TQM. The introduction of TQM is not certified, nor is there a general rule when the company has to implement the TQM model. It is up to each company to create a quality management model that suits its focus and that reflects the wishes and requirements of its customers. It follows that TQM can be implemented by any companies, without the necessity of implementation of ISO standards, even though, as mentioned, these standards can be part of the TQM model. The main differences between the TQM and QMS approaches are shown in Figure 2.
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Figure 2. Differences between the TQM and QMS approaches to evaluation of quality (Frame and Barnes and Edwards, 2001).

<table>
<thead>
<tr>
<th></th>
<th>TQM</th>
<th>QMS (ISO Standards)</th>
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<tbody>
<tr>
<td><strong>Description</strong></td>
<td>A strategy of constant improvement of all company activities are involved</td>
<td>A norm assuring customers that the company can reach the guaranteed quality level</td>
</tr>
<tr>
<td><strong>Characteristics</strong></td>
<td>Comparable approach including all company activities and employees</td>
<td>Methodological approach to quality</td>
</tr>
<tr>
<td><strong>Driving Force</strong></td>
<td>People</td>
<td>Procedures</td>
</tr>
<tr>
<td><strong>Target</strong></td>
<td>To constantly improve quality and satisfy customer’s needs</td>
<td>To get certificate and compliance with specifications</td>
</tr>
<tr>
<td><strong>Culture</strong></td>
<td>Quality assures a competitive advantage only when every employee is involved</td>
<td>To hold firm to written procedures and their observance</td>
</tr>
</tbody>
</table>

While the QMS models are currently very popular in small and medium-sized companies, the TQM models are implemented in large transnational corporations. Auditing and certification companies have understandably attempted to introduce TQM into small companies. If there is a properly implemented and observed QMS model, it is usually sufficient for smaller companies. On the contrary, QMS is practically unusable for large multinational companies, because they create their own systems that fit their corporate culture, mission and vision while respecting geographical differences.

2.3 BSC Models

The Balanced Scorecard Model (Figure 3) as another quality management model is a way to achieve the targets set in the quality policy, in correlation with the following activities:
- Finances management
- Customer relationship management
- Internal process management
- Management of innovational and educational activities.
The model is evaluated in terms of financial and non-financial parameters. It includes past and future effects, both in terms of internal and external perspective. BSC is an interdisciplinary comprehensive business management tool used in quality management and elsewhere.

We assume that long-term stability and quality cannot be judged only on the basis of the achieved financial results. BSC therefore results from modern relationship marketing based on CRM and the TQM quality management model and is focused on future activities. Past activities are only an indicator for the evaluation of future activities, not its basis. For this reason, BSC can be seen as an important controlling tool widely usable in formulation, implementation and evaluation of individual company activities.

Achievement of strategic targets based on four factors of the BSC model clearly defines the need to find a balance among individual activities. As in the CRM model, the involved parties (stakeholders and shareholders) must find a compromise with all groups that impact the company and as in the BSC model all of these strategic activities must be continuously optimized and their balance managed.
**Financial targets:**
Economic performance, profitability, liquidity, annual increase, value of the company

**Managerial task:**
Implement into the company and subsequently manage the owners' requirements.

**Customers' targets:**
Quality of service, loyalty, long-term relationship, etc.

**Managerial task:**
To understand and manage the wishes and requirements of our customers.

**Internal targets:**
Productivity, incentive programs, responsibilities, protection of employees, etc.

**Managerial task:**
To create an internal environment with high competitive advantage.

**Innovational and educational targets:**
Knowledge management, creative teams, a high degree of innovation of basic and higher orders, system of education and staff development, etc.

**Managerial task:**
To manage changes and continuous improvement of processes, products, communication and other activities.

3. **Quality controlling**

Focuses on evaluation of activities and planned targets in quality management. The long-term impact on the company is monitored by strategic controlling that focuses on evaluation of the TQM and BSC models. The immediate effects of improperly selected QMS or non-fulfillment of interim short-term targets related to quality and consequently resulting risk management is involved in operational controlling.

3.1 **Evaluation of TQM**

Based primarily on the decision whether TQM has ever been implemented in the company. This is a difficult process that affects all employees. It is a time-consuming and expensive process that is part of the corporate culture and that is often linked with the mission of our company and social and community responsibility. The decision cannot result from the desire of a consultant who undoubtedly has a great interest in implementing a demanding TQM process in our company, but from a rational consideration resulting from the company's size, geographic scope and its mission.
If it is decided to implement the TQM model, an optimum model must be selected. As TQM models are generally not standardized and do not follow a general procedure resulting in obtaining a certificate, it generally involves a summary of benchmarking cases based on a comparison of quality management systems with other companies in the sector or similar companies and the process itself is based on market knowledge, the internal environment, mission and vision of the company.

It is also possible to use some commonly used TQM models, such as the EFQM model. It is one of the most popular models, sometimes called an excellent production model, but rather the EFQM excellence model. It is a model developed by the European Foundation for Quality Management. EFQM is often regarded as a general guideline for implementation of the quality models based on TQM. It is based on five conditions and four areas of evaluation of results (Figure 4).

**Figure 4. EFQM model – model of excellent production**

EFQM is a structured management system that enables self-evaluation of our company in nine areas and that is based on a systematic process of comparison (benchmarking) with other companies. EFQM is an ideal way to achieve so-called excellence in all nine evaluated categories.

The controlling department should not only assess the suitability of introducing EFQM, but its main task should be to follow the evaluation of results on the basis of employee and customer satisfaction, the company environment (marketing research) and the company's financial results (usually based on a financial analysis) and to suggest appropriate measures.
3.2 Evaluation of BSC

BSC controlling is focused on finding optimal evaluation criteria for the individual areas of the BSC model. The basic condition for the efficient use of BSC in responsible management is to provide information to identify tasks, performance measurement and evaluation in individual areas (Král, 2010). Figure 5 contains a description of the evaluation criteria of every BSC area, which is recommended to be applied in controlling.

![Figure 5. Evaluation criteria of the decisive areas of BSC](image)

Market share can be expressed in several ways, the most common are:

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\text{Market Share} = \frac{\text{Numbers of Customers of our Company}}{\text{Total Number of Customers on the Market}} \quad \text{or} \quad \frac{\text{Sales of our Company}}{\text{Total Volumes of Sales on the Market}}
\]

**Productivity in this case usually means labour productivity, based on employees’ ability to innovate:**

\[
\text{Labour Productivity} = \frac{\text{Performance (e.g. Revenues, Measurement Units, Added Value)}}{\text{Number of Employees}}
\]
3.3 Evaluation of QMS

Focuses on the management of deviations from quality targets, fulfillment of the documents contained in the quality guidelines and other controlled documents forming the framework of quality management. As in the financial controlling of small and medium-sized companies, a natural controller is a bank providing operating loans (the tool is a financial analysis in the form of predetermined covenants). In quality controlling the certification authority takes on the role of a controller - in the first phase the certification authority issues a quality certificate, then reissues it in predetermined periods (usually 1-2 years), which is done based on achievement of the given standards. This requires that the company continually maintains the set quality management system (QMS), which may be done by its employees (managers responsible for quality) or by external consultants. Their task is to continuously monitor and evaluate the implementation of standards, quality targets and quality policy using the controlled documents usually contained in the so-called quality guidelines. This phase of the controlling is thus partly managed by a quality manager, or a consultant or a certification authority.

However, this must be preceded by primary controlling activities of an operational nature, consisting in the selection of a consultant, an initial audit, implementation of the quality system and selection of a certification authority.

3.4 Quality assurance costs

Quality costs are important cost items that in accordance with the growing importance of the quality and implementation of the quality management systems may ultimately have a significant impact on overall results. They must therefore be subject to thorough operational controlling.

They are usually divided into the following categories (Král, 2010):

Prevention costs:
Costs associated with measures revitalizing production in case of so-called bad or reject quality

Quality inspection costs
Costs associated with the control of purchased materials, control of the manufacturing process, as well as control of the products to be shipped.

Damage costs
These are the damages inside the company (associated with the reject rate and including the costs of reprocessing, granted discounts, etc.) and damages outside the company (complaints, repairs, etc.)

The aim of controlling is to determine the real costs associated with the immediate provision of the quality systems, as well as to quantify the additional costs associated with poor quality.
4. Conclusion

We should be aware of the fact that quality management in a hyper-competitive environment where supply exceeds demand more than tenfold is closely interconnected with the highest level of marketing management - CRM customer relationship management. Modern quality management textbooks have even introduced a new term: CRMQ - Customer Relationship Management and Quality. Small and medium-sized companies, which more than anyone else have to respect the wishes and needs of customers, since they cannot actually change demand, should perceive quality management not only on the basis of the standards included in the QMS, but should also approach quality management based on the TQM, i.e. based on the philosophy of satisfying customers. This does not mean, however, that the wishes and needs of customers are more important than overall company efficiency. That is why it is extremely important to apply the M-C model in quality management based on the plans and targets, as well as on strict monitoring and evaluation of activities related to risk management.

References

Havlíček, K., 2011, “Management & Controlling of small and medium companies”, (University of Finance and Administration, Eupress, Prague).