

ISO 9000 Certification Process and Business Competitiveness In Slovenia

Marjan Pivka, Duško Uršič

University of Maribor

Faculty of Business and Economics

Abstract

*The Slovenian management have already for a while been intensely trying to catch up the West. We can not generalize this movement yet, though it can be observed in many companies. According to the latest data, already 30% of all employees in Slovenia are participating in the project of quality. More than 400 companies have ISO 900x certified quality systems (in 1999). Our interest as quality consultants, researchers and auditors is the research of the added value given by the ISO 900x certification process to company. This article shows only some result of the research. **The influence of ISO 9000 certificate on organisation's competitiveness.** The research was conducted in 1998 for Slovenian companies.*

1. Introduction

During the past years ISO 900x certified quality systems have literally flooded global and also Slovenian businesses and other organizations. Our many years of active effort dedicated to development of theory and application of quality has lead us to an empirical conclusion that there is a vast gap between the quality systems theory and its real applications (with results) in complex business. This gap is resulted in a different form such as (Gibbom 1997, Seddon 1997):

- Most of ISO 900x certified quality systems, are market driven. The goal of such quality systems is the certificate and not process, product or service quality (and potentially business advantage!).

- The certified quality systems are based on ISO 9001 requirements and not on the quality requirements of the business.
- The connection and correlation between certified quality systems and business competition is not transparent and evident.
- The certification process is based on ISO standards and has nothing to do with business success and competitiveness as an ultimate consequence of the quality system.
- The correlation between Certified quality system and innovations, management of different resources, user satisfaction, quality of management etc. is scientifically not researched.
- The effectiveness of the quality system is not measured.
- The implementation of the certification process may have a negative influence on some resources of the organization.

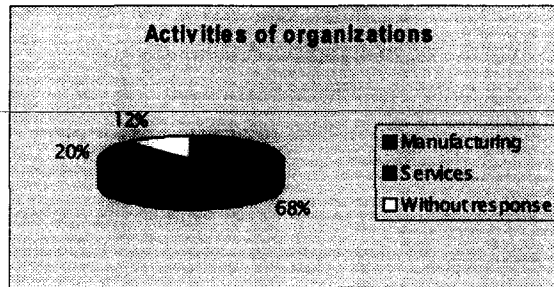
2 .The influence of the ISO 9000 Certificate on Organizations Competitiveness

In June and July 1998 a letter survey was made among 355 organizations in Slovenia which according to data from the Slovenian Chamber of Commerce, had been granted the ISO 9001 or ISO 9002 certificate. 240 questionnaires were addressed to contact persons (management representatives). 117 responses were received, or about 33% of all certified organisations. This sample is large enough to make statistically sound conclusions.

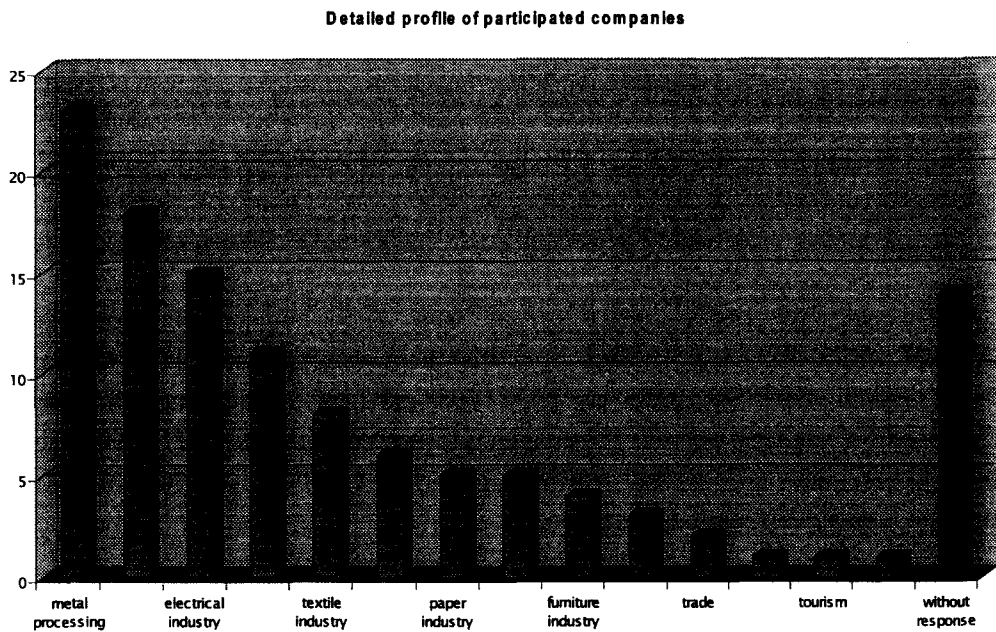
The whole research includes the analysis of more than 30 parameters used for assessing the competitiveness of the management separately and the organization generally. Here only some fundamental comprehensions are presented (Pivka, Uri 1999).

2.1 The profile of organizations participating in the research project

The activities of organizations are shown on <Fig. 1>. It is not surprising that the companies with industrial activities are first: metal processing, electrical, chemical, textile, furniture, civil engineering, food and paper industries. Totally 80 companies (or 68%) are from the field of manufacturing industries, 23 companies (or 19%) are service companies, 14 of them did not answer this question. A detailed presentation of individual activities is shown in <Fig. 2>.



< Figure 1 > The profile of organizations participating in the research project



< Figure 2 > The detailed profile of companies participating in the research project

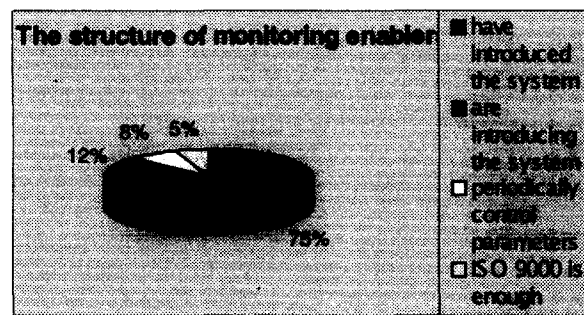
3.2 Which enablers influence most the quality of products, processes of services?

ISO 9001 indicates only indirectly the need for monitoring and analysing of those enablers and parameters of production or service process that influence the quality of products, processes or services. Therefore, the companies were asked whether such enablers and parameters have been monitored and analysed and used in their business decisions. Frequent cases of such enablers (parameters) are: reject,

quality costs, response time, complaints, number of (new, lost) customers, productivity, quality of suppliers, waiting periods, time of repair, number of services per x sold units, percentage of returned supplies, percentage of unfulfilled supplies according to the contract, turnover per employee, investigations and so on. The question was:

Has your company introduced the system of monitoring and analysing those enablers (parameters) that according to your experiences influence most the quality of products, processes or services?

The answers are presented in <Fig. 3>. It is encouraging that even 75% (88 organizations) have introduced the system of monitoring enablers and parameters, and only 5% of the organizations are satisfied with just having the quality system according to ISO 9000.



< Figure 3 > The structure of monitoring enablers

From the detailed analysis of enablers, which can not be presented in this paper due to the space limitations, it follows:

By its contents and number of answers most parameters refer to the stating and search of faults, thus to the parameters of quality control (complaints, rejects, repairs, unfulfilled supplies and stagnations in production) and not to parameters of quality assurance (elimination of fault causes), to which the costs of quality, productivity, customer satisfaction, analyses and education can be counted. Obviously in Slovenia the introduced quality system according to ISO 9000 has a larger influence on removing the faults than on stating the causes. According to the Kano model, it has an influence on the so-called dissatisfiers.

4. The Influence of the Certified Quality System on Business Competitiveness

With the next group of questions we trying to established how the quality system according to ISO 9000 influences the typical indexes of business efficiency. The organizations assessed each index of business efficiency on the rank scale with points from 1 to 7. The meaning of points is as follows:

- 1 - the situation has essentially changed for the worse
- 2 - the situation has changed for the worse
- 3 - the situation has minimally changed for the worse
- 4 - the situation is unchanged
- 5 - the situation has minimally improved
- 6 - the situation has improved
- 7 - the situation has essentially improved

If the organization had not monitored and analysed any of the indexes it could denote one of the following reasons:

- the index has not been monitored
- there are no data or they are unreliable
- some data are collected, yet not analysed
- the index is useless for us
- other reasons

The question was:

Assess, how the quality system ISO influenced the below stated parameters (factors, enablers) of business efficiency in your company. Each of them shall be given from 1 to 7 points. If you can not assess the parameter denote it with one or more reasons.

Unfortunately the organizations gave no reliable answers for the reasons why they have not monitored and analysed certain parameters. Therefore, the analysis of reasons why they are not monitored and analysed can not be given. This problem will have to be solved by further investigations.

In the table below, an analysis of the influence of the quality system according to ISO 9000 on typical factors of business efficiency in organizations is given:

Parameter	Mean	Unassessed
People satisfaction	4,96	27
Innovations of business processes	4,89	32
Innovations of products and/or services	4,92	27
Suppliers satisfaction	4,96	23
Reduction of operation costs	5,04	19
Loyalty of existing purchasers	5,34	15
Acquisition of new purchasers	5,34	13
Monthly plans of org. units	5,36	17
Quality of management	5,38	38
Information resources management	5,43	21
Business plan of the organization	5,48	12
Quality of aftersale services	5,48	44
Customer satisfaction	5,49	13
Written strategy of organization	5,55	14
Quality of products - services	5,65	4
Efficiency of performing procedures/processes	5,82	7
Productivity	5,60	28
Financial resources management	5,23	42
Material resources management	5,43	37
Overall organization	5,62	48
Business results	5,58	38

Table: Mean values of parameters of business competitiveness. In the Mean column, the influence of unassessed organisations is excluded! The Unassessed column shows the number of organizations that have not assessed the parameter.

From this table, two characteristics are evident:

low range between the highest mark (5,82 for the parameter “efficiency of performing the procedures - processes”) and the lowest mark (4,96 for the parameter “people satisfaction”) as well as

high range between the number of organizations that have not assessed the influence of ISO 9000 on the parameter (in the above table these organizations are denoted with % of the total 117 companies). Only two parameters (“efficiency of performing the procedures/processes” and “quality of products/services”) were

assessed by more than 90% of all questioned organizations, all the other parameters were assessed by less than 90% of questioned organizations.

Not considering the influence of the different number of assessed answers the situation is as follows:

1. The average mark for all parameters is 5,35 or **the situation has minimally improved.**
2. For parameters with the average mark below 5 (the situation has minimally improved) it is estimated that the situation is somewhere between **unchanged and minimally improved.**
3. Only the parameter "efficiency of performing procedures/processes" with the mark 5,82 is a margin above the others - which means **the situation has improved.**
4. The marks of other parameters show that the situation is somewhere between **minimal improvement and improvement.**
5. The total assessment of the influence of the quality system according to ISO 9000 on the quoted parameters of business efficiency is: **the situation has minimally improved.**

Due to the great number of organizations that have not assessed the influence of the quality system according ISO 9000, these conclusions are hazardous.

Taking into account the influence of various number of assessed answers the conclusions are as follows:

1. Without reservation it can be stated that the quality system according to ISO 9000 has influenced the Slovene organizations in such a way that **the situation has improved** (estimated by more than 90% of the questioned organizations) for the parameters:

- efficiency of performing procedures and/or processes
- quality of products and/or services

2. Without reservation it can be stated that the quality system according to ISO 9000 has influenced the Slovene organizations in such a way that **the situation has minimally improved** (estimated by more than 85% of the questioned organizations) for the following parameters:

- customer satisfaction (mark 5,49)
- acquisition of new customers (mark 5,34)
- loyalty of existing customers (mark 5,34)
- written strategy of the organization (mark 5,55)
- business plan of the organization (mark 5,48)
- monthly plans of organizational units (mark 5,36)

3. With reservations it can be stated that the quality system according to ISO 9000 has influenced the Slovene organizations in such a way that **the situation has minimally improved** (estimated by more than 70% and less than 85% of the questioned organizations) for the following parameters:

- reduction of operation costs (mark 5,04)
- information sources management (mark 5,43)
- innovations of business processes (mark 4,89)
- suppliers satisfaction (mark 4,96)
- innovations of products and/or services (mark 4,92)
- people satisfaction (mark 4,84).

4. An extremely great number of organizations (more than 60% and less than 70%) has not assessed following parameters:

- quality of aftersale services (mark 5,48; 38% of organizations without assessment)
- quality of management (mark 5,38; 35% of organizations without assessment),
- productivity (mark 5,60; 24 % of organizations without assessment),
- financial resources management (mark 5,23; 36% of organizations without assessment),
- material resources management (mark 5,43; 32% of organizations without assessment),
- overall organization (mark 5,62; 41% of organizations without assessment).

- business results (5,58 ; 32% of organizations without assessment).

As the number of organizations that have assessed these parameters are too few, their marks are only indicative. Therefore we conclude that ~~we can not assess~~ the influence of the quality system according to ISO 9000 on those parameters.

5. Conclusions

The development of the quality systems according ISO 9000 in its basic intention puts special emphasizes on the management. The Slovene experience, presented in our analysis, incontestably leads to the conclusion that the introduced quality system according to ISO 9000 has positively influenced first of all those processes in the organization that are connected to and dependnd on the ISO 9000 standard. Knowing that the priority of them is the control of the conformance level of the processes, the data given by the analysis are expected. Our data show that the control of the business processes development is a great unexploited potential of the Slovene management. The analysis of the triennial period of the organizations with the ISO 9000 certificate shows that the situation is paradoxical. On one side the quality system according to ISO 9000 should permanently improve the performance viewpoint of business processes, on the other hand the negligence of their development viewpoint shows the lack of motives to develop the quality system.

Practice unquestionably shows that proving the conformity of the quality system with the requirements of ISO 9000 is first of all a technical problem and much less the problem connected with the innovation of organizations and interpersonal relations among the employees. Here, the management qualification plays a leading role. It seems that the permanency in the development of quality systems according ISO 9000 and the related influence on assurance of the competitive ability of the organization will be ensured when the actual motive connected with the criterion of competitiveness will prevail over the marketing motive. This can surely be influenced by the certification bodies, though the basic influence on assuring the quoted aims is to be sought in the qualification of management.

References

- [1] Gibbon, C.F.(1997), A Review of the Empirical Research on ISO 9000.
www.cyberus.ca/~chris/webdoc7.htm
- [2] Pivka M., Uršič D.(1999): The influence od ISO 9000 certificate on organiza-
tions competitiveness. Management forum s.p. 1999.
- [3] Seddon J.(1997), ISO 9000 Implementation and Vale-added: Three Case
Studiues, www.mcb.co.uk/services/conferen/nov96/isocases.htm
- [4] Uršič, D., Mulej, M.(1994): From a General to an Individual Perception of an
organization Problems Along Simplification; v Trapp, R. (ed.): Cybernetics
and Systems 94; Vol. 1, World Scientific, Singapore, 1994, pages 715-722.
- [5] Uršič, D.(1996): Innovation of Enterprise; Linea, Maribor, SLO, 1996 (published
in Slovene)
- [6] ISO / IEC / SIST 9000 family standards.