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Quality management systems based on ISO 9001 finally successful

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Abstract

This article refers about primary refusing and final acceptance the quality management system based on ISO 9001 Standard by the firms during the years 2006 – 2012 in the Czech Republic. The ISO 9001 Standard was not warmly accepted and few firms only decided to adopt ISO 9001 by internal motivation before the year 2006. This situation was totally changed by the Public Tender Act No. 137/2006 Sb (only Act). The Act required the applicants for public tender are to prove certified quality management system based on ISO 9001 standard. This requirement resulted to high demand on certification bodies’ services and consequently on advisory offices when the firms realized they are not able to build quality management system by their own forces because of incomprehensible Czech translation of the Standard text. The high demand on certificates resulted to many of certification bodies with very unequal level. Beside established certification bodies the new one-man-show certification bodies occurred. The final effect was certificates were not reliable vindication of quality. The mix of dismotivating factors resulted to schizoid situation when firms built quality management systems and obtained certificates, however were decided to cancel it at the moment the Act gets invalid. This was the situation in the 2009 year. The following research was done in the 2017, several years after the legal requirement on public tender applicants disappeared. The same firms were researched. Totaly 56% maintained quality management system including certification despite the previous decision to cancel it. The ISO 9001 Standard was found useful and worthy.

…….The survey was done i text the field of electrical products or services. All participants of this system was interviewed – users in firms, certification bodies, advisory offices and the national accreditation body representatives and the translator. Their statements were compared to obtain holistic overview.

Keywords

ISO 9001 Standard; national accreditation body; Public Tender Act No. 137/2006 Sb.; quality management system certification;

Introduction

The management quality system (QMS) based on Standard *EN ISO 9001 Quality management system - Requirements* is widely spread. It is tailored for any organization regardless the field of activities. Most users are commercial organizations (firms) whose products are expected to be high quality. The Standard was created by International standard organization which claims “*the Standard provide guidance and tools for companies and organizations who want to ensure that their products and services consistently meet customer’s requirements, and that quality is consistently improved*”. The customers obtain the product of improved reliability, the firms gain more effective internal processes and enhanced competition advantage. The QMS benefits were described in plenty academic and business sources. The author [3] claimed these types of benefits: decision making based on more accurate information, quality cost control, the increasing work productivity, the waste reduction. The soft benefits are enhanced sensitivity to customers’ requirements, the enhanced adaptability to varying market conditions; the higher effectivity and the better market positions. Authors [4] claimed QMS ensures the organization survives in market environment where other competitors yet QMS have adopted. To the other benefits belong quality orientation communicated to public; the reliable controlling tool for the top management; reliable baseline for the next growth; the decreasing number of customer audits. Authors [5] claimed QMS enhances competitive advantages; contributes to firm reputation among customers and sets the baseline for both product quality and the productivity. According to [6] the QMS reduces top management tasks because each employee obtains detailed work instructions ensuring all orders will be done right for the first attempt. The potential problems will be identified and prevented thanks the holistic measurement system which detects any deviation from set value. This holistic measurement system is one of the results of well implemented QMS.

The research aim was to highlight the adoption process of ISO 9001 Standard in the Czech Republic and show its potential weaknesses. The identified weaknesses can be reflected by other standards addoption processes.

The family of former Czech state standards signed ČSN has been amended by the international standards made by organization ISO at the last years. The international standard from ISO is translated to the Czech language and included into ČSN standards family. The main reason is to spread same standards in all EU countries.

The QMS based on standard ISO 9001 has got more popular in the Czech Republic since 2001 year when Czech translation of EN ISO 9001:2000 Standard was published. The number of certified firms and certified bodies has grown rapidly since that time:

**Table 1: The number of certified firms and certification bodies in selected years in the Czech Republic; (source:** [**www.cia.cz**](http://www.cia.cz)**; ISO survey 2015)**

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| year | 1991 | 1995 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| certif. bodies | 0 | 3 | 22 | 26 | 29 | 34 | 40 | 44 | 48 | 52 |
| certified firms |  | 180 | 3 855 | 5 627 | 8 489 | 2 565 | 10 781 | 12 743 | 12 811 | 10 458 |
| year | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
| certif. bodies | 46 | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. | n.a. |
| certified firms | 10 089 | 14031 | 16242 | 12697 | 10679 | 12679 | 13229 | 10648 | n.a. | n.a. |

The quick increasing number of certified bodies implicated that their demands to the applying firms were not comparable. The established certification bodies with good goodwill from previous decades started to compete with very fresh certification bodies led by people with minimum relevant experience. In contrast to very unequal level of services all of these certification bodies were accredited by the national accreditation authority the Czech Accreditation Institute.

The QMS spreading was intensively supported by the Public Tender Act No. 137/2006 Sb. valid from 2006 to April 2012 which stated the certified QMS as one of the possible requirements on public tender applicants. This requirement was described in § 56 Technical qualification expectations paragraph 4. The public tenders are very significant orders in the Czech Republic and firms make effort to participate on them. This condition contained in the Public Tender Act results to large demand for certification among the applying firms and consequently results to demand for advisory offices and certification bodies.

The QMS adoption was still more supported by the subsidies for small enterprises (max. 39 employee) supplied by The Prague Economic Chamber in the region of Czech capital city. The maximal subsidy was up to 100 000 CZK and was available from June 2006 to May 2008.

Methodology

The comparative method was used. The all relevant participants interested in ISO 9001 or QMS building were structurally interviewed and their replies were confronted. The relevant participants were: firms with implemented QMS, the advisors, the certification bodies’ representatives; the national accreditation body representative and the standard text translator to the Czech language. All the interviews were done during 2009 year. The used questions were formulated according to overall insight to the QMS theory. The overall insight was obtained by literature review both about ISO 9001 in scientific articles and about in specific situation in the Czech Republic. In the first line the firms were interviewed, consequently the certification bodies, advisors and last interviewed was national accreditation body representative. This consequence was chosen to obtain maximum of various information at the beginning and gain the evidence to confront certification bodies, advisory offices and national accreditation body representatives. The translator of original English written Standard to the Czech language was interviewed when the poor quality of translation occurred as important factor for firms.

The initial contact with all respondents was done by email or phone. The questions have been sent before the interview. The interviews were recorded and summary written during the speech. All respondents agreed with recording.

sample of firms construction

The survey was conducted in small firms concerned of electrical equipment production or services. The number of interviewed firms was not strictly given from the beginning. This type of firms was chosen because of large QMS penetration in this type of production. The firms’ representatives (quality managers or directors) were structurally interviewed about reasons to adopt QMS, the perceived usefulness and the willingness to keep QMS. Since the 15th interview the replies have been almost identical. This trend remained in ten consequent interviews and therefore the interviews were stopped after 25th one. The firm sample was constructed respecting these criteria:

* The Czech firms without any foreign owner participation were only involved.
* The experience with QMS was long enough to go through at least two witness audits by certification body.
* All inspected firms produced electrical equipment or connected services.
* The employees head count varied from 10 to 100 people.

sample of certification bodies construction

The three established certification bodies (Lloyd’s Register, Quality Assurance, Moody’s International a Czech ship and industrial register) were interviewed. Two of them are international organization which was not accredited by Czech national accreditation authority. This distribution allowed to compare point of view from various type of certification body.

sample of advisory offices construction

Two advisory offices were interviewed. The first advisory office (Easy ISO) was one-man company with motto “ISO which does not disturb you”. This advisory promised its customers to obtain certification without any added administrative. The second advisory office was established (TES Praha). The two antipodal advisory offices was chosen in order to compare their point of view.

Results

The questions and the corresponding replies are summarized at the tables below:

**Table 2: Why did you adopt QMS based on ISO 9001 standard? (source: author)**

|  |  |
| --- | --- |
| the important customer task | 14 |
| the Public Tender Act No. 137/2006 Sb. | 8 |
| the better management of the internal processes | 2 |
| the quality improvement | 1 |
| the firm image\* (one respondent claimed two reasons) | 1 |

**Table 3: Why did you choose the certification body? (source: author)**

|  |  |
| --- | --- |
| according to certification b. image | 9 |
| according to cert. b. specialization  | 7 |
| according to advisory recommendation | 6 |
| locality | 3 |

**Table 4: Did you understand the Czech translation of ISO 9001 Standard? (source: author)**

|  |  |
| --- | --- |
| incomprehensible | 12 |
| hardly to understand | 7 |
| comprehensible without problems | 6 |

**Table 5: Would you maintain the QMS if it would not be required by Act? (source: author)**

|  |  |
| --- | --- |
| only the useful parts of QMS would be maintened | 9 |
| whole QMS would be maintened including the certification | 6 |
| any part of QMS would be maintened | 6 |
| whole QMS would be maintened excluding the certification | 4 |

The interviews interpretation

The main reason (56%) to build QMS was the requirement of important customer – see the Table 2. The second most frequent reason (32%) was the Public Tender Act. The rest reasons totally represent residual 12%. It implicates that 88% of respondents were forced to QMS adoption by external motivation. This result was confirmed by all certification body representatives. They admitted that firms built QMS due to internal motivation till 2002 year. Since 2003 year the market is saturated and certificated QMS is not competitive advantage any more. Actually the certificates failed as basement for establishing the confidence between firm and its customers. The certification body representatives estimated the portion of pro forma certification up to 80% of small firms. The interviewed advisors confirmed external motivation as dominant factor.

The 48% respondents find the Czech translation of Standard text incomprehensible and 28% find it to be comprehensible with difficulties – see the Table 4. The low comprehensibility of Czech standard translation was confirmed by certification bodies’ representatives. The only text of the standard without any supporting explanation is not sufficient information to build QMS successfully. The user needs to read relevant handbooks and textbooks in addition. The advisors confirm low understandability of Czech translation. In their opinion it is hard to explain abstract standard requirements into the specific factual parts of QMS. One advisory admitted honestly that poor translation is reason for advisory offices existence.

The translator from Czech institute for normalization (This former independent organization was fused with Institute for technical normalization, metrology and state validation in 2009 year.) explained that original English text was translated respecting the rule 1:1. It means each word in Czech version must correspond to one word in English original. This rule was used because of certification and advisory lobby. It has not any relevance in translation theory. Any texts are not translated 1:1 because it results to the chaos.

**The main findings of interviews in 2009 year**

* The motivation to adopt QMS in researched firms was mostly external
* The certificate is not seen as reliable
* The high number of certification bodies with various level of demands contributed to low reliability of certificates
* The text of the standard Czech translation is hardly to understand

The review in the 2017 year

The survey about QMS maintenance was done in the same firms in 2017 year. The Public Tender Act was modified and the § 56 Technical qualification expectations paragraph 4 was suddenly inactivated in April 2012. The external motivation to keep QMS disappeared. The QMS certificate is valid for 3 years. It means all certificates from 2012 year got invalid at least in 2015 if the firm did not want to keep the QMS to be certified.

The three of investigated firms do not exist more. Surprisingly the 14 (56%) of remained firms maintained certified QMS. This is significantly more than 6 (24%) firms, which were decided to keep QMS in 2009 year – see the Table 5. The firms representative claimed in 2017 that QMS contributed to more effective internal processes and it is worthy to meet whole standard requirements including certification. The demands of certification bodies did not get lower since the Public Tender Act is not valid.

Conclusion and discussion

The QMS based on ISO 9001 Standard was adopted in most (88%) explored firms because of external reasons. The Czech translation of the Standard was hardly to understand. The QMS certificate was not seen as label of reliability. The lot of certification bodies with very unequal approach contributed to low goodwill of certification. According to managerial theory these conditions created the worst motivation to adopt and keep QMS. In the year 2009 only 24% firms were decided to keep QMS including certification regardless the external motivation. The consequent review done at same firms after 8 years showed that QMS including certification remained in 56% of investigated firms. The standard’s requirements were found as reasonable and QMS as useful for firm internal needs. It implicates that QMS based on ISO 9001 needed several years to be adjusted for firm needs and after that adjustment process is perceived as useful and necessary.

Some respondents claimed that ISO 9001 should not be called a “standard” because does not contain any characteristics of the products which must be met. In the Czech Republic the document called „standard“ used to be list of parameters which must be fulfilled by the object of the standard. These standards belonged to the Czech state norms family (ČSN) and covered most fileds of industry production and services.

In the author‘s opinion this practice should be respected and ISO 9001 should be in the Czech language called „guideline“ instead of „standard“. This is one of the many mistakes done by translator. It is embarassing that translation of quality standard is so poor quality. It was one of the most important reason to refuse ISO 9001 standard by users. The responsible persons from national accreditation body and Czech institute for normalization knew this fact very well.

The research result indicates that other standards based on *cycle plan-do-check-act* made by ISO without any required parameters for products (e.g. ISO 14 001; ISO 27001 ISO 50 0001) could be useful in the Czech Republic despite lot of them are adopted by enforced users driven by external motivation.

The external forces to maintain any management system based on standards above don’t ensure that users adopt these standards by correct way and obtain promised benefits. Only result will be lot of unreliable certificates revealed by the unreliable certification bodies.

The poor text translation is essential problem. The users’ disability to build quality management system without advisories results to existence of may advisory offices with unequal level of services.

The right way to spread ISO standards is to translate them correctly to the Czech language and let the users to adopt them according their own needs.

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