# The Study of Quality Certification System of Lithuania

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*This article analyses the quality certification, standardization, market and technical barriers to trade relations problems. Certification system and quality management tools development in Lithuania and international context are also analysed. It gives a study of the processes in place designed to normalise international standards, technical regulations and rules in the light of current global economic conditions. The models of Market, standardization and certification relations, Standardization space and typology and National quality certification system are presented in the article. The resultant generalisations and suggestions have been made based on the author's research of Lithuanian enterprises.*

*Worldwide economic globalisation processes and the development of international trade have necessitated rapid quality internationalisation processes, as they are crucial in defining the quality of a product or company. These processes mean that more countries are keeping to unified standards and technical regulations, quality and environmental management systems, quality satisfaction evaluation and certification procedures. With their help, it is hoped that not only will the quality of goods and services be assured on an international scale, but that their implementation will lead to the elimination of technical barriers to trade. The main task of this article is to analyze and systemize quality certification, standardization, regulation tools that are used in the Lithuania and international trade, and to present the providence of the more effective usage of them.*

*Technical barriers to international trade are becoming increasingly pervasive because there is a lot of variance in how these technical rules are applied in manufacturing and agriculture, where, in order to guarantee the production of pure and healthy food products, many countries have come up with especially strict and restrictive rules. Given the existing complicated and non-uniform rules, their systematisation is very difficult to achieve. The author suggests technical barriers to trade be divided into five groups.*

*The certification system of Lithuania involves products, organizations and employees conformity assessment. Apart from "traditional" quality (ISO 9001) and environment (ISO 14001) management systems Lithuanian companies use other systems – ISO 22000, ISO/IEC 20000 GMP, ISO/IEC 17021:2006, ISO/TS 16949, ISO/IEC 27001, CMMI, BRC Global Standard, etc. Vehicle technical inspection and jewellery quality hallmarking performed by Lithuanian Assay Office are also a part of product certification activity. It must be highlighted that enterprises in Lithuania do not certify their products to the conformity of EU quality mark (Key Mark) requirements and not develop environmental management system EMAS yet.*

*Nowadays quality management systems (QMS) are implemented no only in business enterprises, but also in hospitals, high education institutions, police departments, city municipalities and other public sector institutions of Lithuania. Although the amount of organizations that use quality management systems ISO 9001 is rising in Lithuania still there are some problems to be solved. However quantitative evaluation of noted indicator is not very informative. That is why the author uses the relative index – the number of ISO 9001 certificates per 1000 citizen for better comparison. According to this index in the number of QMS certificates Lithuania wins behind against the USA, China and India, however signally falls against other new European Union countries. To reach the EU average of this index, Lithuania has to have more than 2000 certificated QMS. Thus, business organizations and state governmental institutions have every reason for the concern. The author provides recommendations for the development of the effective QMS, to improve all certification system of country and introduce the providences of quality management science development.*

Keywords: *certification, market, model, quality, quality management system, standardization, technical barrier.*

## Introduction

The globalisation of world economy together with the expansion of international trade has lead to the fast processes of quality internationalization, as a crucial element of companies' competitiveness. These processes appear by wider application of the same methods, principles and criteria while determining quality policy, creating international accreditation, notification and quality certification systems in various countries (Calabro, 2007; Integrated, 2001; Vogel, 2003). Therefore, not occasionally the strategy of the Lithuanian export growth together with the national quality program give a special attention to the development of product quality assurance systems as well as to promotion of the certification of products and quality systems (Ruževičius, 2007d; 2007f).

During these processes overall standards, technical regulations, quality management systems, procedures of quality conformity evaluation and certification are being widely used in different countries. They are being used to help both to insure the product and services quality and to eliminate technical barriers in trade. The European Union

created effective cures for barriers in fluent movement of products. In this case the special place is taken by *New* and *Global approaches* of the product quality regulation (EU, 1997; The added, 1997; Export, 1999). Their main requirements limit governmental interference in quality of companies. Only those ranges, where self-regulation influence of market is not enough, and companies have possibilities to choose the optimal solution, are being left. These aspects are not enough studied in the scientific works. The *main task* of this article is to systemize quality certification, standardization, regulation tools that are used in Lithuania and in the world for international trade and business, and to present the providence of the more effective usage of them. *Methodology* – this article was prepared using scientific, normative and legal literature as well as generalizations and a logical analysis of economic activity, inclusive of theoretical and methodological affirmations and systematized business practice, with results taken from the author's systematic research on problems in quality. The resultant generalisations and suggestions have been made based on the author's research of Lithuanian enterprises (Ruževičius, 2003; 2004; 2007d; 2007e).

## Technical barriers to trade in the context of quality standardization and certification

The protection of new industries or even the whole economy of a country, from competition in world markets by imposing restrictions on national markets and free trade was, for some time, a universally accepted practice. There are two types of trade restrictions: traditional barriers – such as tariffs and quotas and secondly, in the more economically developed countries, technical barriers. The appearance of some of these restrictions was in response to safeguarding the health and interests of citizens, and this often varied between countries. However, some technical barriers were created for the sole purpose of stopping competitive products from other countries appearing in local markets. Typical barriers such as quotas and tariffs are comparatively easily removed, and this was gradually achieved by the efforts of the World Trade Organisation (WTO). Technical barriers are technical regulations, provisions, rules, quality standards and local laws that vary depending on the country that sets them and restricts the free circulation of goods (EU, 1997; Ruževičius, 2007c). Individual countries may set technical rules in order to protect their national and public interests.

Technical barriers are becoming increasingly pervasive because there is a lot of variance in how these technical rules are applied in manufacturing and agriculture, where, in order to guarantee the production of pure and healthy food products, many countries have come up with especially strict and restrictive rules. Given the existing complicated and non-uniform rules, their systematisation is very difficult to achieve. The author suggests technical barriers to trade be divided into five groups concerning:

1) differences in technical regulations related to product quality indicators (e.g. mass, form, size, etc...);

2) the regulation of indicators of goods' functional operation features;

3) the labelling content of goods, model titles, product packaging and presentation;

4) the technical and compositional attributes of a product, necessary for permitting its use in a certain country (e.g. food additives, hazardous material norms);

5) corroborative certification indicating product quality or a company's management system requirements.

A technical barrier often met with in recent times is the need to re-check quality certificates that are issued yet unrecognised by the country of export – does the product concerned actually meet the standards of the importing country. The last technical barrier to trade concerns specific quality requirements, as strict quality standards set by the country importing the goods may pose problems for foreign businesspeople wishing to bring in these goods. In other words, the "centre of gravity" of technical barriers themselves has shifted over the last few years: where earlier restrictions concentrated on product quality factors and indicators, these days more attention is given to quality restrictions on product manufacturing systems, its quality, environmental and other tools (Green, 2001; Marijano, 2001; Getting, 2004; Zutshi, 2004; Rios, 2006).

The effects of technical barriers to trade in global business mentioned above are being minimised with the endorsement of international agreements, while in the European Economic Area (EEA), this issue is being resolved in several ways (EU, 2004; Ruževičius, 2007c):

- *mutual agreements on inconsistent quality requirements* (excepting those that are deemed harmful to health, safety, the environment)
- *new trade restrictions prevention* (new technical regulations and standards should not create new trade barriers)
- *technical consistency* (technical laws guarantee that all products made and sold in the EEA meet the same technical requirements)
- *mutual product quality agreements* (once suitable consistent standards are implemented, it is expected that manufacturers will follow the set guidelines regulating product quality)

Quality internationalisation processes are being driven by increasingly closer-knit co-operation between the WTO and international standardisation and certification institutions. The WTO has adopted the *Code of good practice for the preparation, adoption and application of standards* that links standardisation to trade technical regulation. The quality certification, standardization and market relations are generalized in Figure 1.

Standards are the most widely accepted means of quality regulation applied in international trade. Standardization area, levels and typology are generalized in Figure 2. Standards are represented at four levels – international, regional, national and organisational. The WTO strongly insists that countries and businesses follow international standards, in particular those set by the International Organization for Standardization (ISO), as this is one of the most effective ways of minimising technical barriers to trade on a global scale. Economical aspects of standardization are very important for the development of state economy. Standards are the assumption of international economic collaboration and the world trade. Standardisation technologies and other advantages mentioned above are well understood by a manufacturing staff, however, while discussing with

leaders of companies the economical benefit of standards is understood best.

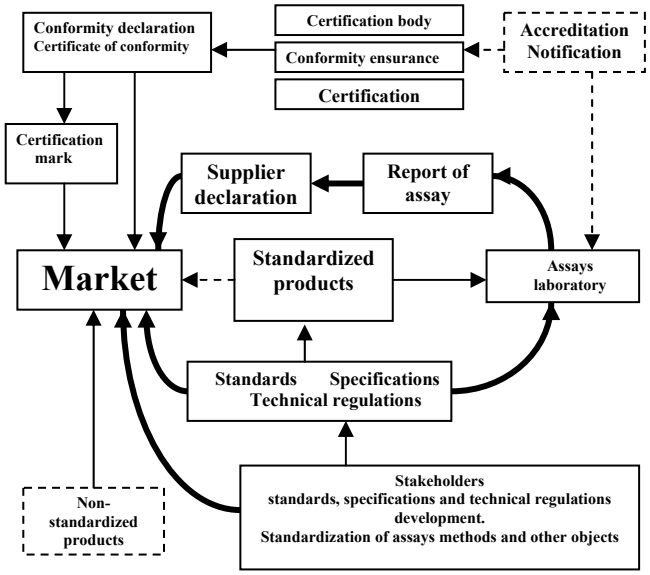


**Figure 1**. Model of standardization, certification and market relations (*designed by the author*)

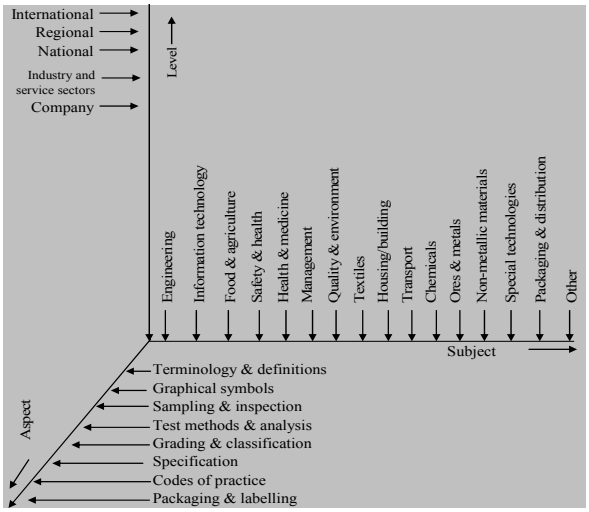


**Figure 2.** The standardization space and typology …….(*source: Verman, 1997; Ruževičius, 2007b*)

The National standardisation organization of Germany (DIN) and the Ministry of economic affairs and technology of Germany (BMWi) has published such results of the research called "Economic benefit of standardization":

- standardization raises Germany's gross domestic product (GDP) by 16 billion Euros per year;
- standardization causes 1/3 overall country's economical growth;
- standards bring bigger economical growth than patents and licences;
- companies that take part in standardization processes gain an advantage over competitors because of easier adaptation to market needs and new technologies, also the research risk and expansion expenses of these companies are being lowered (Economic…, 2005).

Researches made in Great Britain show, that standardization activity in this country causes about 3.6 billion of surplus value per year. On the other hand, expenses of commercial transactions are significantly lower, when organization uses international and European standards in its activity (Ruževičius, 2007b).

## Review of certification system of Lithuania

The certification system of our country is generalized in Figure 3. This system involves products, organizations and employees voluntary and mandatory conformity assessment. It could be mentioned a few types of certification: of quality (e.g., ISO 9001, Key Mark), environmental (e.g., ISO 14001, EMAS, eco-labelling), security and other requirements certification (e.g., OHSAS, HACCP).

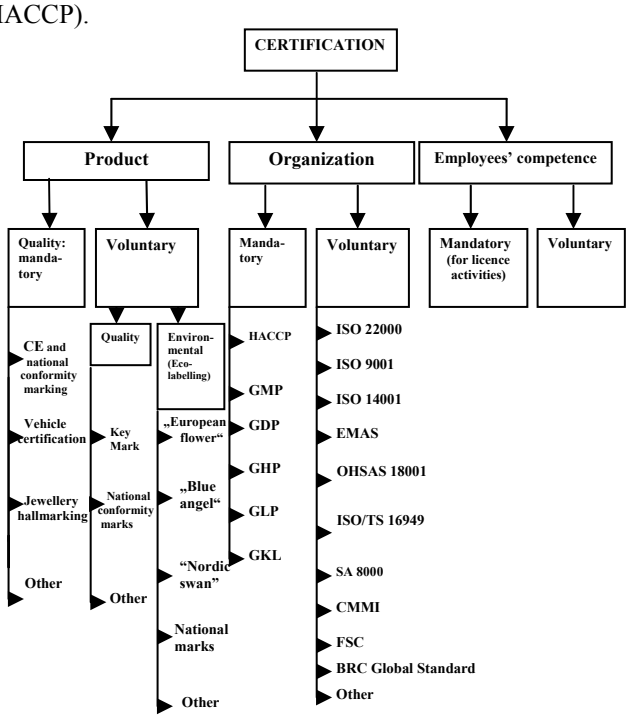


**Figure 3**. Quality certification system of Lithuania (*designed by the author*)

Apart from "traditional" quality (ISO 9001) and environment (ISO 14001) management systems Lithuanian companies use the new systems – ISO 22000 (food industry chain quality management), ISO/IEC 20000 (IT service management system), GMP (*Good Manufacturing Practice*), FSC (*Forest Stewardship Council*; forest management and and wood processors certification), ISO/IEC 17021:2006 (requirements for bodies providing audit and certification of management systems), ISO 13485 (for medical devices), SA 8000 (*Social accountability*), OHSAS (*Occupational Health and Safety Management System*), ISO/TS 16949, ISO/IEC 27001, CMMI, BRC Global Standard, etc. (Fig.3). ISO/TS 16949 system includes quality model requirements QS 9000 (USA), EAQF (France), VDA6.1 (Germany) and AVSQ (Italy) for the automotive sector (car and car accessories). ISO/IEC 27001 gives recommendation for information security management. This document is a Code of Practice and certification standard, based on the information security practices of blue chip organizations. CMMI (*Capability Maturity Model Integration*) is a process improvement approach that provides enterprise (commonly

software and IT organizations) with the essentials elements of effective processes. This system provides 5 levels of processes management maturity. For the meantime only one organization in Lithuania (IT enterprise "Alna Software") have got "CMM Level 2" certificate.

In 1998 Great Britain retailer consortium prepared foodstuff standards that are being used for foodstuff producers and providers certification. That is why organizations of our country that provide products mentioned above to some regions and trade networks are forced to use BRC Global Standards. They include 4 aspects of quality standard assurance:

- HACCP system (Hazard Analysis Critical Control Points) requirements;
- general quality management;
- environment control assurance in companies;
- management of products and processes.

DS 3027 quality assurance model is the same like ISO 22000 and integrates and details HACCP system requirements.

Vehicle technical inspection and jewellery quality hallmarking (assessment of fineness of the precious metal alloys, evaluation of fineness of gems) performed by Lithuanian Assay Office (LAO) are also a part of product certification activities (Fig.3). LAO is the member of the Convention on the Control and Marking of Articles of Precious Metals (Vienna Convention). The author suggests for Lithuanian Assay Office to participate actively while signing interstate agreements for mutual articles'quality conformity appraisal recognition. It is necessary to improve the laws that regulate jewellery hallmarking. Because of the deficiency of the laws, Lithuanian businessmen are forced to certificate some of their jewellery articles in Poland. The implementation of the suggested means would improve the quality-price intercourse (integral quality index) of these products and would shorten the term of their added value, which does not create any circulation.

SA 8000, OHSAS 18001, ISO 14001 and EMAS systems and product eco-labelling there are not only environmental but also socially responsible business attributes (Vogel, 2003; Steen, 2005; Ruževičius, 2007e)**.** It must be highlighted that enterprises in Lithuania do not develop environmental management system EMAS yet. The earlier mentioned quality and environmental management tools are not the object of particular study and wider presentation in this article.

Unfortunately, enterprises of Lithuania do not certify their products to the conformity of EU quality mark requirements yet. The *Key Mark* is a general voluntary mark, developed by the European Committee for Standardisation (CEN). The Key Mark is the pan-European voluntary third-party certification mark, demonstrating to users and consumers that a product is in conformity with the relevant European standard. The Key Mark can also be used for services. The Key Mark can help to choose between products conforming to the legally required minimum characteristics in the EEA, and products conforming to the complete European and products conforming to the complete European Standard. The Key Mark is really a quality certification mark, addresses users and consumers. By author's opinion, national products Key Mark certification needs support of government institutions of our country. *CE* marking is an indication that the product should be in conformity to the provisions of all applicable European Directives. CE mark reflects only one aspect of quality – the products' security. CE marking is mandatory and addresses the responsible market surveillance authorities.

## Quality management system (QMS) development and its implementation problems

One of the most important phenomena of quality management development and internationalization is the creation of quality management system standardized models, the systematic development of them and usage in business and other spheres. The content of the models of quality systems ISO 9001 has drastically changed during the past 15 years. In the model version of 1987, the main emphasis and measures of the quality ensuring activity "shifted" from technological operations control and production management to the management of processes. The innovation of the improved ISO 9001:1994 model is the main emphasis placed upon preventive measures of quality nonconformity with the standard. New challenges related to changes in market conditions brought the currently operating model of the quality management system (ISO 9001:2000) still nearer to business needs and total quality management (TQM) concept – the model version of 2000 includes eight TQM principles and a mandatory requirement to create a subsystem for measuring the satisfaction of consumer needs thus considerably enhancing the effectiveness of the system (Casadesus, 2000; Garvin, 2000, Ruževičius 2007a; 2007b).

In Lithuania, the certification of the QMS started in 1995, and at the start of 2008 we had around 800 certified organizations (see Fig. 4). The number of certified QMS in Lithuania increased in the period 2000–2006 about fourfold. The growth of this indicator in Lithuania is much faster than the world average (Frost, 2007; The ISO..., 2004-2007). QMS are implementing no only in business enterprises, but also in hospitals, high educations institutions, police departments, city municipalities and other public sector institutions of Lithuania nowadays.

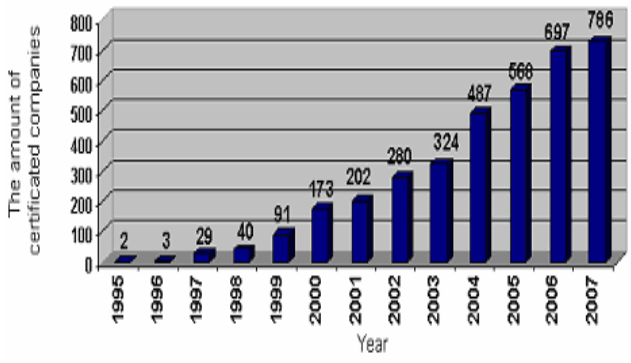


**Figure 4**. Development of QMS (ISO 9001) in Lithuania by the number of certified enterprises, end of period
*(source: Ruževičius, 2007a; Sertifikuotos, 2008)*

Although the amount of organizations that use quality management systems ISO 9001 is rising in Lithuania still there are some problems to be solved. At the start of 2007, at least 897 866 ISO 9000: 2000 certificates had been issued in 170 countries and economies of the world. At this time the most amount of certificated QMS was boasted by China (162 259 companies), Italy (105 799), Japan (80 518), Spain (57 552), Germany (46 458) and USA (44 883) (The ISO, 2007). But the estimation by absolute variable is not informative enough. Therefore, for a more objective comparison, author use a relative indicator – the number of ISO 9001 certificates per 1000 of the population (see Fig. 5 and 6). According to this indicator, the highest ranking countries in the world are Italy (1.69 certificate per 1000 population), Hungary (1.55 certificate), the Czech republic (1.24 certificate) and Spain (1.17 certificate).

By the number of the QMS certificates per 1000 of the population Lithuania surpasses the USA, China and India, but considerably lags behind other new EU countries (see Fig. 6). In 2005, in Lithuania this indicator was 0.16, whereas the average of the EU-27 countries – 0.57, i.e. about four times higher. In order to achieve the EU average for the mentioned indicator, Lithuania should have more than 2000 of certified QMSs. If the tempo of the QMSs implementation growth in Lithuania remains the same, our country could reach the current EU average of this indicator only in 2027 (Ruževičius, 2007d). Thus, business organizations and state governmental institutions have every reason for concern.

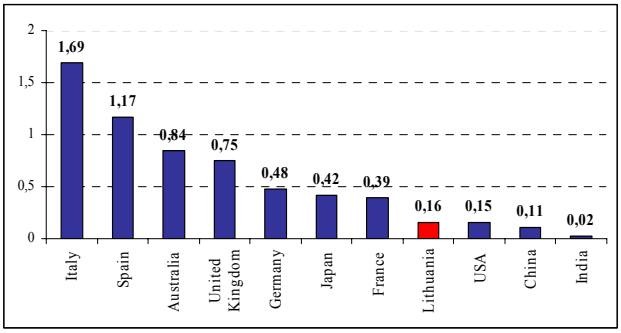


**Figure 5**. Number of certified QMSs per 1000 of the population by country, with the pargest amount of certificates in the world and Lithuania in 2005 (*source: Ruževičius, 2007(d); The ISO..., 2004-2007*)

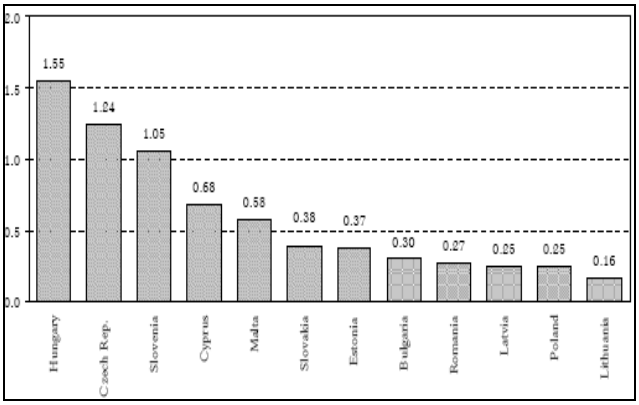


**Figure 6.** Number of certified QMSs per 1000 of the population by new EU countries in 2005 (*source: Ruževičius, 2007(d); The ISO, 2004-2007)*

The study revealed the areas of the quality management systems that need improvement. The author highlights the most important two of them – absence of the workable subsystem that could measure the satisfaction of the customers' needs and their loyalty and lack of appropriate methodology of calculations of QMSs costs and for their effectiveness evaluation.

The author provides some recommendations for the development of the effective quality management system:

- it takes time for the new culture of the quality system to spread through the entire enterprise and to change the established work culture. The institutionalization of changes is a consciously monitored process that calls for preparation and skills;
- leadership – one of the most important and responsible areas of the quality management system development activity – should be entrusted to persons competent in the quality management area. Leadership principles should be provided for by strategic planning at the top organizational authority level;
- without a clear strategic direction and conception of the genuine objective of the quality system, quality implementation attempts will not warrant the benefit that the quality system yields;
- objectives and probable results of the quality system should be set individually for each enterprise after much research and strategic considerations have been performed and after a general consensus on the vision-ideal of the quality system that the enterprise should aspire to be reached;
- an indispensable condition in order to reach the highest efficiency of the quality management system is not to modify and adapt the idealized vision to the current situation and various possible restrictions with the aim of optimally approaching the idealized result;
- work, related to the development or changing of the organization structure and quality culture in implementing the quality system, is of utmost importance, constitutes about half of the system development work and guarantees up to 70 per cent of the effectiveness of this innovative activity.

## Conclusions

Lithuanian organizations use various activity and product quality and environmental certification systems that increase enterprises' competitiveness and image and also stimulate and facilitate the international trade. The certification system of Lithuania involves products, organizations and employees conformity assessment. Vehicle technical inspection and jewellery quality hallmarking are also a part of product certification activity. It must be highlighted that enterprises in Lithuania do not certify their products to the conformity of EU quality mark (Key Mark) requirements and not develop environmental management system EMAS yet.

The growth of number of certified QMS in Lithuania is much faster than the world average in the period 2000–2006. QMS are implemented no only in business enterprises, but also in hospitals, high educations institutions, police departments, city municipalities and other public sector institutions of Lithuania nowadays.

Although the amount of organizations that use quality management systems ISO 9001 is rising in Lithuania still there are some problems to be solved. By the number of the QMS certificates per 1000 of the population Lithuania surpasses the USA, China and India, but considerably lags behind other new EU countries. In order to achieve the EU average for the mentioned indicator, Lithuania should have more than 2000 of certified QMSs. It is relevant to create the rigorous methodology of calculation of QMSs costs and for their effectiveness evaluation. Thus, business organizations and state governmental institutions have every reason for concern.

It is advisable to make a correction in Lithuanian public procurement laws validating the possession of environmental management (ISO 14001 or EMAS), quality management (ISO 9001, ISO 22000 etc.), social responsibility (SA 8000), employee safety and health management (OHSAS 18001) systems, product quality and environmental certificates as a competitive advantage of companies participating in purchase mentioned above. It is necessary also to improve the laws that regulate jewellery hallmarking.

The author gives such possible *quality* management development insights to quality scientists, consultants and quality practicing:

- development of the rigorous methodology of calculation of QMSs and other management systems' design, implementation and maintenance costs and of their effectiveness evaluation;
- evaluation of the efficiency and influence of standardization, QMSs, environmental management systems and eco-labeling tools on company's added value and country's gross domestic product;
- evaluation of real and comparable value of management systems certificates, delivered by different conformity assessment institutions;
- development of methodology for intellectual products' quality evaluation;
- studies of emotional quality content, evaluation and measurement.

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Juozas Ruževičius


**Lietuvos kokybės sertifikavimo sistemos analizė**


Santrauka

Šio straipsnio tikslas – identifikuoti kokybės ir aplinkosaugos vadybos priemonių bei jų sertifikavimo ir standartizavimo tipologiją, susisteminti tarptautinėje prekyboje ir versle taikomas kokybės atitikties laidavimo ir užtikrinimo priemones, išanalizuoti jų diegimo raidą Lietuvoje ir tarptautiniame kontekste bei suformuluoti veiksmingesnio jų taikymo įžvalgas. Straipsnis parengtas naudojant mokslinės, normatyvinės ir teisinės literatūros bei ekonominės veiklos loginę analizę ir apibendrinimus, apimančius teorinių, metodologinių teiginių ir verslo praktikos veiksmų sisteminimą bei remiantis autoriaus atliktų kokybės problemų sisteminių tyrimų rezultatais.

Straipsnyje analizuojami pasaulio ekonomikos ir įvairių veiklos sričių globalizacijos bei internacionalizacijos procesų veikiami organizacijų veiklos kokybės užtikrinimo priemonių diegimo plėtros ir raidos pokyčiai bei jų įtaka konkurencingumui. Atskleidžiami kokybės vadybos sistemų (KVS) ir kitų priemonių diegimo raidos mūsų šalyje ir tarptautiniame kontekste ypatumai ir probleminės sritys. Pateikiami produktų standartizavimo, sertifikavimo ir rinkos sąveikos, standartizavimo erdvės ir tipologijos bei Lietuvos sertifikavimo sistemos autentiški modeliai; pristatomos kokybės vadybos plėtotės ir vadybos priemonių veiksmingesnio taikymo įžvalgos.

Pasaulio ekonomikos globalizacijos procesai ir tarptautinės prekybos plėtojimas sąlygoja sparčius kokybės, kaip esminio firmų ir jų produktų konkurencingumo elemento, internacionalizavimo procesus. Jų metu įvairiose šalyse vis plačiau naudojami bendri, standartai, techniniai reglamentai, kokybės ir aplinkosaugos vadybos sistemos, kokybės atitikties įvertinimo ir sertifikavimo procedūros. Tačiau vis dar išlieka tarptautinę prekybą ribojančių techninių kliūčių. Techninės kliūtys yra

techniniai reglamentai, normos, kokybės standartai ir vietinės taisyklės, kurios įvairiose šalyse skiriasi ir riboja laisvą prekių cirkuliaciją. Šalys gali nustatyti technines taisykles, siekdamos apsaugoti valstybės ir viešuosius interesus. Iš tiesų pagirtina šalių iniciatyva saugoti vartotojų gerovę ir garantuoti saugą, kokybišką aplinką, užtikrinti tausojamąjį gamtos išteklių vartojimą, bet šios taisyklės dažnai naudojamos protekcionistiniais tikslais. Techninių kliūčių išlieka ir dėl didelio skirtingų techninių taisyklių taikymo daugelyje gamybos šakų bei žemės ūkyje, kur, siekdamos užtikrinti švarių ir sveikų maisto produktų gamybą, daugelis šalių išleido griežtas ir ribojančias taisykles. Atsižvelgiant į egzistuojančias sudėtingas ir nevienarūšes taisykles, labai sunku detaliai susisteminti techninių kliūčių įvairovę. Autorius siūlo technines prekybos kliūtis skirstyti į penkias grupes, susijusias su:

1) techniniais produktų kokybės rodiklių reglamentavimo skirtumais (pvz., produkto masė, forma, dydis ir kt.);

2) prekių funkcinių eksploatacinių savybių rodiklių reglamentavimu;

3) prekių ženklinimo turinio, modelių pavadinimų, pakuotės bei pristatymo ypatumais;

4) techninėmis ir sudėties savybėmis, būtinomis produktui naudoti tam tikroje šalyje (pvz., leidžiami naudoti maisto priedai, kenksmingų medžiagų normos ir kt.);

5) reikalavimais turėti specifinius produktų kokybę ar įmonės vadybos sistemą patvirtinančius sertifikatus.

Labai svarbūs šalies ūkio raidai yra standartizacijos ekonominiai aspektai. Jos erdvė, lygmenys ir tipologija apibendrinta straipsnyje pristatomame modelyje.

Standartai – tai tarptautinio ekonominio bendradarbiavimo ir pasaulinės prekybos prielaida. Kita vertus, komercinių sandorių kaštai kur kas žemesni, kai organizacija savo veikloje remiasi ir naudoja tarptautinius ir Europos standartus. Beje, standartizacijos ekonominis veiksmingumas dar nėra sistemingai nagrinėjamas Lietuvoje. Techniniai standartai, metrologija ir atitikties įvertinimo procedūros (įskaitant akreditaciją ir notifikaciją) rinkos priežiūros institucijų, verslo ir visuomeninių organizacijų naudojamos siekiant tinkamai apsvarstyti tokius klausimus kaip gamybos optimizavimas, sveikata, vartotojų apsauga, aplinkosauga, saugumas ir kokybė, atsižvelgiant ir į veiklos rizikos valdymą bei rinkos nesėkmės tikimybę. Stabili šių sričių plėtra ir ją užtikrinančių priemonių įgyvendinimas leidžia palaikyti ir stabilų ekonomikos augimą, didinti visuomenės gerovę bei skatinti tarptautine prekybą.

Mūsų šalies organizacijų, produktų ir darbuotojų sertifikavimo sistema apibendrinta straipsnyje teikiamame modelyje. Be „tradicinių“ kokybės (ISO 9001) ir aplinkosaugos (ISO 14001) vadybos sistemų Lietuvos įmonės diegia ir kitas sistemas – ISO 22000, BRC Global Standard, DS 3027 ir RVASVT (maisto saugos užtikrinimas), ISO/IEC 27001 (informacijos saugos vadyba), CMMI (procesų valdymo gebėjimų brandos vertinimo modelis), SA 8000 (organizacijų socialinis atsakingumas), OHSAS 18001 (darbuotojų sveikatos ir saugos valdymas) ir kt. Šalies sertifikavimo sistema apima ir transporto priemonių techninės būklės kontrolę bei juvelyrinių dirbinių prabavimą. Beje, Lietuvoje kol kas nėra įdiegtų EMAS aplinkosaugos vadybos sistemų ir Europos Sąjungos kokybės ženklo *Key Mark* (liet. „Rakto ženklas“) atitikčiai sertifikuotų nacionalinių produktų.

Vienu svarbiausių kokybės vadybos raidos ir internacionalizavimo fenomenų laikytinas kokybės vadybos standartizuotų modelių kūrimas, sistemingas jų tobulinimas ir taikymas verslo ir kitose srityse. Šiuo metu KVS diegiamos ne tik verslo įmonėse, bet ir mokymo institucijose, ligoninėse, savivaldybėse, policijos departamentuose ir kitose viešojo sektoriaus organizacijose. Nors diegiančių kokybės vadybos sistemas ISO 9001 organizacijų Lietuvoje sparčiai daugėja (2008 m. pradžioje turėjome 786 sertifikuotas įmones – apie 1 proc. visų šalies organizacijų), tačiau spręstinų problemų dar esama. 2007 m. pradžioje pasaulyje daugiausia sertifikuotų KVS turėjo Kinija, Italija, Japonija, Ispanija, Vokietija ir JAV. Tačiau vertinimas absoliučiu dydžiu nėra pakankamai informatyvus. Todėl objektyvesniam palyginimui šio straipsnio autorius naudoja santykinį rodiklį – ISO 9001 sertifikatų skaičių, tenkantį 1000 šalies gyventojų. Pagal šį rodiklį pasaulyje pirmauja Italija (1,69 sertifikatų 1000 gyv.), Vengrija (1,55), Čekija (1,24) ir Ispanija (1,17). Pagal KVS sertifikatų kiekį, tenkantį 1000 gyventojų, Lietuva lenkia JAV, Kiniją ir Indiją, tačiau ženkliai atsilieka nuo kitų ES šalių. 2005 m. Lietuvoje šis rodiklis buvo 0,16, tuo tarpu ES 27 šalių vidurkis – 0,57, t.y. apie 4 kartus aukštesnis. Norint pasiekti minėto rodiklio ES vidurkį, Lietuva turėtų turėti daugiau kaip 2000 sertifikuotų KVS. Taigi yra kuo susirūpinti verslo organizacijoms ir valstybės valdžios institucijoms.

Autorius teikia tokias veiksmingos kokybės vadybos sistemos sukūrimo organizacijoje rekomendacijas:

- reikės laiko, kol nauja kokybės sistemos kultūra paplis po visą įmonę ir pakeis nusistovėjusią darbo kultūrą. Pokyčių institucionalizavimas – sąmoningai valdomas procesas, kuriam reikia pasirengimo ir įgūdžių;
- vadovavimas – viena iš svarbiausių ir atsakingiausių kokybės vadybos sistemos kūrimo veiklos sričių – turi būti patikėta kompetentingiems kokybės vadybos srityje asmenims. Vadovavimo principai turi būti numatyti strateginio planavimo būdu aukščiausiu vadovų lygmeniu;
- kokybės sistemos tikslai ir tikėtini rezultatai turi būti nustatyti individualiai kiekvienai įmonei, atlikus daug tyrimų ir strateginių svarstymų, prieinant bendrą sutarimą dėl kokybės sistemos vizijos – idealo, kurio turi siekti įmonė;
- būtina sąlyga aukščiausiam kokybės vadybos sistemos veiksmingumui pasiekti – idealizuotos vizijos nemodifikavimas ir neadaptavimas pagal esamą situaciją ir įvairius galimus suvaržymus, kad būtų galima optimaliai priartėti prie idealizuoto rezultato;
- diegiant kokybės sistemą itin svarbūs yra organizacinės struktūros ir kokybės kultūros kūrimo ar keitimo darbai, kurie sudaro apie pusę sistemos kūrimo darbų apimties ir laiduoja iki 70 proc. šios inovacinės veiklos veiksmingumo.

Atsižvelgiant į KVS ir aplinkosaugos vadybos priemonių strateginę reikšmę ne tik įmonių veiklos efektyvumui, bet ir visos šalies konkurencingumui bei ekonomikos įvaizdžiui, autoriaus nuomone, organizacijų darbuotojų metodologinių ir praktinių kokybės diegimo įgūdžių spragas galėtų pašalinti specialios švietimo programos, platesnė edukacinė veikla, finansuojama iš darbuotojų kompetencijos ugdymui skiriamų ES fondų lėšų.

Lietuvos kokybės politiką formuojančioms valdžios institucijoms siūloma stiprinti sertifikavimo infrastruktūrą, o šalies viešųjų pirkimų įstatyme tikslinga padaryti pataisą, įteisinančią kaip konkurencinį pranašumą minėtuose pirkimuose dalyvaujančių įmonių aplinkosaugos (ISO 14001 arba EMAS), kokybės vadybos (ISO 9001, ISO 22000), socialinės atsakomybės (SA 8000), darbuotojų saugos ir sveikatos vadybos (OHSAS) sistemų, produktų kokybės sertifikatų turėjimą. Lietuvos prabavimo rūmams, atliekantiems juvelyrinių dirbinių sertifikavimą, siūloma aktyviau dalyvauti pasirašant tarpvalstybines sutartis dėl abipusio gaminių kokybės atitikties įvertinimo pripažinimo. Būtina tobulinti ir juvelyrinių gaminių sertifikavimą reglamentuojančius teisės aktus, nes dėl jų trūkumų Lietuvos verslininkai priversti dalį gaminių prabuoti Lenkijoje. Šių priemonių įgyvendinimas pagerintų minėtų gaminių kokybės ir kainos santykį (integralinį kokybės rodiklį) ir sutrumpintų jų pridėtinės vertės nekuriančios cirkuliacijos trukmę.

Autorius teikia šias kokybės vadybos tyrimų plėtotės galimas įžvalgas, adresuojamas kokybės mokslininkams, konsultantams ir kokybės praktikams:

- KVS ir kitų vadybos priemonių projektavimo, diegimo ir palaikymo išlaidų apskaitos ir jų veiksmingumo įvertinimo metodologijos parengimas;
- standartizavimo, kokybės ir aplinkosaugos priemonių taikymo pridedamosios vertės organizacijose kūrimui bei šalies bendrojo vidaus produkto augimui tyrimai;
- kokybės sistemų sertifikatų, išduodamų skirtingų atitikties laidavimo įstaigų, realios vertės lyginamieji tyrimai;
- intelekto produktų kokybės turinio atskleidimo tyrimai ir vertinimo metodologijos parengimas;
- produktų emocinės kokybės turinio, vertinimo ir matavimo studijos.

Raktažodžiai: *kokybė, kokybės vadybos sistema, modelis, rinka, sertifikavimas, standartizavimas, techninė kliūtis.*

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