

QUALITY: A DETERMINANT FACTOR OF COMPETITIVENESS – THE EVOLUTION OF ISO CERTIFICATIONS FOR MANAGEMENT SYSTEMS

*Cosmin DOBRIN*¹
*Adriana GÎRNEAȚĂ*²
*Mihaela MASCU (UDA)*³
*Oana CROITORU*⁴

ABSTRACT

In the current economy characterized by increased competition, quality represents a fundamental condition for the competitiveness of firms producing goods or providing services at global level. Obtaining competitiveness implies a permanent adaptation of the management processes of the organizations to the market conditions and consumer demands and requires the adoption of a systemic quality control concept, which refers not only to the productive activities, but to all their functional departments. The purpose of this article is to discuss the concept of quality from the perspective of business competitiveness and, furthermore, to examine the evolution of ISO certifications for management systems. The ISO 9000 series are standards based on the idea of continual improvement, that establish the requirements for a quality management system, allowing businesses and organizations to improve their process performance, organizational capabilities and customer satisfaction. The permanent improvement and adaptation of this quality standard to the economic turbulences are the subject of this study. Using methods of qualitative research, this paper analyses the evolution of ISO certifications for management systems worldwide emphasizing on ISO 9001.

The interest shown by organizations to continuous improvement of quality is due to an external threat generated by real or potential market losses caused by poor quality. Therefore, quality is considered a strategic contribution that can not be neglected in order to achieve competitiveness.

KEYWORDS: *competitive advantage, ISO 9000, quality management*

JEL CLASSIFICATION: *L15*

1. INTRODUCTION

The analysis of the global economy highlights certain indisputable defining features: diversification and rapid renewal of products and services under the impact of fast development of science and technology, globalization of markets facilitated by progress in telecommunications or increasing demands of customers and society. Under these conditions, the quality of goods and services represents a determinant of competitiveness for companies. A rising interest in quality assurance issues is manifested at national, regional and international level. The competitiveness of a company is determined mainly by quality and price, or in other words, the relation between these components. Customers have become more aware of their rights and they are in permanent search

¹ Bucharest University of Economic Studies, Romania, cdobrin@yahoo.com

² Bucharest University of Economic Studies, Romania, adriana_girneata@yahoo.com

³ Bucharest University of Economic Studies, Romania, mihaelauda@yahoo.com

⁴ Bucharest University of Economic Studies, Romania, selenaoana@yahoo.com

of quality products and services (Dobrin & Girneata, 2015). Thus, in order for organizations to be globally competitive, they need to promote quality of products and services. The requirements for quality are expressions of needs that equally relate to market demands (implicit), the contractual requirements (explicit), the internal requirements of companies regarding profitability and the requirements of the protection of society and the environment (Goetsch & Davis, 2014). For this reason, quality requirements can take many forms as they relate to performance, reliability, profitability, cost of achieving economic aspects, as well as maintenance and operating costs or environmental protection. Organizations must reconsider their values and the feasibility of their processes (Nica & Potcovaru, 2014) in order to gain or maintain competitiveness at the global level. Quality is a continuous variable in both time and space, what is currently regarded as quality may not meet certain requirements in the future, what is specific on a market segment can be completely refuted elsewhere. Quality of conception, determined by marketing activities and design, defines the extent to which the product design meets quality requirements.

2. LITERATURE REVIEW

Conner (1991) and Porter (1980, 1985) consider that there are two models of competitive advantage, both being complementary and based on the economic theory. The first of these models focuses on the market cost and differentiation. According to this model, inefficient companies, including those that do not offer products for which consumers are willing to pay a premium price are uncovered by the market (Reed et al., 2000). The second model, the one based on resources, is centred on the resources available to a company and it is influenced by internal factors of the firm. It can be ascertained there is a representative number of researches concerning the link between the implementation of total quality management and improving performance of a company (Samson & Terziovski, 1999 Easton & Jarrell, 1998; Lemak et al., 1997). Taking into consideration the theoretical link existing between competitive advantage and performance, it can be stated that quality management practices can be applied by companies in order to gain competitive advantage on the market (Girneata et al., 2015; Curkovic & Pagell, 1999; Hewitt, 1994; Seawright & Young, 1996). The evolution of the main factors of competitiveness indicates that in the first half of the twentieth century, the competitive advantage of companies was represented by lower prices achieved on account of a cheaper workforce. Starting with the 1950s, another factor of competitiveness becomes decisive, namely automated production. In parallel with this, two other factors increase in significance: the company's ability to adapt to market demands and quality products and services, respectively (Juran, 1995).

The economic restructuring process cannot be designed without taking into account the criteria and costs of quality. Considering the consequences of poor quality, it can be stated that "quality is free". The cost of poor quality varies from one firm to another. Practically, non-quality management consists in optimizing the effectiveness of the company by treating the causes of anomalies (Castka et al., 2015). Non-quality expenses can be grouped in two categories:

- A first category represents charges for repairs or, if this is not possible, expenses resulted from rejected products.
- The second category are costs related to the resumption of quality control, further necessary negotiations and delays in delivering the products.

The economic repercussions of poor quality lead to personnel reduction (unemployment) and even to the closure of companies. In the economy of firms, non-quality is expressed in high prices in relation to the competitors, bad reputation on the market; poor knowledge of the market and competition (Johnston & Ozment, (2015). Therefore, the most visible elements generating poor quality are the absence of firm strategy, subjective evaluation of personnel, the lack of delegation of authority or failure to comply with social legislation.

3. RESEARCH METHODOLOGY

This study focuses on emphasizing the necessity of implementing quality standards in organizations, as a prerequisite for increasing competitiveness, based on investigating the relationship between implementing ISO 9001 and the performance of companies in terms of improving quality. Hence, in order to illustrate the evolution of ISO certifications worldwide in the last decade, this research uses data from the International Organization for Standardization database, covering the period 2000-2014. A significant period of time was analysed in which the global economy has undergone significant changes. Data were divided according to the seven main geographical areas of the world, thus obtaining an objective structuring of information. Subsequently, the main ISO standards were analysed, ISO 9001, ISO 14001, ISO 22000 respectively, indicating the first 10 countries that registered the largest number of these standards in 2014.

4. ISO STANDARDS AND THEIR CONTRIBUTION TO ENSURE QUALITY

In order to achieve sustainability, hence to maintain or develop their performance in the long term (Cuc, 2009), companies must permanently seek modalities to improve the quality of products or services they provide. Quality of services, products or management which, in fact, influences the quality of other products or processes of the enterprise, is an important factor in any competitive business on the market. This quality contributes directly or indirectly to increasing turnover, maintaining the market position, conquering new market segments, improving the image of the company or increasing customers and suppliers' confidence in the services and products offered by the company.

Conformity certification (products, systems, personnel) is the action of a third party (certification body) which proves the existence of adequate confidence that an entity properly identified is conforming to a specific standard or other normative documents. "ISO" is the abbreviation of the "International Organization for Standardization". It is headquartered in Geneva and has developed about 10,000 standards of quality for over 50 years, of which the best known is the international standard management system standard ISO 9001 quality.

According to ISO standards, quality is determined by all stages of the product or service (technical and economical circuit), from conception to execution, delivery and service, respectively. ISO standards define non-compliance as failure to satisfy specified requirements and defects are regarded as the failure of products or services to satisfy the requirements for the intended use. Non quality, defined as the sum of all the anomalies of an economic unit, is manifested in various forms within the organizations. Market research shows that customers are willing to pay more to buy a quality product or service. For customers, operational reliability and security remain two key purchasing criteria.

Whether it is a recent or old company, having ISO accreditation is proof of the quality of the company. Such quality certification is an indicator to customers of the quality and reliability of the company and ensures its stability in a volatile market where the element or ISO certification ISO certification is a must. A company may hold more certifications for various ISO standards. A set of ISO certifications obtained by a company, are proof that it is deploying special efforts to function according to high quality standards. The fact that a company holds ISO certification does not simply imply obtaining an internationally recognized certificate, but is the extent to which the company uses certain working practices, it is aware of its obligations relating to its purpose, it complies with customer requirements and it actually represents, a general recommendation based on the organization's processes and performance.

The advantages of product evaluation and certification consist in (Blackman & Rivera, 2011):

- providing confidence for leadership, customers or the authorities that the products satisfy the requirements of safety and quality by providing the opinion of objective and impartial third party certification body;
- analysing the characteristics of the products, particularly those that can influence the health and safety of users in all phases of the product lifecycle (from design to after-sales service);
- continuous improvement of product, as body and procedures apply to schemes which take account of existing legislation and standards;
- identifying weaknesses related to manufacturing and testing by competent and impartial persons;
- optimizing the quality/price ratio, reducing the risk of non-compliances due to regular surveillance quality.

The main ISO standards are the following:

- **ISO 9001** provides requirements for the management system of an organization that aims to demonstrate its ability to consistently provide a product or service under both customer requirements and legal provisions and to increase customer satisfaction through effective application of the system, including improving processes continue (International Organization for Standardization, 2015a). Implementation of ISO 9001 ensures customers of the existence of a constant quality of products and services, entailing numerous benefits for the business, such as: increasing the confidence of customers and suppliers in the products and services, improvement of processes, efficiency, significant cost reduction, increasing competitiveness, maintaining market position and conquering new market niches, increase customer satisfaction, benefits regarding the company image associated with professionalism and high standards (International Organization for Standardization, 2015b).
- **ISO 14000** are general standards that relate to environmental management systems, aimed at keeping under control the impact that business processes have on the environment. The **ISO 14001** standard establishes the framework and criteria that an organization can follow to have an effective environmental management system. It can be implemented in any type of company, regardless of the activity in which it operates. Implementing ISO 14001 ensures the management of the company and employees as well as external stakeholders (shareholders, investors, institutions, authorities) that the impact of the organization on the environment is measured and constantly improved. The advantages of ISO 14001 certification reside in low cost waste management, savings in energy and consumption of materials, reducing raw material costs, lower distribution costs (transport and storage), improving the public image of the company to third parties (authorities, public reviews), increasing customer confidence in the probity supplier, competitive prices due to the amount of waste minimization, optimized use of financial resources, compliance with regulations on environmental protection authorities (International Organization for Standardization, 2015c).
- **ISO 22000** is the food safety management standard. However, through this set of standards, the organization is encouraged to integrate other aspects of the management system, such as quality in general and/or environmental protection. Organizations that want to take into account such matters can do it through the full implementation of ISO 22000 to ISO 9001 and / or ISO 14001. ISO 22000 identifies, evaluates and controls all physical, chemical or biological hazards arising from raw materials, premises, environment, personnel, equipment or production processes (<https://www.iso.org/obp/ui/#iso:std:iso:22000:ed-1:v1:en>). Through ISO 22000 certification, the organization transmits to all its stakeholders that: the main objective is the safety of the food and compliance with legal requirements regarding food safety, all aspects of the organization (process performance, staff competence, products, services) are continuously improved, it demonstrates ability to control food safety hazards in order to provide safe end products that meet the food safety requirements agreed

by customers and regulators, it has major interests and proposes to improve customer satisfaction through the effective control of food safety hazards.

- **ISO 50001** is the standard for energy management system that can be applied by organizations in all sectors. It provides a framework for commitment to individual actions and aims at continuously reducing specific energy consumption. Contrary to other management systems, it refers to specific technical points, such as continuous data recording energy, screening tests and evaluation of operational energy consumption. Continuous improvement of the organization energy performance is the priority of ISO 50001. The standard describes requirements that the company must meet when introducing, implementing, maintaining and improving an energy management system. This systematic approach is designed to enable organizations to improve the energy performance, to increase energy efficiency and to optimize energy consumption (European Commission, 2013). The main objective of this standard is to reduce costs and emissions of greenhouse and other tasks on the environment.
- **ISO 27001** presents the principles, terms and requirements for information security management systems, defining the requirements for an information security management system and enabling and optimizing the selection of appropriate control measures. This provides the opportunity of protecting all data and information, hence increasing the confidence of collaborators and stakeholders. Using the family of standards ISO 27000 companies may secure their assets, such as financial information, intellectual property, employee details or information entrusted by third parties. ISO 27001 was revised in 2013 and the major improvements made aimed at security checks, in order to assure the maintenance of the timeliness of the standard, capable of facing the current risks such as identity theft, risks related to mobile devices and other online vulnerabilities (<https://www.iso.org/obp/ui/#iso:std:54534:en>). Furthermore, the new version of ISO/IEC 27001:2013 enables easy integration with other management system.
- **ISO 13485** defines requirements for a quality management system for organizations that must demonstrate their ability to provide medical devices and related services which consistently meet customer requirements and the applicable regulatory requirements of medical devices and related services. The main objective of this standard is to facilitate the utilization of harmonized regulatory requirements for medical devices in the context of quality management system (<https://www.iso.org/obp/ui/#iso:std:iso:13485:ed-2:v1:en>). Consequently, it includes some specific requirements for medical devices and excludes some of ISO 9001 that are not suitable as regulatory requirements. Due to these exclusions, firms whose quality management system conforms to ISO 13485 cannot claim conformity to ISO 9001, unless their quality management system complies with all the requirements of ISO 9001.

With the exception of family of standards ISO 9000 and ISO 14000, the vast majority of ISO standards have specific features. They are documented agreements which contain technical specifications or other precise criteria utilized as rules, guidelines or definitions of characteristics necessary to ensure that materials, products or services and processes are suitable for their requirements in application.

Generally, ISO reviews standards every five years to ensure they are maintained relevant to the changes regarding market demands. In 2015, new editions of ISO 9001 and ISO 14001 appeared. ISO 9001, the standard used by organizations worldwide as a framework for quality management system, offers companies in which it is implemented, both the ability to provide customers with products and services that meet their requirements, but also the applicable legal and regulated requirements, as well as the possibility to enhance customer satisfaction simultaneously by taking into account the risks and opportunities associated with the context and objectives of the organization.

4.1. ISO 9000: International Quality Standards

The family of standards ISO 9000 is an international consensus on the management practices necessary to ensure the capability of an organization to meet on time and continuously the customer requirements regarding quality and applicable regulatory requirements in order to increase customer satisfaction and achieve continual improvement of its own performance in meeting these objectives. These best practices have been incorporated into a synthetic set of standardized requirements, representing the standards ISO 9000, concerning quality management system implemented in an organization, regardless of specific size or type of ownership of it. Therefore, ISO 9000 family of standards was developed to help organizations to design, implement and lead effective quality management systems (Terziovski & Guerrero, 2014).

To lead and manage a company successfully, it is essential to direct and control it in a systematic and transparent modality. Success can arise from implementing and maintaining a management system for continuous improvement to include all stakeholders.

According to ISO 9000, eight basic principles of quality management are identified, that must be implemented by top management to lead the organization towards improved performance:

- Focusing on the consumer - organizations depend on consumers and, therefore, they should understand their current and future needs, meet their demands and try to exceed their expectations. For this reason, management must ensure that consumer demands are fully understood, transmitted and recorded properly;
- Leadership - leaders establish unity of direction and purpose of the organization. They must have the ability to create and maintain the internal environment where people can understand, follow and assume the objectives of the organization;
- Involving employees - employees represent the core of the organization and their full implication facilitates that their abilities are used for the benefit the enterprise.
- Process approach - a desired result is achieved in a more efficient modality when related resources and activities are managed as a whole;
- System-based approach to management - identification, understanding and management of interdependent processes like a system contribute to increase efficiency and effectiveness of the organization in achieving its objectives;
- Continual improvement - continual improvement should be a permanent objective for any company;
- Addressing decisions based on facts - the decisions must be based upon data and information analysis;
- Mutually beneficial relationships with suppliers - a company and its suppliers are interdependent, but a relationship reciprocally beneficial increases the ability of all parties to create value.

The sophisticated workflow processes contribute decisively to the quality of products or services. ISO 9001 was developed to provide customers the certification that a company operates in agreement and based on an internationally recognized quality system, representative of both quality products and services, as well as management organization (Biazzo, Bernardi, 2003). Due to its orientation towards process, ISO 9001 certification take into account specific requirements and prospects of the companies (Tricker, 2014). It also ensures continued development using a continuous improvement process. ISO 9001 is one of the factors that favour international trade of goods and services. The proof is the number of countries that have adopted this standard and the hundreds of thousands of companies that have obtained ISO 9001 certification. Counting over 1 million certified organizations worldwide, ISO 9001 standard is the most known management system that has proven effective in over 25 years of existence.

4.2. Evolution of the ISO Standards

Since the first edition of standards related to quality, which aimed to implement controls and improve product quality, particularly in the industrial sectors, to the edition from 2000, then to one in 2008 and to the newest edition in 2015, ISO 9001 has seen developments related to market needs, the reality and the context in which businesses operate. ISO 9001: 2015 has been revised from a technical standpoint to adopt the unification and understanding of high-level structures.

Table 1 presents the evolution of ISO Standards in 2000 - 2014 period. It can be noted that the number of ISO standards has increased almost steadily each year, both globally and in each of the seven areas analysed, indicating the availability of companies to obtain certification and acquire a good reputation in front of customers or business partners. The number of ISO standards has increased from 408,062 in 2000 to 1,138,155 in 2014. Each of the analysed regions recorded at least a doubling of the number of ISO certifications in 2014 compared to 2000, except North America, where the growth was of almost 5%. As a percentage, the highest increase was recorded in Central and South Asia: over 7 times the level of 2000. Based on the number of certificates, the most significant growth was in East Asia and the Pacific, where in 2014 there were issued 366,810 more ISO certifications than in 2000.

Table 1. The evolution of ISO Standards in the period 2000 - 2014

Year	Africa	Central and South America	North America	Europe	East Asia and Pacific	Central and South Asia	Middle East	TOTAL
2000	4769	10805	48296	219561	109217	6411	9003	408062
2001	3903	14409	50894	269648	155597	6348	9550	510349
2002	4529	13679	53806	292878	177767	9383	9724	561766
2003	3769	9303	40185	242455	185846	9162	7199	497919
2004	4865	17016	49962	320748	240938	13856	12747	660132
2005	6763	22498	59663	377172	266100	27966	13681	773843
2006	7441	29382	61436	414208	320320	44923	19195	896905
2007	7446	39354	47600	431479	354056	50379	21172	951486
2008	8534	37458	47896	455303	366491	44171	20469	980322
2009	8435	35549	41947	500286	408498	44432	24604	1063751
2010	7667	49260	36632	530039	438477	37596	18839	1118510
2011	8164	51685	37530	459367	471836	33577	17069	1079228
2012	9674	51459	38586	469739	476106	32373	19050	1096987
2013	9816	52466	48579	482620	467320	44847	20812	1126460
2014	10308	50256	50533	483710	476027	45365	21956	1138155
2014/2000(%)	2.16	4.65	1.05	2.20	4.36	7.08	2.44	2.79
2014/2000	5539	39451	2237	264149	366810	38954	12953	730093

Source: International Standard Organization database (<http://www.iso.org/>) and authors' calculation

The annual growth of ISO 9001 certificates in the period 1994-2014 is graphically presented in **Figure 1**. It has been an inconsistent evolution, as evidenced by the trend line included in the chart. It can be noticed that in 2003 and 2011, the number of ISO 9001 certificates was below the level recorded in the previous years. Also, in the period after the world economic crisis and especially in the last three years, the increases were extremely low.

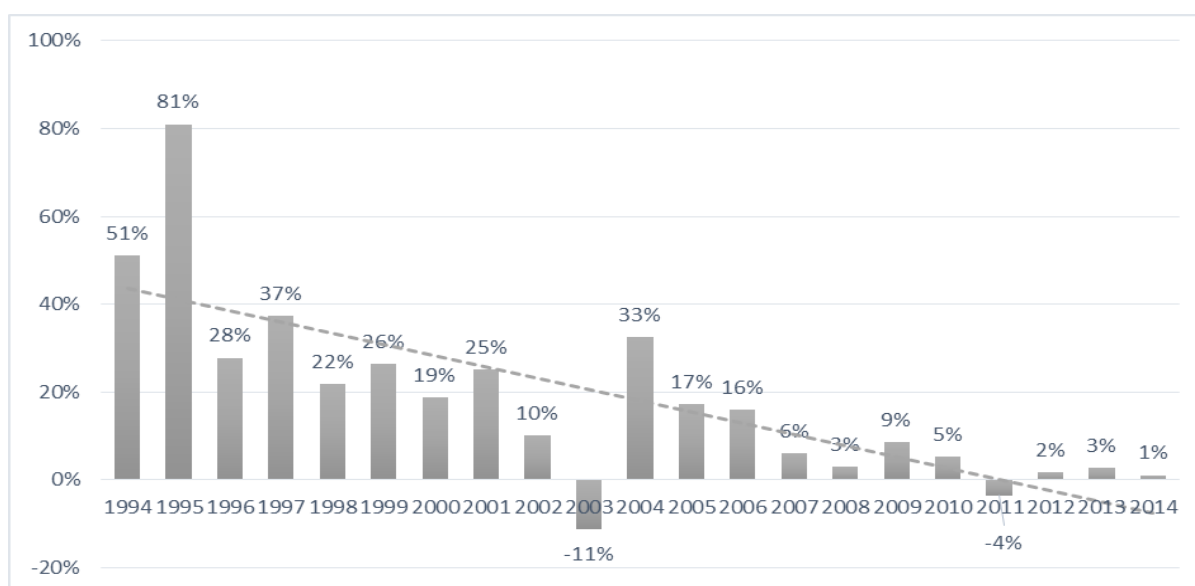


Figure 1. Annual growth of ISO 9001 certification in the period 1994-2014 (in %)

Source: Created by authors based on the data available in ISO database

The main industrial sectors that have received the most ISO 9001 certificates were the same in 2013 and 2014, respectively, basic metal and fabricated metal products, electrical and optical equipment, construction, wholesale and retail trade or repairs of motor vehicles and machinery and equipment (**Table 2.**). The evolution of the number of certificates issued was also fluctuant in this case, registering quite small increases in only three out of the five most important industrial sectors. It is noteworthy the preoccupation of the companies in the production sector to obtain certifications regarding assurance of quality compliance with the conditions of the goods and services they delivers to their customers.

Table 2. First five industrial sectors for ISO 9001 certificates in 2013 and 2014

First five industrial sectors for ISO 9001 certificates		In 2014	In 2013
1	Basic metal & fabricated metal products	118272	116602
2	Electrical and optical equipment	86523	87797
3	Construction	76862	80920
4	Wholesale & retail trade, repairs of motor vehicles	73676	73167
5	Machinery and equipment	64699	63497

Source: Data collected from International Standard Organization database (<http://www.iso.org/>)

Table 3 shows the first 10 countries according to the number of ISO 9001 certificates issued in 2014, and **Figure 2** illustrates the percentage distribution. The country which obtained the most ISO 9001 certificates in 2014 is China, with a total of 342,800, representing approximately 30% of the 1,138,155 certificates issued worldwide. At European level, Italy is the country that has the most ISO 9001 certifications obtained in 2014, respectively 168,960, followed by Germany with around 5% of the total. Japan, India, United Kingdom, Spain, USA, France, Australia are found also in the charts, but they accumulate less than a quarter of all certificates in this category.

Table 3. First 10 countries for ISO 9001 certificates – 2014

First 10 countries for ISO 9001 certificates - 2014		
1	China	342800
2	Italy	168960
3	Germany	55363
4	Japan	45785
5	India	41016
6	United Kingdom	40200
7	Spain	36005
8	USA	33008
9	France	29122
10	Australia	19731
11	Others	326165

Source: International Standard Organization (<http://www.iso.org/>)

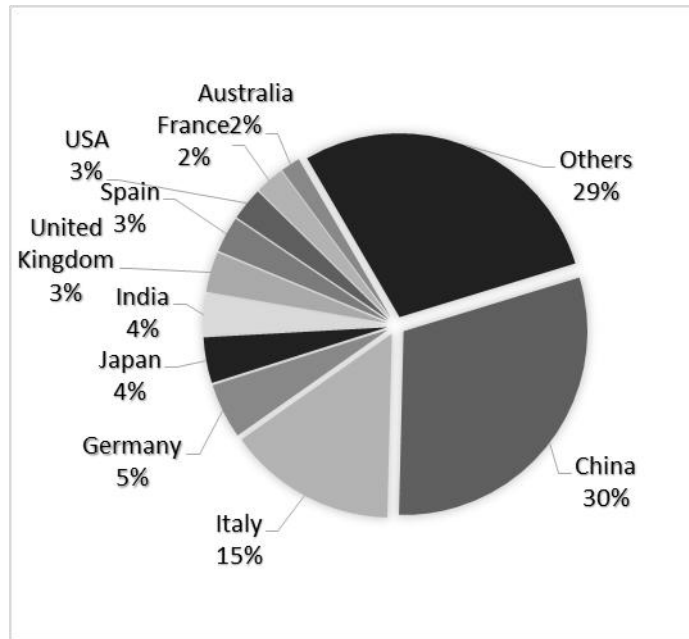


Figure 2. Distribution of ISO 9001 certificates in 2014

Source: Created by authors based on the data available in ISO database

Table 4. First 10 countries for ISO 14001 certificates - 2014

First 10 countries for ISO 14001 certificates - 2014		
1	China	117758
2	Italy	27178
3	Japan	23753
4	United Kingdom	16685
5	Spain	13869
6	Romania	9302
7	France	8306
8	Germany	7708
9	USA	6586
10	India	6446
11	Others	86557

Source: International Standard Organization (<http://www.iso.org/>)

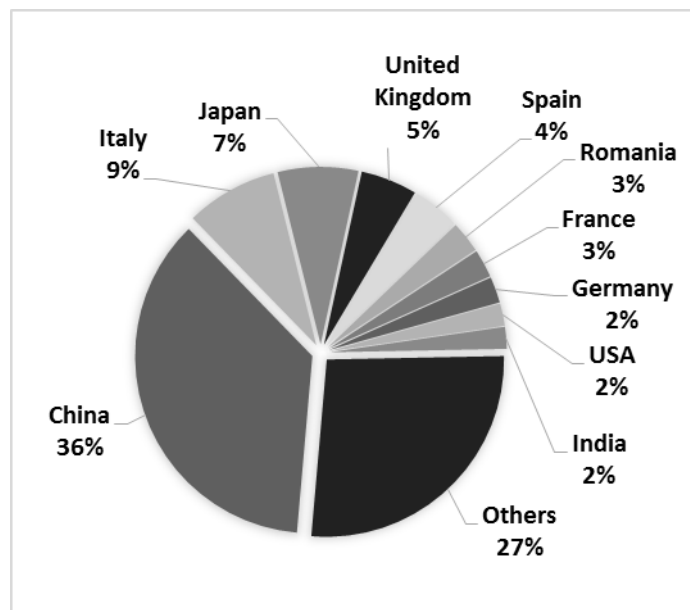


Figure 3. Distribution of ISO 14001 certificates in 2014

Source: Created by authors based on the data available in ISO database

In **Table 4** there are included the first 10 countries by number of ISO 14001 certificates issued in 2014 and in **Figure 3** they are graphically represented according to the percentage held by each of them in the total of 324,148 certificates. China is the country with the most ISO certificates 14001

received in 2014, respectively 117,758, accounting for about 36% of the total, followed by Italy which recorded a total of 27,178 certificates, representing approximately 9% of the total. It is found that most countries from the first rankings are found herein, except Australia. One change is that Romania ranks sixth, with 9,302 certificates and surpassing countries such as France, Germany or USA.

Table 5. First 10 countries for ISO 22000 certificates - 2014

First 10 countries for ISO 22000 certificates - 2014		
1	China	10212
2	India	1817
3	Greece	1354
4	Italy	1214
5	Romania	1130
6	Japan	1043
7	Taipei, Chinese	836
8	Turkey	858
9	France	632
10	Poland	626
11	Others	10778

Source: International Standard Organization (<http://www.iso.org/>)

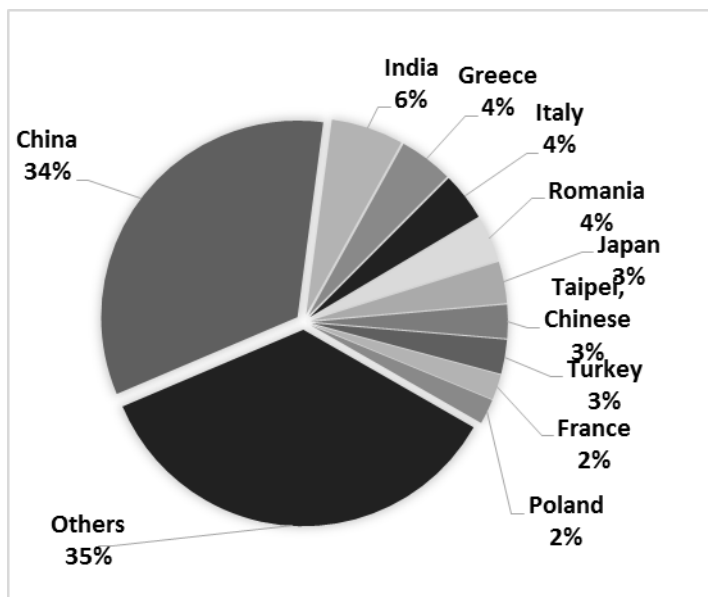


Figure 4. Distribution of ISO 22000 certificates in 2014

Source: Created by authors based on the data available in ISO database

Regarding the ISO 22000 certification issued in 2014, the first place is occupied by China with 10,212 certifications, representing approximately 34% of the total 30,500 (Table 5). India ranks second place with a total of 1,817 ISO 22000 certificates, meaning 6% of the total. In the five countries there are also found Greece, Italy and Romania. Figure 4 graphically illustrates the percentage held by each country in this ranking.

5. CONCLUSIONS

The evolution of the number of ISO certifications emitted worldwide highlights the increased interest of present organizations for quality. Also, the efforts of companies to comply with ISO standards and to continuously improve processes and quality demonstrates the importance of this factor over the long term competitiveness of the organizations.

In the current socio-economic context, product quality has become the determinant of the competitiveness of enterprises as it ensures adaptability to increasingly dynamic market requirements. Product quality is expressed by a set of features made either by contracts, orders or requests in direct relationships between customer and producer, it is explained by standards or rules or exists as a state of affairs caused by similar products present at a given time on the market.

The importance of obtaining ISO certificates in order to increase competitiveness of companies on international level arises from the following considerations:

- Firstly, for an enterprise to achieve and maintain the quality desired by the customer, in terms of efficiency, it is a necessity in business. Achieving this goal is conditioned by planned and efficient use of human, material and financial available resources. To do this, it requires an efficient management system.
- On the other hand, the client wants a company that has the capacity to provide the required quality and to maintain this quality. In order to gain customer loyalty, companies must be able to demonstrate that they have implemented an effective system of quality management.
- Besides these mentioned aspects, companies must take into account the requirements of society embodied in regulations and other restrictions aimed at protecting the life and health of the individual and the environment.

REFERENCES

- Biazzo, S. & Bernardi, G. (2003). Process management practices and quality systems standards: risks and opportunities of the new ISO 9001 certification. *Business Process Management Journal*, 9(2), 149-169.
- Blackman, A. & Rivera, J. (2011). Producer - level benefits of sustainability certification. *Conservation Biology*, 25(6), 1176-1185.
- Castka, P., Prajogo, D., Sohal, A. & Yeung, A. C. (2015). Understanding firms' selection of their ISO 9000 third-party certifiers. *International Journal of Production Economics*, 162, 125-133.
- Conner, K. R. (1991). A historical comparison of resource-based theory and five schools of thought within industrial organization economics. Do we have a new theory of the firm? *Journal of Management*, 17, 121-154.
- Cuc, S. (2009). Sustainable development-a major desideratum for the producers of textiles machines, *Industria textila*, 60 (3), 169-174
- Curkovic, S. & Pagell, M. (1999). A critical evaluation of the ability of ISO 9000 to lead to a competitive advantage. *Journal of Quality Management*, 4, 51-67.
- Dobrin, C. O. & Gîrneală, A. (2015). Complaining Behaviour and Consumer Safety: Research on Romania Online Shopping. *Economic Studies*, (1), 161-175.
- Easton, G. S. & Jarrell, S. L. (1998). The effects of total quality management on corporate performance: an empirical investigation. *Journal of Business*, 71, 253-307.
- European Commission (2013). *How to develop a Sustainable Energy Action Plan integrated with an Energy Management System based on ISO 50001:2011 – Guidelines*. Retrieved October 07, 2015, from https://ec.europa.eu/energy/intelligent/projects/sites/iee-projects/files/projects/documents/energy_for_mayors_how_to_develop_a_seap_integrated_wit_h_enms_en.pdf.
- Gîrneală, A., Giurgiu, A., Dobrin, C. O., Popa, I., Popescu, I. D. & Cuc, S. et al. (2015). Performance management practices in Romanian textile and clothing companies, *Industria Textila*, 66 (2), 108 – 113.
- Goetsch, D. L. & Davis, S. B. (2014). *Quality management for organizational excellence*. pearson.
- Hewitt, S. (1994). Strategic advantages emerge from tactical TQM tools. *Quality Progress*, 27 (10), 57-59.
- International Organization for Standardization (2015a), *Reaping the benefits of ISO 9001*, Retrieved October 11, 2015, from http://www.iso.org/iso/reaping_the_benefits_of_iso_9001.pdf.
- International Organization for Standardization (2015b), *Debunking the myths*, Retrieved October 11, 2015, from http://www.iso.org/iso/iso_9001_debunking_the_myths.pdf.
- International Organization for Standardization (2015c), *ISO 14001 Key benefits*, Retrieved October 11, 2015, from http://www.iso.org/iso/iso_14001_-_key_benefits.pdf.

- International Organization for Standardization (n.d.). *Food safety management systems — Requirements for any organization in the food chain*, Retrieved October 07, 2015, from <https://www.iso.org/obp/ui/#iso:std:iso:22000:ed-1:v1:en>
- International Organization for Standardization (n.d.). *Information technology — Security techniques — Information security management systems — Requirements*, Retrieved October 07, 2015, from <https://www.iso.org/obp/ui/#iso:std:54534:en>
- International Organization for Standardization (n.d.). *Medical devices — Quality management systems — Requirements for regulatory purposes*, Retrieved October 07, 2015, from <https://www.iso.org/obp/ui/#iso:std:iso:13485:ed-2:v1:en>
- Johnston, A. & Ozment, J. (2015). A firm-specific analysis of service quality costs. *International Journal of Logistics Research and Applications*, (ahead-of-print), 1-15.
- Juran, J. M. (1995). *A history of managing for quality: the evolution, trends, and future direction of managing for quality*. Milwaukee, WI: ASQC Quality Press.
- Lemak, D. J., Reed, R. & Satish, P. K. (1997). Commitment to total quality management: is there a relationship with firm performance? *Journal of Quality Management*, 2, 67- 86.
- Nica, E. & Potcovaru, A. M. (2014). The Social Construction of Organizational Reality, *Psychosociological Issues in Human Resource Management*, 2(2): 56–61.
- Porter, M. (1980). *Competitive strategy: techniques for Analyzing Industries and Competitors*. New York: Free Press.
- Porter, M. E. (1985). *Competitive advantage: creating and Sustaining Superior Performance*. New York: Free Press
- Reed, R., Lemak, D. J. & Mero, N. P. (2000). Total quality management and sustainable competitive advantage. *Journal of Quality Management*, 5, 5-26.
- Seawright, K. W. & Young, S. T. (1996). A quality definition continuum. *Interfaces*, 26 (3), 107-113.
- Samson, D. & Terziovski, M. (1999). The relationship between total quality management practices and operational performance. *Journal of Operations Management*, 17, 393- 409.
- Terziovski, M. & Guerrero, J. L. (2014). ISO 9000 quality system certification and its impact on product and process innovation performance. *International Journal of Production Economics*, 158, 197-207.
- Tricker, R. (2014). *ISO 9001: 2008 for Small Businesses*. Routledge.