

## ISO 9001 AS A MAIN SYSTEM OF QUALITY MANAGEMENT IN POLAND: AN ANALYSIS BASED ON THE GLOBAL DATA<sup>1</sup>

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### ABSTRACT

*Despite the fact that quality is a multidimensional concept – defined by different approaches to management (e.g. TQM, Kaizen, ISO), strategies and operational activities – ISO standards are dominant in Europe. Quality management has been adopted in Poland, which translates directly into a number of certificates issued by accredited certification units. The aim of the paper is to analyze the dynamics of issuing QSM certificates in Poland, that are consistent with ISO 9001 standard, in comparison to chosen European countries.*

**Keywords:** ISO 9001, the level of certification and the dynamics of changes in Poland over the last two decades

### 1. STANDARD ISO 9001 AS A TOOL OF QUALITY IMPROVEMENT

The approach to issue of quality varies from country to country. It is conditioned by many factors, first of all it depends on the level of development and the situational context of the particular society, e.g. the socioeconomic and political framework. Currently, there are promoted three key quality management concepts: TQM, Kaizen and ISO. Despite the fact that they differ from each other and that each suggests employing distinct politics, strategies, methods and tools, they seem to have one common underlying idea: **to consolidate the results of the activities, which aim to increase profits of organization.**

The quality management concepts emerged as a result of search for solutions that would allow decision-makers to optimize both expenditure and the results of their activities. It is worth mentioning, however, that the idea to control and to standardize systems, which would regulate quality level, existed since the dawn of time. On the other hand, all the time (though with different intensity) people have been searching for additional profits in order to improve the results. The quality systems have emerged and have been gaining the increasing popularity due to belief that their comprehensive application, in the entire value chain, may help to achieve the main goal of every organization, which is to increase different kinds of profits.

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## 2. IMPLEMENTATION OF ISO 9001 NORM – A CHARECTERISTIC OF THE GLOBAL TREND

The aim of the paper is to explore involvement of Polish institutions in the process of implementation of quality management systems in compliance with ISO 9001:2008 and ISO 9001 standards – the international norms on quality management system issued by the International Organization for Standardization. When an organization meets requirements contained in the norm it indicates that its quality management system is effective; with regard to its management system it means that it meets specified requirements, which have a significant impact on the results achieved by organization.

Table 1 shows the number of ISO 9001 certificates registered from 1993 to 2011 on different continents.

*Table 1. The number of the registered certificates by continent*

Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>TOTAL</b>	<b>46571</b>	<b>70364</b>	<b>127348</b>	<b>162700</b>	<b>223298</b>	<b>271846</b>	<b>343641</b>	<b>457833</b>	<b>510349</b>	<b>561766</b>
Africa	1009	1177	1563	2255	2555	3342	4928	4769	3903	4529
Central and South America	140	475	1220	1713	2989	5221	8972	10805	14409	13679
North America	2613	4915	10374	16980	25144	33550	45166	48296	50894	53806
<b>Europe</b>	<b>37779</b>	<b>55400</b>	<b>92611</b>	<b>109961</b>	<b>143674</b>	<b>166255</b>	<b>190247</b>	<b>269332</b>	<b>269648</b>	<b>292878</b>
East Asia and Pacific	4767	7719	19766	27885	42824	54671	81950	109217	155597	177767
Central and South Asia	74	330	1038	1712	2963	3556	5508	6411	6348	9383
Middle East	189	348	776	2194	3149	5251	6870	9003	9550	9724

*Table 1. cont.*

Year	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>TOTAL</b>	<b>497919</b>	<b>660132</b>	<b>773843</b>	<b>896905</b>	<b>951486</b>	<b>980322</b>	<b>1063751</b>	<b>1118510</b>	<b>1111698</b>
Africa	3769	4865	6763	7441	7446	8534	8435	7667	7775
Central and South America	9303	17016	22498	29382	39354	37458	35549	49260	51663
North America	40185	49962	59663	61436	47600	47896	41947	36632	37530
<b>Europe</b>	<b>242455</b>	<b>320748</b>	<b>377172</b>	<b>414208</b>	<b>431479</b>	<b>455303</b>	<b>500286</b>	<b>530039</b>	<b>492248</b>
East Asia and Pacific	185846	240938	266100	320320	354056	366491	408498	438477	471836
Central and South Asia	9162	13856	27966	44923	50379	44171	44432	37596	33577
Middle East	7199	12747	13681	19195	21172	20469	24604	18839	17069

Source: Own compilation based on The ISO Survey of Management System Standard Certifications – 2011

Since the introduction of ISO standard the European countries have been playing a leading role. It is to some extent natural and is expressed by the number of issued certificates (Tab. 1). Nevertheless, it should be pointed out that a significant shift has been taken place recently. While in 1993 Europe's percentage share of the total number of certificates accounted for 81.4%, according to 2012 data now it accounts for 44.3%. Although Europe still is the leader, its percentage share has dropped significantly; nearly 50 % of its share has been taken by organizations in the other parts of the world, from East Asia and the Pacific region in particular. It is due to changes taking place in organizations located in East Asia and the Pacific region, which are related to spatial transformations and allocation of industrial centers.

Newly established companies, guided by principles of cooperation with European trade partners, have engaged enthusiastically in standardization process in compliance with ISO. Thus the problem of incompatibility of quality management systems has been eliminated. On the basis of available data we can make a preliminary assumption that in coming years this tendency will be maintained.

The Figure 1 shows the regional distribution of certificates in percentage.

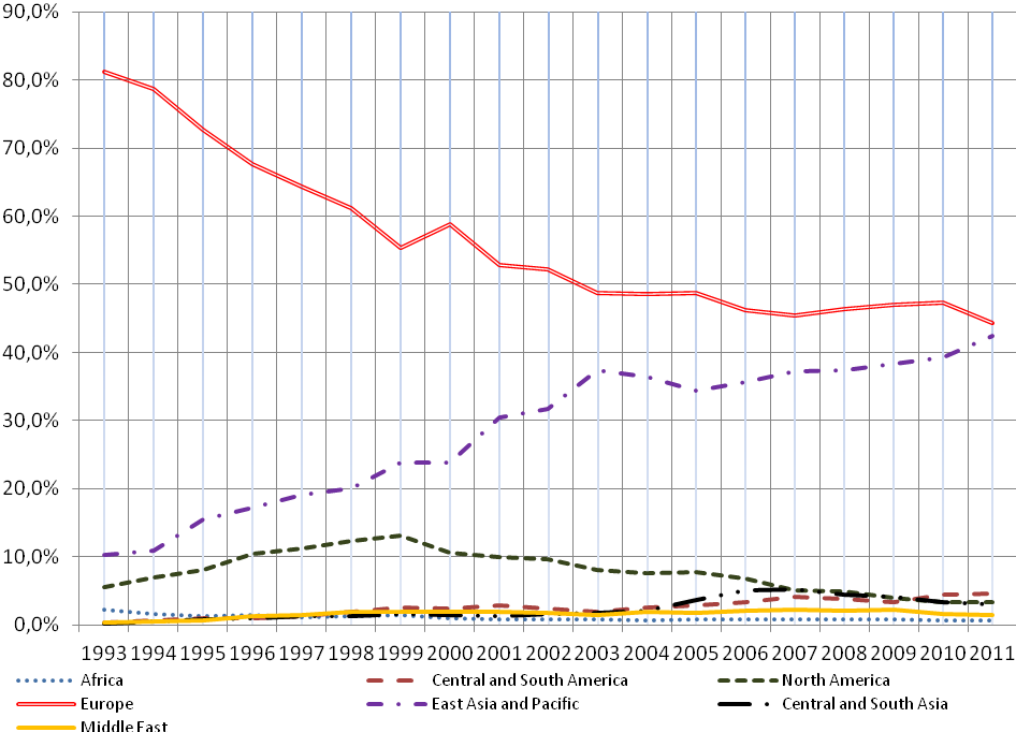


Figure 1. The spatial distribution of the number of ISO 9001 certificates in percentage  
 Source: Own compilation based on The ISO Survey of Management System Standard Certifications – 2011

From 1993 to 2011 the percentage share of Central and South America (4.6%), Central and South Asia (3.0%), the Middle East (1.5%) and Africa (0.7%) was rather small, but stable. In turn, North America currently has the lowest percentage share (3.4%) in the number of ISO 9001 certificates in the history of the continent. For comparison, in 1999, which was the best year, it accounted for 13.1%. This state of affairs would need further analysis and investigation of sociocultural and economic-political context.

The last global indicator we take into account is the number of countries on the particular continent involved in the process of implementation of the system, which is in compliance with ISO 9001 standard (Fig. 2).

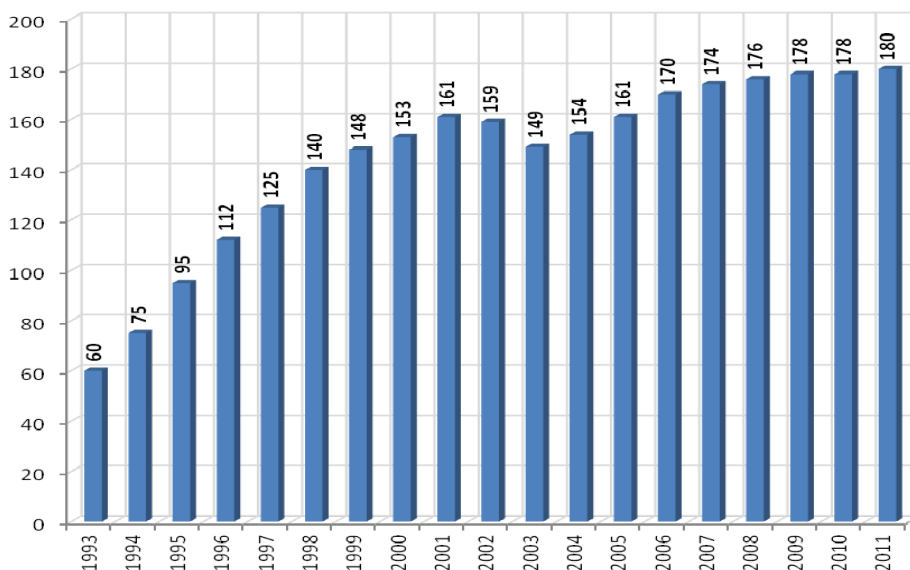


Figure 2. The number of countries, which use ISO 9001 certification

Source: Own compilation based on The ISO Survey of Management System Standard Certifications – 2011

Currently, 180 countries take part in certification process in compliance with ISO standard 9001:2008. The ratios, however, seem to be rather unequal: Europe (49 countries), Africa (43 countries), Central and South America (33), East Asia and Pacific (25), the Middle East (14), Central and South Asia (13) and North America (3). In Europe, the most active countries in the field of ISO system implementation are: Italy, Spain, Germany, United Kingdom and France. The research carried out on this topic allowed to identify the so-called 'top countries' for ISO 9001 certificates – 2011 (Table 2).

Table 2. Top countries for ISO 9001 certificates

Top 10 countries for ISO 9001 certificates – 2011		
1.	China	328213
2.	Italy	171947
3.	Japan	56912
4.	Spain	53057
5.	Germany	49540
6.	United Kingdom	43564
7.	India	29574
8.	France	29215
9.	Brazil	28325
10.	Republic of Korea	27284

Source: The ISO Survey of Management System Standard Certifications – 2011

In the group of non-European countries a leading role play Asian countries, i.e. China, Japan, India and South Korea. The only exception is Brazil, where many factories (e.g. of automotive industry) have been established recently, which explains such a high activity in this field.

### 3. IMPLEMENTATION OF ISO NORM 9001 IN POLAND IN COMPARISON TO OTHER COUNTRIES

Bearing all these facts in mind, we would like to present a preliminary analysis of implementation of norm ISO 9001: 2008 in Poland in comparison to the other European countries. The analysis is based on the 2011 data. In 2011 the leading role played Italy, its percentage share in certification was 34. 9%. The next were: Spain (10.8%), Germany (10.1%), United Kingdom (8.9%), France (5.9%), Romania (3.9%), the Russian Federation and the Czech Republic (2.6%), the Netherlands and Poland (2.2%), Switzerland (2.1%). The percentage share of the other countries did not exceed 2%.

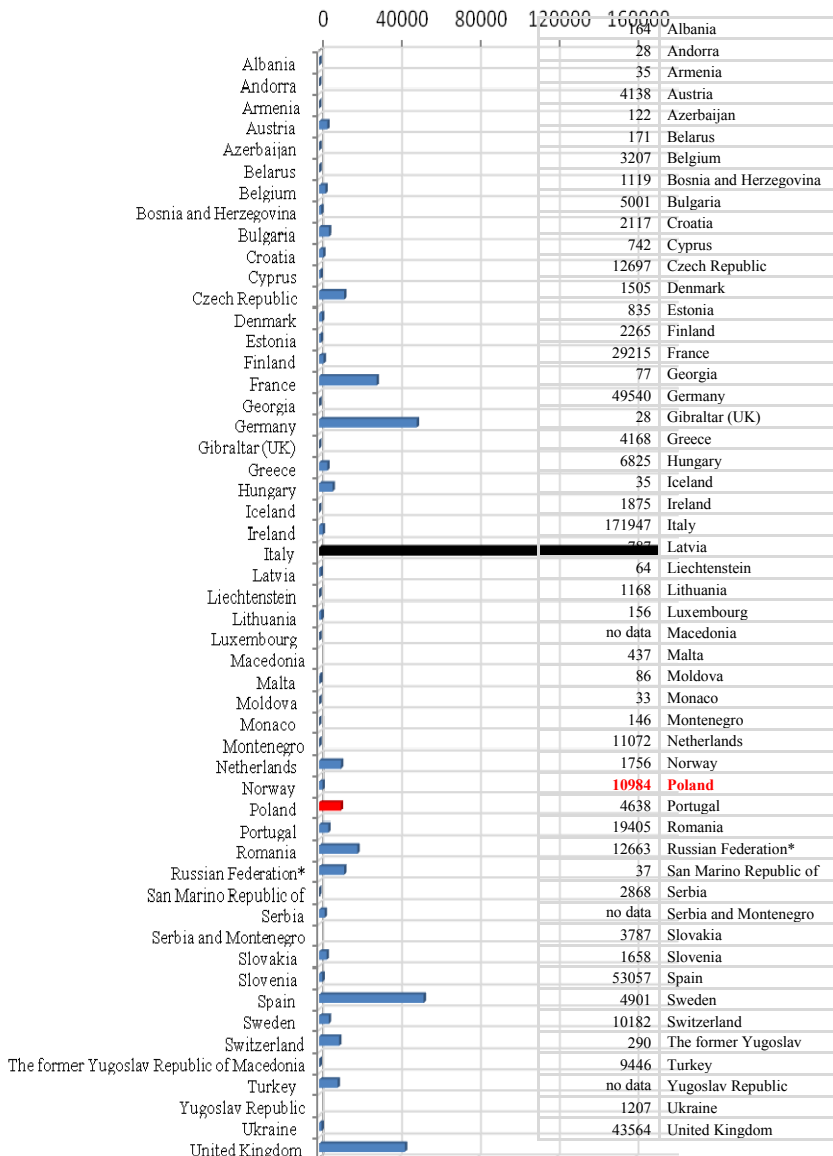


Figure 3. The number of ISO 9001 certificates issued in particular European countries  
Source: Own compilation based on The ISO Survey of Management System Standard Certifications – 2011

Poland and the Netherlands are ranked 9<sup>th</sup> in Europe in terms of the number of certificates. Polskie Centrum Akredytacyjne (PCA), with headquarters in Warsaw, is a domestic accreditation body authorized to accredit certification units, inspection bodies, research and calibration laboratories and other bodies, which verify and assess conformity<sup>2</sup>. At present, according to the PCA data base there are 33 certification bodies within the framework of QMS. The spatial distribution of the units is shown in Figure 4.

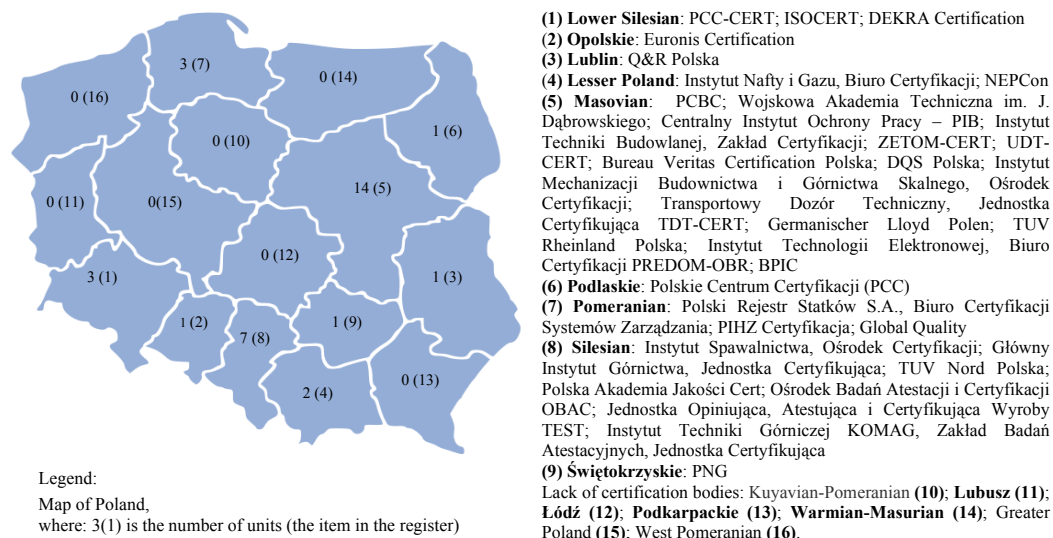


Figure 4. The spatial distribution of certification bodies in Poland in compliance with ISO 9001  
Source: Own compilation

Table 3. The number of the registered certificates in Italy and Poland

<b>Year</b>	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
<b>Italy</b>	864	2008	4814	7321	12134	18095	21069	48109	48109	61212
<b>Poland</b>	1	16	130	260	669	768	1012	2622	2622	3091
<b>Year</b>	2003	2004	2005	2006	2007	2008	2009	2010	2011	
<b>Italy</b>	64120	84485	98028	105799	115359	118309	130066	138892	171947	
<b>Poland</b>	3216	5753	9718	8115	9184	10965	12707	12195	10984	

Source: Own compilation based on The ISO Survey of Management System Standard Certifications – 2011

Apart from certification bodies listed above there are in Poland many certification, consultative, coordinative and supervisory bodies, which operate within QMS, but are not accredited by the PCA. These bodies either simply do not have accreditation of the PCA or they offer their services in Poland, but are accredited by foreign accreditation bodies. There is no comprehensive register of all these units. Therefore the list of bodies presented in Figure 4 gives only a general idea of certification bodies market in Poland and does not reflect its reality. In Poland ISO standards are dominant approach within QSM and in fact in many

<sup>2</sup> Act from 30<sup>th</sup> August 2002 on system of conformity assessment, Dz. U. 2002 No. 166, item 1360 and Act from 15<sup>th</sup> April 2011 on change of Act on system of conformity assessment and some other Acts.

organizations have a long-term tradition (Table 5). The increasing number of certificates in Poland indicates that ISO standards have gained recognition of many users. At the same time, decision-makers who after making cost-benefit analysis<sup>3</sup> of implementation and sustaining QSM, decide on further implementations confirm that ISO standard has been accepted and recognized by the community.

#### 4. CONCLUSIONS

In Europe, including Poland, in the field of quality management systems, ISO standards are dominant. Quality management has been adopted in Poland, which directly translates into the number of certificates issued by certification bodies, including accredited entities. In 2011 in terms of the number of certificates Poland was ranked 9<sup>th</sup> in Europe. Yet taking comprehensive approach to issue of quality we shall bear in mind that the number of certificates is not the only indicator of the level of quality in the particular country. Since in organizations, apart from ISO standards, are implemented solutions, which are based on the other concepts of management, such as TQM or Kaizen. At present, however, there are no registers or statistic data available on number of organizations, which have been employing these philosophies. Therefore if we want to make any analysis it has to be based on the particular case. Then a recommendation is to introduce a comprehensive registry of solutions implemented within QSM.

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<sup>3</sup>See: Kuźdowicz P., Kluge P.D., Jakubowski J., Estimation of efficiency of innovation projects in quality management system, [in:] *Automation 2004: Atomatyzacja - Nowości i Perspektywy*. Warszawa, 2004, pp. 313-319; Kluge P.D., Kuźdowicz P., Zarządzanie jakością danych przy zastosowaniu rozwiązania klasy ERP w małym i średnim przedsiębiorstwie produkcyjnym, [in:] *Efektywność zastosowań systemów informatycznych 2004*, Eds. J. K. Grabara, J. S. Nowak, Warszawa: WNT, 2004, pp. 127-137.

