

## DEVELOPMENT OF QUALITY MANAGEMENT IN POLISH WOOD INDUSTRY

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### ABSTRACT

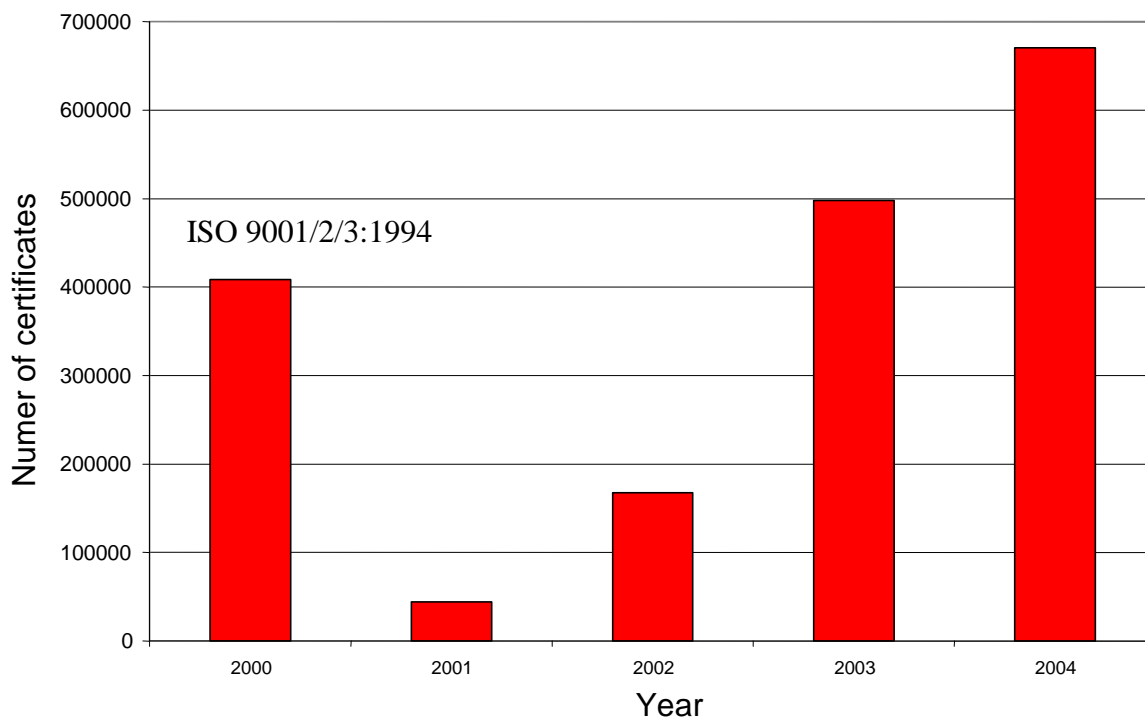
*Recently, quality management systems concept is very well-liked however this approach, within polish as well as international wood industry, is applied very rarely. On the other hand, lately, development of polish wood industry has taken a place and it allowed for increasing of quality management systems certification number. The core ideas of quality management system implementation are: management which it is base on facts and data, process approach, people development what in consequence provides to achieve benefits easier.*

### DEVELOPMENT OF QUALITY MANAGEMENT SYSTEMS AROUND THE WORLD

The ISO 9001:2000 and ISO 14001 standards (1996 and 2004 versions) are implemented by some 887 770 organizations in 161 countries [www.iso.org].

The ISO 9001 family is among ISO's best known standards ever. The ISO 9000 family addresses "quality management". This means what the organization does to fulfill:

- the customer's quality requirements, and
- applicable regulatory requirements, while aiming to
- enhance customer satisfaction, and
- achieve continual improvement of its performance in pursuit of these objectives” [www.iso.org].



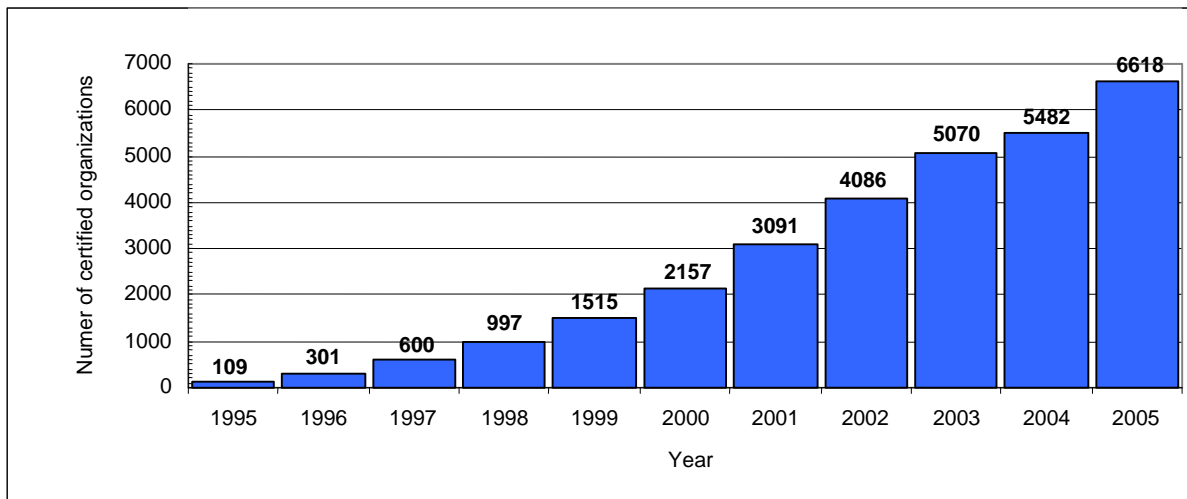
**Figure 1. Number of certificates around the world according to the ISO 9001:2000 standard (WIŚNIEWSKA S., 2007)**

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The rapid growth of quantity of certificates is caused by customer requirements and not only final customer but as well and maybe the most important an internal customer among corporation or even among plant or department.

### DEVELOPMENT OF QUALITY MANAGEMENT SYSTEMS IN POLAND

Permanent changes at the polish market causes increasing of the organization number with certified Quality Management System. Figure 2 shows how many organizations in Poland have implemented certificate of Quality Management System according to ISO 9001:2000.



**Figure 2. Growth of certification of Quality Management Systems according to ISO 9001:2000**  
(WIŚNIEWSKA S., 2007)

In the last decade number of organization with certificate of Quality Management System has increased sixty times and number of organization in general has increased only three times.

Organizations implement Quality System due to different reasons. The most popular reasons are as follow:

- marketing tool,
- cost saving,
- customer requirement,
- corporation requirement,
- market requirement (for instance automotive industry or aircraft industry).

In Poland, till now, the most important was to utilize Quality Management certificate as an advertisement tool. However nowadays companies changing their point of view on the market as well as they are changing it into customer approach. Organizations try to meet customer requirements and Quality Management System is one from the best, helpful instrument for this.

It is good to underline that Figure 2 concerning only ISO 9001:2000 so the most popular of Quality Management System and id does not concern high-specialized, industry standards and regulations, which presently are popular as well. Different Quality standards are base on process and system approach therefore it is easy to make a mix or make a compilation of each other.

Quality System base on processes it has not to be certified, but this fact makes harder an identification of company which use this quality system.

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**POLISH WOOD INDUSTRY**

Central Statistical Office in Poland – GUS, classifies wood industry according to the EAC in two major sectors: 6 – manufacturing of wood and wood, straw, and wicker products (except furniture) and 23 – manufacturing of furniture and manufacturing n.e.c. The numbers of officially registered enterprises in these sectors are shown in table 1.

**Table 1. Industrial enterprises by number of employees in I quarter 2007 (Central Statistical Office - GUS data).**

SECTOR	total	0-9	10-49	50-249	250-999	1000 and more
Manufacture of wood and wood, straw and wicker products	40454	37501	2476	417	53	7
Manufacture of furniture; manufacturing n.e.c.	42550	39617	2265	556	98	14

The first sector includes:

- sawmills,
- veneer production,
- timber frame constructions,
- windows and doors production,
- flooring material,
- wood based panel production (plywood, chipboard, MDF, HDF and fiberboard form wet method production).

The second sector mainly covers furniture production.

**Table 2. Sold production, employment and average monthly gross wages and salaries in industry by sections and divisions in I quarter 2007 (Central Statistical Office GUS - data).**

SECTIONS AND DIVISIONS	Sold production		Average paid employment		Average monthly gross wages and salaries	
	in mln zł	I quarter 2006=100	in thous.	I quarter 2006=100	in zł	I quarter 2006=100
TOTAL	198902,2	113,0	2542,1	103,2	2777,98	108,3
MANUFACTURING	168174,6	116,2	2164,1	104,0	2541,98	108,7
Manufacture of wood and wood, straw and wicker products	5510,7	119,1	98,3	101,2	1932,35	112,8
Manufacture of furniture; manufacturing n.e.c.	7607,9	118,9	163,3	104,0	1964,35	109,5

A current condition of wood industry in Poland in 2007 was presented in table 2.

Since 1989 the polish wood industry is rapidly growing. The growth rate is much faster than average in national economy. The dynamics of that process is strongly dependent on the type of industry sector. In a case of wood based panel industry it was aligned with privatization of state owned companies and huge investments in new production lines. In furniture production sector intensive growth was a continuous trend for many years. During last 15 years Poland becomes one of the biggest furniture producers in the EU (6<sup>th</sup> in 2006) and worldwide (10<sup>th</sup> in 2006) (Adamowicz, Wiktorski 2006). Considering the period between 1989 and 2005, the furniture export increased over 30 times reaching the value of \$5030 millions (fig.3).

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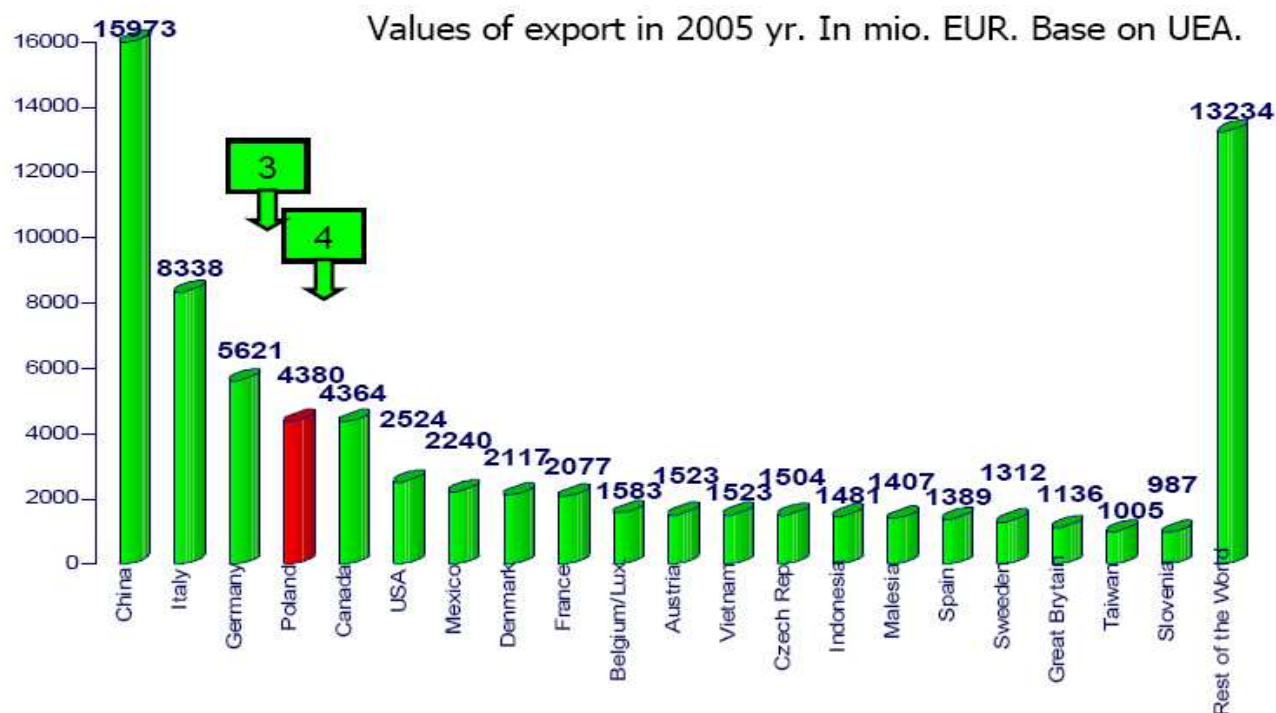


Figure 3. TOP 20 world-exporting countries in 2005 (export value in € millions) (Adamowicz, Wiktorski2006)

The furniture production becomes very important sector of national economy. As shown on table 3 the value of furniture production as a share of GDP is more than two times higher in Poland than EU average.

Table 3. Importance of furniture industry for polish economy (Adamowicz, Wiktorski 2006)

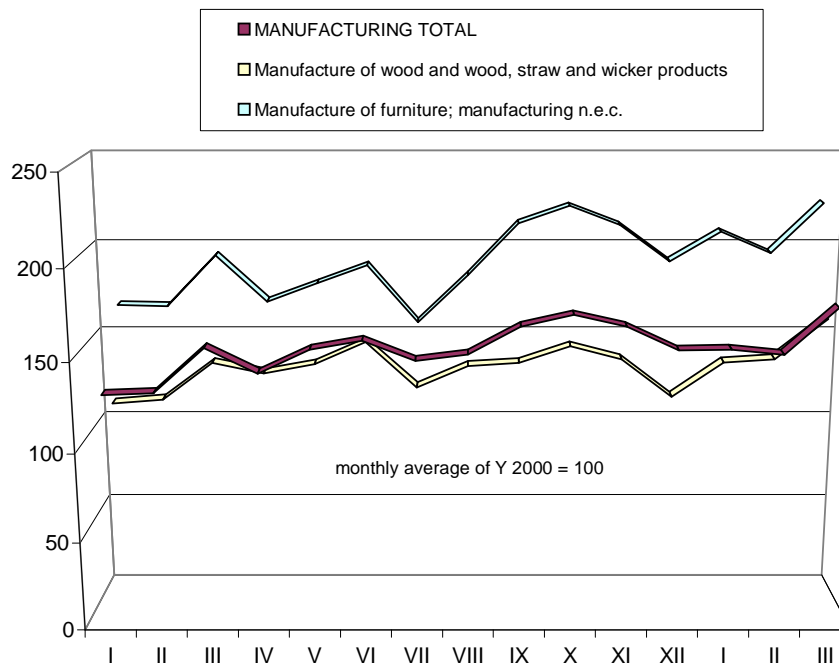
Description	UE – 25	Poland*
Gross Domestic Product (GDP)	10 527,0 bln €	268,7 bln €
Value of the furniture sold production **	93,8 bln €	5,6 bln €
Furniture production share in GDP	0,9%	2,1 %

Notes:

\*1 € = 3,8951 PLN – average annual exchange rate in 2006 r. based on NBP

\*\* Estimate values for companies employing more than 9 people. Based on: UEA, GUS, OIGPM

Dynamics of sold production in 2006 and 1 quarter of 2007 for two main wood industry sectors is presented at fig. 4. The base for indexes calculation was the monthly average value of sold production in year 2000.



**Fig.4** Volume index of sold production of wood industry in 2006 and 1 quarter 2007  
(Central Statistical Office –GUS data)

### DEVELOPMENT OF QUALITY MANAGEMENT SYSTEMS IN POLISH WOOD INDUSTRY

With the rapid growth and relatively shallow internal market Polish wood industry is based on export. To sustain strong competition on western, highly demanding markets, producers must focus on quality of their products and best in class efficiency of production process. New trends, such as outsourcing, enable development of strong production competences and bring into consideration the need for B2B communications. This situation results with a change in approach to the ISO 9001 standard. For many years the main reason for implementation of QMS standard was based on companies' marketing strategy. Nowadays it is seen more likely as a tool for establishing an efficient management system within the company and supply chain.

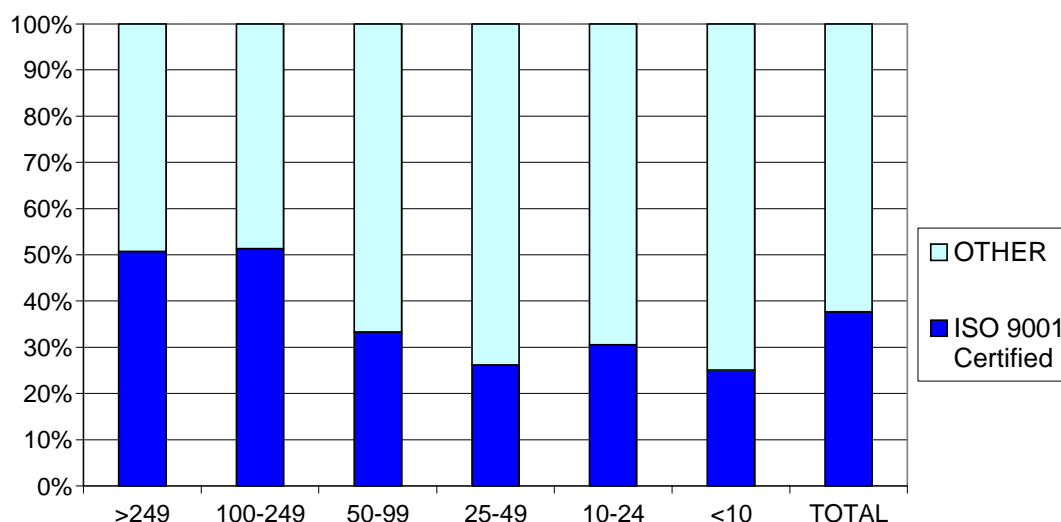
In wood-based panels industry since many years QMS was a market standard requirement. Currently all enterprises in that sector are ISO 9001:2000 certified.

The opposite situation is within the sawmilling sector. Almost none of such companies are certified according to the requirements of ISO 9001. This reflects global trends in that sector where the main focus is on environmental issues and FSC certification.

Among doors and windows production sectors the ISO 9001 certificates are popular, mainly because a major part of the production is made for export. The other reason is that statutory requirements for those products are forcing companies to establish formal and documented quality control systems. This situation promotes ISO 9001 standard as one of the best practices in that subject.

Situation within the furniture production sector according to OIGPM research was presented in Fig. 5. There is a strong correlation between the size of the company and its interest in ISO 9001 certificates. One of the reasons that ISO certificates are not very popular within smaller companies is the cost of implementation, certification and maintenance of such QMS system. Apart from the costs connected to the certification process, the need for formal management standards and best practices is much stronger among bigger companies.

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**Fig.5 ISO 9001certified industrial enterprises in furniture production sector by number of employees in 2004 (OIGPM)**

Significant impact on QMS implementation in Poland has activity of world biggest trade companies in furniture market – IKEA. IKEA’s buying policy is established on the basis of the Supplier Quality Assurance Program - the QMS that covers industry specific requirements. All IKEA suppliers are forced to implement it. The standard has four levels of requirements: entry level – QMUST, basic level – QWAY and advanced level – 4SIP, the most advanced – 4<sup>th</sup> level requires fulfillment of 4SIP requirements and 3<sup>rd</sup> party ISO 9001 certificate. Because IKEA (and SWEDWOOD which is owned by IKEA) are cooperating with significant numbers of suppliers within polish wood industry, this standard becomes the most popular.

### CONCLUSIONS

With its intensive growth, polish wood industry is searching for good management standards. Implementation of QMS based on ISO 9001:2000 standard becomes “best practice” among the enterprises in this sector. The process approach brings in to company’s management system a valuable tool for continuous improvement and high efficiency of production process. The other important advantage is impact on marketing strategies where ISO 9001 certificates are recognized as an entry requirement for international markets.

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