

# Effects of application of standard ISO 9001 in profitability of SME in the Republic of Macedonia

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## Abstract

In this paper we analyze the effects of the implementation of ISO 9001 in the profitability of small and medium enterprises in the Republic of Macedonia. Our analysis has synthesized succeeded benefits from the application of this standard based on theoretical and empirical research in recent years. We as the author emphasized the need to focus on issues related to the effects of the application of standards in performance and achievements of small and medium enterprises in the Republic of Macedonia. To analyze this effect it is necessary to conduct empirical research. As a basis for analysis have received 100 small and medium enterprises that operate in the Polog region where we will analyze how the financial performance of companies that have applied this type of standard and financial performance of companies that have not applied this standard.

Empirical research shows that companies that have applied ISO 9001 standard are rentable of companies that have not applied this standard are less rentable.

**Keywords:** ISO 9001, benefits, profitability, financial performance

## 1. INTRODUCTION

Quality paradigm or movement has become a significant force throughout Europe and the rest of the world. Methods to improve and manage quality are numerous; we can say that the quality paradigm, or movement, is based on two pillars: ISO 9001 and total quality management. Currently, many people are familiar with academic life or have heard of ISO 9001. In our view these two factors have played an important role in widespread this topic: Extending self certification to include a wide variety of sectors, products and services and ISO 9001 certification intensive promotion conducted by some company as if it were a quality product or service label. One might think that this popular process can positively and negatively affect future development. For example, a large group of researchers has been popular for the objectives arising from the implementation of a quality assurance system, but many others are not very objective, but give a general opinion.

ISO 9001 is a standard for quality management within the enterprise. When it comes to the application of ISO standards for quality, people often think that they do this only large enterprises which have many employees and companies that have very complex manufacturing processes. Rather, there are many reasons those small and

medium enterprises to apply this standard. This is the universal standard, ISO 9001 does not depend on the size of organization and type of product or service. This means that enterprises can deploy certified. To examine why SME should applied ISO 9001, first we must see benefit from the implementation of this standard:

- Pleasure and decrease the number of complaints from customers
- Clear procedure for business obligations for each employee
- Strengthening the brand
- The possibility of gaining new markets

These benefits apply notwithstanding from the size of the enterprise, but small enterprises often have very small budget available. Precisely because of this, they need to invest in minimizing losses during product manufacturing. This will enable long-term plan to save funds which means in the future will be able to expand their business. Also, for small business every client is of particular importance for the survival of the company and report to him to be at the right level. Consumer satisfaction play a crucial role to him again to ask of our enterprise product or service, and you prefer our products and services potential. With the application of ISO 9001, reduce the number of complaints from customers and employees were given more time to focus on other tasks. In addition, all the processes in the enterprise will be documented and every employee will

have clear documented procedure that you must follow. This will facilitate the work, will increase discipline, will reduce the need for concessions and will increase the number of products before it controls be placed on sale. In circumstances where any human resource is the price of these advantages may have a key role in the enterprise. Certification with internationally recognized standard such as ISO 9001 helps build renowned undertaking at the global level. Not only that customers prefer products from companies that have applied this certificate, but often set as a precondition for entering into business contracts. Working according to international standards, small and medium enterprises are able to compete with large corporations. In addition, opening possibilities for the conquest of new markets at home and abroad. Example ISO standard for quality more often placed as a condition during competition in the tender in the Republic of Macedonia. Regarding international markets, small enterprises have greater opportunities to enter into contracts with foreign companies if they have applied the ISO 9001 standard. With this strategy, small enterprises can more easily expand and grow in large enterprises.

Although at first glance the application of ISO 9001 is seen as an expense, enterprise managers should use these advantages to save, to promote and develop their business. Through this paper will seek to examine questions about the impact of the application of ISO 9001 standards on actual sales and profitability of the 100 companies that operate in the region of Polog making comparisons between companies which have applied this standard and enterprise which did not apply.

## 2. Literature review

Standard ISO 9001 quality management system is an extremely common practice in management practice.

The vast majority of empirical works on this problem look into this problem based on the data works and numerous empirical data regarding the effect of the application of ISO 9001 in the profitability of enterprises. Case studies are an ideal way to successfully illustrate the reality of implementing these standards. However, they do provide evidence that the quality standard certification is closely linked with improving enterprise performance, but only that it is possible such a correlation.

(Jones, et al., 1997) finds that, unfortunately, some benefits derived from ISO 9001 certification are unclear, while

others are open to different interpretations or problems that can be measured (for example, productivity growth or increase market share). (Tsiotras and Gotzamani, 1996; Lloyd's Register Quality Assurance Ltd., 1994; Vloegeberhgs and Bellen, 1996) conclude that despite the difficulties in quantifying and measuring the benefits, it is common for literature distinguish between aspects of internal and aspects of external the enterprise. This means that there is less research on the benefits brought by ISO 9001 standard than the standard motivation research. At the same time, the results of these surveys are often confusing and uneven. For example, while some specific research shows an improvement in the enterprise, others say just marketing contribution.

During the analysis of the importance of internal benefits related to external benefits, we found different opinions. (Vloegeberhgs and Bellen, 1996) shows that most of the benefits of certification are internal nature. According to (Brown et al., 1998), although the majority of small and medium enterprises have been certified for external reasons, the most important benefits are of an internal nature, such as: improving the awareness of the importance of quality, improving the awareness of societal problems and improve the quality of the product. On the other hand, (Quaz and Padijbo, 1998) conclude that the most important benefits are external natures, which highlight the three most important reasons such as: an increase in consumer satisfaction, product quality improvement and competition in the market and fulfillment of customer requirements.

According to a survey of 160 enterprises in Australia (Brown and Van der Wiel, 1995), find that the benefits of certification include: Increase awareness of the quality of the company, increased awareness for product quality, improving enterprise management, improvement of relations with customers, improving products and services, improve relations within the enterprise, enhancing consumer satisfaction and increasing the respect of competitors. On the other hand, according to a study conducted in the United Kingdom (Lloyd's Register Quality Assurance, 1994), the benefits of the certification can be summarized as an important tool of marketing that helps relations market, increases the possibility of obtaining new contracts, reduces the number of customer audits and helps to penetrate international markets. Of course we may take into consideration the results of this study to be biased, because investigative organizations are directly involved in the implementation of ISO 9001 standard. Another study conducted by the important consulting company

(Vanguard Consulting, 1994) confirms that only 15% of companies have benefited from the standard application in Great Britain.

In accordance with this research, the authors of this paper will carry out a study in the Republic of Macedonia for the period from 2001 to 2010 to 100 small and medium enterprises operating in the Polog region.

This research analyzes a large number of enterprises certified with a diversification of activities. The authors studied the issues related to ISO 9001 registration in an attempt to analyze the effects produced by the application of standards (Casadesus, Heras and Ochoa, 2000). In conclusion, the empirical evidence analyzed show that the most important internal benefits the application of ISO 9001 include: Improving the definition and standardization of procedures (33%), improvement in defining the responsibilities and obligations of employees (19%), increased confidence in the quality of the enterprise (11%), better involvement in work (11%) and improved in directions which reduce improvisation (7%). All other aspects were of little importance. These results are similar, with some exceptions for other research on the benefits of internal normative. For example, in an investigation of particular importance conducted in 1,220 enterprises (Buttle, 1997) noted that the most important internal benefits include: improving the efficiency of the enterprise, improving work procedures, improvement in the management and control the enterprise, reducing problems with procedures and increase employee motivation. Another important contribution is the use of standard data collected by the implementation of the strategy or operations. In 95% of companies, the data used by opposing study (Goh and Ridgeway, 1994), where the majority of enterprises do not see any advantages in analyzing quality cost. Moreover, the majority of enterprises (91%) stated that certification has benefited them, especially because of the opportunities to reconstruction their organizations and to determine the responsibilities of each job.

On the other hand, the investigation quoted by (Casadesus, Heras and Ochoa, 2000), the most important external benefits in the implementation of ISO 9001 are: increased customer demands accountability (34%), access to new markets (21%), improvement in relations with customers (18%), improve customer service (16%) and customer audit reduction (8%). The importance of big business and the image quality offered by the standard is reinforced by these results, because no one is connected to a real improvement in quality. Another benefit of certification is that it has a

positive impact on the financial aspect of the company. 58% of enterprises believe that standard enables a significant increase in the market as well as a significant increase in the trend of their enterprises. Therefore, these results resemble those of (Lloyds Register Quality Assurance Ltd, 1994), which stated that in 49% of cases, enterprises have benefited from certification because they have expanded their markets.

### **2.1. Effects on the profitability of enterprises**

Although we believe that these surveys are important to show the effects of the ISO 9001 standard, cannot ignore their inherent weakness and distortions methodology to assess the effects of the implementation of ISO 9001 process, surveys and opinions gathered from directors surveyed enterprises. For this reason, we believe in the importance of evaluating the effects of standard objective indicators, such as productivity, reducing product defects or profitability, rather than rely on the opinion of the managers. Among specialists in this field of research, there has been an intensive discussion whether the application of ISO 9001, or other quality assurance techniques are embodied in general economic and real income, or in improving the performance of the company, see (Adams, 1999 and Haversjo, 2000) that have examined the relationship between improving the quality and profitability.

There are several studies of the management consulting company proving that total quality programs have not been effective (Hendricks and Singhal, 1997). These studies, as can be expected in this field research, were published and distributed widely in the business world. On the other hand, there is evidence in favor of companies that have won awards for excellence or quality certificates. According to a study conducted by two American academic in the period between the years 1987-1997, these companies have good sales performance after the change has been about 64% higher than sales of other enterprises (Hendricks and Singhal, 1997). In a survey published by (Lloyds Register Quality Assurance, 1996), profit margins and return on invested capital in certified enterprises is higher than twice the industry average. Also, recently published a Danish study where companies certified with ISO 9001 standard have a higher rate of return than companies that are not certified (Haversjo, 2000).

## **3. Empirical Analysis**

The research analyzed in this paper studies the effects of ISO 9001 certified enterprise economic score. Our research is focused on Polog region in the Republic of Macedonia, which is considered as a region which has a small number of certified enterprises. The data collected for this study were taken from the financial statements of 100 companies for the period 2001-2010 which are the subject of analysis and appropriate questionnaires completed by the enterprise managers.

For this research we used two samples from the database where we have allocated the 50 companies that have applied this standard and enterprises that have not applied. We have analyzed the data referred to fundamental indicators of the Enterprise as business profit and profitability.

Figure 1 shows data for 100 enterprises operating in the Polog region where we have grouped the companies which have applied this standard and companies that have not applied.

**Table 1. Average profitability of enterprises that have applied the ISO 9001 standard and enterprises that have not applied this standard**

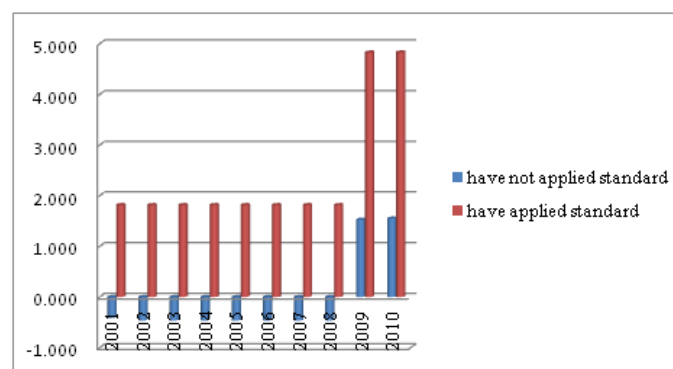
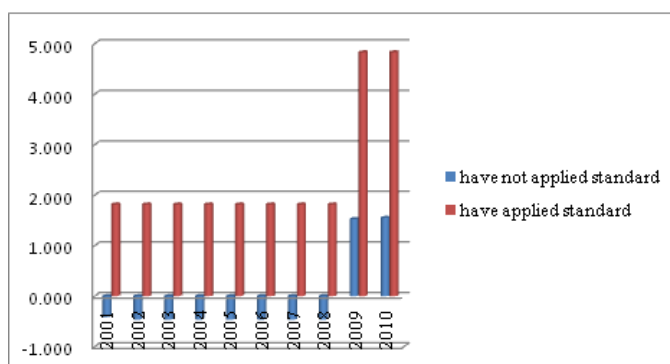
Years	Enterprises who have not applied the ISO 9001	Enterprises that have applied ISO 9001
2001	-0,413	1,816
2002	-0,465	1,816
2003	-0,465	1,816
2004	-0,465	1,816
2005	-0,465	1,816
2006	-0,465	1,816
2007	-0,465	1,816
2008	-0,465	1,816
2009	1,525	4,831
2010	1,551	4,831

As we can see from Table 1, the profitability of enterprises certified to ISO 9001 standard is much higher than companies that are not certified. Enterprises that have applied ISO 9001 standard have much higher average profitability than companies that have not applied this standard. Therefore we can conclude that the application of ISO 9001 standard is very important to increase the profitability of enterprises in Polog Region.

In the following we Barr analyze how it affects the application of ISO 9001 in the acquisition of companies in this region.

**Table 2. Average earnings of companies that have applied the ISO 9001 standard and enterprises have not applied this standard**

Years	Enterprises who have not applied the ISO 9001	Enterprises that have applied ISO 9001
2001	-0,413	1,816
2002	-0,465	1,816
2003	-0,465	1,816
2004	-0,465	1,816
2005	-0,465	1,816
2006	-0,465	1,816
2007	-0,465	1,816
2008	-0,465	1,816
2009	1,525	4,831
2010	1,551	4,831



As you can see from the table 2, profit of enterprises certified to ISO 9001 standard is much higher than companies that are not certified. Enterprises that have applied ISO 9001 standard have much higher average profit

than companies that have not applied this standard. Therefore we can conclude that the application of ISO 9001 standard is very important enterprises profit growth Polog region, although at first glance it can be concluded that the application of this standard is a cost, but the long-term application of standard ISO 9001 increases the profit of enterprises

#### 4. Conclusions and recommendations

Based on the research results in this field can be concluded that the application of ISO 9001 standard provides opportunities for the internationalization of the company, penetrating foreign markets and expand its market as a result we have increased sales and thus increase viability and profitability of the enterprise, but it does not affect product quality. There are various reasons to prove that affect the application of ISO 9001 in an enterprise. As noted by our survey, companies that had applied the standard ISO 9001 were rentable and higher profit, but it does not mean that all enterprises have profit as the primary goal. There are companies which, although they have not realized high profits, they have achieved their goal for the internationalization of the company, so although we can see that the financial statements have not realized higher profit, they have achieved their goal, the conquest of new markets. According to our study we can conclude that the application of ISO 9001 standard has a positive effect on the profitability of enterprises, but are insufficient data that the application of this standard may lead to improved overall performance of the enterprise.

Therefore, we recommend companies to apply the standard for quality and ISO 9001 quality because even though at first glance be seen as a cost, in the future enterprise will benefit the quality of products and services and other hand will boost profit her. Benefits apply notwithstanding the size of the company, but small enterprises often have very small budget available. Precisely because of this, they need to invest in minimizing losses during product manufacturing. This will allow long-term plan to save funds with which tools in the future will be able to expand their business. Also, for small every client is of particular importance for the survival of the company and report to him to be at the right level.

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