

ISO 9001: 2000 and its Implementation in Dominican Republic Construction Industry

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ABSTRACT

Over the past few years, Dominican Republic has seen an unprecedented growth in construction activities because of the booming tourism industry and real estate. With the signing of free trade agreement with the United States and the Central American countries of El Salvador, Guatemala, Honduras and Nicaragua, construction companies have been forced to remain competitive in order to be in the business. The goal of staying competitive can only be accomplished by the implementation of world class quality standards like ISO 9001:2000. In the changing market share, it was deemed worthwhile to study how the implementation of ISO 9001:2000 quality standard has influenced the construction companies in this country to remain competitive. A questionnaire survey was prepared and distributed through emails to about 450 construction companies. From the valid responses from about 70 of the companies, it was found that although the country is embracing multinational-companies in the construction industry, the local construction industry is not moving at a pace with which it can catch up with the competition created by the multinational companies. The lack of awareness among the local construction companies to the advantages of embracing quality systems such as ISO 9001:2000 is the main reason for non-implementation of ISO 9001:2000.

Keywords: ISO 9001:2000, Quality Management, Construction, Dominican Republic

1. INTRODUCTION

The International Organization for Standardization (ISO) is a federation of the national standard bodies of nations from around the world. ISO 9000 is an international quality for goods and services. Although the term ISO stands for quality standard, it is however misleading because ISO 9000 does not set any specifications for quality. Rather it sets broad requirements for the assurance of quality and for management's involvement (Goetsch & Davis, 2006). ISO 9000 consists of three standards of which ISO 9001:2000 is a part that deals with the Quality Management Systems-Requirements. ISO 9000 and Total Quality Management (TQM) are compatible in that ISO 9000 can be a complementary subset of TQM involvement (Goetsch & Davis, 2006).

The use of international quality standards is a relatively new practice in Dominican Republic. At first it was brought to the country by large multinational corporations that used ISO and/or other quality systems, basically industrial and service companies, and not known by construction industries, which were limited to small contractors working on construction projects for the government.

With the rise of the tourism industry in the mid eighties, a new breed of construction companies arise to meet the high demand of hotel projects, which led to a bigger and more diverse construction industry.

On August 2004, The Dominican Republic signed a free trade agreement with United States and the central American countries of El Salvador, Guatemala, Honduras and Nicaragua, forcing Dominican companies, construction companies included, to adapt to the changes to remain competitive.

That goal of staying competitive can only be accomplished by the implementation of world class quality standards. This project presents a study to determine the use of ISO 9001:2000 quality standard in construction industry in the Dominican Republic.

The Dominican Republic is a Latin American country that occupies the eastern two-thirds of the Caribbean island called Hispaniola. It shares a border with the Republic of Haiti, making it one of two Caribbean islands that are split by two countries; the other is Saint-Martin/Sint Maarten. Hispaniola is the second-largest of the Greater Antilles islands, and lies west of Puerto Rico and east of Cuba and Jamaica (Wikipedia).

The construction industry has been one of the most important sectors of the economy for decades; it contributes about 5.5 percent to GDP (Dominican Republic Central Bank, 2007). Nowadays, the construction industry is at its highest, with the rise of tourism and real estate. In tourism, with an average of 4 million tourist annually (Dominican Republic Central Bank, 2007), the rise of big hotel projects is constant and is expanding to meet not only the middle class international tourist, but also the high end of the tourism market. The real estate market is growing fast, with the construction of beachfront residential developments, aiming to the high class of the international market.

2. OBJECTIVES

The main purpose of this study is to investigate level of implementation of ISO 9001:2000 quality standard in the Dominican Republic construction industry, and how it has influenced in the competitiveness of those organizations.

Other important aspect is to determine the proportion of national and multinational organizations in the industry, and the number of years those organizations have in the market.

It was also considered important to investigate the motives behind the non implementation of the ISO 9001:2000 quality standard for those companies who haven't done so, the number of years they are in the market, and the level of knowledge they have about those quality standards, and analyze the results.

3. METHODOLOGY

The first step was to create a list of all the companies related to the construction industry, not limited to the country's capital, but for the whole country, to get a much better idea of the industry. The list was made using the most current industry related construction company directory, with over 800 companies listed, 450 companies were selected, mostly the ones with email or fax.

Once the list of the 450 companies was selected, a questionnaire was prepared and sent. Of the 450 questionnaires sent, 70 valid responses were received, with that representing a response rate of 15.6 percent.

The questionnaire consists of three sections:

- Market position: to determine the origins of the company, its relation to the construction industry, years in the market and whether or not they implement ISO 9001:2000 quality standard.
- Users of ISO 9001:2000: question regarding the use of ISO 9001:2000, the time of implementation, and opinions of how it has influenced in the company's competitiveness.
- Non users of ISO 9001:2000: a series of questions to investigate the motives behind the non use of ISO 9001:2000 and its perception on how they think it has affected their competitiveness.

4. ANALYSIS AND DISCUSSION

Results of the questionnaire survey are analysed and categorized into three main sections as follows.

4.1 MARKET POSITION

In the market position section, question about the origin of the organization, according to Figure 1, 65 of the 70 companies were national companies, with a multinational presence of 7 percent, with 5 responses. The proportion is going to change towards more multinational companies in the years to come, because the signing of the free trade agreement is only 3 years old. In the present, the tendency is that more and more multinational companies are coming to the country because they see a lot of opportunities for growth.

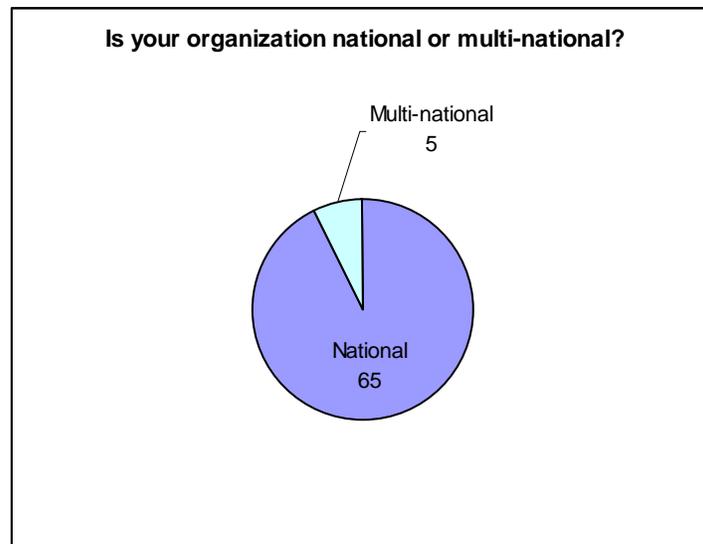


Figure 1: Type of Organization

Figure 2 shows that of the 70 responses, 38 companies were general contracting companies (54%), 20 identified themselves as subcontractors (29%) and 12 were suppliers (17%). It's important to note that, of the multinational companies, 90 percent of them were either suppliers or subcontractors. Majority of the general contractors were national companies.

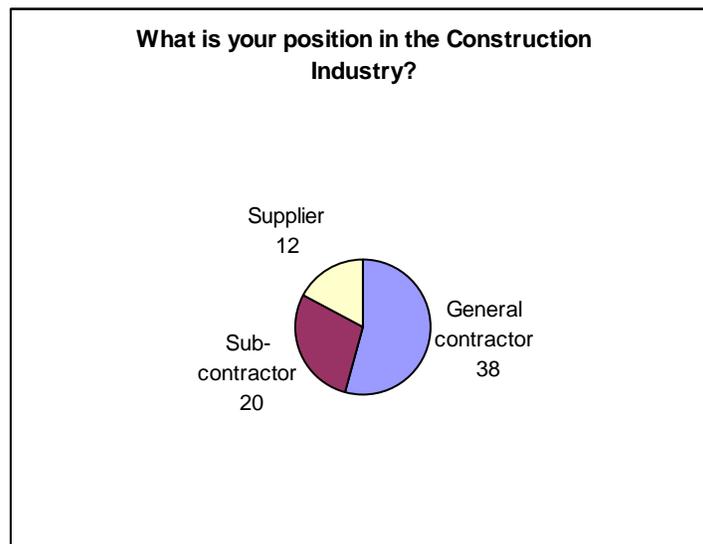


Figure 2: Organization's Role

Figure 3 indicates that the majority of the companies have between 6 to 10 years of industry experience. The reason could be that the rise of the economy in late 90's brought new construction companies, both national and multinational to the country. A very interesting fact is that all the companies with 1 to 5 years in the business are multinational, that representing 50 percent of the multinational companies in the survey,

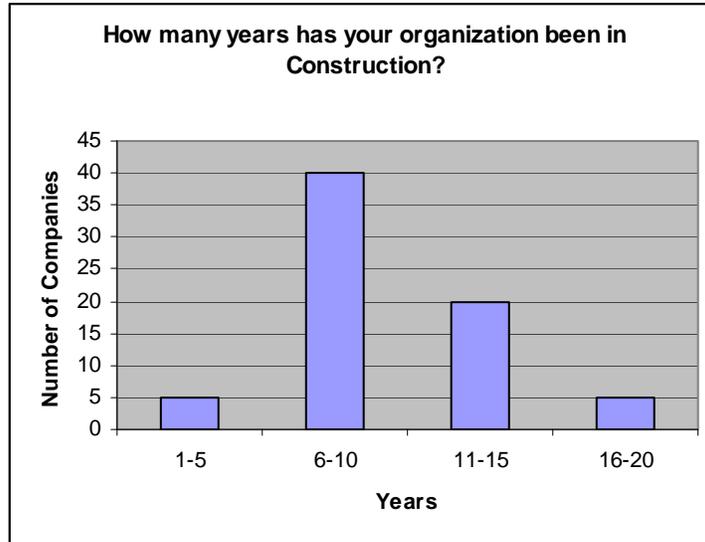


Figure 3: Construction Experience of Organizations

The question that aimed to identify the companies that implemented ISO 9001:2000 showed that 86 percent of the companies don't implement ISO 9001:2000 quality standard, with 62 out of 70 responses, and only 14 percent companies implement ISO 9001:2000, with 8 out of 70 responses. An important fact is that of the 8 companies who implemented ISO 9001:2000, 6 of them were multinational, that showing that multinational companies are more aware of the advantages that ISO 9001:2000 give to their companies. Only 2 of 65 of the national companies implement ISO 9001:2000, that representing only 3 percent of the national companies, a number which can be considered very low.

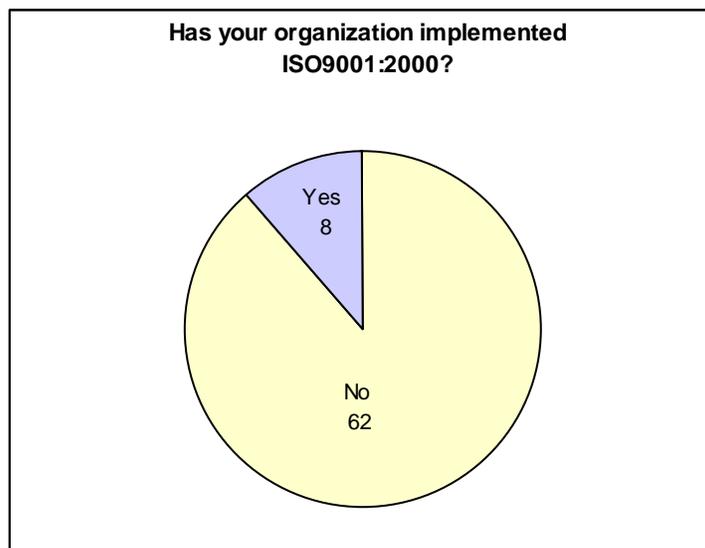


Figure 4: ISO9001:2000 Implementation

4.2 USERS OF ISO9001:2000

Figure 5 shows that 6 out of 8 companies that have implemented ISO 9001:2000 in the survey have from 1 to 5 years of implementing ISO 9001:2000, that representing 75 percent of the total. Only 2 companies have from 6 to 10 years. Its important to note that the two companies that have 6 to 10 years are multinational, and the other remaining 4 multinational companies have 4 or 5 years of implementing ISO 9001:2000, showing that the multinational companies are more focused in setting international quality standards in their organizations. These companies are aware of the importance that quality systems have had in their global approach to doing business.

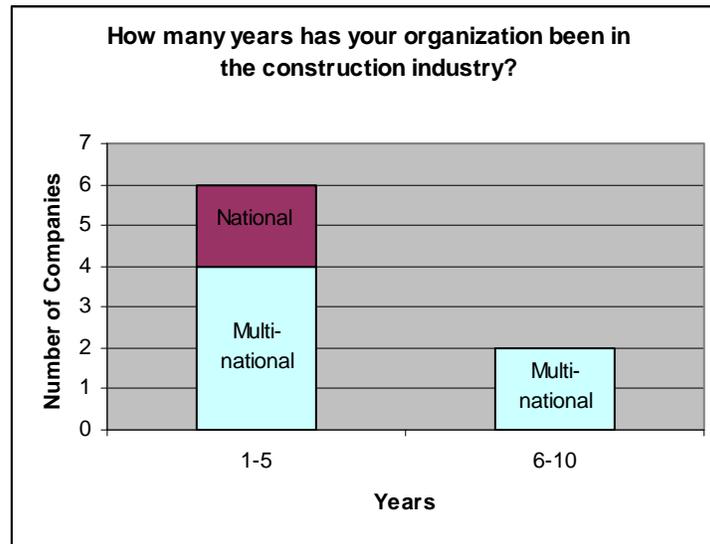


Figure 5: Years in construction

The question about how the companies value the importance they give to the use of quality systems brought some interesting results. Of the 8 responses, 6 of them (75%) valued the use of ISO 9001:2000 as very important. The remaining answers valued the use of ISO 9001:2000 as important (15%). First thing to note is that all of the companies consider the implementation of ISO 9001:2000 as valuable. The second thing to note is that all of the respondents that valued as very important the implementation of ISO 9001:2000, all of them came from the multinational companies, which represent 100 percent of the multinational companies. In other words all the multinational companies valued the implementation of ISO 9001:2000 in their organizations as very positive.

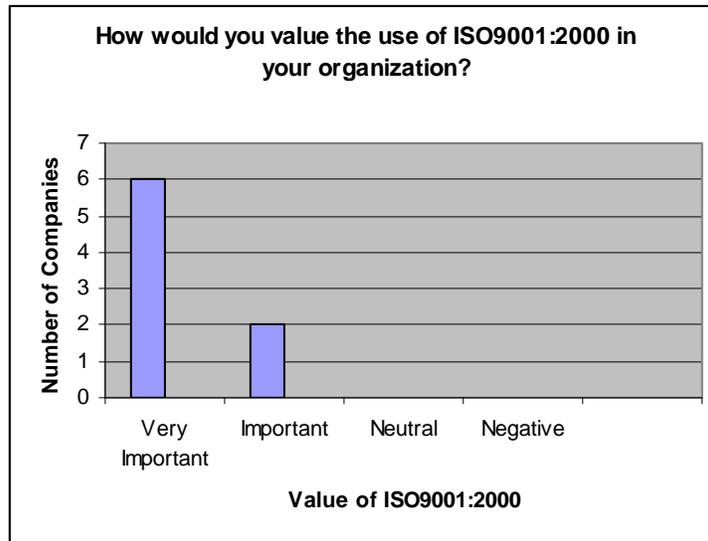


Figure 6: Value of ISO9001:2000

Figure 7 shows that all of the respondents stated that the use of ISO 9001:2000 has contributed to the competitiveness of the organization, which goes hand in hand with the previous answer that valued in a positive way the implementation of ISO 9001:2000.

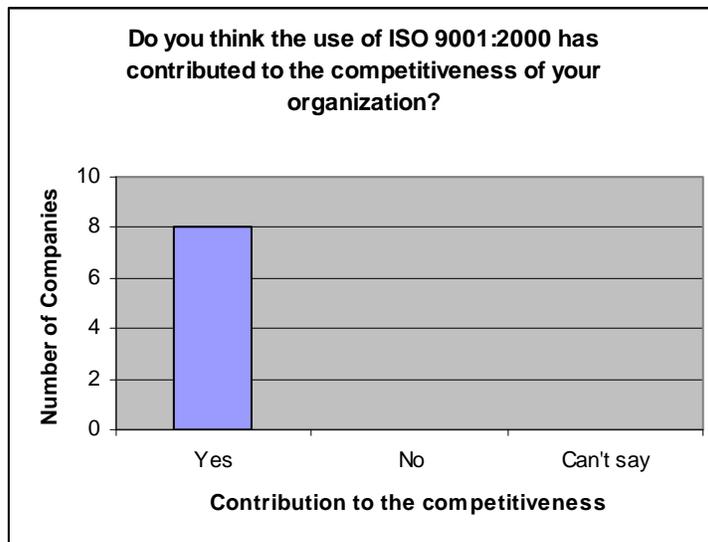


Figure 7: Contribution of ISO9001:2000 to Competitiveness

4.3 NON-USERS OF ISO9001:2000

Figure 8 shows that 65 percent of the non users of ISO 9001:2000 (40 out of 62), which are the majority of the companies on the list (86%), aren't familiar with ISO 9001:2000 quality standard. While trying to find some reasons behind that high percentage it was noticed that 80 percent of the companies who weren't familiar with ISO 9001:2000 quality standard were companies who worked outside of the city's capital, which relates to that high percentage because companies from outside of the city's capital don't have a lot of market share, and are not that interested in international quality standards.

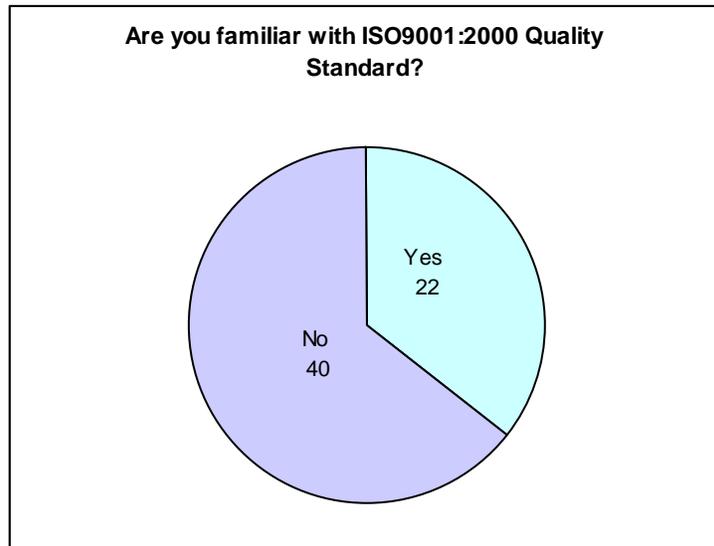


Figure 8: Familiarity with ISO9001:2000

Question 9 (Figure 9) was made for the 22 companies that listed they were familiar with ISO 9001:2000 but haven't implemented it. Eleven of the 22 (50%) stated that their organization isn't big enough. It's important to note that those eleven answers were from companies outside of the city's capital, which is closely related to the previous answer in the fact that companies outside of the city's capital have less market share, thus not being interested in investigating about international quality standards.

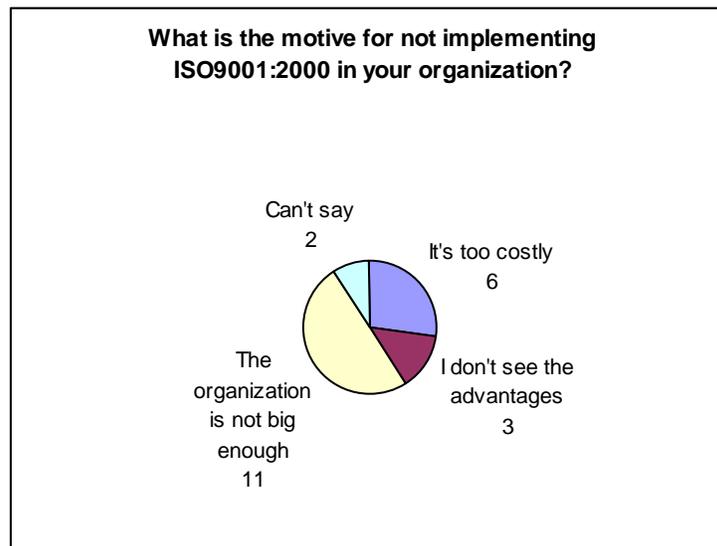


Figure 9: Motive Behind Implementing ISO9001:2000

Just like question 9, the last question was for the 22 companies that listed that they were familiar with ISO 9001:2000 but haven't implemented it. Of the 22 companies, 14 out of 22 (64%) are not certain if ISO 9001:2000 can influence in the company's competitiveness. It is believed that high percentage goes hand in hand with the lack of knowledge of ISO 9001:2000 of a big part of the companies in the list, largely because of their low market share and lack of interest in quality systems.

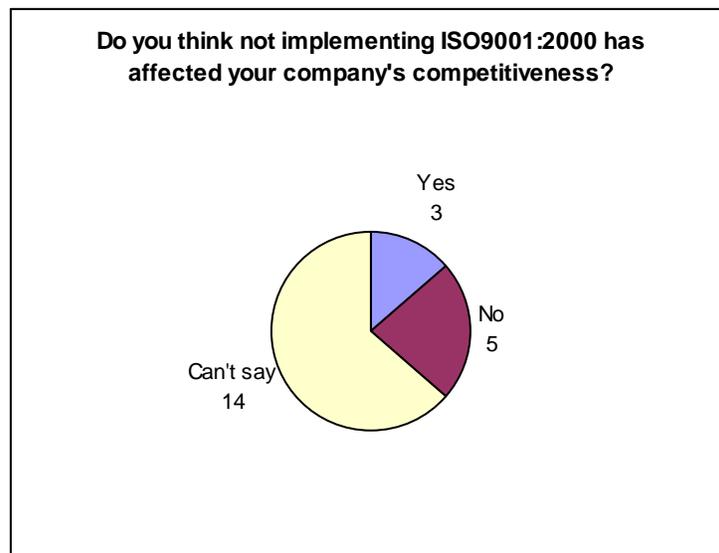


Figure 10: Perception of ISO9001:2000 Influence

5. CONCLUSIONS

From the survey some meaningful conclusions can be drawn. The first to note is that the country hasn't yet embraced the changes that the signing of the free trade agreement between United States and Central American countries require for staying competitive in the construction industry, because of the lack of knowledge of the importance that implementing international quality systems like ISO 9001:2000 have in the competitiveness of their organizations.

Other factor to note is that multinational companies are aware of that importance and are the first ones to embrace the implementation of international quality standards. Even though the percentage of multinational companies according to the survey is very low, a thing that cannot be seen in the survey is the tendency of growth of multinational companies in the next few years, which to this day is a reality, because of the new changes the economy is experimenting in the recent years.

A bigger problem that goes beyond the lack of implementation is that the knowledge of international quality standards by a big proportion of Dominican companies is minimal to none, which makes a lot more difficult for these companies to make the necessary changes in order to stay competitive in the marketplace.

To conclude, in easier terms, the country its opening to the world but is not making the necessary changes to compete with it. It is hoped that the country can identify the necessary steps to change towards a more competitive economy. The establishment of quality culture in an organization can have a head start with the implementation of international quality standards like ISO 9001:2000, and as we know, quality is critical to the success of companies competing in the global marketplace.

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