

Investigating the Economic Benefits of ISO 9001 Certified Companies in Guyana via Pre and Post Certification

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Abstract

ISO 9001 Quality Management System is one of the leading management standards that companies worldwide seek to be certified to, with over a million companies certified and increasing yearly, being ISO 9001 certified is a requirement for potential clients to do business with a company. The purpose of this research is to investigate the economic benefits of ISO 9001 certified companies in Guyana. Eighteen (18) companies were identified and participant's responses were analyzed into quantitative and qualitative data and discussed. The findings suggested that companies experience increased economic benefits among other internal benefits that enhanced the company's overall performance.

Keywords: *International Organization for Standards (ISO), Standard, Quality Management System (QMS).*

Introduction

The history of quality can be traced back to Dr. Demming, Dr. Juran and other quality experts in the 1950's where "plan do check act" (PDCA) cycle, statistical and quality control tools were implemented. The Japanese after learning from these experts developed the Japanese Industrial Standards (JIS) committee which allowed manufacturers to be certified to this quality standard. Quality control then moved to quality assurance where defects were monitored and systems put in place to prevent defects during production. During the 1980's the world was moving towards global trading; therefore, countries needed to have a level playing field when conducting trade (ISO 9001 overview, 2018). The International Organization for Standards in 1987 adopted the ISO 9000 series of standards. Now, ISO 9001 is recognized throughout the world. Many companies will not buy from you unless you are ISO 9001 certified.

The evolution of the ISO 9001 quality management system has moved from quality management to the business strategic direction of a company and its survival in today's business environment. The purpose of a management system is to deliver the business objectives that are established in order to meet the needs of the business stakeholders. Successful business understands and addresses the needs and expectations of their own individual stakeholders. The ISO 9001: 2015 standard refers to these stakeholders as 'interested parties. Interested parties can be external or internal to the organization and include, for example, Customers, Owners, Employees, Society and Suppliers whose needs may be similar, unique or diverging. Understanding the external and internal issues relevant to its purpose and strategic direction is fundamental to business success, as is the need to determine the risks and opportunities that need to be addressed to achieve intended business results. So, what is a quality management system (QMS)? A quality management system is a way of defining how an organization can meet the requirements of its customers and other stakeholders affected by its work. ISO 9001 is based on the idea of continual improvement. It is designed to be flexible enough for use by many different types of organizations, so it does not specify what the objectives relating to "quality" or "meeting customer needs" should be. Instead, it requires organizations to define these objectives themselves and continually improve their processes in order to reach them. Once these targets have been attained, they must be reassessed - in a quest for continual improvement. A QMS can bring benefits to organizations of all sizes and all sectors, from the small manufacturer of bicycle parts to a hospital employing 5000 people (Reaping the Benefits ISO 9001, 2015). Working for an ISO 9001 certified company from 2012 to present it is evident that certification has seen improved customer satisfaction, thus retaining clients and increasing revenue over time. Better management of resources

has led to cost savings. This study seeks to investigate the economic benefits of being an ISO 9001 certified company in Guyana.

Rationale of study

The fundamental reason for the study is assessing if there are any economic benefits experienced by companies in Guyana after they achieved certification and in what areas they gain any economic benefits.

Objective of the study

The objective of the study will seek to investigate the pre and post economic benefits of being an ISO 9001 certified company in Guyana. It will investigate the following areas:

- Production efficiency
- Competitive edge
- Cost saving
- Net profit
- Increased revenues
- Market shares
- Any other benefits experienced by companies

Review of literature

ISO 9001 is a standard that sets out the requirements for a quality management system. It helps businesses and organizations to be more efficient and improve customer satisfaction. Quality management systems should not result in excessive bureaucracy, paperwork, or lack of flexibility. Nor should your quality management system be a financial burden. Expenditures relating to implementing and maintaining a quality management system should be considered an investment that will provide a return in the form of benefits and improvements. Every organization will already have a management structure and this should be the basis on which its quality management system is built. You may find that your organization is already fulfilling many of the requirements included in ISO9001, but has simply not yet organized its activities into a formal quality management system (ISO 9001:2015 for Small Enterprises, 2016). In 1987, ISO published the first ISO 9000 series of quality management standards (QMS). Since then, more than one million organizations in 178 countries have achieved ISO 9001 certification (Does ISO 9001 pay? - Analysis of 42 studies, 2012). Although dozens of scientific studies on ISO 9001 have been published to date, a confusing picture of the impact of ISO 9001 on financial performance remains. While many concluded that ISO 9001 implementation and certification had a direct and positive financial impact, others found no significant effect. Beyond the direct link between the QMS and financial success, some studies highlighted other variables that may have an influence. According to Manders' research, developing countries are likely to gain higher operational performance improvements from ISO 9001. Implementing ISO 9001 helps firms in developing countries develop more sophisticated approaches to quality management. This in turn has an impact on operational performance. Also, societies that have higher institutional collectivism and performance orientation cultures, and those with lower power distance and future orientation cultures, gain more performance benefits. So, should there be one standard worldwide? The International Organization for Standardization might consider whether to adapt aspects of the standard to different cultures. However, each country has its own need and having different versions of the standard per country would mean that ISO 9001 is not a unique, international standard anymore. So, a more feasible alternative is for consultants to help companies to create the best possible cultural environment for ISO 9001 implementation. In other words, ISO 9001 consultants should be aware of the national cultures manifesting in a company and help to implement ISO 9001 based on cultural conditions (ISO 9001 benefits differ per country and company, 2015). ISO 9001 is applicable to any business small or large and has internal and external benefits. Mike Pearson a consultant for the British Standards Institution did a white paper on "The Small Business Owner's Simplified Guide to ISO 9001 and Business Improvement" (2012). He listed some external benefits of being ISO 9001 certified; 1) ISO 9001 is the recognized quality management system

standard worldwide. It confirms that you have put in the effort to enhance your systems to meet the standard, in order to continue supplying a product or service that consistently meets your customers' requirements. 2) Through the process of continuing to review and improve systems, the standard can positively help your business to ensure a high level of customer satisfaction and increase the effectiveness of your operations. This will in turn provide opportunities for orders, increased profitability and stability in the business. 3) BSI's customer research (BSI voice of the customer survey 2012 to 2015) has shown that 50.6% of businesses attract new customers, as a result of implementing and gaining certification. Further, 62.2% report improvements in products or services, 60.8% report an increase in trust in their business. For a company to become ISO 9001 certified they have to undergo an audit from a recognized certification body and then be issued a certificate of compliance to the ISO 9001 requirements. An article published by the United Nations conducted a survey from 2009 to 2015; feedback was collected from businesses about their perceptions of their ISO 9001 certified suppliers and from ISO certified organizations about their implementation and certification process. One of the main findings was that the performance and confidence levels of the different organizations significantly varied depending on the certification body they were certified with as well as the certification body's underlying accreditation. For the most part, all certified clients reported satisfying results with their certification bodies, with only a small number CB's performing poorly. Therefore, it is important to emphasize that ISO 9001 is considered an economic benefit due to the fact that: 1) 95% of the organizations that participated in the survey considered ISO 9001 a "good" or "very good" investment. 2) The general opinion of both the ISO 9001 standard and the accredited certification to ISO 9001 are good. 3) There was a high rate of satisfaction from businesses regarding the performance of their ISO 9001 certified suppliers. The overall perception was that certified suppliers performed much better" than those not certified (United Nations, 2017). A survey conducted by ISO showed a 7 % increase in ISO 9001 certified companies from 2015 to 2016 (The ISO Survey of Management System Standard Certifications 2016, 2017). It is now a criterion when supplying a product or service especially to foreign companies that a company be certified to ISO 9001. This is evident on the website Centre for Local Business Development (2017) where local businesses in Guyana have to state what certification they have in step (2) for registering their business as a supplier which will give them a competitive edge over non-certified companies.

Methodology

Study area: only ISO 9001 certified companies were identified; a list was received from the Guyana National Bureau of Standards citing that 18 companies were ISO 9001 certified as the population. Since the population size was small, hundred percent sampling was targeted to collect primary data.

Questionnaire and interview: the research used a questionnaire and interview for data collection. The questionnaire was developed using Google forms and pretesting was done using the research supervisor. The questionnaire was structured with quantitative and qualitative questions to solicit the best response from participants. Questions 8-13 targeted economic benefits before certification and questions 14-19 after certification. These questions were scale rated from 1-10 with 1 being no improvement and 10 being significant improvement. An even number scale was used to avoid central tendency.

Data collection: The interviews were conducted from 13th to 26th June, 2018. Companies were contacted by telephone to set interview dates; however, some companies preferred that questionnaires be emailed to them due to busy work schedule. Phone calls and follow-up emails were utilized to gain questionnaires where personal interviews were not conducted. Out of the 18 companies identified all responded excepting for one company that didn't consent to filling the questionnaire. This resulted in a 6 % margin of error with 95% confidence level which was calculated using margin of error calculator from survey monkey.

Data analysis: The data collected were entered into the Google forms and the responses were analyzed into pie charts and bar charts for easy interpretation. The data was also exported to an Excel file for further analysis (Table 1).

Observations and findings

During the interview sessions with companies it was observed that the personnel responsible for the Quality Management System were not fully knowledgeable in the financial aspect of the company and therefore had to make contact with top management for relevant information. Some participants also indicated that the company was certified for more than 20 years, thus making it difficult to respond to questions relating to before certification. One participant from a major manufacturing company stated that they receive minimal economic benefit since they already were operating efficiently due to holding a franchise product.

Discussion

Quantitative analysis

The companies interviewed ranged from public to private sector which included regulatory agencies, retail and shipping, educational, agricultural, with manufacturing companies making up 23.5%. The pie chart in Figure 1 shows the amount of years the companies were certified.

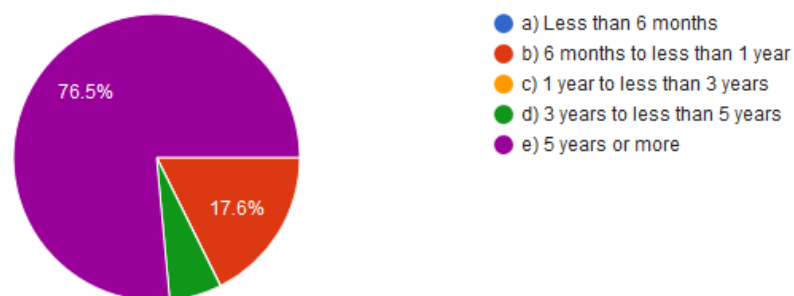


Figure 1. Pie chart showing amount of years companies were certified

From the data analysis it was seen that 94.1 % of companies seek certification due to management decision which was influenced from client requests and shareholders.

The following chart in Figure 2 shows the percentage change before and after certification. For production efficiency, competitive edge and cost saving a 16, 18 and 16 % percent increase respectively was higher as compared net profit, increased revenue and market share which was 9, 14, 9 % percent increase respectively which was lower.

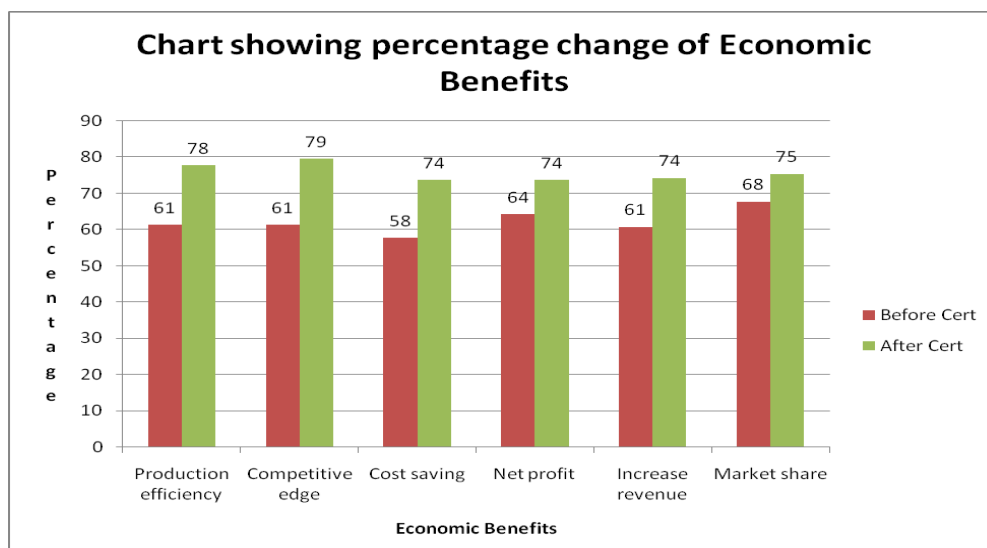


Figure 2. Bar chart showing percentage change of economic benefits.

Some disadvantage to certification experienced by companies were cost of certification is expensive to maintain (41.2%), only few shareholders/ customers see certification as important (35.3%) while participants stated other factors accounting for (41.2%). See Figure 3.

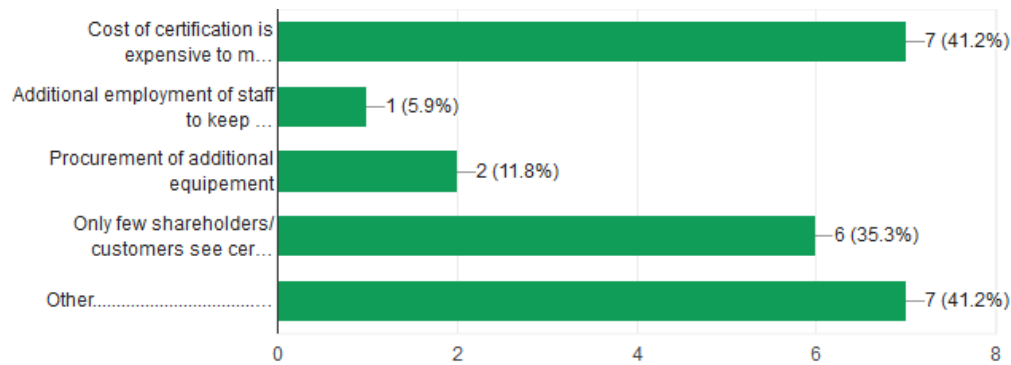


Figure 3. Chart showing various disadvantage of certification.

Qualitative analysis

Respondents stated varying other benefits encountered from certification but most noted were greater recognition from local and foreign clients, systematic approach to streamlining operations, better documented systems for accountability and greater customer satisfaction (Table 2).

Conclusion

Economic benefits were evident for all the parameters tested from the study, since a significant increase in percentage for each was cited. The other benefits experienced by companies were internal as well as external, thus clearly showing there are overall benefits to being an ISO 9001 certified company, which matches studies cited in the literature review.

Recommendations for future research

Future studies can be carried out on:

- 1) Difficulties encountered while preparing for certification i.e. documentation, training of personnel, capital investment and procurement of any additional equipment.
- 2) An in-dept and longer study on a selected company that is aiming for certification to assess how they have actually benefited from being certified.

Summary

The project is birthed since no research study was conducted in the Guyana context on the benefits of being an ISO 9001 certified company. Questionnaires were used to solicit the responses from participants. These responses were analyzed using Excel computation. These were discussed in a qualitative and quantitative manner as to gain a better understanding how the data related to the study was undertaken. It was finally concluded that economic benefits were enjoyed by companies.

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Appendix

Table1: Participants analysis

Company name	Company represent	Type of business	What are some of the requests from clients?	Before certification						After certification					
				Production	Competitive	Cost saving	Net profit	Increase rev	Market share	Production	Competitive	Cost saving	Net profit		
MACHINERY CORPORATION OF GUYANA RICHARD-YC	MINING & CONSTRUCTION	a) Client request	6	7	5	7	7	7	7	9	9	9	9		
Guyana Sugar Corporation	Quality Assurance	Sugar Production	a) Client request	5	7	4	7	5	9	8	7	7	6		
Art Williams and Henry Wendt	Head of training	Training- Aviation	b) Management	8	8	8	6	6	6	9	10	9	8		
Guyana National Shipping Corp	Quality Coordinator	Shipping and logistics	b) Management	6	5	3	5	4	5	7	8	4	5		
Banks DH limited	Leslie Doodnauth	Food manufacturing	a) Client request	10	10	10	10	10	10	10	10	10	10		
ASH United (Guyana) Inc	Sales coordinator	Retail/ Shipping/ Etc	a) Client request	5	6	6	5	6	6	5	8	6	5		
GPL Inc	Quality Manager	Utility (electricity)	d) Other	4	1	3	4	5	8	6	2	6	7		
Actlabs Guyana Inc	General Manager	Geological testing	a) Client request	5	3	5	4	4	3	6	8	6	8		
Guyana National Bureau of Standards	Candelle Walcott	Public sector	b) Management	5	5	4	5	4	7	6	7	7	7		
Massy Distribution (Guyana) Inc															
Guyana Geology and Mines Commission	Administrative Officer	Regulatory Agency	b) Management	5	10	5	10	7	10	8	10	8	10		
Edward B Beharry & Co Ltd	Raymond Ramsaro	Manufacturing and	b) Management	6	6	8	7	7	8	8	8	9	8		
National Milling Company of Guyana	Ms. Samantha Shim	Manufacturing	b) Management	7	6	7	8	7	8	8	7	8	7		
Demerara Distillers Limited	Kesha Fraser	Manufacturing	b) Management	7	7	8	8	8	8	9	8	9	9		
Massy Gas Products (Guyana) Ltd	Quality Representative	Manufacturing	b) Management	6	5	1	1	1	1	8	9	1	1		
Caricom Rice Mills Ltd	Quality Assurance	Rice Milling (Agri)	a) Client request	5	4	5	7	6	5	8	7	8	8		
Sterling Products Ltd	Robert Ross	Manufacturing	b) Management	6	6	8	7	8	6	8	8	9	8		
Assuria General (GY) Inc	Management Secret	Insurance	b) Management	8	8	8	8	8	8	9	9	9	9		

Source: Table was modified from the Excel file for this study

Table 2. Respondents comments

Respondents Comments
EMPLOYEE ENGAGEMENT, POSITIVE CULTURAL CHANGE OVER TIME
Reduction in cost of production, reduction in customer complaints, improved traceability, employees are all aware of product standard requirements.
Assisted the school in national accreditation and recognition worldwide
1) Improve in processes, procedures, SOP's, instructions, quality plans. 2) Better measurement of customer feedback (surveys, questionnaire) 3) risk management 4) continuous evaluation of external suppliers. 5) International firms are willing to do business with you because of ISO.
Systematic approach
Company recognition, increased competitive advantage, improved customer services
1) Documentation offers a systematic approach to doing work. 2) it offers excellent traceability. 3) Quality helps staff to transition. 4) Builds the company reputation
1) Global recognition. 2) Client satisfaction. 3) Increased in clientele
1) Streamed operations using the process approach. 2) Increased monitoring and measuring of objectives. 3) Clearly defined policies and procedures. 4) Addressing non conformance through corrective action process. 5) Increased recognition of services.
Increase staff morale and increased customer satisfaction
1) Improvement in problem solving and risk management. 2) Increased focus on the customer. 3) Focused improvement on systems
More accountability from everyone, empowering managers and giving more responsibility
1) Standardized approaches improve consistency. 2) Drives continuous improvement. 3) Lower defect rates.
1) Employees are now more aware of ISO 9001 standard and what it means to be certified and they are actively engaged in the continual improvement process at work. 2) Operations/ activities are documented and are now monitored for compliance and opportunities for improvement.
1) Improved competence of personnel (trained). 2) Continuous improvement promoted. 3) Structural/ systematic way of doing things. 4) Improved communication both internal and external thus promoting greater awareness and adherence to company requirements, statutory and regulatory requirements.
1) Market access increased. 2) Improve efficiency internally. 3) Greater recognition.

Source: developed for this study