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ISO 9001 Quality Certification and Financial Performance of Selected Manufacturing Companies

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This study was to fill a significant gap in the research, more specifically to determine the practices of ISO 9001 quality management certification and financial performance. Cronbach alpha was utilized to measure the reliability of the four scale likert-type questionnaire. Also the annual audited financial records of the 71 food and beverage manufacturing companies in the Philippines were gathered. The results of this study revealed that ISO 9001 certified companies strongly agree to practice ISO 9001 quality management certification than non-ISO certified companies. Leadership, mutual benefit supplier quality management, and continual improvement are the highest among the principles. In terms of level of return on asset (ROA), there is no statistical significant difference between ISO and non-ISO certified companies, and company size.

Keywords: ISO 9001, Financial Performance, Food and Beverage, Manufacturing Company, Certified and non certified, Return on Asset (ROA), Net Profit Margin (NPM), Asset Turnover (ATO).

INTRODUCTION

ISO 9001 certification is among the most desirable accomplishments a company can pursue. The Philippines, in particular, is still young in adopting ISO 9001 certifications. ISO survey indicates 2,412 companies, which are mainly engaged in exports, that are certified ISO 9001:2000. It grew by 9.6% compared with the year 2008. Researchers Chua, Goh & Wan (2002) found certification leads to better financial performance; non-listed certified company experience better documentation procedure, higher perceived quality of product or service, more effective communication among employees than listed certified company. Unlike Gotzamani, Theodorakioglou & Tsiotras (2006), stated they cannot guarantee that this improvement will continue after certification. A study of Corbett, Sancho & Kirsch (2005) researched ten year financial performance of ISO 9001 certified manufacturing companies, they found significant abnormal improvements in financial performance.

Researchers have examined ISO 9001 certified companies from manufacturing. Some companies have better business performance than others. Indeed, a wealth of literature exists, which argues for and against the use and practice of such certification instruments. Capistrano (2008) maintained that "an organization can still produce poorly-made products or offer poor service and still get certified because it is consistent and conforming to a set of standards". At present, there is none empirical literature on ISO 9001 within the context of the Philippines food and beverage manufacturing companies. Thus, this paper attempts to fill critical void.

According to International Standard Organization (ISO), in the year 2000, ISO replaced 9002 and 9003 with a new set of standards, called ISO 9001:2000. Currently, ISO 9001:2008 is published and implemented. The purpose is simplifying the international exchange of goods ad service around the world. The ISO principles consist of eight quality principles namely: customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision making, and mutually beneficial supplier quality management.

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Through field experiments (Kumar, Venkatesan & Reinhartz, 2008) it has been proved that adopting a customer-focused sales campaign can significantly increase firm profits and return on investment. Numerous authors like (Chen & Cheng, 2007) argued that adopting customer focus may improve satisfaction both internal and external customer; Carron et al., (2006) claimed that it could reduce environmental pollution affecting workers and communities; Abdullah, Uli & Tari, (2008) observed that it may influence quality improvement; Claver & Tari (2008) said it may improve customer, people, society results and quality performance; and authors Vijande & Gonzalez (2008) emphasized that it could enhance innovation.

The benefits of leadership are that people will understand and be motivated toward the organization's goals and objectives, so that miscommunication between levels of an organization will be minimized. In their research, Azar, Kahnali & Taghavi (2008) found that leadership is an important factor in successful ISO 9000 quality management, acts as a driver. It creates values, goals and systems to satisfy customer expectation and improve organization's performance. The application of leadership, according to Noriss (2009), improves people skills leading to increased organization performance and employee job satisfaction.

Chang (2008) stated that each employee should understand his/her role and responsibility in solving the problem forwardly as mastership, and learn the principles, skills and technologies of TQM and ISO 9000. Researchers Zgodavova and Colesca (2007) postulated that people freely sharing knowledge, experience, discuss problem or issue as a result of effective motivation for performance improvement. In their study, Owino, Ogachi and Maureen (2011) revealed that lack of teamwork negatively affected the quality of product or service offered in the institution.

Globalization has forced organizations to innovate. Baker & Maddux (2005:44) have stressed, "Process management requires knowledgeable individuals who are able to manage in the increasingly complex process oriented environment". Looking at the global competitiveness, it is important that medium and large companies take this seriously to be able to restructure their processes, come out with quality products and stay in competition. The redesign of business processes will create efficiency, shorter cycle times through effective use of resources, reduce waste and costs (Fening, Pesakovic & Amaria, 2008).

The system approach to management, according to Kuratko, Goodale and Hornsby (2001), serves as a central collection and analysis point in an integrated performance measurement system that relies on financial and non-financial data and information. The researchers stressed, "Effective use of information drives the firm's continuous improvement in performance and competitiveness" (p.295).

Researchers Lee, Huang, Barnes and Kao (2010) found factors of IT, information sharing, supply chain integration, decentralization and coordination are significant positive relationships to employee relations, operational performance, customer satisfaction paving the way to improve financial growth. Therefore, in this comparative study (Civcisa, 2007: 987) found out that the implementation of system approach to management is very important aspect for companies' competitiveness in this business-driven world in order to be successful. Continual improvement is what ISO 9001 brings a continuous process to the company so that excellence in performance shall be sustained in the company, thus customers shall be satisfied in using the products and services being offered. In a study, Abdullah, Uli, and Tari (2008) researched that quality improvement was significantly influenced by soft factors which included management commitment, employee involvement, customer focus, training and education, reward and recognition. Here, firm must provide the employees with continuous training and education in work related and statistical techniques so that problem identification and problem solving abilities of them at all levels are enhanced and improved continuously. The above statement was agreed by researcher Keller (2008) who stated that continual improvement can be achieved if management provides workers opportunities for continuing education in and outside their company Factual approach to decision making is needed for business leader and managers to have a dynamically factual approach toward decision making, so that the production of any departmental effort would turn out beneficial to the company. A study by James & Johnson (2009) and supported by authors (Tari, 2005; Kartha, 2004; Soltani & Lai, 2007), observed that information on quality performance should be readily available to the workers anytime for their continued support and development, and those who need such. However, companies should have systematic guidelines on keeping those data reliable so they themselves or anybody in the work can be guided by facts accordingly.

The nature of supply chain (SC) relationships has undergone some dramatic changes. Corporations have been encouraged to develop close partnership with suppliers and customers alike. Various dimension of SC relationship such as trust, dependence/interdependence, commitment, adaptation, communication, and cooperation positively correlated on performance. A study was conducted in the Republic of Ireland showed that supply chain relation quality (SCRQ) has a positive impact on design quality. This suggests that by developing and engaging in true partnership types of SC relationships, suppliers can become much more proactive in the design and new product development process. From management perspective, mutual trust and commitment are central to a more enlightened approach to managing SC relationship. Further researchers stated that double loop learning could increasingly become a feature of strong relationship. Double loop learning involves learning about how one learns about the way one defines and solves problems (Fynes, Voss and Burca, 2004). Azar, Kahnali and Taghavi (2008) commented that companies must focus their efforts to improve the quality of the products they receive from their suppliers so they can pass it on to their customer.

Numerous studies of ISO 9000 worldwide have almost the same highlight on this component showing if the company is growing financially (Chua, Goh and Wan, 2002; Dunu and Ayokanmbi, 2008; Han, Chen and Ebrahimpour, 2007).The study of Chang and Lo (2005) stated that benefits of ISO 9000 certification is not a "risk-free undertaking." The value of certification registration varies and may lead to unprecedented successes, or merely to an increased workload and additional cost to the operation. Further, authors Casadesus and Karapetrovic (2005) have also found that the ISO certification has been criticized for the implementation cost the required time to the registering company. The result of the study of Morris (2006) found that ISO certification does not immediate lead to greater financial performance. Based on above explanation, among companies under study that relates to certification and size, this study shall have the following null hypothesis: There are no significant relationships between ISO 9001 certification to financial performance

RESEARCH METHODOLOGY

Research Design. This research used descriptive quantitative and relationship approach The data collection was carried out through survey using four point Likert scale questionnaire. The survey was conducted on an ISO 9001 certified and non certified food and beverage manufacturing companies located in the Philippines. The questionnaire was specifically designed to seek responses from quality representative responsible for quality management systems at the site, while the secondary data are taken from the latest, and available 2008 corporate audited financial annual reports published by the Security and Exchange Commission. The classification of large and medium size company fulfills the requirement from Republic Act no. 950. Total assets (inclusive loans, exclusive land) between fifteen million to one hundred million are categorized medium size, while above one hindered million are categorized large size company. The data were analyzed using StatistiXL. , t-test and multiple regression were used to test the hypotheses.

Variable and Measures. The questionnaire has three main parts: Part I (which deals with company basic information); Part II (which pertains to quality management, consisting of 33 items, dealt with awareness of the eight (8) components of ISO 9001 quality management principles, and financial report (return on asset) of 71 manufacturing companies were obtained from secondary sources such as annual report. The reliability of the instrument was examined by Cronbach's alpha at 0.9437, standard deviation 7.72 which exceed the cut off level of 0.60 (Nunnally as cited by Brah, Tee and Rao, 2002).

Respondents. A sample of 289 food and beverage companies was drawn from the list obtained from Philippines top 7,000 corporations. A total of 71 managers of large and medium size companies responded, thereby yielding a response rate of 25 percent which the researcher considered samples were enough due to time and resources available. Other study (Stewart & Waddell, 2008), survey of 1000 quality certified organizations in Australia yielded a 23% response rate. By certification, 26 or 37% companies are ISO 9001 certified while 45 or 63% companies are non-ISO certified.

Data Analysis. To test the hypothesis, researcher carried out t-test for test differences and multiple regression analysis to test significant relationship. If the p-value > 0.05, the hypothesis is supported that there is not significant relationship. The data processing was carried out by using the assistance of StatistiXL software program at 5% significant level.

RESULT AND DISCUSSION

ISO 9001 practices and hypothesis. The result of four scale showed that the highest ISO 9001 quality principles practices for ISO 9001 certified company are leadership (3.98) and mutual benefit supplier quality management (3.98). Meanwhile for non certified company, the highest ISO 9001 practices is leadership (3.94) and process approach (3.91). The biggest gap among those company is involvement of people (0.13), while the smallest gap is on process approach (0.03). To test the hypothesis or to find whether there is no significant difference in the mean scores of companies between the ISO 9001 certified and non-ISO 9001 certified company, researcher conducted t-test. The result showed that p-value for total is 0.018 less than 0.05. Thus, the research null hypothesis is rejected or there is significant difference in the mean practices scores of companies between the ISO 9001 certified and non certified company. ISO-certified companies reported higher mean scores in degrees of practicing ISO 9001 quality certification than non certified companies. The findings confirm previous study by Dunu, Ayokanmbi and Tsiotras (2008) that ISO 9000 certified companies practiced more, and performed better than non-ISO companies. Authors Gotzamami, Theodorakioglou and Tskiotras (2006) stated that the influence of leadership has improved the operational performance. Keller (2006) added that continual improvement can be achieved if management provides worker opportunities for continuing education in and outside their company. Furthermore, Noriss (2009) stated that the application of leadership improves people skills and employee job satisfaction. Finally, the study of Chua, Goh and Wan (2002) stated that ISO certified companies experience better documentation procedures, and higher perceived quality of product or service.

Then to compare the degree of agreement of ISO 9001 practices between large and medium size companies. The result of test statistics showed that the absolute computed t-value: t(69)=2.489n is higher than the tabular t-value: t(69)=1.960 or p-value 0.015 < 0.05 which indicated that there was a statistically significant difference in degree of agreement of ISO 9001 practices between large and medium size company. Thus, null hypothesis is rejected. Large size companies reported significantly higher mean scores in degrees of practicing ISO 9001 quality management certification than medium size company. The findings confirm previous study by Dunu, Ayokanmbi and Tsiotras (2008) that the concepts of quality management are generally applied more in large companies than in small companies.

Financial Performance and hypothesis. The researcher followed the studies by Trochim (2006) to classify the level of financial performance in terms of return on asset (ROA), using grouped frequency distribution. The findings indicate that the average return on asset of the Philippine food and beverage is 5%, falling behind America's food and beverages processor industry average of 16% (www.deloitte.com). The result showed that the average ROA of ISO certified companies is 8%, above non certified companies 3%. Unfortunately, some of the companies have serious negative ROA that they really need to improve their return on large asset investment. Regarding the level of return on asset (ROA) between ISO certified and non certified, statistical result showed that p-value for total is 0.133 greater than 0.05. Although it is insignificant, the findings showed ISO certified companies are consistently higher ROA than that of non-certified companies. To compare between large and medium size company, the result showed insignificant that p-value is 0.51 greater than 0.05. These findings are relevant to the previous studies (Dunu, Ayokanmbi and Tsiotras, 2008; Corbet, Sancho and Kirsch, 2005), but differ from Benner and Vesolo (2008). Earnings that are generated from asset between medium and large-size companies were the same. Companies may practice ISO 9001 certification because of aspiration for international sales, competitive pressures, or major customer requirement (Bayati and Taghavi, 2007). This study is supported that the financial benefits from an ISO 9001 quality management system perhaps takes in the long run time, rather than the short run (Morris, 2006). Thus, this should be viewed as a long term investment. The longer a company practices ISO 9001, the more of commitment from the top management, the higher the results tend to be.

CONCLUSION

ISO 9001 certified companies strongly agree to practice ISO 9001 quality management certification than non-ISO certified companies. Leadership, mutual benefit supplier quality management, and continual improvement are the highest among the principles. In terms of level of return on asset (ROA), the Philippine food and beverage companies fall behind America's food and beverage processor industry average, and there is no statistical significant difference level of financial performance in term of return on asset between ISO and non-ISO certified companies, and company size.

Limitation and Further Research. Although this study has provided interesting finding for quality management, there are some limitations of this research that need to be emphasized. First, a longitudinal research would complement this work to support these relationships on a longitudinal basis. Second, member of countries in ASEAN such as Indonesia, Thailand, Brunei, Singapore, and Malaysia could be included in order to make comparisons in terms of quality improvement practices and performance.

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