

## Abstract

Quality has become one of the basic means of competition. Among different quality approaches ISO 9000 quality standards have consistently increased their popularity. In Thailand, companies realize the importance of becoming ISO 9000 certified. More and more companies are going for ISO 9000 certification. Thus, implementing ISO 9000 quality system successfully and effectively becomes an important topic. Strategies and success factors can help the company to understand the way to achieving ISO 9000 certification. The objectives of this study are: (1) to identify the success factors that affect ISO 9000 certification in terms of time and cost; (2) to examine the effect of the success factors on ISO 9000 certification

Literature is reviewed on general background of ISO 9000 quality standards, success and its measurement, and success factors of project implementation. From the literature studied, success measurement of ISO 9000 certification and fourteen success factors for ISO 9000 certification are drawn to develop the research framework.

This research formulates a conceptual framework to assess the effect of success factors on ISO 9000 certification in terms of time and cost. In the framework, dependent variable success of ISO 9000 certification is measured by two criteria – time and cost. There are fourteen success factors as independent variables are categorized into five groups. Clear goals, understanding of ISO 9000 standards, understanding organization's quality system and accepted comprehensive plan are grouped into project preparation. Top management commitment and management review are grouped into management attitude. Employee commitment is the only factor in the group employee involvement; Stable organization structure, education and training, effective communication, and documentation and control are grouped into organizational change. External and other aspects group includes market pressure, availability of resources, and consultant's assistance. These fourteen factors are hypothesized to be success factors affecting ISO 9000 certification.

The mail survey is conducted among 130 ISO 9000 certified companies in the electronic industry in Thailand according to TISI (Thailand Industrial Standard Institute) record (except the companies which address is not known). The response rate of the questionnaire return is 40.7%. The data analysis methods include descriptive analysis, independent-samples t test and ANOVA test.

To perform independent-samples t test, all the companies in the sample are divided into two groups according to the subjective measurement of ISO 9000 certification success – satisfaction with ISO 9000 certification in terms of time and cost. Independent-samples t test is applied to see whether time and cost can be success criteria of ISO 9000 certification. The result shows that time and cost spent can be success criteria of ISO 9000 certification.

The independent-samples t test is also applied to identify the success factors affecting ISO 9000 certification and it reveals that there are ten success factors affecting success of ISO 9000 certification which include clear goals, understanding of ISO 9000 standard, understanding of organization's quality system, top management

commitment, management review, employee commitment, education and training, effective communication, documentation and control, and market pressure. Other four factors - accepted comprehensive plan, stable organizational structure, consultant's assistance and availability of resources are found not to be significant success factors in this study.

The ANOVA test is to see the effect of each of ten success factors on ISO 9000 certification in terms of time and cost. The result of ANOVA test shows that clear goals, understanding of ISO 9000 standard, top management commitment, management review, employee commitment, education and training have significant effect on ISO 9000 certification in terms of both time and cost. The factors understanding of organization's quality system, effective communication, documentation and control have significant effect on ISO 9000 certification in terms of cost but not time. The factor market pressure has significant effect on ISO 9000 certification in terms of time but not cost.

Finally, the recommendation is made to both interested business and researchers for further study. The recommendations for business include gaining full support and commitment from the highest level of management, setting a goal with milestones, conducting status reports, and paying close attention to timing and budget, becoming familiar with the ISO 9000 series standards and specific industry-related standards, attempting to capture what is being done today when writing procedures for an initial assessment. The suggestions to academicians include expanding the study to a broader scope, study on more success factors, going deeper to focus on one of the specific issues, and further research on ISO 14000.

