CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes overview of the research methodology and design used for this research. The research is to investigate the impact of Continuous Improvement program towards employee's Job Satisfaction in Malaysia industry environment.

This research is conducted in a quantitative way, where survey questionnaires are used to collect data. Quantitative research is impersonally experimental, manipulating variables and controlling natural phenomena, by constructing hypotheses and testing them against the hard facts of reality (Leedy, 1993). According to Christensen (1985), quantitative was the most appropriate one to use if the purpose of an investigation is to describe the degree of relationship which exists between the variables.

The link between CI program and employee's Job Satisfaction is illustrated in Figure 1.1. In this research framework, CI program consists of six supporting variables and employee's Job Satisfaction is the dependent variable. The model suggests that the greater the extent to which these CI elements are present, the greater will be the job satisfaction among employees.

3.2 Research Design

This research is conducted in a systematically way to find the answers of research question and it is conducted in a quantitative way, where survey questionnaire is used to collect data. Besides that, the research is conducted

in descriptive studies and explanatory studies, which also known as hypotheses testing. Study focuses on analysis of questionnaire to establish the association between the variables, which as shown in Research Framework (Figure 1.1).

The questionnaire is distributed to employees who were working in Klang Vally Industries in Malaysia. Therefore, this research is aligned with survey research strategy. In this strategy, the questionnaire is distributed to the employees via email. It is expected to collect an amount of data from the interviewees from several organisations in Klang Valley, Malaysia. The data is analysed later to exanimate the hypotheses that mentioned in Chapter 1. In overall, this research is a combination of quantitative and qualitative data collection, and it's categorised as Mixed Method Research.

3.3 Population and sample

This research focuses on the Klang Valley industries in Malaysia. The industries consist of the enterprises in the manufacturing, manufacturing-related services or service based industries. Besides that, the industries are included the sectors of automotive, electrical, financial, education, accountancy, primary agricultures, information and communication technology (ICT).

3.4 Probability Sampling

Since this research is type of deductive research and the sample frame is pre-determined, thus this research is using probability sampling method.

Lau and Idris (2001) have conducted a research of success factors on TQM implementation, they have selected sample size of one hundred and twenty seven companies to generalise the industry. Nevertheless, due to the time and author ability limitation, the research will target on twenty companies. Since the sampling frame is large enough (one thousand three hundreds and fivety two companies), thus the selection method will focus on Simple Random, where the sample will be selected at random by computer. The sample will randomly choose to email until the author get the enough sample size from the interviewees.

3.5 Units of Analysis

Base on the research objectives, this research is mainly focuses on the employees' Job Satisfaction due to Continuous Improvement elements, therefore the unit of analysis is refer to individual because the research is interested on individual employees in the organisation which practicing Continuous Improvement. The research used the data that collected from each individual as the input of the study.

3.6 Measure

Data for this study was collected using three separate instruments (Refer to Appendix). The first instrument was designed to collect the data regarding the Continuous Improvement elements. The second instrument was designed to measure the employees' job satisfaction based on Spector's (1985) Job Satisfaction Survey (JSS) (Sauer, 2009). The third instrument was

designed to collect data on the specific demographic information about the respondents.

The supporting variables in the study were Continuous Improvement practices. For the purposes of the study, six broad Continuous Improvement practices were considered:

1. Customer Focus

2. Employee Involvement

3. Process Management

4. Supplier As Key Performance

5. Individual and Group Recognition

6. Database Decision Making

The Continuous Improvement questionnaires are measured with 5-point Likert scale anchored from (1) strongly disagree to (5) strongly agree. The employees of selected organisation or organisation are informed of the purpose of the research and they are assured of the confidential of the questionnaire. The questions are designed based on the criteria and guidelines set forth by the Baldrige Award for Quality and Japan's Deming Prize (Culp, 1992), Mink's Continuous Improvement Matrix (Limon, 1993) and TQM practices (Ying, 2000). Their questionnaires have been reviewed and modified to suit with Malaysia industry's situation.

The CI questionnaire utilises thirty nine items which represent six elements of Continuous Improvement. These six elements support an organisation's business strategy towards the increase in employees' Job Satisfaction. The six elements are customer focus, employee involvement, process management, supplier as key performance, individual and group recognition, and database decision making. The CI score for each responder is computed and summated. The total score range is from minimum of thirty nine points to maximum of one hundred and ninety five points (Ying, 2000; Limon, 1993; Culp, 1992). If the score fell on thirty nine points to one hundred sixteen points, the organisation is considered not committed to CI. On other hand, if the score fell on one hundred seventeen to one hundred ninety five points, the organisation is considered committed to CI (Refer to Table 3.1).

Table 3.1: Continuous Improvement Measurement Score

Score	Commitment on Continuous Improvement
117-195	With
39-116	Without

Job Satisfaction Survey, JSS (Spector, 1985) questionnaire was selected in this study because it emphasizes the multi-dimensional aspect of employees' job satisfaction. Besides that, its reliability and validity have been established by previous studies (Sauer, 2009).

In the JSS questionnaire, it has thirty six items which measured with 5-point Likert scale anchored from (1) strongly disagree to (5) strongly agree. High scores on the result represent the job satisfaction. Nonetheless, there are some of the items were worded in positive manner and others in negative word. Therefore, the scores of the negatively worded item will be reversed before summing with the positive worded items. Negatively worded items are 2, 4, 6, 8, 10, 12, 14, 16, 18, 19, 21, 23, 24, 26, 29, 31, 32, 34, and 36. The summation scores of thirty six items are in the range from minimum of thirty six points to maximum of one hundred and eighty points (Sauer, 2009; Spector, 1985). The overall employees' job satisfaction was determined by the total scores. If the score is in the range of thirty six points to eighty four points, it categorised as low job satisfaction. If the score is in the range of eight five points to one hundred thirty two points, it is categorised as moderate job satisfaction. If the score is range from one hundred thirty three points to one hundred and eighty points, it is categorised as high job satisfaction (Refer to Table 3.2)

For the purpose of analyzing the data, Cronbach's alpha was used as a reliability coefficient. Correlational analysis was undertaken to determine the impact among the variables. Chi-square test and Mann-Whitney U Test were used to explain the impact of the variables.

Table 3.2: Job Satisfaction Measurement Score

Score	Job Satisfaction
133-180	High
85-132	Moderate
36-84	Low

3.6.1 Customer focus

Customer focus is the belief that the customer determines quality (Limon, 1993; Culp, 1992). The CI organisation should including customer's needs in the process of work and always serve the customer more than satisfied (Ying, 2000). Customer can be internal or external customer. External customer is those who purchase the service or product, while internal customer is include employee, supervisor, manager or even shareholder. CI organisations have the strategies and plan to identify and meet customers' needs, and collect the feedback from them to improve the organisation's service and products (Ying, 2000).

Philips (1995) defined customer focus as the degree to which a firm continuously satisfies customer needs and expectations. Morrow (1997) reported that customer focus is evident in the job design principle, which emphasizes on establishing client relationship and feedback and, in turn, is associated with higher levels of Job Satisfaction, communication, job involvement and more favourable perceptions of the work outcome. However, Karia and Asaari (2006) reported that customer focus does not have positive influences on job involvement. Meanwhile, Oakland and Oakland (1998) further states that most leading organisations achieve unparallel levels of customer satisfaction because employees are managed effectively, motivated, involved and committed to meet or even exceed customers' requirements and expectations.

3.6.2   Employee Involvement

Employee involvement is the degree to which employees make suggestions for the improvement of the organisation's process or product and the degree to these suggestions are implemented (Culp, 1992). The CI organisations focus on their policies and procedures to help employees to be involved in CI programs.

Employee involvement is a process for empowering members of an organisation to make decisions and to solve problems appropriate to their levels in the organisation (Ooi, et al, 2007). Cassar (1999) reported employee involvement is one of the most researched contemporary management practices, primarily because it is often associated with enhancing employees' positive attitudes and behaviours in the workplace. Employee involvement may give room for improvement in the area of employees' moral and skill development, enable the individual to improve personal capabilities, help employees change certain personality characteristics and increase the level of respect given to management. In previous empirical of employee participation programs (Karia and Ahmad, 2000).

3.6.3   Process management

The quality should build within the process. As Deming mentioned, "Quality comes not from inspection, but from improvement of the process (Ying, 2000) (Refer to Deming's Quality 14 Points, point 3: Cease dependence on mass inspection)". The standardised and quality proof

process could maintain the consistency of quality. Process management also includes the quality of cross-functional communication, supplier relationship, process customers' needs and pursuit of CI.

3.6.4   Supplier as a key performance

Supplier and the quality of the product are important element in CI program. In fact, suppliers play important role as key part in supply chain, and their understanding of the quality standard of the product supplied could affect the performance of the organisation (Limon, 1993). It would make sense to develop working relationships with supplier organisation that has also adapted to the CI program (Culp, 1992), understanding of quality requirement is build up through effective communication between supplier and organisation. Quality is one of key issue in supplier selection other than cost.

3.6.5   Individual and group recognition

Reward and recognition can be defined as benefits, such as increased salary, bonuses and promotion resulting from the annual review of performance, which is conferred for public acknowledgement of superior performance with respects to goals (Juran and Gryna, 1993). Rewards for quality efforts appear to have a significantly positive relationship to employee morale (Kassicieh and Yourstone, 1998). According to Herzberg's (1996) hygiene theory, recognition is one of the four motivators, which can contribute to employee attitudes when it is present. Reward and recognition activities are

valued by employees, and therefore provide motivation or incentives, secure employees' involvement to their jobs and make their jobs more enjoyable and thus, creating an overall involvement within the respective organisation (Ooi, et al, 2007). The rewards offered by an organisation have a powerful effect on employees' attitudes towards their job and the organisation for which they work.

CI practice organisation or organisation would recognised that individual and group work affect the performance. The employees are part of the system and their work contributes to the final result (Limon, 1993). The employees achieve the result as a team and at the same time, every employee give their own afford move toward the same direction.

3.6.6 Database decision making

Management tasks are inherently complex. In general the number of states necessary to describe all possible futures and the corresponding range of decisions that could be taken is limitless. Getting involved with all the details of a process would require a manager to access the total database of relevant events, an enormous wealth of data, which would mask the overall picture (Bond, 1999). Database decision making reflects the extent to which decision are made based on data collected by means of basic statistical tools (Culp, 1992). The data and information are collected through scientific method and the data are analysed to identify trends and change point to the system (Ying, 2000). The data collection methods included pareto diagram, scatter plots, control chart, affinity diagram, tree diagram, cause-and-effect diagram,

brainstorming, focus group, customer survey research and other statistical tools. Following with that, change, modification or improvement decision may be considered based on the cause of variation in the system. Besides that, the information also could use for setting quality objectives and benchmarking. Therefore, database decision making is a key indicator in CI organisation.

3.6.7 Job Satisfaction

Job Satisfaction is important because of well-established association with a range of organisational outcomes (Gray et al., 2003). Through Continuous Improvement practices, the employees have some expectation on the tangible effects, such as growth, profitability, quality, market competitiveness, cost reduction, inventory, delivery date, safety, human resource development, and marketing strength (Lau and Idris, 2001). Job Satisfaction is measured by using the Spector and Morse's questionnaires (Sauer, 2009; Morse, 1977), where the variables are related to pay, promotion, supervision, benefits, contingent rewards, operating procedures, coworkers, nature of work, and communication.

3.7 Time Horizons

Due to time limitation, the data collection was expected to be done once within two months. Therefore it was a one shot or cross-sectional studies. Questionnaires were distributed to the employees and time period of one month were given to them to return the completed questionnaires.