

CHAPTER FOUR - RESEARCH METHODOLOGY

This chapter outlines the research methodology of the study. The research was conducted in two phases, thus research methodology discussed in two phases. Data in the first phase collected using a Linkert Scale (5 – Strongly Agreed, 1 – Strongly Disagreed) Questionnaire from industrialists. Data collected using Linkert Scale (5 – Strongly Agreed, 1 – Strongly Disagreed) Questionnaire from the small and medium construction owners. During the data collection, face to face interviews were conducted to collect desk information industrialists. Also secondary data collected from relevant sources available.

While searching the literature, the theoretical framework has identified. Then the conceptual framework derived how the research could be facilitated to conclude an ideology which will examine the reality compared to the ideology developed. This has revealed the relationship between existence of small and medium scale construction companies and other issues.

4.1 Conceptual Framework

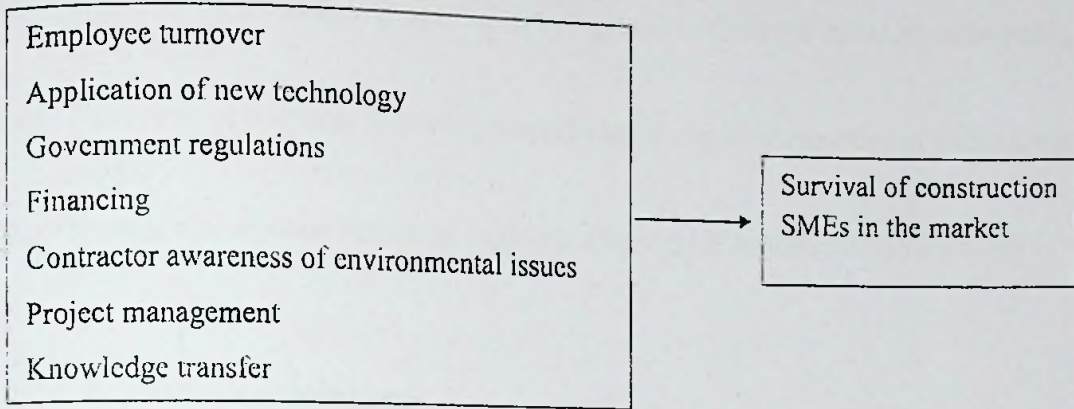
Conducting a research is facilitated by constructing a conceptual framework that specifies an ideal type which is then used to examine the reality comparative to the ideal. Such an ideal type of relationship between modes of assessment of factors affecting dispute resolution among project stakeholders in the construction industry taken into the study.

The factors affecting dispute resolution among project stakeholders in the construction industry can be varied based on the different criteria. Basically there were few researchers have identified factors affected for Survival of construction SMEs in the market and its importance. This has resulted to identify factors lead to Survival of construction SMEs in the market among large players in the construction industry. By this research a most important factors for affecting Survival of construction SMEs in the market among project stakeholders in the construction industry could be developed to overcome the above stated issues.

To illustrate the aim of this paper, we use the Driving forces–Pressures–States–Impacts–Responses (DPSIR) frame work for structuring problems (Fig. 2), a framework commonly used

in the field of environmental management analysis (e.g., Borja et al., 2006; Maxim et al., 2009; Atkins et al., 2011; Gregory et al., 2013).

Conceptual framework



4.2 Hypothesis Development

H₀₁ – There is no relationship between Employee turnovers and Survivals of construction SMEs in the market

H_{a1} – There is a relationship between Employee turnovers and Survivals of construction SMEs in the market

H₀₂ – There is no relationship between Applications of new technology and Survivals of construction SMEs in the market

H_{a2} – There is a relationship between Applications of new technology between Survivals of construction SMEs in the market

H₀₃ – There is no relationship between Government regulations and Survival of construction SMEs in the market

H_{a3} – There is a relationship between Government regulations and Survival of construction SMEs in the market

H₀₄ – There is no relationship between Financing and Survival of construction SMEs in the market

H_{a4} – There is a relationship between Financing and Survival of construction SMEs in the market

H₀₅ – There is no relationship between Contractor awareness of environmental issues and Survival of construction SMEs in the market

- H_{a5} – There is a relationship between Contractor awareness of environmental issues and Survival of construction SMEs in the market
- H₀₆ – There is no relationship between Project management and Survival of construction SMEs in the market
- H_{a6} – There is a relationship between Project management and Survival of construction SMEs in the market
- H₀₇ – There is no relationship Knowledge transfer and Survival of construction SMEs in the market
- H_{a7} – There is a relationship Knowledge transfer and Survival of construction SMEs in the market

4.3 Population and Sampling

Sample design of the proposed project was 31 industrialists. This is the number that would be necessary to sample to be able to generate secure and meaningful results at the end of the study. At the same time any sample must consider what is practical in terms of time and cost.

There are several constructions Projects Island wide and many construction companies. To carry out this research, author has selected 50 on-going construction projects in the country. This is the number that considered as a population for this research.

Sample design of the proposed project was 40 project stakeholders. To analyze the factors affect to performances. This is the number that would be necessary to sample to be able to generate secure and meaningful results at the end of the study. At the same time any sample must consider what is practical in terms of time and cost.

This study was mainly employing a qualitative and quantitative approach to gather information using random sampling method.

4.4 Data Collection

Desk information collected prior to collect data from the field. The focused discussions were had with Chief Executive Officers of respective institutions, consultant from business Chambers, institute of engineers of Sri Lanka, Deputy Director, Ministry of construction

industry and other experts in the field. This has given a focus to the research project carried two months to gather this data.

4.4.1 Primary Data collection

This has taken the form of observation, semi-structured and unstructured interviews. The researcher participated to industry progress review meetings held in construction sites, seminars, workshops and gatherings and “engaged in experiencing the setting (participation) while at the same time observing and talking with other industry participants about whatever is happening” (Patton, 2002). Data collection has guided by three principles of data collection: using multiple sources; creating a case study database; and maintaining chain of evidence (Yin, 1989 as cited by Tellis, 1997).

Unit of analysis was industrialists. Total sample of 50 construction companies were selected using the population as a sampling method covering the areas of Gampaha, Colombo and Kalutara for this purpose. Data analysis was done basically using SPSS.17 package and 31 analysis was done according to the primary data collection from respondents’ opinions.

To identify minimize construction project dispute between parties involved. The data from industrialists were collected from January 15, 2016 to May 5, 2016. Data from construction companies were collected from February 10, 2016 to May 5, 2016.

Prior to the actual data gathering, pre-test on the questionnaire was carried out in three locations collecting data from 5 respondents. Since the researcher identified errors in the questionnaire, same has re-designed and collect data accordingly. Before the actual surveys were conducted, proper contacts had been made with respective respondents.

Research questionnaires were specifically designed to collect information from Industrialists. These questionnaires focused on related to the employee turnover, application of new technology, government regulations, financing, contractor awareness of environmental issues, project management and knowledge transfer. A total of 31 construction project managers were responded for the research questionnaire.

Generally the construction company owner was the priority consideration in the selection of a respondent for data collection. When the owner was not available, his/her successor or the technical expert became the second choice for the interview. If both of them were not available, the most senior person was interviewed depending on the circumstances.

In the case of absent above respondents during the data collection, three subsequent call backs were made in different times to meet them to collect their information. The objective of the research gave as an introduction to respondents and ethical clearance statements were obtained. Then data collected started. Also some data collected while industrialists were having their meetings and gatherings held.

Before entering and analyzing the data, all completed questionnaires were screened with the aim of finding and filling gaps. Finally, the data were analyzed using a SPSS program to generate the required data in tabular form on various aspects. The process of data entry and analysis was undertaken by the researcher under the supervision of the university.

4.5.2 Secondary data collection

Secondary data collected from literature such as books, journals, and reports. Because some of the information may not be accessible in libraries, an archive study of reports conducted at industry level and at the national archives in the industry. The whole process took considerable period of time.

4.6 Statistical Method

The research guided by the Chi-square testing, Mode and Rank to analyse the nominal and ordinal data. For Interval and Ratio data analysed using Mean Value, Standard Deviation, Analyse of variances and Regression tastings.