

IMPACTS OF CULTURE TO THE POST DISASTER RECONSTRUCTION PROJECTS IN SRI LANKA: RESEARCH METHODOLOGICAL PERSPECTIVE

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Abstract

Post Disaster Reconstruction (PDR) is a very important, complex and highly demanding process, including well-planned set of activities done by well experienced construction professionals. One of the main challenges that affects the success of PDR projects is not managing the cultural aspects of the community. Lack of consideration for community culture end up with cultural incompatible solutions that lead to failure of PDR projects. Sri Lanka has a unique culture with a vast cultural diversity, therefore a detailed study on the impact of culture on PDR projects needs to be carried out to identify the reasons for the failures. Since the community cultural impact on the PDR projects in Sri Lankan context is different from other countries, this study should be carried out by following a proper research methodology that has the capability of addressing the research problem in detail. Accordingly, this paper highlights the aspects which have been covered when designing a feasible research methodology for the study under consideration. Choice of methodology mainly depends on the research topic and the specific research question. Methodological perspectives of managing cultural expectations of PDR projects in Sri Lanka are composed of research philosophies, research strategy, research design, and research techniques. This paper demonstrates how these methodological components are achieved by using the case study research strategy. The importance of case study design in gaining the maximum outcome from the study has also been discussed. Furthermore, the paper reveals the experience of the researcher in addressing the challenges faced during the study.

Keywords: *Methodology, Case Study, Research Philosophy*

1. Introduction

Post Disaster Reconstruction (PDR) is not only a good opportunity to convert the destructive area into a sustainable community with a long-term developmental guidance, but also a favourable moment to get prepared for the next disaster (Ye & Okada, 2002). Therefore, it is a very important, complex and highly demanding process, including well-planned set of activities done by well experienced construction professionals (Bello, 2006). The successful performance of a PDR project depends on how well the initial decisions respond to the needs of the affected people. Improper management of community cultural impact and the lack of consideration given to social and cultural concerns in PDR projects serve to reinforce and sometimes-even increase the vulnerability of local communities (Boen & Jigyasu, 2005). Therefore, construction professionals, who involve in PDR projects should pay much attention to identify community cultural impacts to their projects and develop strategies to make those impacts into enablers to complete the project successfully (Wardak, Coffey, & Trigunasyah, 2014).

Sri Lanka has a very unique culture with a vast cultural diversity and it is highly exposed to various natural disasters such as Tsunami, landslides and floods (Amaratunga, Haigh, & Ingirige, 2015). Strength in terms of sustainability, particularly in the PDR of developing countries like Sri Lanka, is undoubtedly still not at an adequate level (Sridarran et al., 2008). There is a huge problem of failures of PDR processes due to different issues (Wardak et al., 2014). The same mistakes are repeated over and over again and most of those mistakes point to lack of understanding of social and cultural capacity, while undertaking PDR. This issue needs to be carefully addressed by studying the cultural context of the country (Jaygasu, 2002). The previous researches have been highlighted that one of the main challenges is to reinforce cultural continuity through development opportunities that are afforded through PDR, so that one does not end up with cultural incompatible solutions, which are unsustainable in the long run (Boen & Jigyasu, 2005). But, a detailed study on the impact of culture to PDR project performance in the Sri Lankan context has not been done yet to identify the real reasons for those challenges. Furthermore, there is a necessity to identify that, to what extent a cultural impact can affect to a PDR project success (Ismail et al., 2014). In order to successfully implement these PDR projects in Sri Lanka, construction professionals should find out the social-cultural impact to the project properly and they should have proper knowledge to manage them. Since the community culture impact on the PDR projects in Sri

Lankan context is different from other countries, carrying out a study to analyse this impact will be very important for the success of the future PDR projects in Sri Lanka (Sridarran et al., 2008).

Within this background, devising an appropriate research methodology to address the research problem of the study is important. Research methodology is the procedure of how research should be undertaken, which provides the overall guidance to answer the research problem (Saunders, Lewes, & Thornhill, 2009). Moreover, it provides the specific techniques, which is used to identify, select, process and analyse information about the specific study. Accordingly, the aim of this paper is to review the methodological stances adopted for the study which investigates the impacts of culture towards post-disaster reconstruction in Sri Lanka. Within the scope of this paper, research philosophy, research approach and research strategy pertaining to the study have been discussed with appropriate justifications for their selections.

The paper is structured as follows: First, it discusses the research philosophies. This is followed up by different research stances adopted in the study.

2. Research Methodology

Research is the process of collecting, analyzing and interpreting data in order to answer specific questions, solve a particular problem or test a hypothesis (Leedy & Ormrod, 2010; Naoum, 2007). Research methodology elaborates the process of achieving the aims and Objectives, for the established research problem using a methodological framework including research design, research approach, and research process and research techniques. Kagioglou et al (1998) has identified research methodology as a hierarchical model where the research techniques are under the research approaches and the research approaches are under research philosophy.

2.1. RESEARCH PHILOSOPHY

Research philosophy has been identified as the base for effective research design and argues that failure to adhere to philosophical issues can affect the quality of the research negatively (Smith, Thorpe, & Lowe, 2012). There are three main reasons for the importance of the philosophy to a research according to the authors as follows:

- It helps to clarify the research design.
- It helps the researcher to identify which research designs will work and which research designs will not work under different circumstances.
- It helps the researcher to identify and create research designs that may be outside his past experience.

There are three types of assumptions as ontology, epistemology and axiology.

Ontology- Assumptions about the nature of reality. There are two ends of ontology as realism and idealism. According to Burrell and Morgan (1979) in realism, the individual is seen as being born into a living, within a social world that has a reality of its own, which exists out there. Idealists believe that reality is originated with the ideas or thoughts and individuals have differing viewpoints. Thus, what counts for truth can vary from place to place and from time to time. In this study, identification of community cultural expectations of disaster-affected community and classification of those impacts based on the disasters of PDR, exploring comparison based on the different disasters, and identification of strategies to manage the PDR projects in cultural perspective depend on the disastrous situation, the community and their usage. The researcher analyzed the subject matters by being an observer of the project. Thus, the study on community cultural expectations towards PDR projects research favors to idealistic nature.

Epistemology- Assumptions on the acceptable and valid knowledge and the way of communicating the knowledge to others (Burrell & Morgan, 1979). This builds up the relationship between the researcher and the reality. There are two classifications of epistemology as positivism and social constructivism. Positivism suggests that the reality is an observable phenomenon, with evidence it is said to be objective. According to Saunders et al (2009) in positivism, the researcher can replicate the findings and emphasize quantifiable observations that offer themselves to statistical analysis. The other classification of this philosophy is social constructionism which uses the people and their opinions rather than using objective or external factors to determine the reality (Smith, Thorpe, & Lowe, 2012). Hence while positivists believe that observer must be independent, human interest must be irrelevant and explanations demonstrate casualty, social constructivists believe that the reality is socially constructed, where social scientists should welcome and encourage the different views and meanings that people place upon their experiences. However, this research is more towards to social constructivism considering the research aim and objectives. This research aims to identify, classify, and manage community cultural expectations and its impact, so that the construction industry can deliver successful outcomes from PDR projects in Sri Lanka. Since this study is conducting based on PDR projects related to several disasters and with the people deal with different cultures in different regions, the researcher has to become part and parcel of the environment. Therefore, it builds the reality through the relationships with the external environment.

Axiology- “refers to the set of values and ethics throughout the research process which incorporates questions about how we as researchers, deal with our own values and also with those of our research participants” (Saunders et al, 2009, p.151). Positivists believe that science and the process of research is value-free, in contrast to the social constructionists’ viewpoint of research, which admits values. In value-free research, the choice of what to study and how to study is determined by objective criteria, while in value-laden research, the choice is determined by human beliefs and experiences (Smith et al, 2012). Accordingly, this research necessitates the researcher to be a part of the environment, and interconnected with the community is needed to unearth the viewpoints related to PDR projects.

Apart from the main three assumptions, there should be a consideration on human nature and methodology too.

Human Nature- the subject and object of study. This reviews the opinions of human beings to the situations encounters in the external world (Burrell & Morgan, 1979). Considering this study, there are a variety of stakeholders who have several cultural expectations vary from one to the other. These expectations may depend on education and socio-economic background, values, and attitudes. Hence the human nature is affected by the situation, environment, or organizational factors, in this research.

Methodology- Methodology is the technique used by the researcher to investigate the reality and obtain the knowledge (Burrell & Morgan, 1979). For this study, it is the mechanism by which the research is carried out.

It can be summarized as in the philosophical point of view, this research would take the social constructionism stance in terms of the epistemological undertakings, idealism stance in terms of ontological undertakings and value-laden stance in terms of axiological undertakings.

3. Scope and Limitations

It is needed to clarify the accepted range of the study. Limitations are constraints which limit the extensity to which the study can go (Simon & Goes). This research is focused only to analyse the post-disaster housing reconstruction projects which have been constructed due to tsunami and landslide disasters. The community cultural impacts to post-disaster reconstruction projects are intended to investigate within the Sri Lankan context only. Data collection is focused on the end-users and professionals who engaged in PDR projects.

4. Research Approach

Research approach has been identified by Thurairajah, Haigh, Amaratunga (2006) as a procedure of organizing research activities and integrating data collection in order to achieve aims and Objectives. Generally, there are three research approaches followed by researchers. They are quantitative, qualitative and mixed approaches (Creswell, 2012).

Quantitative approach is the fact-finding process, which is based on the collected records and the evidences (Naoum, 2007). In addition, Creswell (2003) stated that statistical procedures are the major activities within the quantitative approach. The quantitative research would be more appropriate for the researches, for which the research question starts with 'who', 'what', 'where', 'how', 'many', 'how much' (Smith, Thorpe, & Lowe, 2007).

Qualitative research approach is the best method to be used in cases of assessing opinions and the behaviours related to subjective, attitudinal and exploratory (Naoum, 2007). Qualitative approach requires more details and in-depth information and it is significant in terms of focusing on specific group of people, representing the views and perspectives of the people and in-depth study on topics (Yin, 2011). Ritchie and Lewis (2003) further explained that when the research problem is a 'why', 'what' and 'how' type question, qualitative approach is suitable (Smith et al., 2007).

Mixed approach is not a replacement for the quantitative and qualitative approaches, but an extension of both approaches, which avoids the negative points of two approaches (Johnson & Onwuegbuzie, 2004). This research intends to analyse community cultural impact on Post Disaster Reconstruction (PDR) project performance in Sri Lanka. Since the research problem "How does the community culture impact for the PDR project performance in Sri Lanka?" is putting the research in an assessing opinions and behaviour approach with the question starts with "how", qualitative approach is more appropriate (Smith et al., 2007). Moreover, Kumar (2011) have described the qualitative approach is suitable if the researcher is interested in studying values, beliefs, understandings, perceptions and meanings in order to observe new findings. This research intends to do a comparison of community cultural impact for the PDR projects based on the disaster which requires subjective and attitudinal information. Considering the above facts, qualitative approach has been selected as the main approach due to the intention of the research is to study cultural values, believes and behaviours and focusing on experiences of disaster-affected people related to PDR projects.

Nevertheless, the subsequent objective of recommending strategies to improve project success of PDR projects through the understanding of the impact of community culture adopted a quantitative approach. According to Naomi (2007) quantitative approach is based on collected records and evidences. Therefore, this approach is used to grab information from the stakeholders of construction industry in order to clarify the adaptability of the recorded strategies through literature review and the qualitative study. Hence, it can be concluded that the research adopted a mixed approach, with the expectation of strengthening the rigor and enriching the research analysis and findings, and to proceed with this research.

5. Research Strategy

Research strategy refers to a set of procedures which is used to generate and analyse the research material (Verschuren, 2014). According to Yin (2011), there are three conditions that should be considered when choosing the most suitable research strategy for a study. They are the type of research question posed, the extent of control an investigator has over the actual behavioural events, and the degree of focus on contemporary event. Moreover, research philosophies like ontology, epistemology, axiology, human nature and methodology play a huge role while selecting the research strategy. The author further has been identified case studies, surveys, experiments, archival analyses and histories as the most popular research strategies. Among them, case study is identified dominantly as a qualitative

research method which is intended to use as the strategy in order to accomplish the aims and objectives (Kumar, 2011).

6. Case Study as the Research Strategy

Case study is an experiential analysis that investigates a current phenomenon within its real life context using multiple sources of evidence (Baharein & Noor, 2008). According to the authors, case studies focus on a certain issue, feature or unit of analysis. Due to the open-ended inquiry used in case studies, it is suitable to build theory and generate hypothesis (Amaratunga et al, 2002). Researcher becomes a part and parcel of the environment being studied as a participant observer interacting with social groups (Amaratunga et al., 2015).

When the research problem comprises of 'how' or 'why' questions, undertaking case studies is the most suitable method since an in depth investigation is required to find answers (Yin, 2011). Therefore, case study may be more appropriate on this research (which has a research problem comprising "how") which needs in depth study with multiple source of evidences on current and real situation of the PDR projects in Sri Lanka using the experiences of social group of people who are affected to disastrous conditions like Tsunami, landslides and floods. Moreover, case studies are more suitable for researches where the boundary between phenomenon and the context is not clear (Yin, 2011). In this research, the context which is PDR projects and the phenomenon which is community cultural impact, can't be separated clearly with the boundary. Since the structure of PDR projects highly affects for the results of the research, context specific information is very important for the study which can be easily gathered and analysed through case studies. Furthermore, the selected research philosophies like social constructionism, idealism and value-laden stances lead together with their characteristics to adopt a case study as the strategy. Considering all the above facts, the most appropriate strategy for this research will be case studies.

6.1 CASE STUDY DESIGN

Yin (2011) has introduced basic types of case study designs, determining the choice between single versus multiple case studies. A single case study is appropriate over a multiple case studies when the situations are critical and unique (Amaratunga et al., 2015). This study does not fall under this category and thus multiple case studies have been chosen over a single case study mandated to conduct cross-case analysis and to enable findings through global context cases. Multiple case studies provide a rich ground for the usage of replication logic through multiple sources of evidence (Yin, 2011).

6.2 IDENTIFYING THE UNIT OF ANALYSIS

The main entity, which is being analysed, is known as the unit of analysis (case) in the research. The author further stated that selecting the unit of analysis is directly related to the research problem (Yin, 2011). The research question of the study mainly reflects the impact of community cultural expectations, in PDR leaving the impact of community culture as the main unit of analysis. The disaster which has been based on the reconstruction projects form the boundary of the study since the community cultural impact for PDR projects is analysed based on the disaster. Therefore, post-disaster reconstruction projects done due to landslides, Tsunami and floods have been selected as three separate cases for this study.

6.3 DEFINING THE NUMBER OF CASES AND SELECTION CRITERIA

Yin (2014) highlighted that criteria for selecting a case depends on the convenience, judgment, time and cost constraints. Purposive sampling enables the researcher to select items for the sample deliberately, which is fit for the study, whereas probability sampling provides an equal opportunity for every item in the population to be included in the sample through random sampling (Kothari, 2004). Purposive sampling is generally used in case study research as the sample should be strategically selected (Creswell, 2012).

In the research, the case refers to PDR projects conducted due to each disaster. Since the selection of cases is constrained by limited accessibility and time, cases for this study will be limited to three disasters (Tsunami, landslides and floods). The PDR projects within the disaster are selected using purposive sampling as the cross-case analysis should be conducted on the basis of the disasters. Accordingly, eight (8) respondents from each case (four respondents per project) have been selected as per the involvement for the PDR projects to each disaster. Data collection for decision making is also considered while selecting the respondent.

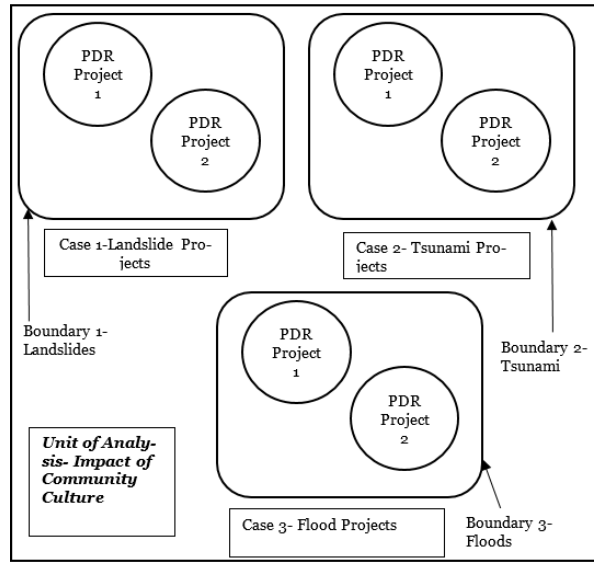


Figure 1 - Case Study Structure

7. Methodological Framework

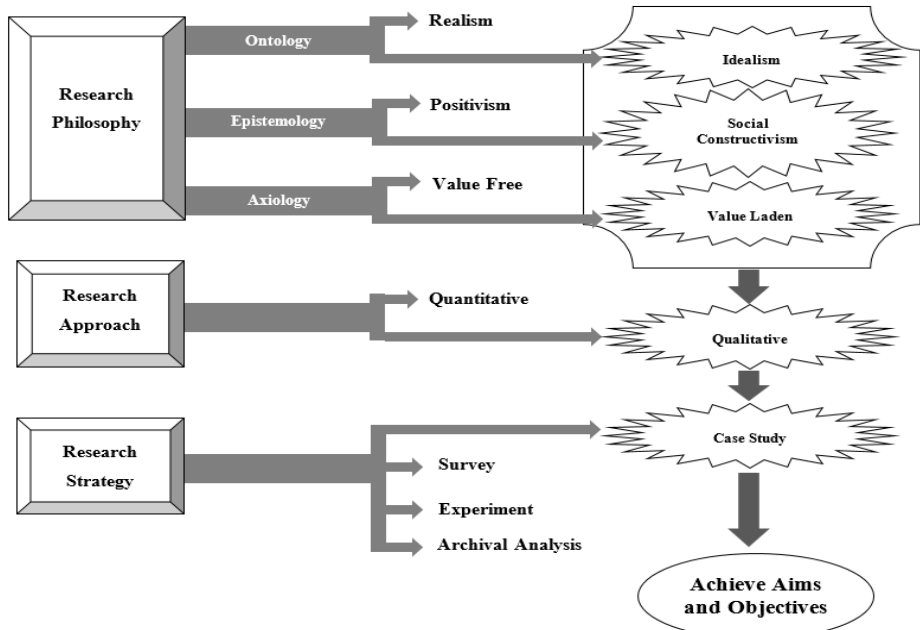


Figure 2 - Conceptual Framework

The summary of the research methodology which leads to achieve aims and objectives of the study, impacts of culture to the post-disaster reconstruction projects in Sri Lanka is mapped together using the above conceptual framework.

As illustrated in the framework, in accordance with the philosophical point of view, this research has been taken the idealism stance in terms of ontological undertakings, social constructionism stance in terms of the epistemological undertakings, and value-laden stance in terms of axiological undertakings. The qualitative research approach is adopted over the quantitative approach and case study research strategy is undertaken among the research strategies like survey, experiment and archival analysis. Finally, through above selected philosophies (Idealism, social constructivism and value-laden), research approach (qualitative) and research strategy (case study) the researcher can achieve the aims and objectives of the study.

10. Conclusion

This paper identified the need for developing a research methodology in fulfilling the aims and objectives of a study and thereby addressing the research problem. Research philosophies are the core of a seminal piece of research. This study follows social constructivism, idealism and value-laden stances as philosophies that lead the research to adopt the research strategy as a case study. It can be recommended to researchers in selecting the most suitable philosophies and through that, finding the appropriate research strategy lead the research to a success. The case study design and unit of analysis has been selected in order to conduct a cross-case analysis.

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