



ASSESSMENT OF POST-TSUNAMI HOUSING CONSTRUCTION IN SRI LANKA

by

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This research dissertation was submitted to the Department of Civil Engineering of the University of Moratuwa in partial fulfillment of the requirements for the degree of Master of Business Administration in Infrastructure .

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Abstract

The tsunami of 26 December 2004 struck two thirds of Sri Lanka's coastline and the damage was distributed from the north down the entire eastern and southern coast and covered the west coast as far as north of Colombo. The disaster killed 35,322 people and completely destroyed more than 50,000 houses.

Each district was affected by tsunami assigned a certain number of houses to be constructed. After a reasonable construction period had elapsed and the progress evaluated, a significant difference was observed between the progresses in different districts. The objective of this research was to develop a model to explain the above difference in construction progress among districts. Progress was compared among the districts and the difference was analyzed. This analysis was based on the number of houses assigned around a year after the tsunami. Four districts, namely Hambantota, Galle, Matara and Ampara were selected for further analysis.

Factors that would contribute to the progress of housing construction among the districts were identified through a literature survey and interview survey. Contributing factors were short listed according to the importance and six factors were chosen as model inputs. They are; land, finance, infrastructure, raw material, human resources and political leadership / administration. These factors were assigned a common importance rating that would be the same for any district. Importance of the factors was expressed as weights, the total adding to 1.0.

Thereafter scores for each district corresponding to the availability of the identified factors were obtained from the interviewees. The sum of weighted scores for each district could then be obtained. The relationship between weighted scores and the construction progress (in terms of houses constructed and also percentage constructed/assigned) was established, and the slope and coefficient of determination of the trend lines calculated. Coefficient of determination and slope of the trend line were very high one year after the tsunami. These measures gradually reduced at two and three years after the tsunami. In conclusion it was identified that the differences



in the rate of construction progress among districts was due to the level of contributing factor availability as reflected by the weighted scores for the districts. Land availability had the greatest importance among all the factors and also showed a marked difference in the four districts studied.

Declaration

"I certify that, this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university to the best of my knowledge and belief. It does not contain any material previously published, written or orally communicated by another person or myself except where due reference is made in the text. I also hereby give my consent for my dissertation if accepted, to be made available for photocopying and for interlibrary loans and for the title and summary to be made available to outside organization."

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To the best of my knowledge, above particulars are correct.

UOM Verified Signature

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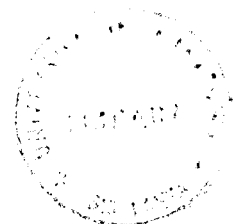
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List of Abbreviations

| | |
|--------|--|
| ADB | - Asian Development Bank |
| GOSL | - Government of Sri Lanka |
| GPA | - Global Program of Action |
| IRR | - Impoverishment, Risk and Reconstruction |
| JBIC | - Japan Bank for International Cooperation |
| NGO | - Non Government Organization |
| RADA | - Reconstruction and Development Agency |
| TAFREN | - Task Force for Rebuilding the Nation |
| THRU | - Tsunami Housing & Reconstruction Unit |
| UDA | - Urban Development Authority |
| UNEP | - United Nations Environment Program |



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