

The Challenges of Sustainable Affordable Housing Construction during the Sri Lankan Economic Crisis

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ABSTRACT

The present Sri Lankan economic crisis has severely impacted various sectors including the industry of construction. Hence, the construction of affordable housing has become an extremely significant factor in response to the circumstances of the economic downfall. Although affordable housing projects are one of the best resolutions for the need for shelter during economic breakdowns, sustainably commencing, implementing, and maintaining such projects are also highly challenging in the present. Therefore, the present study examines the challenges of commencing, implementing, and maintaining sustainable affordable housing projects in Sri Lanka under the impacts of the contemporary economic crisis. The methodology of this research is a combination of both qualitative and quantitative approaches. It has cooperated the primary data gathered from the study sample; construction professionals of Sri Lankan affordable housing projects via semi-structured interviews and questionnaire surveys and also the secondary data sources such as research paper publications, periodicals, journals, and books. The data received from the questionnaire survey was analyzed by a Frequency Index after forming them on a 'Likert Scale' to examine the degree of application of each respondent. The data gathered by interviews were evaluated in reference to a content analysis. The overall study findings reveal various limitations of affordable housing projects in Sri Lanka during the current economic crisis. It also suggests adopting new strategies and measures to enforce the defined field of study by prioritizing the degree of impact of each factor.

Keywords: Economic crisis, Affordable housing, Construction industry, Impacts, Sri Lanka.

INTRODUCTION

Various countries including Sri Lanka have been challenged by housing shortages for several years. Developing countries are generally challenged on the future of their settlements, against the backdrop of addressing issues of inadequate housing, rapid urbanization, and lack of infrastructure (du Plessis, 2002). In particular, housing poverty in Sri Lanka is one of the contemporary issues that lost for a long time. "According to Central Bank estimates the annual demand for housing in Sri Lanka is between 50,000 - 100,000 units, but two-thirds of the incremental demand is not met. So, every year, the backlog demand is adding to new demand. The housing pressure is felt most in cities, where population growth is faster than the overall national population growth rate of 1% per year" Business Times (2010).

Therefore, the construction of affordable housing has become an interesting and productive resolution to overcome the basic issue of housing shortage over its root causes such as rapid organization, scarcity of infrastructure, inadequate finance, etc.

According to the interpretations of Udawattha and Halwatura (2017), affordable houses consist of the ability to purchase. The definition of "affordable housing" given by Nallathiga, R. (2010) interprets "affordable housing" as homes that are within reach of average-income households, statistically to the median price that such households can afford, and metaphorically to the appropriate housing options for each income group. Once the necessity of integrating sustainability and related concepts emerged, sustainable housings were

implemented for the betterment of the future world. According to Morgan and Talbot (2001), sustainable housing is defined as “housing that supports local economic viability, social fairness, and community building”.

Although the establishment of sustainable concepts in affordable housing projects is highly important., reaching into such sustainable desires in affordable housing construction has become challenging in the present due to the economic crisis of Sri Lanka. Sri Lanka’s construction industry is facing thousands of job losses and a steep decline in construction projects due to increasing costs of raw materials, paired with a fuel and electricity crisis (Silva and Neshella,2022). Therefore, the present study examines the challenges that affordable housing projects undergo in attaining sustainable desires. The outcomes of this study may suggest possible ways to overcome the defined challenges for the betterment of the future Sri Lankan construction sector.

BACKGROUND OF THE STUDY

The economy of Sri Lanka has been experiencing a downfall during the last couple of years. According to a working paper published by the Asian Development Bank (2019), Sri Lanka is referred to as a classic twin deficits economy. A publication of The Indian Express(2022) referred to “twin deficit” as “a country’s national expenditure exceeds its national income, and that its production of tradable goods and services is inadequate”. Since the government of Sri Lanka has failed to address such contemporary issues, the economy has undergone various deformations up to the present economic crisis. In search of resolutions to overcome the existing crisis, various nations together with organizations have proposed recommendations to overcome. For example, the World Bank (2022) claims that immediate policy changes are required to address the high levels of debt and debt service, lower the fiscal deficit, restore external stability, and alleviate the negative effects on the weak and disadvantaged. Thus, a majority of the industrial sectors including the construction industry are seen as negatively impacted or collapsed in the present, until a proper resolution has been formed.

In assessing the state of housing requirements in Sri Lanka, Samaratunga (2013) emphasized that inadequate housing has become a major issue during the past decades. According to the Housing Needs Assessment and Data Survey (2016) conducted by the Housing Development Authority in Sri Lanka, 42,000 middle-income housing units are identified as wanting only in Colombo city. The statistical forecast estimated by the above-stated authority has illustrated a rapid increment in housing demand in the upcoming years. Considering the existing housing shortage, the construction of affordable housing has become one of the best solutions. Accordingly, the government of Sri Lanka has initiated several sustainable affordable housing construction projects during the past years. Construction of Orugodawattaresidences, construction of Central Residencies, and construction of Trans hub Residencies are some of the affordable housing projects carried out by the Urban Development Authority in present.

Based on what it provides, such as roads, buildings, and dams for the creation of goods and services, the construction sector plays an active part in a country’s economy (Akoi-Gyebi Adjei, 2009). According to statistics released by the Central Bank of Sri Lanka in 2018, the growth rate of the construction sector has significantly increased over the past few decades. Thus, the present economic crisis has had a negative impact on the Sri Lankan construction sector. According to Nilar. A(2022), the Chairman of the National Construction Association of Sri Lanka has denoted the fact that around 75% of the nation’s construction sites have been shut down. The same publication has moreover stated that many construction employees in the Sri Lankan construction sector are daily losing their jobs due to rising raw material costs, a fuel and electricity crisis, and a sharp fall in construction projects. About the forecast done by one of the leading data analysis companies, Global Data (2022), the Sri Lankan construction industry is expected to decrease by 4.6 percent in real terms during the year 2022,in contrast to the prior forecast of 9.2 percent growth. A similar forecast done by the Chamber of Industry of Sri Lanka (CCI) in 2022 estimates that over a hundred

thousand jobs will be lost over the next three months as a result of the current economic crisis and other factors having a crippling effect unless prompt corrective action is taken. Considering the stated factors, it is clear that the construction industry has been impacted by the consequences of the present economic crisis in Sri Lanka. Therefore, the present study specifically examines the challenges that the construction of sustainable affordable housing projects undergoes in relation to the economic crisis in Sri Lanka.

Problem Statement and Objectives of the Study

Problem Statement: The present Sri Lankan economic crisis has generated negative impacts on various sectors including the construction industry. Accordingly, the current research explores the challenges faced in the construction of sustainable housing projects during the existing economic crisis in Sri Lanka.

Key Objectives:

- To examine the challenges of sustainable affordable housing construction during the Sri Lankan economic crisis.
- To investigate the degree of impact caused by each challenge on sustainable affordable housing construction in Sri Lanka during the economic crisis.
- To explore ways of overcoming the challenges in sustainable affordable housing construction during the Sri Lankan economic crisis.

RESEARCH METHODOLOGY

In reference to the stated study objectives, the present research has adopted a mixed research method of both qualitative and quantitative approaches. The population of the study represents the construction professionals in Sri Lanka while the sample of the research is the construction professionals in affordable housing projects in Sri Lanka. In assessing the data collection techniques, data is mainly gathered via both primary and secondary sources. Primary data sources include conducting semi-structured interviews and a questionnaire survey. Both interviewees and questionnaire survey respondents were sampled based on the purposive sample technique. The secondary data sources refer to previous publications. In assessing the data analyzing process, the types of challenges faced by the construction professionals in sustainable affordable housing projects were first revealed in general. In the next phase, each respondent was asked to rate the probability of occurrence of each cause as; Rarely (R) = 1, Sometimes (S) = 2, Moderate (M) = 3, Often (O) = 4, and Always (A) = 5. Consequently, a Frequency Index (FI) was developed to analyze the data obtained from both the questionnaire survey and interviews, after forming them on a 'Likert Scale'. The participants' reported frequency of occurrence is used to rank the causes of delay using the Frequency Index (Susmitha.,et al.,2018).The equation used in forming the FI is stated below.

$$\text{Frequency index}(FI) = \sum_{i=1}^5 \frac{a_i \times f_i}{H \times N}$$

i = Score of the factor ranging from "Least Effect=1" to "Highest Effect =5"

a_i = Weight of the response

f_i = The frequency of the response

H = Highest weight (i.e. 5 in this study)

N = Total number of respondents.

In addition, responses received for the open-ended questions during the interviews were considered a content analysis. Overall, 71.66% of primary data were extracted after receiving responses from 32 interviews and 115 questionnaire surveys. The interviews and questionnaire surveys were undertaken from 03.04.2022 to 15.12.2023. The current study has also effectively represented the analysis of data in attaining the key objectives.

RESEARCH FINDINGS

In assessing the main focus of this study, challenges of sustainable affordable housing construction during the Sri Lankan economic crisis were revealed in reference to table no. 01, regardless of the frequency of occurrence. Overall factors illustrate the difficulties faced in attaining ‘sustainable desires’ and ‘affordability’ of sustainable affordable housing construction projects.

Table no. 01: Categorization of challenges of sustainable affordable housing construction during the economic crisis in Sri Lanka.

No.	Challenges	Factors
1	Economic.	I. High inflation.
		II. Economic instability.
2	Government Policies.	I. Import restrictions.
		II. Political instability.
		III. Inadequate support given to the construction sector.
3	Financial.	I. Low profit margins.
		II. Inadequate credit facilities offered from the banks.
		III. Inadequate funds for safety precautions.
		IV. Bankruptcy.
4	Disputes.	I. Difficulties in adequately managing project values.
		II. On-time project completion.
		III. Payment delays.
		IV. Higher occurrence of variations.
5	Institutional/ Organizational Development.	I. Inadequate funds for employee trainings.
		II. Inadequate funds for skill/career development programs.
		III. Insufficient finance for research and development.
		IV. Employee demotivation.
6	Resource Management.	I. High employee turnover.
	a. Human Resources	II. Shortage of skilled professionals.
	b. Physical Resources	III. Material shortage. [fuel]
		IV. Lack of purchase power.

Economic Challenges: In assessing the economic challenges, inflation and instability of the economy are found critical during the economic crisis. According to the Central Bank of Sri Lanka (2022), the inflation rate has exceeded 50% for the first time since 1954. Moreover, the prices of goods were subjected to rapid changes due to the fluctuation of exchange rates and unpredicted cost escalations occurred within an unstable economy. Hence, construction budgets were subject to change in the meantime. Overall, attaining ‘affordability’ and ‘sustainability’ in sustainable affordable housing projects has become highly challenging.

Government Policies: The government’s preparation in addressing such challenges is similarly significant to be evaluated. Accordingly, the construction of sustainable affordable housing projects is found to be challenged by the degree of precautions taken by the Sri Lankan government to address the existing crisis. Especially, Sri Lanka has imposed restrictions imposed on 367 non-essential goods items via the Extraordinary Gazette Notification published on March 9th, 2022. As most of the construction-related materials were on the issued list, the industry has experienced a shortage of materials. Consequently, the prices of such materials were increased and it began impacting the overall cost of sustainable affordable housing projects. In addition, the government of Sri Lanka has given inadequate support to the construction sector whereas no proper arrangements were made to contractually secure the contractors during unpredictable price increments or to fund without suspending local construction projects through the National Budget Circular no. 03/2022.

Financial Challenges: The construction of sustainable affordable housing projects has specifically undergone various financial challenges during the economic crisis in Sri Lanka. As a result, existing funds were inadequate to invest in safety precautions, sustainable materials, and other needs of sustainable affordable housing projects. Therefore, a majority of construction companies are found to be experiencing losses or being bankrupted.

Disputes: Although disputes are common and slightly unavoidable in a massive industry as construction, an increment of disputes is seen by when construction companies experience challenges in on-time project completion, payment delays, variations, and managing the value of sustainable affordable housing projects during the Sri Lankan economic crisis.

Institutional/Organizational Development: As comparatively few numbers of sustainable affordable housing projects exist in Sri Lanka, internal development of such construction companies is important. Thus, those companies are revealed to have inadequate funds to conduct employee training, skill/career development programs, or research and development activities due to the impacts of the present economic crisis. In addition, attaining organizational development and project success has become challenging as most of the employees are demotivated by inadequate salary schemes and high turnover. Overall, the future growth of such companies is questionable.

Resource Management: The difficulties faced in paying employee wages by the construction companies which carried out sustainable affordable housing projects have set a high employee turnover. Similarly, the migration of a majority of construction professionals has resulted in a shortage of expertise in sustainable affordable housing projects. Sri Lanka’s foreign exchange shortage has also generated a material shortage. It included essential construction goods and fuel. While construction companies have also experienced a lack of purchase power to buy high-rated essentials, management of resources has become difficult in sustainable affordable housing projects.

The degree of impact caused by each challenge on sustainable affordable housing construction in Sri Lanka during the Economic Crisis

The degree of impact caused by each challenge on sustainable affordable housing construction is

investigated via the FI stated below.

Table no. 02: The sequence of challenges faced in sustainable affordable housing construction during the economic crisis in Sri Lanka as per the FI analysis.

No.	Parameter	FI	Rank
01	Economic challenges	0.741	1
02	Financial challenges	0.738	2
03	Resource Management challenges.	0.711	3
04	Occurrence of disputes.	0.699	4
05	Challenges caused due to the Government Policies	0.673	5
06	Institutional/ Organizational development challenges.	0.603	6

CONCLUSION

The construction sector of Sri Lanka has undergone several changes due to the current economic crisis. The present study examined the challenges faced in the construction of sustainable affordable housing projects under such a crucial condition. In reference to the first and second objectives of the study, the challenges were identified and classified into six categories based on the frequency of occurrence. Accordingly, economic, government policies, financial, disputes, institutional/organizational development, and resource management-related challenges ranked high to low respectively. In assessing the second objective of this research, the degree of impact caused by each challenge on sustainable affordable housing construction was investigated via a FI analysis. According to the results of the FI analysis, sustainable affordable housing construction projects are found to be challenging due to challenges in economic, financial, resource management, dispute management, government policies, and institutional development. Most importantly, the content analysis of this study revealed that economic, financial, and government policy-related challenges are the root causes of other factors identified such as dispute management, institutional development, and resource management. For instance, high employee turnover, shortage of skilled professionals, lack of purchase power, material shortages, disputes, and inadequacy of funds for institutional development are a result of financial, economic, and policy-related issues. Hence, this study argues that economic and financial challenges shall be prioritized and addressed via both short-term and long-term measures.

RECOMMENDATIONS AND FURTHER STUDY DIRECTIONS

Concerning the outcomes, this research recommends exploring ways of overcoming the challenges identified in the sustainable affordable housing construction sector during the Sri Lankan economic crisis. However, since the study has incorporated the FI method, recommendations were developed based on the prioritization of each challenge. In assessing the FI analysis, economic and financial challenges are found to be highly impacting on sustainable affordable housing construction. As content analysis of this study revealed that economic, financial, and government policy-related challenges are the root causes of other factors identified such as dispute management, institutional development, and resource management, both short-term and long-term measures should be taken. Considering this fact, this study mainly recommends ways to overcome financial and economic challenges. Once those two challenges are achieved, other challenges

identified in this study are expected to be overcome up to a certain extent. Accordingly, the present study suggests adopting a debt management strategy by negotiating with international creditors, developing a fiscal and monetary policy by utilizing ways of boosting the local economy while breaking up corruption processors and encouraging local production and diversification to avoid economic dependence on imported

items as a short-term measure. The long-term measures shall be the development of the education sector, construction sector, and business sector, integration of innovation and technology for high productivity, the establishment of transparency and good governance, and sustainability development. Upon the successful attainment of financial and economic challenges, a positive impact is expected in the other types of challenges identified in this study. However, this study suggests specifying further research on the challenges of resource management, dispute management, government policies, and institutional development for sustainable affordable housing construction in Sri Lanka.

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