

Sustainable Housing for Middle-Income Society in Sri Lanka

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Abstract

Housing is a fundamental human necessity and affects how society interacts with the environment. In the modern era, housing expansions all over the world have significantly increased the number of economic, social, and environmental issues. Making housing constructions in places that are quickly urbanizing more sustainable is a top objective for government agencies, business experts, and research organizations. Managing economic, environmental, and social sustainability factors is referred to as sustainable housing. Major natural resources used in the construction of housing include land, energy, water, and building materials. Minor natural resources used in the process include waste production and air and water pollution. In the community's fight for affordable housing, educated middle-income inhabitants are predicted to be the most susceptible group given expected living standards and monthly income-generating levels. The goals are to explain how the framework for evaluating laws was developed and proven to be valid in order to achieve sustainability in middle-income housing. In order to offer the essential background for developing an interim assessment framework for affordable and sustainable middle-income housing, the research begins by analyzing the current local assessment frameworks and regulations. To evaluate the interim assessment framework, a semi-structured questionnaire survey of business professionals and other stakeholders will serve as the foundation for the secondary study. This intermediate evaluation framework will receive the necessary fine-tuning and industry feedback through discussion and opinions. The interim framework must be transformed into a robust and progressive regulatory structure that enables future success in SH for the majority of middle-class citizens in the nation. The results will next be evaluated in light of Sri Lanka's existing regulatory framework for sustainable middle-income housing.

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Introduction

The largest and fastest-growing construction markets today are found in the developing countries. Housing prices rise as a result of rising demand and tight supply, which hurts the most vulnerable segment of the middle-class population (Araji and Shahin 2021). Communities of educated middle-class people struggle to meet their fundamental demands with their meagre incomes as compared to desired living standards and monthly income-generating levels (Huchzermeyer 2008; Sayfutdinova 2015). Middle-class inhabitants, who want fair living standards in terms of housing, education, job/career expectations, vehicle ownership, healthy food, health facilities, and recreational facilities within constrained financial sources, become the most vulnerable segment of society worldwide. According to the Asian Development Bank (2010), the Middle Class is a socioeconomic class that includes professionals, technicians, government employees, and others. They are small-scale business owners as well as highly educated service providers. They are pushing for improved housing options, higher-quality services, and comfortable lifestyles. Mobile phones, computers, and luxury vehicles are in high demand from the middle

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class, according to the Asian Development Bank (2010). The middle class's consumption habits have altered, and they now place a high priority on things like housing, transportation, education, and durable items (Arunathilake and Omar, 2013).

For most households, the biggest expense is typically housing. The cost-to-income ratio of housing is known as housing affordability. Both owned homes and rented homes can be measured for affordability. The economy also depends on home affordability for middle-class families. Electricity and L.P. gas are the next two biggest expenses for the global middle class after housing (Anon n.d.). The middle-class household also spent more money on water bills and increased demand for utilities and natural resources when compared to the other two classes. It seeks attention to develop sustainability in housing developments in terms of affordability and energy efficiency in middle-income housing (Sinnathurai and Brezinova 2012).

Authorities in the majority of developing nations have started a significant number of housing schemes as a response to the housing crisis, whether they were started by government agencies or private developers. Buildings may be constructed without much thought given to durability, energy efficiency, sustainability, or environmental health due to time, money, and land use restrictions imposed by housing developers. These variables may also result in low-cost housing that is of poor quality and has a high prevalence of faults, high maintenance costs, and short lifespans. Housing units might also be built in suburban locations, where residents will have limited access to the city's social and economic prospects as well as to essential amenities and infrastructure.

Finding and promoting solutions is crucial because doing so will prevent private-sector developers from encroaching on land and constructing unaffordable, substandard housing units that exacerbate environmental and social issues on a large scale. Instead, responses to these constraints will enable verification of the sustainability that is frequently achieved in affordable units as effectively as in high-standard buildings. The successful regulatory framework for sustainable housing can be used to deliver substantial environmental, social, and economic benefits to the middle-income people as well as to society as a whole. The delivery of services in the public sector is supported by the regulatory framework. It's critical to balance many public interests, such as consumer protection, productivity, efficiency, innovation, and sustainability, when it comes to regulation.

Because of the country's ongoing financial problems, more Sri Lankans are identifying as middle class. It is clear that there is a shortage of scholarly research on what defines sustainable home building for the middle-class population. The sustainability of middle-income housing has not garnered attention in urban settings, despite the fact that public housing for the low-income population has been addressed with several housing constructions.

Policy choices have a big impact on the sustainability of housing (Clapham 2018; Elsinga et al. 2020; Newman 2006). It is clear that the nation lacks straightforward, efficient, and well-organized regulations for the construction of sustainable housing. The most important difficulty in meeting housing demand in growing places is development that supports current generational needs without compromising future generations' ability to meet their own needs. It is clear that a variety of national laws, ordinances, and council rules apply to the current system of national development. However, because there is a lack of involvement in relation to efficient regulatory applications, housing developments result in the creation of social, economic, and significant environmental concerns.

Because government regulations are always changing and local council approval typically takes a long time, developers find it challenging to put the sustainable housing concept into practice. A simple, effective, flexible, and well-structured regulatory framework shall be introduced to overcome stakeholder interest in sustainable middle-income housing developments.

Objectives of the Study:

This study's main goal is to investigate and create a legal framework for affordable middle-class housing in Sri Lanka.

When the novel thinking technique is used, sustainability regulations' future is taken into account. Instead of being understood in isolation, sustainability is best understood in the context of connections with other elements and factors. Therefore, a legislative framework for sustainability's economic, social, and environmental factors should be connected. Studying and evaluating prior practices and regulatory knowledge is crucial if one wants to develop an integrated and hence flexible regulatory framework.

1. To research Sri Lanka's current regulatory environment (a reference to regulations for SH in SL).
2. to research sustainable regulatory structures on a local and global level.
3. to research the influences on sustainable measures/dimensions in middle-income housing developments in terms of economic, social, and environmental sustainability.
4. to create the legal basis for affordable, sustainable housing in Sri Lanka.
5. to support the effects that middle-income SH will have on the regulatory structure.

These factors must be taken into account while building housing, highlighting the significance of an appropriate legislative framework for future developments of sustainable housing.

Review of Literature

Sustainable Development (SD)

The phrase "development that fulfils the requirements of the present without compromising the ability of future generations to meet their own needs" is the "official" definition of sustainable development (United Nations General Assembly, 1987).

The long-term stability of the economy and environment is the main objective of sustainable development (SD), and this can only be accomplished by including and acknowledging economic, environmental, and social issues throughout the decision-making process.

Bhatti 2001) stated that a framework is more helpful than a precise concept when addressing sustainable development and sustainability to housing.

This notion of sustainable development, however a little nebulous, strives to maintain economic growth and progress while preserving the long-term worth of the environment; it "provides a framework for the integration of environmental policy."

Figure 01: Four dimensions of sustainability

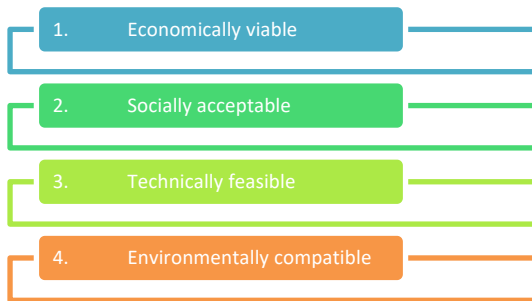
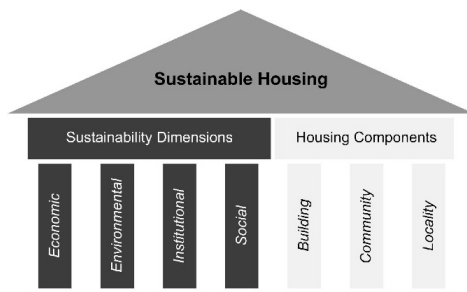


Figure 01: A general concept of sustainable housing



Source: Adamec et al. (2021).

Sustainable Housing Development (SH)

Giving people comfort and security is at the core of sustainable housing. According to one definition, sustainable housing must also be technically practicable, socially acceptable, and environmentally friendly (Choguill 2007). Sustainable housing, according to (Golubchikov and Badyina 2012), entails integrating environmentally friendly and socially beneficial home practices into larger settlement systems. Concern for people is demonstrated by ensuring that they live in a healthy, productive, and in harmony with nature according to the principles of sustainable housing (Nazirah, Z. A. dan P, 2005).

Sustainable housing methods must combine the three pillars of environment, social equity, and economic viability in order to support human health, sustainability, and safety. There are many ways that people can begin living sustainably on their own, even with the simplest implementation at an affordable price. The development of sustainable housing that incorporates land use, social, economic, and environmental considerations also depend on the government, architects, developers, community members, and leaders in the construction industry, in addition to the previously mentioned criteria and implementation. Programs for sustainable housing must continually assess their economic sustainability, socio-cultural acceptability, technological viability, and environmental compatibility (Cooper and Vargas 2004).

The Middle-Income society

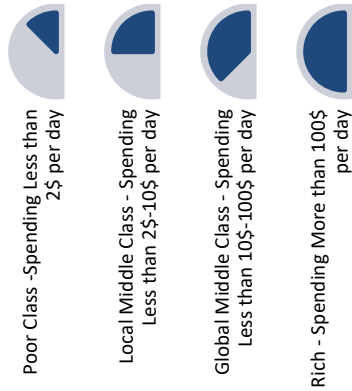
According to the Asian Development Bank (2010), the Middle Class is a socioeconomic class that includes professionals, technicians, government employees, and others. They are small business owners and educated service providers who work hard and have a stable job. They aim to live comfortable lifestyles, seek higher-quality goods and services, and plan to buy homes. The importance of the middle class for economic development, poverty reduction, and growth is further discussed. Additionally, the size of the middle class affects the economy. The demand for

luxury products is rising, according to the Asian Development Bank (2010), because of the middle class. They are requesting smartphones, laptops, and nano cars.

It has further defined that the social class can be classified as follows (www.adb.org)

Two approaches—the relative method and the absolute approach—have been used to describe

Figure 03: Definitions of social class



the middle class economically. The middle class is defined according to the median per capita income according to the relative approach. A different way to define middle class is in terms of standards in developing nations. According to the Absolute method, the middle class is determined by the incomes or income range and the global demand for branded items like designer clothing, the newest technological gadgets, and services for education and health. Purchase decisions are influenced by home market pricing and political landscape. He has also discovered that being married and having kids are significant catalysts for moving.

Middle-Income Housing affordability

Affordable access to quality housing has been essential to the democratization of prosperity that took place in the last century in the majority of high-income countries, making middle-income housing affordability significant. Typically, middle-class housing has been made available through the competitive market without the need for subsidies.

Middle-class housing differs from low-income housing, which depends on public assistance to meet the requirements of families unable to pay market-rate home or rent prices or rentals. Low-income housing is often referred to as "affordable housing" or "social housing."

The economy also depends on home affordability for middle-class families. Housing being the major asset in most households' portfolios, there are additional effects on saving, investing, and consumption decisions, according to Paul Cheshire of the London School of Economics and Wouter Vermeulen of VU University. Housing affordability increases consumers' discretionary income, allowing them to save money and buy more products and services (which generates investment). All of these may help to boost the economy and create jobs.

Government policies should take into account these advancements in economically sound and sustainable principles. affordability for buying and maintaining a home while receiving benefits for a better quality of life through healthier living and lower electricity costs.

The upfront initial cost to the homebuyer has traditionally been used to determine whether a house is considered cheap. Housing costs that do not exceed 30% of a household's gross income are a widely accepted benchmark for housing affordability. Taxes and homeowner's insurance are typically included in housing costs calculated in accordance with this rule, and occasionally utilities are as well. Housing is considered to be out of reach for a household when these total monthly costs are greater than 30 to 35 percent of the household's income.

It is necessary to consider life-cycle costs when evaluating housing affordability. In order to give a more accurate picture of all expenses associated with a structure, life-cycle costing takes into account the long-term expenditures of building upkeep. The whole cost of a structure, including the initial construction expenditures as well as ongoing operation and maintenance costs, is a factor. When viewed from the perspective of life-cycle costs, the operational savings of a decent,

Data collection

Regarding sustainable housing laws and approaches to problem-solving, primary data will be gathered from the literature as well as from a number of national and international sources.

Regarding the characteristics and aspects of sustainable housing, secondary data will be gathered through questionnaires, on-the-ground observations, and interviews with relevant experts, including architects, project managers, consultants, contractors, and users of middle-income housing.

An online survey was used for the quantitative research in order to gather opinions on the current regulations, gauge how much of them apply to housing for middle-class users, and gather suggestions for improvements using a conceptual framework to link sustainable components. To evaluate the information obtained from a literature review and a questionnaire for the assessment of rules, the mixed approach will be used.

Figure 05: Methodological approach to regulatory framework.

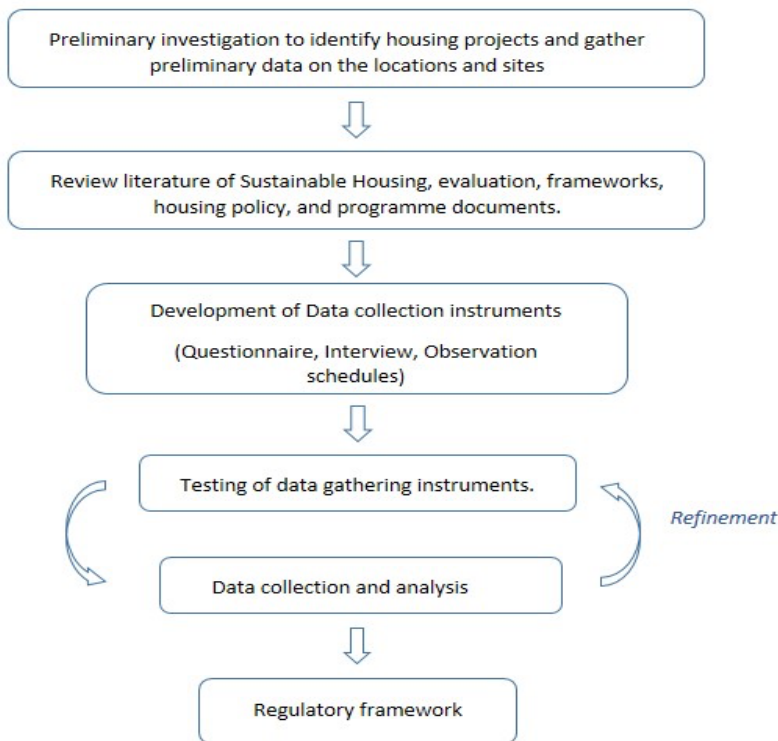
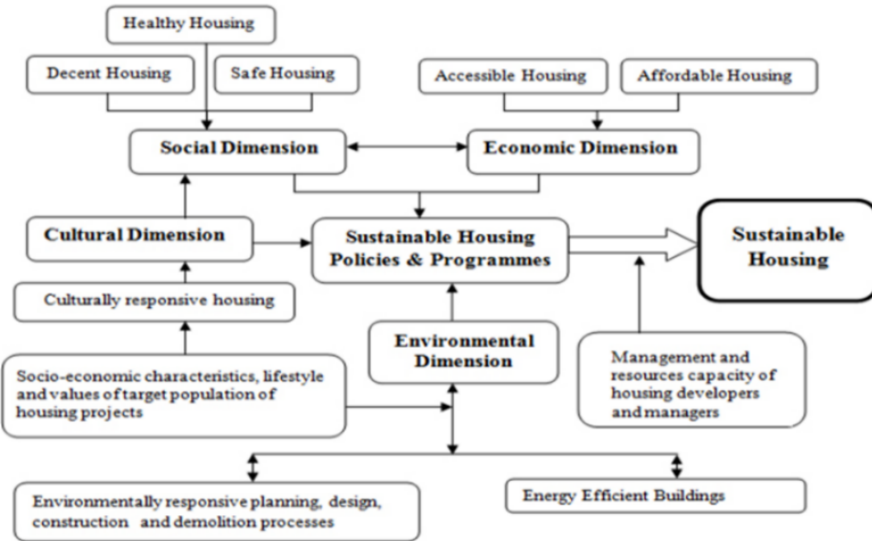


Figure 06: Conceptual framework approach to sustainable housing.



Results and Discussion

In the field of developing the built environment, regulations are quite crucial. Communities wilfully encroach on the environment to satisfy their needs, paying no attention to the scarce resources available. There are a number of alleged elements that affect both new and current affordable housing developments that are related to sustainable development, including planning procedures, regulations, and strategies. The majority of housing complexes are either unaffordable or fail to meet economic advantages, social well-being, or environmental issues in order to satisfy sustainable elements, according to an analysis of the country's housing projects and existing literature. As a result, it's crucial to handle this situation with hands that are technically proficient, skilled, and competent.

This study emphasizes the significance of launching a sustainable strategy that is applicable to middle-class housing developments in urban Sri Lanka. Therefore, it is crucial that we concentrate on the regulatory framework that can be adopted for sustainable middle-income housing developments in metropolitan areas in order to fulfil the Sustainable Development Goals.

Conclusion

The goal of the research described in this paper was to create and evaluate a legal framework for evaluating sustainability in developments of middle-class housing. Studies uncovered aspects of sustainable housing as well as characteristics of the urban middle class. By taking into account past studies that have been done on this subject and the results of data analysis, it was established that the regulatory framework was ineffective in fostering the development of sustainable middle-class housing in the specified urban context. By making use of industry experts and users of the actual situation, the significance of this regulatory framework has been put to the test. Although it might be a flexible, incremental structure, it has been discovered that the regulatory framework is context-related and adapts to the changing requirements. There are both qualitative and quantitative ways for evaluating and measuring the framework's sustainable indicators. In order to evaluate and improve the assessment regulatory framework's applicability, it can now be applied to both new and existing housing developments. The research will also serve as a foundation for future studies that must adopt a more comprehensive systems-based regulatory strategy for sustainable housing construction in various settings and regions across the nation.

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