

Review Paper on the Holistic Role of an Architect in Cost Optimization for Affordable Housing

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Abstract: *With about one in six urban Indians living in illegal squatter settlements, India's need for an extra number of affordable housing is exponentially increasing. In September 2015, the Indian Housing and Urban Poverty Alleviation Program (MoHUPA) unveiled its ambitious Housing for All program under Pradhan Mantri Awas Yojana (PMAY), with the goal of making India slum-free by 2022. This policy is based on similar previous initiatives and shows promise regarding the number of houses to be constructed for all income groups in India with the aid of the government's credit-linked subsidies. The plan, however, has many drawbacks, especially from a people-centered perspective: recipients are often viewed as inactive, the system includes few incentive steps, access to benefits is exclusive and long-term consequences are ignored. It is concluded that PMAY 2014 is essentially a government image campaign and lacks sustainability elements. Even there are many issues that are neglected from a broader perspective such as a private partnership and investment.*

Keywords: Affordable Housing

I. INTRODUCTION

Building industry is a special architecture sector. One of the world's largest sectors, it splits with many other businesses relying on it across different disciplines. Despite being an indicator of growth for the construction industry it's a delicate business. Experiencing budget overruns, difficulties, and squabbles between gatherings. Because designers are far more motivated in initiatives that are bound by schedule, performance, and money in completing a project that is completed on schedule and to the appropriate standard which generates the highest possible payback Segmented up into multiple specializations, fierce rivalry, a limited funding, and fewer resources energy, a manufacturing has proven a robust industry. Despite this, a large number of designers, project managers, Buildings have been excessively by structural engineers and architects. It can remain due to a dearth of creativity, aversion adopting innovative ideas and technologies, lack of creation and investigation, deficiency of skills as well as a lack of smart networks to assist partners in programs. Given new developments in incorporation of technologies in building, reasonable accommodation needs an engineering program it will result in significant reciprocal advantages aimed at tenants as well as programmers as of a most important elements in accommodation or shelter falls underneath the essential requirements category under Maslow's hierarchy of requirements. is a necessary component of physiologic requirements. Affordable is seen as a fundamental requirement of housing postures a huge threat to the advancement of emerging nations, and continuity of industrialized nations. It's an unquestionable the reality is a result of a scarcity of inexpensive homes harmful to civilizations. Maslow's proposed someone will not, according to the order function eliminating the need for the actual survival necessities. Accordingly, Housing affordability ought to be a top objective for the government states to authorize their nation's stability and prosperity. The nation's population was a whopping 1.211.97 million people in 2011 17 censuses, among which 378.11 million (approx. 31.15 per cent) resided in urban areas.

II. REVIEW OF LITERATURE

In this connection the following literature has been reviewed,

Vidya Devi, Rinki Taur (Oct 2009)

This article examines how the privatisation of formerly state rental stock to social housing institutions has aided the establishment of stable communities in South Africa and the Netherlands. Housing stock is largely a discounted renting dwelling alternative for low and middle-income individuals residents in both nations, positioned in well regions and

offering a diverse accommodation. According to the simplicity of the numerous production procedures to decrease the building price, this study focuses on several features of precast building approaches for reduced homes. Gives comprehensive case studies of Observations regarding internal reinvigoration via Johannesburg (South Africa), Lusaka (Zambia), Mbabane (Swaziland), Harare, and Bulawayo in urbanising Africa and the city core revisited (Zimbabwe) are covered. Therefore, since informed construction there is Periodic and repeated manufacture of the identical components results in quicker implementation, increased efficiency, and cost savings. The product's work is condensed to a minimal of prefab building, thus raising the quality of labour, irresponsibility and hygiene.

Jones Lang LaSalle (2011)

According to the Technical Cluster Report on Urban Housing Estimate, the document presents the notion of urbanisation as well as house scarcity in Bharat as EWS, HIG, MIG, and LIG. A Central Level Schemes Policy Framework and the Central Level Schemes Policy Structure are discussed in this article Low Price Housing Rules are also mentioned as the State-sponsored Area Unit initiatives. Close to central stage systems. State Man Maharashtra Space Technology and Housing Authority (MSTHA) and Joint National Renewal Mission (JNNURM) (MHADA). The proliferation of slums (JhuggiJhompries, Zoparpattis) is a natural outcome of rapid urbanization, economic development, rural push-urban pull factors leading to migration and creation of spontaneous settlements. In Mega cities like Delhi and Mumbai the problem size is mammoth. In the This research article examines the complex issue of practises linked to evictions, with some allusions to acquisition as well as confiscation, in the context of urban development-induced displacement. In every of the paper's 10 case studies, one or more of these procedures were used, with or without proper discussion and payment, to acknowledge the challenges in disentangling the notions of eviction, purchase, and confiscation, and contextualizing their connection. The Report of Dr. PranabSen 45 Committee on Slum Census of 2011 gives a very graphic picture from all states on the state of urban slums, which has augmented from 28 million in 1981 to 63 million in 2001 and has additional increased to 93 million in 2011. The report helps to evolve strategies to deal with the problem of Slum settlements in various states and cities. This is a basic document covering the volume of the decennial census of all homes in urban and rural areas. The demographic aspects and the rural and urban modal shift and all socio economic parameters are covered including the housing's quality in terms of nature of materials, access to roads, water supply, sanitation and power

SwaptikChowdhury, Sangeeta Roy (Jan21, 2013)

He paper grants research to have blessings on places like Asian country anywhere concrete or steel is precious. The paper seeks to represent the various facets by adopting prefabricated construction methods for low-cost homes lighting the different manufacturing methods, and thus the productive consecrations obtained through its implementation that could be analyzed one after the other benefited the specifications, thereby increasing the construction the rate of expansion size. This is an important Policy framework document for housing and integrated habitat development. The The government 's position has moved beyond those of a supplier to that of a facilitator and collaborator, and accommodation is no longer a priority development to be taken up as a participatory process with individuals, private sector, public sector, community sector, cooperative sector, corporate sector and NGO's. The Policy directions for accessing resources like land, finance, building materials and technologies are covered. This is a very Progressive State Affordable Housing Policy and attempts to Decrease the accommodation deficit, particularly for the poor and low-income, and begin development of inexpensive homes through cost reduction options. The Policy is also geared to encourage residential investments and municipal development on PPP perfect. The thrust is also for creation of Rental Housing and transit accommodation as well as to deal with the problems of slums (KatchiBasti) and provide for integrated Slum Housing solutions. The Policy further opens up with options of Public and Private Sector to develop on land owned by them, on acquired land, government land. The Policy also covers the incentives through development control regulations for enhanced development (FAR) for support to EWS/LIG and nature of fiscal incentives. The primary gift forms of building systems listed here square measure particularly, longitudinal, precast. Housing Development is largely dependent on the building regulatory frame work, through Development Control 46 Rules, Building Regulations of local bodies. Most of them in all states hardly cover the realistic requirements for planning and design of Dwelling alternatives for the poorest portion of the population. The National Building Code of India 2005 has

comprehensive provisions on all aspects of Residential and other building development, design, and structure with special thrust on all safety aspects as well as special needs of EWS/LIG housing. In the housing for the masses agenda these norms could find easy adoption by all cities and towns.

Dr. Douglas Webster (July – Sep 2009)

The comprehensive paper attempts to relate the housing delivery options vis a vis the housing problem. Thailand has 7% slum population. The critical factors related to affordable housing for low income population are analysed and issues related to land tenure and access to housing finance is detailed. The basket of options are discussed with 11point Action Plan. Today's city leaders are confronted with unprecedented urban planning and development problems. Cities currently house more over half of the world's population. Perhaps nowhere has this urban change been more evident than in Asia, where the urban population has risen by over 378 million people in only ten years. The rapid expansion of cities continues unabated, necessitating more public and private investment in physical and social infrastructure. The worldwide structure of economic availability and stability is shifting drastically, with substantial implications for Asia's and America's developing urban regions. While the recent economic crisis was largely an American problem, its consequences, experiences, and lessons gained were felt throughout the region. The uncertainty created by the current crisis has influenced how development policy is now seen. Uncertainty planning has become an important element of decision-making. While today's concern is economic, municipal officials have to deal with uncertainty in some form or another on a regular basis. Cities must become incubators of innovation in order to develop and succeed, and urban planning must become urban management. Cities are increasingly becoming drivers of economic policy for their countries and worldwide as a result of a power shift. This can be done in a variety of ways, including through democratic or centrally controlled development techniques. Cities in the region are already expanding their responsibilities beyond the traditional municipal services they provide. They're tackling bigger concerns like the necessity of sustainable development in reducing a city's carbon impact, and the need to enhance public involvement in order to bridge the urban divide between the rich and the 47 poor. They are working to enhance the quality of life of their inhabitants as part of their attempts to become world-class cities.

III. DESIGNS OF AFFORDABLE HOUSING

A. Micro-apartment Complex

Residences in micro-apartment buildings which include the Designs of the numerous rooms and utilities that are creatively designed. It occurs frequently has communal facilities: bathrooms, kitchen and dining rooms. This definition relies on space being used 48 effectively, since the apartments are relatively small. We introduced clever features to makes the dwelling more spacious and to conserve room functional.

B. “Affordable Housing Delivery in Thailand” : A Contextual Assessment by Dr. Douglas Webster, GH Bank Housing Journal, Volume 3 Number 8, July – Sep 2009.

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C. “ProPoor Housing Finance in Asia” by Dr Xing Quan Zhang, GH Bank Housing Journal, July – Sep 2009.

Asia, having 60% of world’s population, has diverse housing problems. East Asia with China, Japan and South Korea are better off in comparison to South East Asia countries. Differing degrees of housing finance investments operate in Asia through Commercial Banks, Housing Banks, Mortgage Institutions. China, Hong Kong and Singapore use Housing Provident Fund, Central Provident Fund to advantage with its long tenure fund. Housing subsidies and Cross subsidies have been attempted with benefits serving have nots.

D. “Ignorance may be real reason for sub prime induced financial crisis” by K I Woo, Asia Pacific Housing Journal Volume 6, Number 19, April – June 2012.

As the world continues slowly recovering from the sub prime induced financial crisis, many experts are analyzing why major global banks with cutting edge risk management and corporate governance systems almost brought down the global financial systems by investing in what in hindsight, shoddy subprime yet AAA were rated securities. The derivatives market also gave room for over valuation of properties.

E. “Social and Environmental Aspects of Affordable Housing and Building Materials and Technologies viable options”, Vasudevan Suresh, UN-Habitat, Sep 2004.

In the context of large scale Renovation Programmed for Housing and Urban Development in Iraq, there was a need for Affordable Housing for 2 million. The Building Materials and Technologies need a building component that is both old and contemporary technologies. The Social and environmental aspects of these options are discussed. The strategies for making available a working supply chain are highlighted.

F. “Housing Finance – The Global Experience”, Mr. V Suresh, UN Habitat, Sep 2004.

Housing Finance for any country is the basic need for Affordable Housing. Iraq with its state funded initiative for years had no institutional financing model like Housing Banks or Housing Finance companies. The paper covers a large number of Recommendations for establishing National Housing Fund, Bulk Construction Housing Finance, Retail Housing Finance, Insurance products for Risk Mitigation.

G. “Empowerment Disadvantaged Groups” NicoSteytler, Local Government Quarterly, journal of AILSG, April – June 2008.

Prof. NicoSteytler, Director of the University of Western Cape's Community Law Institute argues for strategies for the empowerment of disadvantaged communities at the community level and local body at the institutional level. A strong case is made for adopting the decision making processes of local governments participatory with community groups. Such an inclusive approach is adopted in pilot projects in townships of Cape Town:

H. “Hand book on Real Estate Investment – Legal Perspective” by Anupam Srivastava, Manupatra, 2007.

The author has covered comprehensively the legal perspective for all real estate and property investments and explain the property laws and statutes governing immovable property for sale, lease, mortgage, gift under various laws. The inheritance aspect is covered in detail. Rent Control Acts and modifications are comprehensively covered. The Real Estate Consumer Protection Act of 1986 is discussed. The new effort of government to bring in a Real Estate Regulator is also covered. 9. “Real Estate Laws”, Mumbai Chartered Account

I. Need of Study

With the industry's complexity and accelerated development, construction technologies and models are becoming increasingly needed to solve complex problems. Project parties would be better positioned to satisfy project objectives by staying below budget, finishing projects on time, enhancing quality, and maximizing profits development of models and systems. With the increased building of residential projects, many more units are likely to be required to meet rising housing demand. Given the huge stakes, cost on residential as expenditures were invested in real estate projects, fewer units are become accessible. Targeted at luxury Property for the wealthy. On the plus side, there has been a surge in home construction house development will generate tremendous it provides opportunity for a variety of trades and businesses. However, housing affordability remains a significant issue that requires addressing (Anuta, 2014).

IV. RESEARCH OBJECTIVES

Upon reviewing pioneers in the field's research and publications, as well as conducting a primary survey, it was discovered that there is a need to study the architect's role for cost optimization by planning, designing and appropriate management accordingly of affordable housing for the society. For the proposed effort, the following goals will be specified.

1. To Study Concept of Affordable Housing and its relevant parameters, present scenario.
2. To study concept of appropriate construction techniques and construction management principles useful for cost optimization used in affordable housing.
3. To study policies of Government, NGO Schemes, Institutional work and Successful applications.
4. To plan affordable housing considering statistical surveys from various stakeholders.
5. To propose comprehensive model for affordable housing (with respect to Guidelines, Policies, Design Strategies, Technology and Materials) to overcome the problem of housing.
6. Customize the floor proportions to reduce the expenditure of reinforcing concrete floors in residential complexes.

V. RESEARCH METHODOLOGY

The research strategy is teleological (where the mechanism is important) and is suited to Hybrid approaches, from both quantitative analysis and qualitative analysis for high income community study in affordable urban housing. The approach to study will be as follows:

1. Studying literature and collecting data on urban housing.
2. Examples, descriptions of the new sustainable urban housing scenario;
3. All laws, policies and regulations on urban housing in India, with an in-depth analysis and graphic depiction of figures, maps, graphs, etc., to help my goal.
4. Contextual identification of the issues and problems.
5. How further policy intervention can affect affordable housing in urban areas.
6. Case study and the inference thereof.
7. Determining the design of samples and preparing questioners.
8. Parameter setting Survey questioner questions on affordable urban housing.
9. Data analysis and the interpretation of the hypothesis.
10. Framing the Guideline Recommendations as per inference.
11. Conclusion, and challenging more study.

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