

A Review Study on Optimum Specifications for Middle Income Group Houses

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Abstract - Optimum specification for middle income group houses aim to cut down construction cost by using alternatives to conventional methods and Input. "It is effective budgeting and technique which help in reducing cost of construction through use locally available material along with improve skills and technology without sacrificing the strength, performance and life of structure. Optimum specification satisfies the most bottom and fundamental human needs for shelter and neglects other needs that people aspire home including psychological, social, and aesthetic needs and ultimately, need for self-actualization. This paper examined the cost effectiveness of using specification for middle income housing technologies in comparison with the traditional construction methods. Two case studies in India were conducted. It was found that about 26.11% and 22.68% of the construction cost, including material and labour cost, can be saved by using the low cost housing technologies in comparison with traditional construction methods for walling and roofing respectively. In this paper we studied about the well managed human resource allocation of the construction for a middle income houses. these firms have the strategies between assigning regular staff and hiring local temporary employees. This study shows that regular project administrators, who are able to reduce managerial flaws and cut down project losses, are favored over local ones.

Key Words: Optimum specification, Middle income houses, Conventional methods, Walling, Roofing, Allocation, Project losses.

1.INTRODUCTION

In India, the world's largest democracy and a rapidly growing economy, the emerging middle class is often seen as an indispensable force for a more accountable and transparent government. This technical note provides new estimates for the size of India's middle class-defined as having reasonable economic security in today's globalized world. Based on data from India's 2009/2010 National Sample Survey, Christian Meyer and Nancy Birdsall estimate India's middle class to constitute around 70 million people, or less than 10 percent of the population-much less than often assumed.

Who constitutes this middle class in India? India's National Council of Applied Economic Research (NCAER) has been at the forefront of shaping this debate. NCAER's current definition identifies the middle class as comprising of two sub -groups: "seekers" with annual household income between Rs.200,000 and Rs. 500,000, and "strivers" with annual household income between Rs. 500,000 and Rs.1 million at 2001/2002 prices. Assuming an average household size of 5 people and converting into constant 2005 purchasing power parity (PPP) dollar, these numbers would be about \$8 \$20 per capita per day for seekers, and \$20 to \$40 per capita per day for strivers.[1]

	CGD		NCAER	
	Based on India's NSS survey		based on NSHIE 2004/2005 survey	
	Population share	(million)	Population share	(million)
Rural	3.37%	27.84		
Urban	11.79%	41.33		
Total	5.88%	69.17	12.8%	153

Table 1: Size of India's Middle class, CGD AND NCAER estimates (2009/2010).

The architectural work of an important modern building project includes planning of the different components of the building, giving due consideration to the site, orientation, ventilation, appearance, etc. This part of the building project constitutes a separate branch of civil engineering known as Architectural engineering. The art of constructing building for residential, business and other purpose, systematically according to their planning and design is known as building construction. Building construction includes foundation, plinth, walls floors, roof, verandah, doors, windows, ventilators and other building services, etc. Adequate knowledge about different building techniques and building materials for hilly area we can discuss in this report. Cost-effective building materials and construction technologies Research and development bodies in India are-

1. Central Building Research Institute (CBRI),
2. Structural Engineering Research Centre (SERC),
3. Centre for Application of Science and Technology to Rural Areas (CASTRA),
4. Regional Research Laboratories (RRL),
5. National Environmental Engineering Research Institute (NEERI).

1.1 Benefit of low cost technique

- High speed of construction

- Less built-up area for the same carpet area.
- Less embodied energy and carbon footprint: significant reduction in use of cement, sand, steel and water; recycling of industrial waste gypsum.
- Lower cost of structure: savings in materials; no plastering.
- Lower building weight (panels weigh only 43 kg/m²), contributing to savings in foundation and reduction in design for earthquake forces, particularly in multi-storeyed construction.
- Buildings up to 8-10 storeys can be designed using this load-bearing system, without the need for beams and columns.

2. LITERATURE REVIEW

Some reviews from the past research papers which are related to optimum specification for middle income houses are as follows:

B Bakhtyaret carried out study on A Review on Low Cost Housing Process in Malaysia; it is observed that, The results confirmed that making balance between low income obligations and developer's profit-making is the key element for building more LCH in the country.[2]

Bredenoord J carried out study on sustainable Housing and Building Materials for Low-income Households; it is observed that sustainable goals for low-cost housing and applications are achievable. Measures concerning the physical development of neighborhoods, such as urban density and connectivity are equally as important as measures concerning community development. The final comprise support for community built organizations, small housing cooperatives (or similar forms of cooperation) and individual households – or small groups – that build and increase their houses incrementally. Adequate design and social organization and support are preconditions for achieving sustainability in incremental housing.[3]

David William Dobson carried out study on Sustainable construction, it is observed that the objective in this paper were to find if there is a belief within the commerce that sustainability means increased cost and to investigate whether using sustainable construction methods save money by reducing a building carbon output and running costs. Following the literature survey, a questionnaire survey has been carried out to canvas opinions within industry. This paper will benefit customers and designers as they can see how integrating sustainability into new buildings will enable big savings on utility and maintenance costs once the building is operational.[4]

Iwuagwu ben ugochukwu carried out study on Local building materials; it is observed that the paper recognizes the problem of inadequate housing as a critical challenge to sustainable urban growth and cities development. Extensive use of recycled materials help conserve restores and preserves the ecosystem. Green buildings wastes management ensures resources and energy efficiency. The closeness of materials saves cost and decreases pollution by fuel through transportation.[5]

Kuo-Liang Lin carried out study on Human Resource allocation for remote construction projects; it is observed that when allocating human resources for the management team of distant projects sites, these firms have the strategies between assigning regular staff and hiring local temporary employees. This paper first proposes a decision making model for human resource allocation in remote construction cost. The case study results show that regular project administrators, who are able to reduce managerial flaws and cut down project losses, are favored over local ones.[6]

Tomas.U.Ganiron carried out study on Prefabricated Technology in a modular home, it is observed that one of interesting perceptions in the study is that prefabricated components has a significance change in the terms of a construction cost as relate to the old-fashioned methods due to the materials and fast band short time duration of construction.[7]

VivanW.Y.Tam carried out study on cost effective of using low cost housing Technologies in construction, it is observed that construction methods of foundation, walling, roofing and lintel are compared. Strength and durability, safety and mental satisfaction are factors that assume top priority during cost reduction. It is found that about 26.11% and 22.68% of the building cost can be saved by consuming low cost housing technologies in assessment with the traditional construction methods.[8]

3. RESULT & DISCUSSIONS

In this paper we consider a plan and compare its cost estimate between Public Works Department and Private Company, in which the human resource allocation and cost distribution of construction materials varies. The estimated cost is as shown in table 2.

S.No	As per PWD rate	As per private company
1	Total cost of building	Total cost in building
	655183.3 Rs	714629.43 Rs

Table.2 Comparison of cost estimate

Difference in rates = ₹59446.13

As per the result we can say that the well managed human resource allocation and planning leads to the reduction of the construction cost and lies under the middle income groups.

3. CONCLUSIONS

In this review paper we discussed about the well planned human resource allocation, and by using nearly available construction materials for the construction for middle income group houses. The growing population in urban areas has led to a strict shortage in land, which leads to the increase in the cost of houses. So there rises the problem of shelter (housing) for the peoples of middle income groups. General specifications have been given for the construction in past researches and we can reduce our construction cost at great extent, the result also shows the variation of cost estimation

of a simple house between government sector construction and private sector construction.

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