

The case for Vertical Housing in Kashmir

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Abstract

The housing in India varies from tiny huts in far flung areas to concrete horizontal structures to the modern apartment buildings in big cities. The horizontal structures are costly and consume more land than that of vertical housing structures. The trend in the valley of Kashmir is to construct the horizontal houses which have not only led to shrinkage of non agricultural land but to the shrinkage of paddy fields as well. There is an immediate need to look into the matter as is directly concerned with the non renewable resources. The purpose of this paper is to investigate the feasibility of vertical housing structures for sustainability. The paper looks into various loopholes that have worked as impediments for evolving a thought system that would nurture a culture of preferring vertical housing structures.

Key Words: Concrete, Vertical Housing, Sustainability, loopholes.

Introduction:

The housing industry in India is one of the fast growing sectors. The total number of houses as per 2011 Census was 33.1 Crores as against 24.9 Crores in 2001 Census marking an increase of 32.8%. Further, it is not only the quantity of houses that has swelled but all along it the quality of houses has also increased. Correspondingly, the population of the state grew at a rate of 23% much lower than the growth of houses. The population as per 2011 Census was 1.25 crores while as it was 1.01 crores in 2001. Further, there has been complete changing pattern in the type of materials used for construction. Metal, asbestos sheets, burnt brick and stone etc are extensively being used and there has been a sharp decline in the use of grass, thatch, bamboo, wood, mud etc.

The surge in the number of houses can directly attributed to the growth of population which in turn is a two edged sword; providing entrepreneurial opportunities for the housing industry however at a greater consumption of non renewable resources. The housing structures have varied not only from place to place but time to time, while the tradition is to build horizontal structures over vast areas, off late the trend is changing towards vertical structures particularly in metro politician cities, the vertical structures consume less resources particularly the most valuable one i.e., land and are thus less costly and effective than horizontal structures. The horizontal structures not only demand more land for the basic structure to put in place however as these structures are geographically spread over large space they demand more structures in the form of hospitals, educational institutes, play grounds etc comparatively to the vertical housing structures. Besides the amenities like water facilities and electricity is less costly in vertical structures as the lines of dispersion and other costs associated will have to be foregone over large areas in horizontal structures.

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The vertical structures are an innovative boon for new generation entrepreneurs to consider not only in metro politician cities but in other parts of the country as well. The move will not only help towards more sustainable surroundings but can be instrumental in providing entrepreneurship opportunities at a place like J&K.

Statement of the problem:

The growing population and a rapid urbanisation have led to the increase in the number of houses which have led to the squeezing of land particularly in urban areas. The census data reveals that there has been a steep increase of 53.8% in the number of houses in urban areas from 2001 to 2011, the number of houses in urban areas was 7.2 crores in 2001 while the number rose to 11 crores in 2011. As per a statistical estimate, the urban population in India is expected to be around 600 million by 2030 (McKinsey Global institute) which would ultimately lead to number of more structures to be put into place to accommodate the growing population.

The people of the third world countries invest their savings in housing structures which ultimately are sunken in this way and thereby don't help the economy to grow. The two prominent types of structures for housing are horizontal and vertical. The horizontal structures demand to the formation of more roads as these structures are widely spread over large areas; the other costs of escalation such as material and labour have also increased proportionally due to demand and supply factors. The requirements of electricity, water, sanitation, waste management, municipality works and other facilities demand more attention and cost in horizontal structures when the same is compared with vertical structures.

The traditional houses in Kashmir are horizontal with double storeys covering a large portion of land where in most of the space remain unutilised and thereby results in the wastage of resources. The population in the main city of Srinagar and towns like Baramulla and Anantnag are increasing at a rapid pace prominently due to urbanisation which has lead to the scarcity of land in these areas. The need of the hour is to grow vertically in order to accommodate the growing needs, lessen investment in housing and using the resources judiciously.

The aim of this paper is to find out the feasibility of the vertical housing structures in Kashmir.

Objectives:

1. To Study the cost effectiveness of vertical structures.
2. To examine the need of vertical structures for growing population.

Review of literature:

Housing is one of the important considerations in urbanisation and ever growing population. Many researchers have contributed with their diverse reviews in this regard. The reviews of different researchers and institutions with regard to housing and urbanisation are as under:

(Wan Nor Azriyati Wan abd aziz et al, 2014) concluded that the people staying in the middle cost vertical residential buildings are pleased with the amount paid for their service charge due to the fact that they received a good management and maintenance services for their properties. There are indeed more

benefits than costs associated with living in vertical units but the perceived lack of understanding in the legislations have led to less level of satisfaction with this type of life style. They suggested that the government need to play more roles in creating awareness amongst the citizens of the rights and responsibility in living in vertical units.

(Sharifa Alshalfan, 2013) cautioned that Kuwait is in need of a moment of fundamental redress. The issue at stake is not solely one of unmanageable housing backlog, but rather a much larger social and economic one. A contrived sense of entitlement has resulted in unsustainable growth of the city that is difficult to reverse. The citizens' dependence on the state to distribute its resources has become an established means of wealth creation. Its generous welfare policies have ingrained a sense of complete state reliance, yet its housing ownership facilitations have promoted opportunism. The result is further dependence on the state without acknowledgement of the limits of its resources.

(Pranati Datta, 2006) recommended the redirection of investment to develop strong economic base for small and medium neglected cities. She propounded that the redirection of migration

flows is required since the mega cities(Mumbai, Kolkata, Delhi, Chennai etc)have reached saturation level for employment generation and to avoid over-crowding into the over congested slums. She was of the opinion that policy should relate to proper urban planning where city planning should consist of operational, developmental and restorative plans.

(Gill & Bhide, 2012) in their paper applauded the vertical settlement as a tool for sustainable development in Mumbai. They reviewed a highly innovative model used by the government in collaboration with others to resolve the twin challenges of affordable housing and need for land for infrastructural development.

(Farmer & Ray, 1981) provided two reasons for stressing the effects of housing subsidies on entrepreneurship. Firstly a large and unpredictable subsidy system offers potential for capital gain, and to the extent that individuals in Britain do possess entrepreneurial ability, secondly they stressed that entrepreneurship is not in unlimited supply, even though its market price is zero, since effort takes time, and time and the agility to use it effectively are limited.

(Thushara & O'Hare, 2012) concluded that housing is the most difficult basic need to fulfil worldwide, with millions of people living without habitable housing. They concluded that the situation is severe in Asia and it is getting worse in urban areas and stressed for an urgent requirement to develop a practical mechanism to address this issue.

(Angelo, 2006) points out that in Australia it is not the house itself that has risen in price, rather it is the land the house sits on, which over a decade has nearly trebled across Australia and by comparison the cost of building a new house on that land has hardly moved. He concluded that land which once represented 25 percent of the cost of a new house and land package is now 60 percent.

(Wong, 2004) pointed out that the scenic view and windy environment being as the two major attractions of high-rise living, planners. He stressed that the developers and policy decision-makers should ensure that these important 'pull' factors are incorporated into the designs of their developments

so as to attract more households to reside at higher floor levels, and at the same time demand a price premium for these features. He observed that land scarcity in major cities may be the fundamental motivation to develop high-rise high-density vertical cities however in recent times; cities around the world are also trying to create its own identity with skyscraper landmarks.

Research Methodology:

The Kashmir Valley from the state of Jammu and Kashmir has been taken up for the purpose of the study, The data used for analysis has been primarily gathered from secondary sources, The Census reports of 2001 and 2011 have been the imperative sources. Besides interactions in form of interviews and discussions with various government authorities were taken up. The official websites supplemented by opinions of various researchers, academicians, practitioners and administrators, Different journals, magazines, newspapers, digest of statistics and other publications were also considered for the purpose.

Analysis and Discussions:

The total population of the Jammu and Kashmir as per the census 2011 was 12541302(1.25 crores approx) while the population in 2001 was estimated that of 10143700 (1.01 crores approx. The population of 1.25 crores makes it the 19th most populated state of the country. the state has the growth rate of 23% which exceeds the national growth rate of 17%. The statistics in Jammu & Kashmir census 2011 reveal facts that can be instrumental in planning for a better development plan.

Number of census houses			Percentage of houses used as									
Total	Vacant	Occupied	residence	Residence cum other use	Shop, offices	Schools, colleges etc	Hotel, Lodge, guest house	Hospital dispensary etc	Factory workshop	Place of worship	Other non residential use	No. Of occupied locked houses
3,603,632	304,413	3,299,219	55.4	2.8	10.3	1.0	0.2	0.2	1.0	1.5	26.9	0.7

The total number of census houses in the state as per the census 2011 stands at 3603632 out of which 304413 lie vacant and 3299219 are occupied for different uses as illustrated in table 1, the number of households excluding institutional households was estimated at 2015088 out of which 3.5% have no exclusive rooms, 22.3% , 27.6%, 21.5%, 13.0%, 4.7% and 7.5% having one room, two rooms, three rooms, four rooms , five rooms, six and above rooms respectively (table 2).

Total number of households (excluding institutional households)	Table 2 Distribution of households by number of dwelling rooms (%)						
	No exclusive room	One room	Two room	Three rooms	Four rooms	Five rooms	Six & above rooms
2,015,088	3.5	22.3	27.6	21.5	13.0	4.7	7.5

The availability of drinking water facility in these households is within the premises for 48.2%, near the premises for 28.7% and away from premises for 23.1% (Table 4). The source of lighting is electricity for 85.1%, kerosene for 9.7% , solar energy for 1.0%, other oils being the source for 0.2%, 2.0% using the other sources than mentioned and 2.0% of the households have no lighting source (Table 3). The experts agreed that the vertical houses would not have only consumed lesser of resources with the direct reduction of cost for building the same along with accommodating more population but the facilities improved and administrative convenience as well.

Total number of households (excluding institutional households)	Table 3 Distribution of Households by source of lighting (%)					
	Electricity	Kerosene	Solar			No lighting
2,015,088	85.1	9.7	1.0	0.2	2.0	2.0

Table (4) Distribution of households by availability of drinking water facility (%)															
Total number of households (excluding institutional households)	Tap Water			Well			Hand pump	Tube well	Spring	River, canal	Tank, pond, lake	Any Other source	Availability of drinking water source		
	Total	From treated source	From untreated source	Total	Covered	Uncovered							Within the premises	Near The Premises	Away From Premises
2,015,088	63.9	34.7	29.2	6.5	1.9	4.7	11.4	1.5	6.2	6.7	0.7	3.1	48.2	28.7	23.1

The data reveals an upsurge, both in population and the number of houses constructed, this has resulted in the shrinkage of land across the whole state. The shrinkage is not only alarming for the land meant for construction but the conversions of agricultural land into residential plots are a greater sign to worry. The dearth of this important resource (Land) are huge and alternatives none than using it effectively are the viable solutions. The Vertical structure buildings, missing in Kashmir can act as a eminent boon for dwelling and economic activities as well.

Conclusion:

The state of Jammu & Kashmir is in immediate need to address the concern of growing population, urbanisation and innovations in housing. The horizontal structures are costly not only because they are built over vast areas consuming a lot of land or the basic structure which is needed for every erection but these structures also demand a lot of costs in putting up basic services of water, electricity, sewage

distribution and other related costs due to their geographical diversification in the form of putting up lines for water supplies over vast areas, erect poles over vast areas and greater number of transformers for electric distribution.

It has also been observed that the horizontal housing colonies do not have a close proximity to other amenities of life. Such housing colonies do not have playing fields for their children, marriage halls, recreation clubs, hospitals etc due to the sole reason of non availability of land. While we can say that the area needed for the standard living is 1500-2000 square feet, the horizontal houses are constructed with more than the required area, in Kashmir the general trend is to build a two storey house with attic and has a lot more space than required for daily basis. Such space is created for life time occasions like marriage or some funeral gatherings which attract a lot of cost than that of what should have got incurred. It's not only that these extra spaces demand onetime costs; they absorb the maintenance costs for their up tidings on continuous basis.

The entrepreneurs can play an active role in developing a culture to live in vertical structures which will be affordable than horizontal structures and a way to accommodate not only growing urbanisation but huge population as well. Though the state is not doing much in this regard, the government has to play an active part for this development. The government authorities shun away their responsibilities by simply referring Kashmir as seismic zone 5 without considering the vertical structures in Japan which is an area of high seismic activity. Though the Government has kept a limit on height for housing structures to 39-42 meters above the ground level, it is still possible to build a good number of apartments within this height which will save us a lot of cost and resources, the shift towards adding a basement below ground level would be instrumental for the cause and providing the necessary facilities like parking etc, thus not only saving the valuable resource such as land but provide the much needed space.

The government cannot run away from its responsibilities by simply passing the buck and need to help entrepreneurs in this regard by bringing in the latest technologies and other support services in this regard.

References:

- Aini, A. M., Aziz, W. N. A. W. A., & Hanif, N. R. (2015, April). To Move or Not to Move?: Exploring future housing plan of ageing communities in Kuala Lumpur. In *The Asia-Percific Network for Housing Research (APNHR) Conference, Kuala Lumpur*.
- Alshalfan, S. (2013). The right to housing in Kuwait: An urban injustice in a socially just system.
- Datta, P. (2006). Urbanization in India. Regional and subregional population dynamic population process in urban areas, European Population Conference.
- Farmer, M. K., & Barrell, R. (1981). Entrepreneurship and government policy: the case of the housing market. *Journal of Public Policy*, 1(3), 307-332.
- Gill, M., & Bhide, A. (2012, October). Densification through vertical resettlement as a tool for sustainable urban development. In *Proceedings of the Sixth Urban Research and Knowledge Symposium, Barcelona, Spain* (pp. 8-10).
- <http://www.censusindia.gov.in/2011census/dchb/DCHB.html>
- <http://www.census2011.co.in/census/state/jammu+and+kashmir>

- <http://www.jandkplanning.com>
- <http://www.jkhudd.gov.in/>
- <http://www.jkhousingboard.gov.in/>
- <https://www.mckinsey.com>
- <http://www.palgrave-journals.com/udi/journal/v9/n1/full/9000108a.html>
- Karantonis, A. C. (2008). Population growth and housing affordability in the modern city- Sydney a case study. In *Pacific Rim Real Estate Conference*. Pacific Rim Real Estate Society.
- Samaratunga, T., & O'Hare, D. (2012). High density high rise vertical living for low income people in Colombo, Sri Lanka: Learning from Pruitt-Igoe. *Architecture Research*, 2(6), 128-133.
- Nations, U. (2014). World urbanization prospects: The 2014 revision, highlights. department of economic and social affairs. *Population Division, United Nations*, 32.