

Green Investments In Indian Real Estate

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Abstract: With global warming suddenly emerging as a mainstream policy concern, businesses are finding that ‘sustainability’ is rapidly transforming from a fringe ‘feel-good’ issue into an exigent agenda item requiring focused, top-level action. The past year has seen companies across a wide range of industries virtually race to adopt and implement environmental policies, as market forces compelling action outpace regulatory requirements. And with standards of corporate accountability changing almost as rapidly, stakeholders and other constituencies are demanding that firms recognize and act on issues far removed from their core business lines including the environment. As a major user of natural resources, the real estate sector stands as a focus of global efforts to reduce the “carbon footprint” of economic activities. Here, too, the movement to green policies seems to have gained traction with startling speed, though in reality, the forces propelling the “greening” of real estate have been mounting for at least a decade. Some real estate practitioners have long advocated greener approaches to how and where property is developed and operated, but a new paradigm seems to have reached a critical mass of awareness and action just in the past year. Industry publications, conferences and popular press are suddenly filled with accounts of how developers can and are producing more environmentally-friendly “high performance” buildings. The near ubiquitous motto: “green is green” (i.e., environmentally-friendly policies can be profitable). While the residential green building market is rapidly growing and maturing, much remains to be understood about the dynamics of key market elements, the most likely buyer characteristics and preferences, and the most effective marketing and sales strategies. Through our research, we are trying to understand the prevalent green building investments in real estate and in developments for green buildings by finding the green in real estate, green building trends, factors driving green building investments, factors limiting green building investments, market opportunities, risks and strategic considerations.

Keywords: Sustainability, carbon footprint, greening.

1. INTRODUCTION

A green building, also known as a sustainable building, is a structure that is designed, built, renovated, operated, or reused in an ecological and resource-efficient manner. Green buildings are designed to meet certain objectives such as protecting occupant health; improving employee productivity; using energy, water, and other resources more efficiently; and reducing the overall impact to the environment.

1.1 Eco-Housing Certification Process Implementation & Rating:

Green Architecture began with the first Earth Day (22ND April) in 1970, and has grown in popularity as awareness of the earth’s many ecological problems becomes more wide spread. There are various agencies like IGBC, TERI, PMC that certify Green Buildings under specific rating after examination the projects for predefined criteria. These rating systems play an important role in the market, as they help the project gain recognition for candid efforts to improve efficiency and reduce the environmental impact.

The Confederation of Indian Industry (CII) plays an active role in promoting sustainability in the Indian construction sector. The CII is the central pillar of the Indian Green Building Council or IGBC. The IGBC has licensed the LEED Green Building Standard from the U.S. Green Building Council and currently is responsible for certifying LEED-New Construction and LEED-Core and Shell buildings in India. IGBC is a consensus driven non-profit council representing the

building industry, consisting of more than 500 members. The council encourages builders, developers and owners to build green to enhance the economic and environmental performance of buildings.

1.2 Objective of the Study:

The objective of this research is to study the existing Green building scenario in India and comparing it with global trends to develop a framework for formulating investments and marketing strategies which includes

1. Finding the Green in Real Estate
2. Green Building Trends: Evolution and Certification
3. Factors Driving Green Building Investment
4. Factors Limiting Green Building Investment
5. Market Opportunities and Keys to Market Green Buildings

1.3 Methodology:

Pilot survey: A pilot survey was conducted by preparing a questionnaire to understand the basic understanding of green buildings among various stakeholders.

Sampling Procedure: Due to time and financial constraints, it was not feasible to conduct a survey on the entire population to get their opinions and views. Hence a sample of the population was considered for our research. The method of sampling used was Convenience Sampling, where the researcher questions anyone who is available. This method was selected as it was quick and cheap. Questionnaires were sent to 44 people which included students, professionals, government employees, businessmen and retired citizens; of which 25 responded.

2. LITERATURE REVIEW

Menon&Menon, [1] The term enviropreneurial marketing emphasizes the need for an entrepreneurial approach in melding ecological concerns and marketing strategy objectives. (1997)9, analyses the antecedents and consequences of enviropreneurial marketing strategies. Enviropreneurial Marketing is defined as the process for formulating and implementing entrepreneurial and environmentally beneficial marketing activities with the goal of creating revenue by providing exchanges that satisfy a firm's economic and social performance objectives.

Persram, Lucuik[2] MRAIC 14claims that the green buildings can provide owners with competitive advantage through opportunities and specificmeasures associated with helping to mitigate risks. Owners who invest capital in order to achieve operations savings in sustainable properties have found that a variety of benefits are associated with green buildings throughout their lifecycle, higher ROI, lower O&M cost, better investor relations, participation in market growth, reduced risk. A brief study of cost of green buildings and how to achieve them is also included in the article. Leased property that meets green building certification standards such as LEED, associates one with a high quality brand value. To analyse cost of green buildings the studies of Davis Langdon and Greg Kats et al were referred.ie. Davis Langdon’s 2004 study of 138 U.S. buildings & Greg Kats et al.’s 2003 study, The Costs and Financial Benefits of Green Buildings. McGraw Hill Construction’s 2007 study of corporate America’s leaders was also reviewed.

Table 1 : Stages of Project In Eco Housing

PROJECT CYCLE PHASE	SUBMISSION OF DOCUMENTATION	
Design and Pre-Construction Phase	Stage 1	At Registration
	Stage 2	Prior to Excavation
Construction Phase	Stage 3	During construction
Post Construction Phase	Stage 4	Post Construction



Figure 1: Eco Housing Certification Process

Out of the ratings that were discussed earlier LEED and GRIHA are predominantly used in the India by all the builders. The stages of the life cycle that have been identified for evaluation are the pre-construction, building design and construction, and building operation and maintenance stages. By following the rating systems, it helps to design green buildings and, in turn, help evaluate the ‘greenness’ of the buildings which imparts the perfection of greenness.

Energy consumption in buildings occurs in five phases. The first phase corresponds to the manufacturing of building materials and components, which is termed as embodied energy. The second and third phases correspond to the energy used to transport materials from production plants to the building site and the energy used in the actual construction of the building, which is respectively referred to as grey energy and induced energy. Fourthly, energy is consumed at the operational phase, which corresponds to the running of the building when it is occupied. Finally, energy is consumed in the demolition process of buildings as well as in the recycling of their parts. Cost-effective and alternate construction technologies, which apart from reducing cost of construction by reduction of quantity of building materials through improved and innovative techniques or use of alternate low-energy consuming materials, can play a great role in reduction of CO2 emission and thus help in the protection of the environment. Green buildings reduce operational costs and helps in reducing energy consumption on an average of 30 – 50 %. They have less maintenance costs as a result of improved durability from better building technology which in turn results in less replacement of failed components. Water costs are lowered through conservation and collection strategies. With natural landscaping using native plants less maintenance of grounds is required and waste can be reduced by improvised recycling.



Figure2: Advantages of Green Buildings

3. GREEN INVESTMENTS IN INDIAN REAL ESTATE

The demand forecasting of green buildings in the market, under stood the risks, analyzed the factors driving green buildings and government role as a leader, which provides us the logical data for encouraging the investments in real estate sector and there by provoking the builders and contractors to pull up their socks for the upcoming wave of green building investments in real estate sector.

4. FACTORS LIMITING GREEN BUILDING ADOPTION

Who Pays, Who Benefits, and When?

Currently the investor's share of green building ownership, excluding net-leased buildings and similar arrangements, amounts to under 20%. A key reason is the misalignment between owner costs and tenant benefits. Many of the benefits of green buildings, at least for now, seem to accrue to the user of the property; nor is it clear that tenants fully compensate landlords for the value of these benefits. Since government agencies and major corporations own a greater share of their facilities as compared to other types of tenants, these sectors have been better positioned to internalize the benefits from green buildings.

As the builders will be very enthusiastic with green movement after knowing the factors that drive for green buildings, they must also be aware of the basics of the limitation factors of green buildings for choosing the correct customers, technologies, location of the sites etc. to become successful without any pitfalls.

Table 2: Payback Period for Green Buildings

Building	Built-in Area (Sqft)	% increase in cost	Payback (yrs)
CII - Godrej GBC	20,000	20%	7 years
ITC Green Centre, Gurgaon	1,70,000	15%	6 years
Wipro, Gurgaon	1,75,000	8%	5 years
Grundfos Pumps, Chennai	40,000	6%	3 years

5. CONCLUSION

Conclusions from Developers

We have surveyed 19 developers from whom we got the information that, 60% of the developers says that The cost involved in designing and planning of green buildings when compared to conventional building is little bit higher because of lack of skilled labour and unavailability of required technology.

- If government provides tax benefits and subsidies like how Pune Municipal Corporation is giving 60% of them are ready to construct green buildings.
- They say that commercial & public buildings will be the first adapters to green building concept.
- Big companies will be more interested in constructing green building as it is an obvious marketing and for forming a branding for the building.

Conclusions from Contractors

50% out of 25 surveyed contractors 10% are not even aware of the green building movement, and the remaining 90% said that due to the lack of skilled labour and the upgraded technology the cost of constructing green buildings is higher. Also the awareness about the use of local materials was very low among the surveyed contractors. Almost all of them agreed that there should be more research work carried for materials and technology. 50 % of the contractors say that government should encourage green buildings by constructing public government buildings with green features and thereby creating awareness in the public.

Conclusions from Users

Here we have surveyed 50 people 10% were the users of green buildings who states that the employee productivity in green building is much better than any conventional building, and they say that the occupant comfort is very high. 20% were nonresidents of green buildings says that they are little highly economical to purchase green buildings.

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