

# Social Influence On Intention Towards Green Buildings In Madurai

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## ARTICLE INFO

## ABSTRACT

This study focuses on builders intention to engage in green building measures. Houses are an important aspect of human life. It's not just building its where we share love and spend quality time with our family members and colleagues if its workspace. People spend the majority of time in buildings. In addition to, buildings have a significant economic, environmental, and human health impact. This revelation has cleared the way for the construction of environmentally friendly structures. As a result, Green Buildings hold promise for the future in terms of addressing issues such as environmental pollution, global warming, and everyday issues such as water scarcity, disposal systems, high electricity prices, and health concerns. The primary objective of this study is to identify social influence to green building practices adoption and to investigate the influence of such social activities on green building practices adoption. A total of 105 participants were included in the study. SEM was applied to study the social influence on green building practices

**Keywords:** Green marketing, Success of green building, Social Influence and Builders' intention.

## Introduction

Green buildings have a social impact on the health and well-being of the building's residents. Employee absenteeism and productivity rates have decreased as a result, it design the aspects that promote sustainability. According to a study conducted after Lockheed Martin finished a green engineering and design centre in Sunnyvale, California, employee absenteeism rates in the green building reduced by 15% (U.S. Green Building Council 2003).

Another California study of 21,000 children's test scores found that students in classes with more natural light scored 20% higher on mathematics tests and 26% higher on reading tests than students in classrooms with less natural light. (Green Building Council of the United States, 2003).

Buildings contribute significantly to environmental degradation and pollution, therefore sustainable construction approaches have become worldwide phenomena in recent years. According to Wang et al. (2011), development activities in the building projects, which include high-end buildings aiming at raising human living standards, have resulted in excessive resource consumption and environmental damage. Green buildings beat traditional structures in terms of design, utility, comfort, and durability. A green building is one that is built with the environment in mind, with resource efficiency, water conservation, innovation, and indoor environmental quality as top priorities. According to Bohari et al. (2015), the future development of the United Kingdom is based on a clear vision of collaborating across all construction industry stakeholders.

## Critical success factors for green construction

Typically fall into three areas

- i. Technological factors
- ii. Administrative factors
- iii. Behavioural factors

### Technological factors

Different renewable energy sources used in buildings include : solar thermal power, solar PV, small scale wind turbine, geothermal heat pump. However, the use of renewable energy plays a key role in achieving zero electricity generation. The use of the solar desiccant cooling system helps to save as much as 60 percent of energy related costs.

### Administrative factors

Grouped considerations related to the management of green building projects in five classes. For human capital, technical advancement, support from designers and top management and collaboration between design consultants and construction teams. There are multiple management aspects of green buildings. Project level, Company level and Market level, etc., At project level unique project management skills are required for the management of green building. At the Organisation level, the introduction of the Environmental Management System (EMS) is helping to save 90% of energy usage, reduce 63% of C & D waste, reduce 70% of water use, reduce 20% of incidents and reduce 80% of quality complaints.

### Behavioural factors

Green building has been planned to increase performance. Another way to increase performance that have a lot of impact, but full attention is not paid to “green behaviour”- the way users operate the building. The buildings will lose about half of their productivity because people don't use them right way. Therefore, people need to be conscious of their green actions.

### Review of literature:

**Redhwan Mohammed Saleh et al (2019)** examined a research undertaken by 378 architects and contractor engineers. The PLS-SEM method was used to evaluate the collected data. Subjective norms and attitude influence the intention to use green building practices in a positive way. The study's findings highlighted the factors that can help to reduce the magnitude of non-green construction projects' negative environmental effects as well as how governmental sustainable support, green engagement, and environmental concern affect the implementation of green construction practices in Qatar using the extended TPB model.

**G. S. Vyas et al (2019)** integrated in this study found that decision makers give more emphasis on the environmental and social pillars of sustainability before considering features such as occupational health, safety, and comfort, climatic conditions, investment cost, operation and maintenance cost, and indoor air quality. If a construction stakeholder wants to earn more green points with limited resources, the following factors are essential: operation and maintenance costs, material recycling, low-impact building site procedures, locally available materials, and land pollution. The suggested approach has the potential to promote green building construction practices that have not be likely to result from traditional practices.

**Jaber Shurrab et al (2018)** examined the data obtained from 120 respondents in the construction industry and evaluated using exploratory factor analysis Amos software to examine the relationship between the components. To investigate fitness of the components and to measure the effect of green building factors, conformity factor analysis was done. The majority of respondents aware of green construction and working in the construction industry.

**Peidong Sang et al (2019)** investigated the theory of planned behaviour which was used to develop the research model (TPB). A survey was done with 355 customers in Shandong Province, China. Consumers' intention to purchase GH was significantly affected by perceived behavioural control as a direct influencing variable. The results suggest the consumer's impact on GH purchasing willingness in respect to internal psychological aspects, as well as the design and execution of relevant policies and plans for the government to give a frame of reference. **Shijing Yang et al (2019)** discussed on the theory of planned behaviour, this study examines the issue of developers' green procurement through the use of a questionnaire and the structural equation model. The developers' behaviour intention is positively influenced by their attitude, subjective norms, and perceived behavioural control. Developers have the responsibility of stimulating the growth of greenbuilding materials as the primary purchasers of building materials. The research on developers' green purchasing behaviour is helpful in earning a good reputation for developing and improving the building industry's sustainable growth.

**MSc. Nguyen Thanh Lan et al (2019)** attempted the enlarged Theory of Planned Behaviour (TPB) was used as theoretical framework for the study. The survey was done among the customers in Hanoi, Vietnam. EFA was used first, followed by Confirmatory Factor Analysis (CFA) for the measurement model of the latent variables. Subjective norm, health and environmental awareness, and media influence all have a significant positive effect on the purchase intention of green house consumers.

### Research Methodology

The researcher used a descriptive and quantitative approach to undertake the work. Data was gathered from 105 building designers in the Tamilnadu city of Madurai. The snowball sampling technique was applied. Social influence Cronbach's alpha value is 0.832. Cronbach's alpha values greater than or equal to 0.70. (Nunnally,

1970). SPSS and Amos 23.0 were used to analyse the collected data. The researchers used statistical tests such as Structural Equation Modelling (SEM).

**Objectives:**

- To know the green building practices available on social influence.
- To explore the effect of such social influence on intentions.

**Hypothesis:**

Social influence has a positive impact on intention to accept green building practices

	GFI	AGFI	CFI	CMIN/DF	RMR	RMSEA
Achieve	0.941	0.901	0.907	4.483	0.043	0.072
Recommended	>0.9	>0.9	>0.9	<5	<0.08	<0.08

**Model fit**

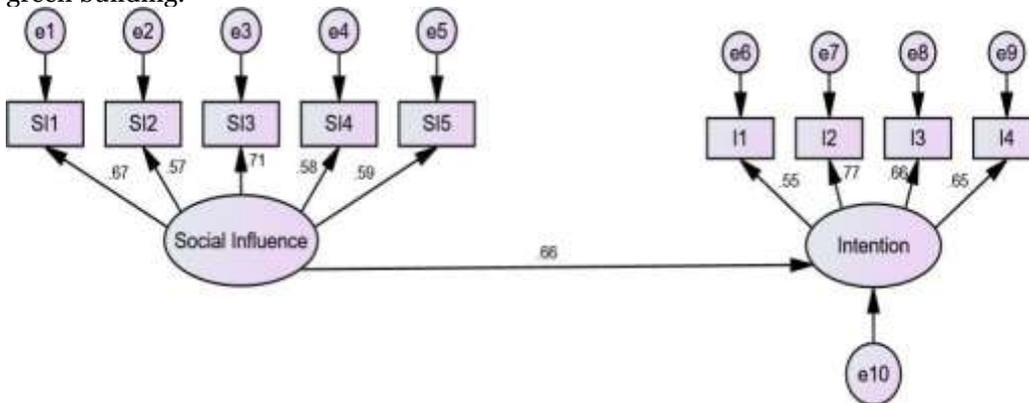
The result of the measurement model revealed a good fit to the data (CMIN/DF(Chi-square fit statistics/degree of freedom) = 4.483, Root mean square error of approximation (RMSEA) = 0.072, Goodness of fit index (GFI) = 0.941, Comparative fit index (CFI) =0.907, Adjusted goodness of fit index (AGFI) = 0.901, and Root mean square residual (RMR) = 0.043.

**H :** Social influence has an impact on the intention towards green building practices of respondents.

Regression Weights						
Relationship		Estimate	Standard Error (S.E)	Critical Ratio (C.R)	P value	Result
H	Intention <--- Social influence	0.457	0.062	7.371	***	Supported

\*\*\* P > 0.05 (Significant)

The table shows that impact of social influence on intention towards green building practices by 45.7%. The test result revealed that the hypothesis is statistically supported (p = \*\*\*). The P-value for the social influence of the respondents is less than 0.05. It is to reject the null hypothesis at a 5% level of significance. Hence, the alternative hypothesis accepted. The table reveals that social influence has an influence on intention towards green building.



**Path analysis**

From the above pathway, when respondents' social influence increases by one unit, their intention towards green building practices will increase by 0.66 units.

**Conclusion:**

Environmental Consciousness leading an individual towards ecologically based living has several other determinants. The main aim of this research was to study the effect of green motive components on intention towards green practices towards builders' in Madurai. Builders' would have the influence to increase green building practices the consumers for becoming environmentally responsive. During the building industry's sustainability growth cycle in recent years, the development of green design got more attention from all around the world. Many issues and barriers still arise in the implementation and promotion of green design and the use of green building materials. Social influences are vital in a collective culture like ours. A member of an environmental club or an organisation that promotes a cause can enhance a client's

intentions. People can be active in green in order to attract that many people as possible and increase awareness. Builders and marketers can work to make such client groups and residences more active.

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