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# Assessment of Factor Affecting the Customization Process In Real Estate Sector

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**Abstract:** *In construction industry, real estate sector in northern India (specially Lucknow Uttar Pradesh) has been on peak point recently and maximizing the productivity of project delivery and provide a Customization has been a attraction point around the circle of real estate sector. Customization is defined as a customer integrated process for providing a product design, manufacturing, marketing and delivery service, and this one has become a main competitive factor. In real estate industry construction and customization of housing being a remarkable example of providing a amenity has various key concern which a interpoint factors on together. Any gap break between the time of construction of housing destroys and customer satisfaction get affected. The strange and genuine problem of connection communication gap has been observed between the customer and developer, which causes many obstacles or hurdle at the time of delivery of project. The paper presents customization of housing in the field of real estate sector at the time of delivery on the basis of customer needs after the positive agreement of developer and find a way to obstacles or hurdles of communication gap between the customer and developer.*

**Keywords:** *Real Estate Sector; Customization; Customer Satisfaction; Project Delivery*

## I. INTRODUCTION

Customization is not about only sales, its about building a relationship between customer and developer. Customization is the method to increase productivity, sale and customer satisfaction and it plays a key role in real estate sector and we know that real estate sector is largest globally recognized sector. Generally, there are three main categories of real estate: residential; commercial; industrial. The aim of this paper is focusing on the residential category like, row houses, apartment, villa etc. In this type of sectors customers wants to the construction of the house and material or component of the house like the brands of sanitary items, tiles, switches, ceiling and furniture type according to their needs and requirement within budget. But now, in the present scenario generally needs or requirement are not fulfilled may be because of some regions and in the result owner have to do some redesign the work space and looks. Due to this additional work cost will be increased automatically and productivity will be decreased. And the main issue is that there is some gap or we can say communication gap between the developer and customer. Because of this communication gap developer does not provide customization surely to the customer with or without extra cost.

So after all the discussion in above paragraph related to the customization in real estate sector in which customer should get requirements by the developer. For the solution of this issue or barrier we will have to create a platform or some process for the customer from which we can give the option of customization at the time of delivery according to the customer needs and requirements.

## II. LITERATURE REVIEW

There are some of research paper are published related to mass customization and after study of some mass customization research work done, articles and case studies relate to real estate, in first paper two main strategies 1) Collaborative customization approach and 2) Pre sell housing, was used for providing the customization in construction industry. In another paper was providing mass customization in housing building industry. Third paper was all about the application of mass customization in the field of construction industry. And in paper was done customization in building design field.

## III.METHODOLOGY

### A. Hypothesis

- 1) *Null Hypothesis:* In null hypothesis, consideration of hypothesis in which amenity, comfort and product will provided by the developer on the demand or need of requirements by the customer at extra cost.
- 2) *Alternate Hypothesis:* In alternate hypothesis, consideration of hypothesis in which amenity, comfort and product will not be provided by the developer on the demand or need of requirements by the customer at no extra cost.

**B. Primary Data Collection**

For achieving the aims and objective and fulfilled the research gap, this research was conducted in local region Lucknow City. Lucknow is the largest city in northern India and capital of the state of Uttar Pradesh. Since the Lucknow has been a multicultural city that flourished as North Indian culture, Artistic hub and the seat power of Nawabs in the 18th and 19th centuries. It is also connected with the nearby cities or district like Barabanki, Unnao, Hardoi, Kanpur, Raebareli, Sitapur etc. Because of all the reasons there are many different type of cultures people lived here. And they also prefer a different type of house design according to the culture and trend both. So for the people of this region type locality we are giving option the customization in housing at the time of delivery according to the customer needs and requirement with the intention of customization.

For the data Primary data collection, we have prepared the questionnaire form on survey monkey Application and distribute the form link to the customers and developers both .in the form we are considering some factors in the some of building component like Bedroom, Living room, Kitchen and Bathroom. And some of this building component we are providing the customization option in some items like Paint, Tiles, switches and socket, ceiling type etc. and we made a option in this way like the brands of the item for paints and all in the increasing order with Price and Quality both.

The data was collected from 87people, in which there are 60 customer and 27 developers. Developers are filled the form according to their understanding in which they can provide the customization for the item without or with cost and Customers are filled the questionnaire form according to their choice, needs and requirement. Choices in the questionnaires' form can be with or without cost.

**C. Secondary Data Collection**

The secondary data was collected from the research papers, site visit, web search etc. Most of the research paper has mentioned the customization option before the construction in which they discussed the plan for the construction to the customer at before the stage of construction. From which the customer and developer can interact with each other and complete the construction process according to the needs and requirement.

I got to know from them after doing the site visit and interaction with some developers of Lucknow, most of the company are not providing the customization option in Lucknow and some companies are providing customization option but very limited.

**D. Data Analysis Through MS Excel**

After doing the data collection on survey monkey, now import the data in MS Excel 2013 and prepare the 5 Linkert scale of multiple-choice questions. Then complete the reliability test: Cronbach's Alpha for measure of internal consistency and compare with the interpretation table and hence our Alpha value is 0.87. our range falling under 0.80-0.89 so from the interpretation table we can say our internal consistency is good.

Reliability Test: Cronbach's Alpha

**RELIABILITY TEST: Cronbach's Alpha**

**Measure of Internal Consistency**

Cronbach's alpha tests to see if **multiple-question Likert scale** surveys are reliable. It will tell you if the test you have designed is accurately measuring the variable of interest.

Cronbach's Alpha	INTERPRETATION														
$\alpha = \frac{K}{K - 1} \left[ 1 - \frac{\sum s^2_y}{s^2_x} \right]$ <p>Where</p> <ul style="list-style-type: none"> <li><math>K</math> is the number of test item</li> <li><math>\sum s^2_y</math> is sum of the item variance</li> <li><math>s^2_x</math> is the variance of total score</li> </ul>	<p>Interpreting ALPHA for dichotomous or Likert scale question.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>CRONBACH'S <math>\alpha</math></th> <th>INTERNAL CONSISTENCY</th> </tr> </thead> <tbody> <tr> <td>0.90 and above</td> <td>Excellent</td> </tr> <tr> <td>0.80 - 0.89</td> <td>Good</td> </tr> <tr> <td>0.70 - 0.79</td> <td>Acceptable</td> </tr> <tr> <td>0.60 - 0.69</td> <td>Questionable</td> </tr> <tr> <td>0.50 - 0.59</td> <td>Poor</td> </tr> <tr> <td>below 0.50</td> <td>Unacceptable</td> </tr> </tbody> </table>	CRONBACH'S $\alpha$	INTERNAL CONSISTENCY	0.90 and above	Excellent	0.80 - 0.89	Good	0.70 - 0.79	Acceptable	0.60 - 0.69	Questionable	0.50 - 0.59	Poor	below 0.50	Unacceptable
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<https://www.statisticshowto.com/cronbachs-alpha-spes/>

Variables	Description	Values	Internal Consistency
K	No. of items	7	GOOD
$\sum s^2_y$	Sum of the item variance	3.50	
$s^2_x$	Variance of total score	13.55	
$\alpha$	Cronbach's alpha	0.87	



#### IV. CONCLUSION

From research work done it has been observed that most of the developer are agree to give customization at without cost but people are not aware for this. And people are also not having an option for selecting the preferences at the time of delivery. From work done it has been observed that If customer will Agree then have to pay the extra cost of Supreme cost and quality amenities that the developer provides. A suggestion has been developed with the study i.e., if the customer will have a option or freedom for customization according to their needs at the time of delivery, then customer will agree for customization. If above statement is happen then the customer satisfaction will increase, the extra cost will decrease, Delivery and sales will also be increases.

#### V. FUTURE RECOMMENDATION

From the whole study, recommend for future work in our local region that if use of this type of survey form for customization at the finishing time for first meet then no need to do individual proper interaction between both of them on regular basis and definitely the project will complete at desirable time.

#### REFERENCES

- [1] Piroozfar AE, Larsen OP, Altan H. Customization in building design and construction: A contribution to sustainability. Handb Res Mass Cust Pers. Published online 2009:911-939. doi:10.1142/9789814280280\_0046
- [2] Jensen K, Nielsen K, Brunoe T, et al. Application of Mass Customization in the Construction Industry To cite this version : HAL Id : hal-01417455 Application of Mass Customization in the Construction Industry. Published online 2016.
- [3] Folaranmi AO. Customization in Housing : a Process for Developing User Oriented Houses in Megacities. (2010):1-17.
- [4] Raposo M, Eloy S. Tools to enable inhabitants to co-design their house. 2019;1:67-76.
- [5] Parekh VJ, Shah JA, Rathod HA, Desai KA. Mass Customization in Real Estate Industry. 2014;2(09):501-504.
- [6] Larsen MSS, Lindhard SM, Brunoe TD, Nielsen K, Larsen JK. Mass Customization in the House Building Industry: Literature Review and Research Directions. Front Built Environ. 2019;5(October):1-12. doi:10.3389/fbuil.2019.00115



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