



Study of Factors Influencing Residential Real Estate Development Process

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Abstract:

Real estate development is very large and risky field of work. The process of real estate development is very complex process and also involves many subfields such as residential commercial etc. The real estate developer is the key person in the development process. There are many factors which are related to risk and decision making are influence the development process .the real estate industry is very large so the study is carried out only considering the residential real estate in Amravati region. The research paper presents the review these factors and their influence on the development process. For the research questionnaire survey is carried out to the 33 residential real estate developers and the results are presented with the help of relative importance index method.

Keywords: Real Estate, factors influencing real estate, real estate development, risk and decision making factors.

I. INTRODUCTION

The residential real estate development process is an entrepreneurial activity and there are four core principals cost, time, quality and safety, which are important for the most of the developers. The process involves various series of factors which area related to risk and decision making. These factors are directly affects those principals and the development process. Maintaining the balance between these factors is important for the most of the developers. While project risk and some factors related to decision making are something that may threaten the success of any real estate project throughout the development process. As the ability to mitigate these risks also diminishes over the lifecycle, it is critically important to implement project planning and monitoring process at the outset. The risk that real estate project will face throughout its development life cycle will vary in nature and continuously threaten to throw of the balance between the four principles, cost, time, quality and safety.

II. FACTORS AFFECTING THE REAL ESTATE DEVELOPMENT PROCESS

The Stages in the real estate development lifecycle are broadly indentified and these are pre-construction, construction and post-construction. In these particular Stages of real estate development there are key factors related to risk and decision making in every stage which influence the project development and ultimately return on the investment of developer. The factors identified are as follows,

Pre Construction Stage

The pre construction Stage involves numerous activities. The activities include feasibility study, market analysis, and site selection site acquisition, planning the overall project, estimating, and various legal agreements. In this initial stage of real estate development various risk factors that affect the process of development. The factors are as follows,

Feasibility Study

The feasibility study of some kind to ensure that developers do not make a mistake in choosing to the particular land parcel to develop. It is not enough for a developer to complete the steps to the process of development to achieve success. Developer must have some kind of feeling, whether it be instinct or educated, that the development will be successful. A developer may do several feasibility studies varying such things as site, product, and price to find what will be the most profitable project.

Risk of Planning and Design Errors

The second part of risk in this phase of development is the risk of planning and design errors. These errors may be occurred into the process when there is inappropriate conversation between the designers, planners and developers. Another cause of this risk may be the changing the motto of the use of the land. This risk could be mitigate by proper planning, the proper coordination in between the planner, designer and developer.

Risk of Cost Forecasting

The third risk in this phase is the risk of cost forecasting. This risk is occurred by incorrect or inappropriate cost benchmarking. Another cause of this risk is discrepancies in estimating inflammatory impact on material pricing and cost implementing new technologies. For avoiding such risk, there should be use of inflationary trends for more accurate price forecast and review of cash flow and estimate through the dedicated technical team.

Legal and Judicial Risk

The legal and judicial risk includes the risk of oversight of specific byelaw requirement resulting in delay in approvals due to exclusion of relevant byelaws and issues which limits the design and project requirements. The risk that government

regulations prevent the use of the land as the developer intended. This could be by not giving the developer a desired zoning change or the placement of environmental controls on a development already in progress.

Political Interference

The risk of political interference involves the risk of interference of the integrated stakeholders associated with real estate development project. The main risks involves are as follows.

- The local community is frustrated in not being able to influence the planning and implementation of the new project;
- Information provided to external stakeholders may not be correct, timely and appropriate;
- Incorrect identification of the interests of external stakeholders;
- Ineffective response to the actions, both legal and substantive, in place against the project by external stakeholders to protect their interests.
- The project itself is ineffective when it comes to fitting with the local context.

Environmental Legislation

This involves the risk of changes in environmental legislation such as land pollution, protected flora and fauna, Archaeological excavation, conservation of monuments and historic buildings. This factor should be carefully checked before the purchasing of land or planning and designing of the project.

Site Selection

The factor of site selection is very important in the process of real estate development process. The physical characteristic of the land that is purchased is not as expected. Poor soil conditions discovered after land acquisition would be a good example of this type of risk. Also the location of site affects the project sells and rent. The project site should be located in the area where the various services will be available and nearer for the end users of the project.

Construction Stage

This is an important part of the real estate development process. The stage is associated with the all activities in the construction stage. Also the various factors which directly affect the construction stage are discussed below.

Financial Drawdown

Finance is the key element in the real estate development process; the whole process is directly or indirectly depends on the finance. This risk of financial drawdown might occur due to the discrepancies in adjustment of milestone and fund release schedule altering the time of fund release.

Quantity Variation

There is a significant possibility of variation in cost of construction due increased quantity of execution to suit the site requirement. There may be many reasons could be responsible for this such as at the start of construction,

specially pertaining to substructure construction due to geo technical reasons.

Quality Defects

There may be possibility of quality defects in the executed construction for the specific project due to poor workmanship on site or the use of substandard materials. This risk can be minimized by the regular quality audits highlighting the areas of improvement and rectifying the defects before commencement of operations.

Safety

These risks are on the construction site due to the hazardous working conditions, accidents on the site which may lead to work stoppage and creates excessive load on the project finance budget.

Delay in Construction

The delay in the construction directly affects the cost of the project, there may be many reasons to that such as, incorrect sequence of construction activities and construction logistics issue.

Post –Construction Stage

The variations in the real estate market are hardly controllable. It is only possible make predictions about the market, but because of the inevitable time-lag between the conception of the project and its completion, the developer is especially vulnerable to broadly based, local, social, economic and financial changes. This is where time becomes one of the problems with which a developer must contend. Changes in consumer preference, changes in economic outlook, and changes in interest rates are difficult to forecast over long periods of time and once a development project has been started it is difficult to change. The real estate market causes various effects on the variables determining the revenues of the project:

- Decrease in sale or rent price.
- Longer time to sale or rent the project.
- Competitiveness in the real estate market.
- Delay in overall development process.
- Various government policies that affect the sell or rent of project.

Perhaps the best strategy to mitigate the risk of changing market conditions is to only develop enough land to meet the short term market demand. However, the danger of this is that if the market picks up he will be slow to respond with new land to build housing on due to the time lag in its development. By knowing and understanding the market in which the developer is operating, he will be best able to decide when to slow down his pace of development.

III. OVERALL FORMAT SPECIFICATIONS

Analysis

Survey Construction

After reviewing the available literature on property development 17 factors which are property development

process were identified throughout the stages in the property development process namely:

- Preconstruction stage: 6 risk factors
- Construction stage: 6 risk factors
- Post construction stage: 5 risk factors

The questionnaire is prepared based on the factors identified which are influencing the development process of real estate. The respondents were the reputed residential real estate developers in the Amravati. The opinions of the total 33 respondents were noted under the questionnaire survey. In the questionnaire survey the respondents were asked to check the most important risks and indicate rankings for the factors which are highly prioritized. Respondents were asked to rate each property development factor on a 4-point scale ranging from 1 to 4. The scale is as follows, 1= Insignificant, 2=Minor, 3=Moderate, 4= Major. After the getting data in terms of all the rankings the multitude of each factor in calculated in terms if parentage and the relative importance of the all the factors is calculated by relative importance index method, the formula is given as,

$$\text{Relative Importance Index} = \frac{\sum (w_1+w_2+\dots+w_n)}{A \times N}$$

Where,

- w= Degree of Rankings
- A=Maximum Degree of Ranking
- N= Total no. of Respondents

Analysis of Responses

The respondents were asked to firstly their opinion about the risk is affecting the process and then the responses area noted about each factor. After the questionnaire survey of the 33 developers working in the residential real estate industry in Amravati, the responses obtained in the form of opinions and the rankings they are represented below in tabular form. The responses are evaluated on percentage basis and with help of relative important index method. The tabular representations of the responses are as follows,

Table.1. The Total Number Of Respondents Responded To The Respective Factors

Sr. No.	Name of factors	No. of Respondents
1.	Feasibility study	33
2.	Risk of error in planning	31
3.	Risk in cost forecasting	32
4.	Legal or judicial and government's policies	33
5.	Political interference	27
6.	Site selection	33
7.	Financial drawdown	33
8.	Quantity variation	20
9.	Quality defects	33
10.	Safety Issues	33
11.	Delay in construction process	33
12.	Environmental legislation	22
13.	Marketing risks in the city's real estate industry	33
14.	Longer time selling or renting the project	33
15.	Competitiveness	33
16.	Risk of change in selling or renting price of project	33

The above table I shows the total number of respondents responded to the respective factors. From the table it can be seen that except risk of error in planning, risk of cost forecasting, political interference, quantity variation and environmental legislation factors the respondents responded to all of them.

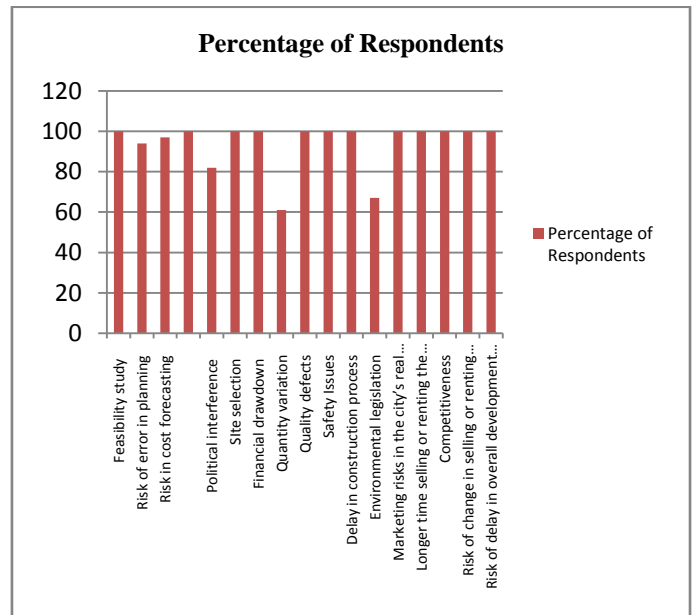


Figure.1. Graph Between The Factors Influencing Development Process And No Of Respondents

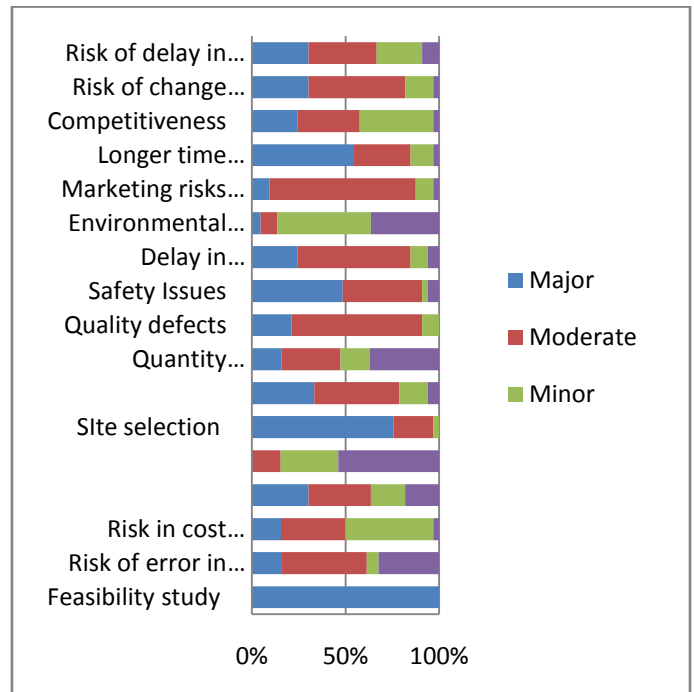


Figure.2. Stacked Bar Chart Representing The Relative Percentage For Each Factor

The figure II shows the stacked bar chart representing the relative percentage for each factor responded by the respondents in the specific category of the rankings.

Results

With the help of relative important index formula the relative important index for each factor influencing the development

process is found out which is represented in the following table.

$$RII = \frac{\sum (w_1 + w_2 + \dots + w_n)}{A \times N}$$

Table.2. Relative Important Index for the Respective Factors

Sr. No.	Name of factors	RII
1.	Feasibility study	1.000
2.	Risk of error in planning	0.613
3.	Risk in cost forecasting	0.656
4.	Legal or judicial and government's policies	0.689
5.	Political interference	0.389
6.	Site selection	0.932
7.	Financial drawdown	0.765
8.	Quantity variation	0.538
9.	Quality defects	0.780
10.	Safety Issues	0.833
11.	Delay in construction process	0.758
12.	Environmental legislation	0.455
13.	Marketing risks in the city's real estate industry	0.712
14.	Longer time selling or renting the project	0.841
15.	Competitiveness	0.697
16.	Risk of change in selling or renting price of project	0.773
17.	Risk of delay in overall development process	0.720

Table.3. Average Relative Important Index for The Each Stage Of Development

Name of Factor	RII	Stages	Avg	Rank
Feasibility study	1.000	Pre-Construction	0.71	2
Risk of error in planning	0.613			
Risk in cost forecasting	0.656			
Legal or judicial and government's policies	0.689			
Political interference	0.389			
Site selection	0.932			
Financial drawdown	0.765	Construction	0.68	3
Quantity variation	0.538			
Quality defects	0.780			
Safety Issues	0.833			
Delay in construction process	0.758			
Environmental legislation	0.455	Post-Construction	0.74	1
Marketing risks in the city's real estate industry	0.712			
Longer time selling or renting the project	0.841			
Competitiveness	0.697			
Risk of change in selling or renting price of project	0.773			
Risk of delay in overall development process	0.720			

IV. CONCLUSION

The real estate development process combination of various activities such as, buying, planning, designing, construction and selling. There are many factors influencing this overall development process. These factors affect the cost, time, quality and safety. For the most of the developers these elements are very important. So the above research is conducted to study the overall development in the residential real estate industry and understanding the influencing factors to the development process. There are some factors related to risk and decision making process are identified which are influencing the project. Based on the factors the offline questionnaire survey is carried out towards the residential real estate developers in Amravati. From the above study it can be concluded that, there are two most predominant factors influencing the project of the real estate developers in Amravati region that are feasibility study and site selection or the location. Also the main factors voted by maximum developers related to risk which are faced by them are,

- Longer time to sell or rent their project.
- Safety related issues.
- Quality defects
- Changes in selling price
- Financial drawdown
- Delay in construction

And with the observation of average importance index of each stage it can be concluded that,

- The post construction stage which is mainly includes property management i.e. selling or renting is most significant and more influenced by the risk factors.
- Whereas the first stage of property development which contains factors related to the decision making is relatively lesser influenced.
- The construction stage is found to be least significant and lesser influenced by the risk factors for the developer among all three stages.

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