

# Impact on Real-Estate Developers Pursuant to Implementation of Real Estate Regulatory Act [RERA] 2016

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**Abstract:** The Real-Estate sector is one of the most universally acknowledged sectors. In India, Real-Estate is the second highest employer after agriculture and is bound to grow at 30% rate over the next 10 years. With the growing market of the Real-Estate sector, there is also huge amount of defaulting in the Real-Estate sector and within the Real-Estate sector, With such large investments into land and another project, the developers start losing focus on his ongoing projects and does not manage the project wisely which leads to delay of these said projects with RERA coming into force all the calculations of Real-Estate developers are changed. From now on the Real-Estate developers have to precisely focus on a particular project with RERA coming into force all the calculations of Real-Estate developers are changed from now on the Real-Estate developers have to precisely focus on a particular project.

**Keywords:** Real Estate, RERA, Developers, Impact, Relative Importance Index, Spearman Rank Correlation

## I. INTRODUCTION

Before RERA came into force, almost all Real-Estate developers used to invest one projects capital into another project to increase their turnover by risking the lifecycle of ongoing projects. Now, after implementation of RERA developers will have to ensure compliance to avoid punishments. So, with RERA coming into force all the calculations of Real-Estate developers are changed. From now on the Real-Estate developers have to precisely focus on a particular project and they will have to maintain a distinct bank account for each different project. This will lead to huge impact on cashflow cycle of all Real-Estate developers. As the act has just came into force, this is the best time to take views and opinion of different stakeholders of Real-Estate industry and to research about the impact of RERA on Real-Estate project. Below is table 1 which explains the evolution of RERA in India.

Table 1: Evolution of RERA [18]

Year	Developments
2013	UPA Government introduced the Real Estate Regulatory and Authority Bill
09/09/2013	The Bill was referred to the Standing Committee on Urban Development for Examination
08/10/2013	The Standing Committee heard the briefing of the Ministry of Housing and Urban Poverty Alleviation
06/11/2013 to 12/11/2013	The Standing Committee heard the views of some of the NGOs working in the field of Real Estate
12/02/2014	The Standing Committee prepared its Report after Public opinion
13/02/2014	The Standing Committee of Urban Development submitted its Report
07/04/2015	The Union Cabinet under the Chairmanship of Prime Minister, Mr. Narendra Modi gave approval to amendments in the Bill
06/05/2015	The Bill was introduced in the Rajya Sabha and was Referred to the Standing Committee of 21 members of Rajya Sabha
03/07/2015	The selected Committee held 17 settings to examine the Bill
30/07/2015	The Committee submitted its Report to the Rajya Sabha
10/12/2015	The Cabinet accepted 20 odd major Amendments to the Bills
10/03/2015	Rajya Sabha Passed the Bill
15/03/2016	The Lok Sabha passed the Bill and received assent of the President
01/05/2016	The Real Estate Regulatory and Development Act (RERA) came into force.

This paper presents the literature review on the impact and effect of RERA after its implementation in India on Real-Estate sector. Further through the questionnaire survey, this paper presents current scenario and perception of various construction professionals about implementation of RERA and its impact on the real estate developers particularly in Ahmedabad District. (Figure 1).



Figure 1: Physical Location of Ahmedabad in India map (Scope of work)

## II. LITERATURE REVIEW

Following literature review is about the impact and effect of RERA after its implementation in India on Real-Estate sector.

A. Joshi et al. (2016) suggested that in India, a standardized real estate regulation act is necessary to have uniform standards throughout the country and to bring transparency in transactions. [1] the act is a positive change in terms of increasing transparency in the real-estate sector, increasing accountability of the promoters and developers and establishing efficient forums for grievance redress. [16] S. Patil et al. (2017). According to V. Patil (2017) The act only covers new projects and the projects where completion certificate is not issued the existing problems. [24] M. Khandar et al. (2018) researched on immediate impact of RERA on construction industry and concluded that though the act is very new, it is accepted very easily by the seller and buyers. A very positive impact is expected in the future as the act becomes more intact. [10] A. Kadam et al. (2018) studied that this act is beneficial for the builders with a high budget and middle-class buyers. Corruption between the agents and the builders could be stopped to a greater extent. [2] S. Merchant et al. (2018) carried out case study on analysis of dilutions of the RERA 2016 by state governments and found out that though powers of the states under RERA are limited, yet the states diluted the provisions while notifying the rules that will defeat the purpose of law and also suggested that central government has to come out with clear directives to achieve the objective behind the law. [15] T. Joy et al. (2018) studied that the concept of RERA is excellent if implemented as it is but the diversion and modification of rules by the states from the central act will not fulfil the purpose of RERA. [21] The passing of real estate regulatory act 2016 or RERA, the benami transactions act and the move of demonetization ensured that the sector has lost much of its historic touch and became more transparent according to S. Rodgi (2019) [18] S. Salunkhe (2019) proposed that RERA is the best thing to have happened to homebuyers in recent years, and also to buyers of properties of various types and with such a law in place, buyers can invest in properties fully secured from many risks. [19] N. Karnawat et al. (2019) found out after study on impact of RERA and GST on construction sector that due to implementation of RERA, the major victim of the real estate market is the developer/ promoter now and the status of Indian real estate is expected to rise. Indian real estate is improving towards global standards and practices. [11] S. Shinde et al. (2019) stated that Expectation from the Maha-RERA act 2016 is that it would create a sophisticated market for the real estate by creating transparency between seller and buyer. [20]

## III. RESEARCH METHODOLOGY

The study aims to check impact on real estate developers and construction industry after implementation of RERA 2016 and rank their effect on industry after gathering data through survey. Different literatures related to this research are reviewed, and the following research methodology is implemented which is shown in figure 2.

The research instrument used in this research is questionnaire which was designed in such a way that it ensures to address the objectives of the study categorized by different parts. The first part of the questionnaire is targeted to gather information about the respondents and firms' profile. The second part contains the various aspects of RERA affecting real estate developers which is to be rated by the respondents. The factors which were identified from previous research will be used as a basis for preparing a questionnaire to investigate its influence on the construction industry after implementation of RERA. Total 32 factors were identified under 2 main groups. A 5-point Likert scale was used for measuring of the level of impact and agreement of factors. These questionnaires were distributed to Project Managers, Contractors and Engineers of a construction firm in Ahmadabad city.

The data collected from the questionnaire survey was analyzed using Microsoft Excel. The perspective of the respondent for factors impacting real estate developers after implementation of RERA has been analyzed to rank the factors based on their Relative Important Index and Spearman Rank Correlation. Higher the value of index, more important is the factor impacting real estate developers in construction industry.

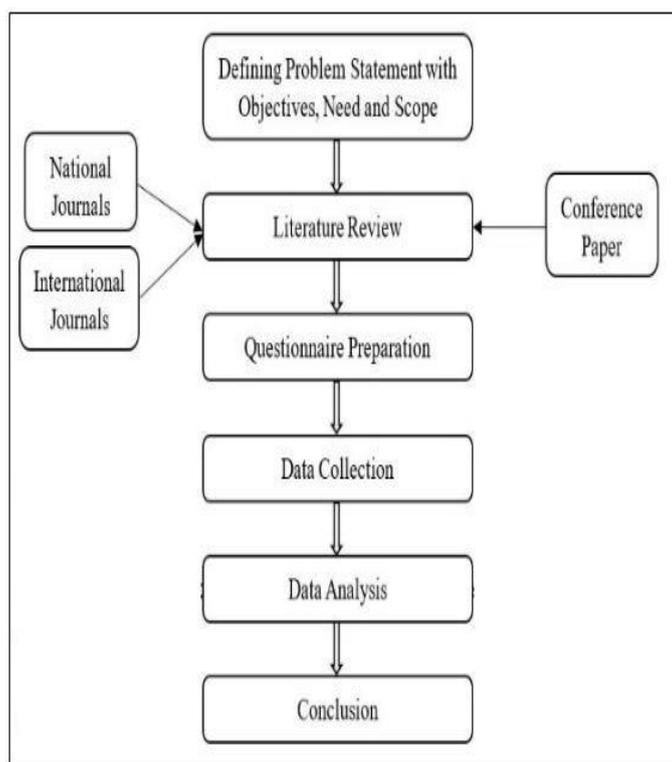


Figure 2: Methodology flow diagram

#### IV. DATA ANALYSIS AND RESULT

Project Managers, Contractors and Engineers of Ahmadabad city registered with GujRERA authority or working with firm registered with same authority were targeted for the survey. Normally response rate is very low so the questionnaire was distributed to the various stakeholders more than the sample size requirement. A total of 100 questionnaires were distributed to different stakeholders in Ahmadabad city. This study received 70 responses.

##### 4.1 Relative Important Index (RII)

The primary data collected from the questionnaire survey were analyzed using Relative Importance Index method for ranking each factor from the perspective of project managers, contractors and engineers. A Five-point Likert scale was used for rating of the level of impact and agreement of factors, where 5 means critical impact and 1 means no impact and for agreement 5 means strongly agree and 1 means strongly disagree. This was transformed to important indices for each factor as follows:

$$RII = \frac{\sum W}{A \times N} \quad (1)$$

Where, W is the weighting given to each factor by the respondents (ranging from 1 to 5), A is the highest weight (i.e., 5 in this case), and N is the total number of respondents. Higher the value of RII, more important was the factor affecting real estate developers.

Table 2: Top most factor of RERA impacting real estate developers by RII method

Sr. No	Factors by Level of Impact	RII	Rank
2	Impact of RERA on Financial Cycle	0.8600	1
8	Developer will be allowed to withdraw funds from separate account as per percentage completion of project. Scale its Impact on Project.	0.8343	2
10	Booking amount taken from the customer should not exceed 10% of total cost. Scale its Impact on Project.	0.8343	3
6	Developer will have to keep 70% of funds from client &/or banks for a project in this separate bank account. Impact of it on Developer's Turnover?	0.8286	4
7	Developer will have to take certification from Chartered Accountant, Engineer & Architect to use funds from separate account. Scale its Impact on Project.	0.8143	5
9	Developer will have to get the separate account audited by Chartered Accountant within six months after end of every financial cycle. Scale its Impact on Project.	0.8086	6
1	Awareness of RERA	0.7971	7
5	Impact of Opening A Separate Bank Account for Project	0.7943	8
3	Impact of Registration Process of RERA on Project	0.7686	9
4	Impact of RERA Registration Fees, Rs. 10-20/Sq.mt. of Land Area on Project	0.7286	10

Table 2.1: Top most factor of RERA impacting real estate developers by RII method

Sr. No	Factors by Level of Agreement	RII	Rank
2	The Developer will have to pay Full Compensation to the Customers with Interest Rate of 2% of SBI or Mutual Agreement, from Missing Date of Possession to Actual Date of Possession. This will greatly Impact the Project if the Developer Misses the Date of Possession.	0.8686	1
8	Before RERA, Developers used to Show a Greater Number of Booking than Actual as a Marketing Strategy to attract customers.	0.8657	2
10	The Developer will have to Pay a Penalty of 10% of total Project Cost for any kind of non- compliance with Rules of RERA Authority. This will Greatly Impact the Financial Terms of Project.	0.8629	3
6	Amount that is withdrawn from the separate bank account should be in proportion with the works executed & shall be certified by Chartered Accountant, Engineer and Architect. This process will always lock the funds for development for any other use than specified project.	0.8400	4
7	Before RERA Real-Estate Developers used to divert funds received from various projects to start other such multiple projects at the same time.	0.8314	5
9	Disclosing the Carpet Area instead of Super Built up Area will Impact the Sales of the Project.	0.8140	6
1	Now, Developers will have to Disclose Number & Types of Apartment Booked for a Project on Website. Which can Impact Sales of the Project.	0.7914	7
5	Developers will have to provide Construction Schedule for a project & will have to strictly follow the Schedule. To follow this Schedule, Efficient Working Management is Required.	0.7600	8
3	Developers cannot market their Project until Project is Registered (Which takes longer duration). This will directly Impact Sales of the Project & It will directly Impact Project Negatively.	0.7429	9
4	As 70% of funds that are collected from customers and banks will result in timely completion of projects.	0.7286	10

#### 4.2 Spearman Rank Correlation

Spearman Rank Correlation is done for identification of the way of occurrence of factors based on the response given from various stakeholders. The Spearman correlation coefficient,  $r_s$ , can take values from +1 to -1. A  $r_s$  of +1 indicates a perfect association of ranks, a  $r_s$  of zero indicates no association between ranks and a  $r_s$  of -1 indicates a perfect negative association of ranks. The closer  $r_s$  is to zero, the weaker the association between the ranks. Spearman rank correlation is calculated using formula 2.

$$r_s = 1 - \frac{6 \sum_{i=1}^n d_i^2}{n(n^2-1)} \quad (2)$$

Where,

$r_s$  = Spearman's rank correlation coefficient

$\sum Di^2$  = Sum of squared differences between paired value of individual factor

$n$  = Total number of factors (10 and 22 factors respectively in this study)

As there are 3 different designated persons, it makes 3 different pairs as shown in Table 3 with the value of  $r_s$ .

Table 3: Spearman Rank Correlation Value Between Stakeholders in Decreasing Order for factors by Level of Impact

Sr. No.	Stakeholder	Value of $r_s$	Stakeholder
1	Project Manager	0.76969697	Engineer
2	Project Manager	0.296969697	Contractor
3	Engineer	0.284848485	Contractor

As shown in table 3, highest value of spearman rank correlation is between Project Manager and Engineer that means level of thinking and giving answer to particular issues is very similar. There is a highest level of agreement between Project Manager and Engineer. likewise, lowest value of spearman rank correlation is between Engineer and Contractor it means that there is lowest level of agreement between Engineer and Contractor.

Table 3.1: Spearman Rank Correlation Value Between Stakeholders in Decreasing Order for factors by Level of Agreement

Sr. No.	Stakeholder	Value of $r_s$	Stakeholder
1	Project Manager	0.896103896	Engineer
2	Project Manager	0.85770751	Contractor
3	Engineer	0.773009599	Contractor

As shown in table 3.1, highest value of spearman rank correlation is between Project Manager and Engineer that means level of thinking and giving answer to particular issues is very similar. There is a highest level of agreement between Project Manager and Engineer. likewise, lowest value of spearman rank correlation is between Engineer and Contractor it means that there is lowest level of agreement between Engineer and Contractor.

## V. CONCLUSION

Based on the results of this study some conclusions are to be found as discussed below,

- During registration, information about clearances, annual report, balance sheet, cash flow statement and auditor's report need to be provided.
- The selling of the project will not be done on the super built-up area but on the carpet area, if there is a delay in possession the developers have to give both interest and fines.
- Timely completion of project is a must, failing which buyers will have to be compensated with an interest rate of State Bank of India's highest marginal cost of lending rate plus two per cent, within 45 days of it becoming due.
- The promoter has to maintain a 'separate account' for every project undertaken where in 70 percent of the funds received from the buyers shall be deposited.
- Such funds can only be used for the intention of construction and land buying.
- If the developer sells a project that is not registered then the project penalty will be found on the developer which will be 5% of total project's cost.
- One more provision in this act is the regulation of middlemen, which is a blessing in disguise. This registration & regulation of the middlemen will help in eliminating fraudulent practices.
- Upon implementation of this act, the developers have to keep every activity related to the project transparent, first buyers knew only the things that the developers used to tell them, but now all the necessary and minor information related to the project would be published on the website of the concerned authority.
- Once the project is started, the developers would not be allowed to make any changes to the project. Developers can make changes only when customers permit them, without the approval of the customers, the developers will not be allowed to make any changes to the project.
- In case the developer tends to enter into any false practice without the concern of the customer, it will tantamount to indulgence of violation of the provisions of RERA act & attracts penalty as well as prosecution ahead.

## VI. FUTURE SCOPE

This paper surveyed some of the most important factors of RERA affecting real estate developers, key players of construction sector and construction industry, however future research may be conducted on effect on governing body of RERA and also impact of RERA on specific financial terms and strategies made by real estate developers to sustain in this competitive market and the case study may be conducted to make the impact of RERA more easy to understand.

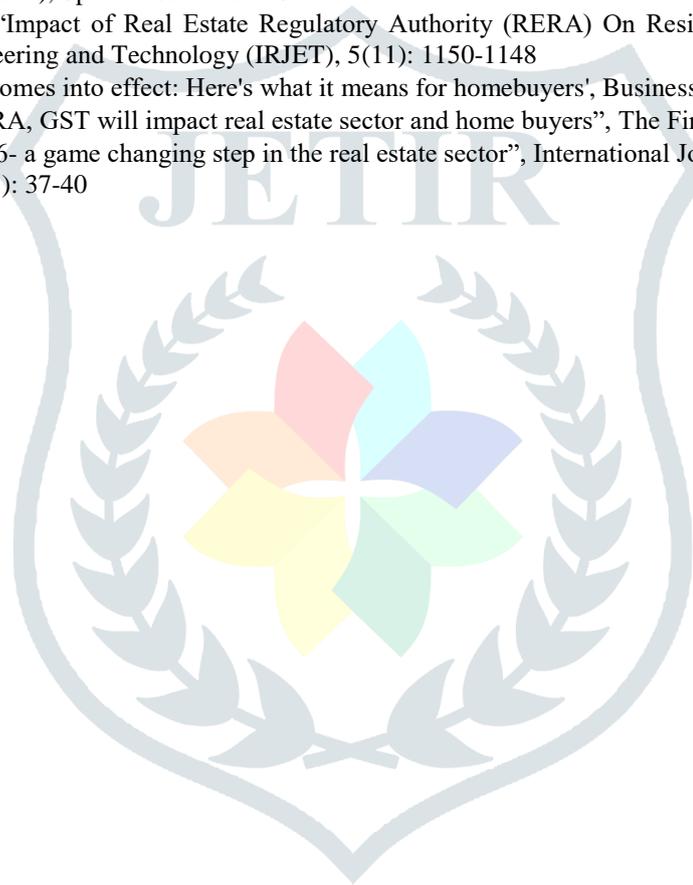
## ACKNOWLEDGEMENT

I am really grateful to Prof. (Dr.) I. N. Patel, Principal, BVM Engineering College, Vallabh Vidyanagar, Gujarat, Dr. Jayeshkumar R. Pitroda, Associate Professor, PG Coordinator Construction Engineering and Management, Civil Engineering Department, BVM Engineering College Vallabh Vidyanagar, Gujarat and Dr. Mehul J. Shah, Assistant Professor, Mathematics Department, BVM Engineering College Vallabh Vidyanagar, Gujarat for their motivation and support for the research work.

## REFERENCES

- [1] A. Joshi, Nisha Singh 2016, "Real Estate Regulation Act (RERA), 2016: Implementation and Issues", International Journal of Management Studies (IJMS), 5(4): 96-101
- [2] A. Kadam, G. Parulekar 2018, "Detailed Study and Analysis of RERA Act", International Research Journal of Engineering and Technology (IRJET), 5(4): 3030-3032
- [3] B. Sapam 2017, "RERA may put most brokers out of work", Live Mint.
- [4] Business Today 2017, "What is RERA and how will it benefit home buyers?", Business Today.
- [5] FE Online 2017, "5 ways RERA will impact developers - The Financial Express", The Financial Express.
- [6] H. Ananthamurthy 2016, "Impact of RERA - the real estate regulation and development act", Experion.
- [7] <https://gujrera.mahaonline.gov.in/>
- [8] <https://maharera.mahaonline.gov.in/>
- [9] <https://www.projectguru.in/>
- [10] M. Khandar, A. Panganti 2018, "Immediate Impact of RERA on Construction Industry", International Journal of Engineering Research (IJER), 7(1): 71-74

- [11] N. Karnawat, H. Ambre 2019, "Study on Impact of RERA And GST On Construction Sector", International Research Journal of Engineering and Technology (IRJET), 6(5): 6112-6117
- [12] S. Dhawan 2017, "RERA: Are on-going realty projects being covered under RERA in your state?" The Economic Times.
- [13] S. Ghosh 2016, "RERA takes effect; to address homebuyers' grievances", Hindustan Times.
- [14] S. Mammen 2017, "Buyers Fear RERA May Delay Ongoing Projects", Proptiger.
- [15] S. Merchant, R. Pednekar and D. Arolkar 2018, "Analysis of Dilutions of the Real Estate (Regulations and Development) Act 2016 by State Governments: A Case study", International Journal of Creative Research Thoughts (IJCRT), 6(2): 742-749
- [16] S. Patil, A. Waghmare 2017, "Impact of Real Estate Regulation and Development Act (RERA) on India's Real Estate Sector" (IJSRST), 3(8): 1312-1316
- [17] S. Reddy 2017, "Real Estate Regulations & Development Act RERA Key points & Review", ReLakhs.
- [18] S. Rodgi 2019, "An Overview of RERA in India: A Regulatory Shift", Research Review International Journal of Multidisciplinary (RRJ), 4(1): PP. 379-382
- [19] S. Salunkhe 2019, "Review paper on study of MAHARERA act", International Research Journal of Engineering and Technology (IRJET), 6(2): 2240-2242
- [20] S. Shinde, S. Kulkarni, "Impact of Maha-RERA Act 2016 on The Real Estate Industry", International Journal of Research in Advent Technology (IJRAT), Special Issue: 127-131
- [21] T. Joy, B. Selvam 2018, "Impact of Real Estate Regulatory Authority (RERA) On Residential Project", International Research Journal of Engineering and Technology (IRJET), 5(11): 1150-1148
- [22] T. Kaushal 2017, 'RERA comes into effect: Here's what it means for homebuyers', Business Today.
- [23] V. Mehta 2016, "How RERA, GST will impact real estate sector and home buyers", The Financial Express.
- [24] V. Patil 2017, "RERA 2016- a game changing step in the real estate sector", International Journal of Research in Business Management (IJRBM), 5(1): 37-40
- [25] [www.apnarera.com/](http://www.apnarera.com/)



## Author's Biography:

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