

IMPACT OF GST IN CONSTRUCTION INDUSTRY

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Abstract - The implementation of GST in India on 01 July 2017. There has not been conducted many researches on impact of GST on construction industry and Contribution of industrial sector to GDP is 29% of the total GDP. In this 29%, construction industry contributes to 11% of the industry sector. This seems to be a big digit when it comes to revenue generation of the nation. The aim of this study is the GST effect associated on construction capital cost and it influences towards the housing developer and housing property price. To understand the concept of GST. To study the impact of GST in construction industry. To identify the possible impact of GST implementation towards the construction cost which will then give an importance to the housing developer and housing value. To improve the stakeholder's knowledge and solve the questions & confusion regarding GST in construction industry. And also provide suggestions and initiatives that can soften the GST impact on Gujarat. A total of 50 questionnaire were collected, data were analyzed using relative importance index method. From the analysis it concludes that, building materials, equipment rental charges, construction soft cost, construction hard cost, labour cost and prize of building are the major construction impact gain from the GST implementation. Increment on housing property price in which end buyer is the one who suffer the price increment.

Key Words: GST, Labour, Housing developer, GDP, Construction industry

1. INTRODUCTION

GST is the critical form of Indirect Taxation which is said to be the indirect taxation improve ever since our Independence. The Goods and Service Tax is levied on the manufacture, sale and users of the goods and services. Tax policies play a major role on the economy through their impact on both efficiency and equity. A good tax system should keep in view subject of income distribution and, at the same time, also try to generate tax revenues to support government expenditure on public services and infrastructure development.

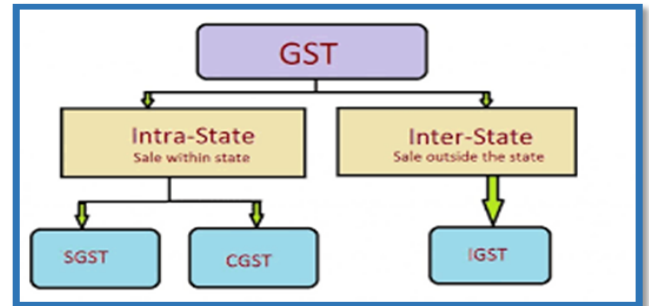


Figure 1: types of GST

The purpose of this study is to identify the perception of the construction industry towards the implementation of the goods and services tax. The others purpose of this research is to look over the pricing effect from the perspectives of the construction industry. Introduction of goods and service tax (GST) by the government of India has led to a lot of ambiguity in the Construction industry.

1.1 Background taxation in India

Taxation is a procedure to generate revenue by the Government to finance various developmental activities in the country. The States & Central Governments have been duly authorized to levy tax on goods & services with clear separation and without any overlapping in such powers under the Constitution of India.

Figure 2: difference of old & new system of GST

Transaction	NEW system	OLD System	Comments
Sale within the state	SGST and CGST	VAT & Excise / ST*	Under the new system, a transaction of sale within the state shall have two taxes, SGST – which goes to the State; and CGST which goes to the Centre
Sale outside the state	IGST	CST & Excise / ST*	Under the new system, a transaction of sale from one state to another shall have only one type of tax, the IGST – which goes to the Centre

The taxes can be divided broadly into two parts as

- (i) Direct Tax
- (ii) Indirect Tax

The Direct Taxes are those, the burden of which can't be shifted to another person, for example, the income

tax which is paid by an individual to the Central Govt. on his income. The Direct Tax includes Income Tax, Corporate Tax, Property Tax etc.

On the other hand, the Indirect Tax is a tax the burden of which can be shifted to another person like CEN-VAT and VAT which can be expressly included in the price being charged from the buyers. Whereas the Indirect Tax includes Customs, Excise, Service Tax, VAT, CST, Luxury Tax, Entertainment Tax, Amusement Tax, Tax on Lottery, Betting & Gambling, Purchase Tax, Entry Tax etc.

Prior to the introduction of Goods and Services Tax (GST), there were different stages for levy and collection of Indirect Taxes as reflected here after:

1. Central Excise Law:

The Central Excise Law was being levied on manufacture or production of excisable goods (i.e. the goods included in Central Excise Tariff for levy of duty) in India. However, the duty was being collected on removal of manufactured goods from the factory or the warehouse. This duty which was known as Central Excise was being levied and collected by the Central Government.

2. State VAT Law:

The VAT was levied on sale of goods when such sale of goods was within the state. i.e. in the exclusive area of the State. Such sale should be by one person to another for consideration. The VAT (earlier known as Sales Tax) was being levied and collected by the State Government.

3. Central Sales Tax Law:

The Central Sales Tax (CST) was being levied on those sales which the movement of goods from one State to another i.e. Inter-State. As per constitutional provisions, the State Govt. was not empowered to levy tax on inter-state sale of goods. Therefore, the CST was being levied by Central Govt. and same was being collected by State Govt. The powers to levy tax on inter-state sale of goods were authorized to the Central Govts. To avoid rate-war amongst States on sale of goods from their State for consumption in other State.

4. Entry Tax & Octroi Laws:

The Municipalities & the Local Authorities were allowed to collect the taxes on goods on its entry into or exit from the local area of such municipalities. Normally, these taxes were being levied by State Govts. But the municipalities & local authorities were empowered to collect the same.

5. Service Tax Laws:

The Central Govt. was empowered to levy service tax on provision of services by a person to another in taxable territory for consideration. This tax was being levied and collected by the Central Govt.

6. Entertainment, Amusement & Luxury Tax Laws:

Actually, the States were not entitled to levy any tax on services except in few cases such as entertainment tax, amusement tax & luxury tax. The examples of such taxes are the taxes levied on buying of cinema tickets, amusement park and on stay in hotels etc. These taxes were being levied and collected by the States/Local Authorities.

7. Cesses & Surcharges:

The Central Govt. as well as the State Govt. were levying & collecting various cesses such as Primary Education Cess, Secondary Education Cess and the surcharges on various goods and services. These taxes were being levied through separate legislations; however, these were being collected by Central Govt. and the State Govt. in the manner of mother laws. For example, the education cess was being levied by Central Govt. on manufacture of goods through different measure but was being collected in the manner of central excise law. Likewise, the States were levying surcharges on specified goods through different measure. However, these were being collected in the manner of VAT Laws.

8. Other Tax Laws:

There were other tax laws also at State and Central level such as taxes on lottery, betting, gambling levied and collected by States.

1.2 Need for study

There has not been conducted many researches on impact of GST on construction industry and Contribution of industrial sector to GDP is 29% of the total GDP. In this 29%, construction industry contributes to 11% of the industry sector. This seems to be a big digit when it comes to revenue generation of the nation.

1.3 Objective

- To understand the concept of GST.
- To study the impact of GST in construction industry.
- To identify the possible impact of GST implementation towards the construction cost which will then give an importance to the housing developer and housing value.
- To improve the stakeholder's knowledge and solve the questions & confusion regarding GST in construction industry.

1.4 Scope of work

This study will investigate the impact of GST in construction industry. The study was restricted within Gujarat region.

1.5 Research methodology

Research methodology on the project is as follows: -

- Literature review
- Factor identification
- Questionnaire preparation
- Questionnaire survey
- Data analysis using RII method
- Conclusion and recommendations

2. Literature review

This literature review has been done to establish theoretical framework for the topic/subject area. Define key terms, identify studies, models, terminologies, case studies and so on supporting the topic.

2.1 Learning's from literature

- Major construction cost component that get the significant impact due to GST implementation.
- Cost increment due to GST and exempt taxes make an issues on developer business's capital flows. In order to maintain the profit and cover the risk, developer raising the housing price where the end buyers will borne the price increment.
- For ready possession projects, only the construction cost i.e. the material cost and labour cost affect the cost of a property. Other indirect taxes (service tax, value added tax, GST) are not applicable, where as for new projects the new taxes are applicable.
- India shall move to join the world wide standards in taxation, corporate laws and managerial practices and be among the leaders in these fields.
- GST is a single taxation system, applied to whole nation instead of various taxes like Central Sales tax, Excise tax, VAT, Service tax, Entertainment tax etc.
- GST is helpful for the development of Indian economy as well it will be very much helpful in improving the gross domestic product of the country more than two percent.
- GST in the anvil, it would be prudent for the industry to identify and understand some of these potential issues.
- Encourage by the success of GST, more than 140 countries have introduced GST in some form to other and is fast becoming the preferred form of indirect tax in the Asia Pacific region.

3. Data collection

To achieve the objective identify the possible impact of GST implementation towards the construction cost which

will then give an influence to the housing developer and the housing value.

3.1 Research methodology

The research methodology contains two stages. The primary stage included a literature search and interviews. The literature review was conducted through internet and project management journals, gathering procedures, books. As the result of this stage, 43 factors affecting impact of GST in construction industry were identified. These factors were categories in six groups as: construction site cost related, construction hard cost- building material related, construction hard cost- labour related, construction hard cost- equipment and machinery related, construction soft cost related, developer related. The second phase considering the enlisted GST implementation factor conduct pilot survey of 2 experts in the construction industry. To scrutinize the GST implementation factors as well as the validations of the questionnaire.

3.2 Questionnaire preparation

A questionnaire was designed based on the objectives of the study. A questionnaire survey was developed to get the opinion and understanding from the experienced respondents regarding the GST on construction industry.

- Questionnaire Outline: The questionnaires are all classified into 2 sections:
 - a) Section A: Company and respondent profile
 - b) Section B: Impacts of GST on construction industry.

Based on the literatures and factors considered, a questionnaire was designed as a measurement tool for impacts. The fourty three factors were adapted to measure impacts of GST on construction industry. Also the respondents were asked to rate their level of argument according to 5 point scale according to level of contributing.

3.3 Data validation

To ensure a meaningful and complete response to the questionnaire, an interview was conducted with experts to explain the purpose of the study and obtain information on the design of the questionnaire, especially to determine the factors of impact of GST in construction industry. A questionnaire, with 43 GST implementation impact factors prepared to suit the nature of the construction projects, was discussed with the guidance required to add more factors and test validity of content by knowledge experts and local construction participants. The content was validated by interviewing the experts to check the content, readability, language and to add further factors and information if necessary.

As a result, remarks regarding modification in factors and questionnaire were taken into consideration.

3.4 Sample size

The Engineers of government, developer, Contractor, accountant and Consultant were targeted for the survey. These details were considered to be the size of the population to determine the sample size of the study. For a representative population statistical sample, the formula shown below,

$$ss = \frac{Z^2 * (p) * (1-p)}{c^2}$$

Where,

- Z = statistic value for the confidence level (e.g. 1.96 for 95% confidence level)
- p = percentage picking a choice, expressed as decimal (0.5 used for sample size needed)
- c = confidence interval, expressed as decimal (e.g. 0.05 = ±5) ss = 385

$$\text{new ss} = \frac{ss}{1 + \frac{ss-1}{Pop}}$$

Where,

pop = population (100)

new sample size = 80

4. Data Analysis

Data analysis is the way toward bringing order, structure and significance to the mass of gathered data. The reason of analysing data is to obtain usable and valuable data.

The analysis irrespective of whether the data is quantitative or qualitative may:

- summarise and describe the data
- Identify relations between variables
- Evaluate variables
- Identify the difference between variables
- Forecast outcomes.

4.1 Relative Important Index

Relative Importance Index (RII) method was used as data analysis method to assess the relative importance of cost factors regarding construction project. A five-point Likert Scale was adopted. Results of analysis was presented in the

next chapter. The relative importance index, RII, was computed for each factor to identify the most and the least significant cost factors in in different construction project. The causes were examined and the ranking of their attributes was done using the Relative Importance Index (RII). The relative importance index is given as:

$$RII = \sum w/A*N$$

Where,

- RII = Relative Important Index
- W = Weighting given to each factor by the respondents (ranging from 1 to 5)
- A = Highest weight (here 5)
- N = Total number of respondents.

4.2 Reliability

Reliability is defined as the consistency of results from a test.

The reliability is calculated by Spearman Brown formula which is used where scale is administered.

$$Rsb = \frac{2Rhh}{1 + Rhh}$$

Where, Rhh is the correlation of the scores in two half tests.

After the division of data in two half. Now that we have our two half of the test, we have to calculate the Correlation between them.

$$Rhh = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{\sqrt{[\sum(X - \bar{X})^2][\sum(Y - \bar{Y})^2]}}$$

In our case,

X = one person's score on the first half of items,

Y = one person's score on the second half of items,

\bar{y} = the mean score on the second half of items.

$$Rhh = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{\sqrt{[\sum(X - \bar{X})^2][\sum(Y - \bar{Y})^2]}}$$

$$= \frac{19267.27}{\sqrt{(20445.43)*(20226.77)}} = 0.95$$

Now,

$$Rsb = \frac{2Rhh}{1 + Rhh}$$

$$= \frac{2*0.95}{1+ 0.95}$$

$$= 0.97 > 0.70$$

After the calculation,

Rsb = 0.97 > 0.70, hence it has good reliability.

4.3 Top 10 factors on impact of GST in construction industry

Sr. No.	Types of factors	Factors affecting the impact of GST in construction industry	RII = $\frac{\sum w/A*N}{N}$
1	Building Material	Cement	0.796
2		Iron/ steel reinforcement/ bar	0.784
2	Developer related	Increase in price of building property	0.784
3	Building Material	Bricks	0.78
3	Equipment and machinery	Mobile crane	0.78
4	Building Material	Timber	0.756
5	Equipment and machinery	Concrete mixer	0.752
5	Developer related	Total cost of construction get increased	0.752
6	Concrete Vibrator	Excavator/ Backhoe	0.748
7	Building Material	Ready mix concrete	0.744
8	Construction soft cost	Loan/ Interim fees	0.736
9		Marketing fees	0.732
9	Equipment and machinery	Concrete Vibrator	0.732
10	Developer related	Difficulty in payment of employees	0.73

5. Conclusions

5.1 General Conclusion

- GST is a single taxation system, applied to whole nation instead of various taxes like Central Sales tax, Excise tax, VAT, Service tax etc.
- cost increment due to GST and exempt taxes make an issue on developer business's capital flows. In order to maintain the profit and cover the risk, developer raising the housing price where the end buyers will be borne the price increment.
- For ready possession projects, only the construction cost i.e. the material cost and labour cost affect the cost of a property. Other indirect taxes (service tax, value added tax, GST) are not applicable, where as for new projects the new taxes are applicable.
- No doubt GST can increase the government revenue but government should also give attention to the public and others. The only possible remedy for this disruption is to make the transition to GST simpler.
- major construction cost component that get the significant impact due to GST implementation.

5.2 Research related conclusion

In this research, various factors affecting impact of GST in construction industry were identified and listed. The key factors which were identified by questionnaire survey, rated by 50 responders and 43 factors were identified for impact of GST in construction industry. Various factors that were incorporated as below,

Sr. No.	Types of factors	Factors affecting the impact of GST in construction industry	Impact		
			Before	After	Summary
1	Building Material	Cement	27% tax levied	28% GST applicable	1% tax increased
2		Iron/ steel reinforcement/ bar	19.5% tax levied	18% GST applicable	1.5% tax decreased
3		Ready mix concrete	18% tax levied	(12.5% + 6%) = 18.5% GST applicable	0.5% tax increased
4		Bricks	18% tax	5% GST	13% tax

			levied	applicable	decreased
5		Timber	17.5% tax levied	18% GST applicable	0.5% tax increased
6	Equipment and machinery	Excavator / Backhoe	18% tax levied	28% GST applicable	10% tax increased
7		Concrete mixer	12% tax levied	18% GST applicable	6% tax increased
8		Concrete Vibrator	12% tax levied	18% GST applicable	6% tax increased
9		Mobile crane	18% tax levied	28% GST applicable	10% tax increased
10	Construction soft cost	Loan/ Interim fees	12% tax levied	18% GST applicable	6% tax increased
11	Developer related	Total cost of construction get increased	developers were purchasing material without tax	To purchase any construction material GST is mandatory.	Because of GST the initial cost of the project is increased.
12		Difficulty in payment of employees	Salary was paid in cash.	Salary is paid by bank transaction.	Employees has to fill income tax Compulsory.
13		Increase in price of building property	Developers were never paid tax for any purchasing of construction materials.	Because of GST construction cost is increased.	Therefore, the overall project cost is increased.

5.3 Future Scope

The study was about the impact of GST in construction industry. But during the research work, the found content for the further research is that the combination of construction industry and Indian economy.

REFERENCES

- [1] R.Shanker(2017)Impact and Implication on Various Industries in Indian Economy Journal of Internet Banking and Commerce, 2-22.
- [2] Meet H. Rawal, T.J. Patel, and V. V. Vishwakarma (2017) Building construction: before and after International Journal of Research in Engineering and Technology (IJRET), 2, 156-165.
- [3] Ramesh kumar and Naveen(2017) Impact of demonitisation and gst on construction industry International Journal of Research in Engineering and Technology (IJRET),5,3349-3354.
- [4] Zainal, R, Teng, T. C and Mohamed, S. (2016). Construction Costs and Housing Prices: Impact of Goods and Services Tax. International Journal of Economics and Financial Issues, 6(7S), 16-20.
- [5] Azith, Y. (2017). GST Impact On Housing And Construction Industry. International Journal of Research, 4(10), 768-770.
- [6] Kawle, P. S and Aher, Y. L. (2017). GST: An economic overview: Challenges and Impact ahead. International Research Journal of Engineering and Technology, 4(4), 2760-2763.
- [7] Dani S. (November 20, 2016). A Research Paper on an Impact of Goods and Service Tax (GST) on Indian Economy. Business and Economics Journal ,
- [8] Poonam, M. (2017). GOODS AND SERVICES TAX IN INDIA: AN. 6th International Conference on Recent Trends in Engineering, Science and Management
- [9] Zainala, R. Tengb, T. C and Pinc, Y. S. (2016). The Effects of GST (Goods and Services Tax) on Construction Capital Costs and Housing Property Prices international soft science,19, 1335-1987.
- [10] Sui Pheng, L and Loi, C. P. (1994). Implementation of the goods and services tax (GST) in the Singapore construction industry. Journal of Property Finance, 5(3), 41-58.
- [11] Buchanan, J & Allan C. (2000). The growth of contractors in the construction industry: Implications for tax revenue.The economic and labour relation review,1127-1139.

[12] Demonetization And Its Impacts On Real Estate In India, Gurnam Chand, Journal of Global Research & Analysis, RNIHARENG/2012/59126, ISSN – 2278-6775

[13] Developments in the Apartment and Urban Real Estate Laws in India, Arjya B. Majumdar, accessed from <http://ssrn.com/abstract=2747086>

[14] Housing Regulation in South Africa- An Inspiration for India, Aditya Singh, accessed from <http://ssrn.com/abstract=1694058>

[15] Uncertain ground: the 'Ownership Flat' and urban property in twentieth century Bombay, Nikhil Rao, South Asian History and Culture Vol. 3, No. 1, January 2012, 1–25

[16] Immediate Impact Of Rera On Construction Industry, International Journal Of Engineering Research, Volume No.7, Issue 11-12 Jan. 2018.

[17] GST: An economic overview: Challenges and Impact Ahead IRJET Vol 4 Issue 4 Apr-17.

[18] GST- A Game Changer in Indian Tax Structure IOSR JBM

[19] Planning, Scheduling and tracking of residential project using primavera IJARCSMS Vol 3 Issue 5 May15.

[20] A Benefit Study of Petroleum Inclusion in GST Bill St. Joseph's College of Commerce Bangalore.

[21] An overview of GST – Reduction of Tax Burden St. Joseph's College of Commerce Bangalore.

[22] First Discussion Paper on GST in India Empowered Committee of State Finance, New Delhi.

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