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AN ATTEMPT OF ANALYSIS OF ETHICAL AND UNETHICAL ISSUES IN CONSTRUCTION SECTOR:- CONTRACTOR'S PERSPECTIVE

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Abstract: Construction Industries is one of the largest, challenging and demanding business sector in worldwide which play vital role in the economic as well social growth of economic country. This industry is considered to be one of the most susceptible to unethical practices because it involves substantial capital investments, providing large scale opportunities for rent extraction as well as investment that usually cannot be redeployed after implementation. Unethical practices can take place at every phase of a construction project during the planning and design, pre-qualification and tender, project execution, operation and maintenance. Such practices can result in projects which when completed are considered unnecessary, unsuitable, overlay complex components, overpriced. This study depends on the questionnaire survey amongst professionals, contractors of construction industry and technical analysis by RII (Relative Importance Index) method. The study recommends the promoting awareness regarding the values of ethical and Unethical behavior different forum and ensuring the effective punishment for unethical activities at different stages of project life cycle might reduce unethical practices in construction industry and to ultimately improve the project performance.

Index Terms – Contractor's Issues, Questionnaire, Relative Importance Index, Management Issues, Mean Value.

I. INTRODUCTION

The construction industry faces with some ethical and unethical issues and the behaviour of the of construction industry can lead to confidence reduction in profession, continuous insecure practices that risk lives and property, loss of income by clients and governments, needless and baseless expenditure that raise the level of poverty and reduce the quality of life amongst other things. The effects of unethical practices have lasting impact detrimental to construction and engineering companies such as wasted tender expenses, tendering uncertainty, increased project costs, economic damage, fines, reputational risk [2] The issues of professional ethics have sparked enthusiastic concern and pragmatic discussion among the general public and there is growing demand by current literature for good ethical practices and professional behaviour in the construction industry. In the face of its size and universality, the construction industry is often cited as plagued with graft and malpractices [7] Common issues highlighted are tendering practice, substandard quality of construction work, safety culture, payment issues, corruption.

The value of worldwide construction industry is increasing but the industry still faces problems especially the unethical conducts and practices among professionals. But if the unethical conducts and practices amongst professionals cannot be resolved, this goal is difficult to achieve, practice and apply. The frequency of unethical conduct and practices amongst professionals leading to the high effect towards the construction industry [3]

In achieving professional's excellence, it is important that construction practitioners not only concentrate on technological advances but also put ethics in action. It is important to reflect on ethical issues and unethical practices prevalent in construction industry in order to overcome the problems prevailing in the industry. The way forward is towards improve ethical practices and it should come about from the way educate construction professionals to way we practice construction. The objectives of study is by doing questionnaire survey of ethical and unethical issues in construction industry and technical analysis by RII (Relative Importance Index) method. All these problems need to be solved with a properly and wisely in other to attain status as a develop country in the worldwide. In achieving professional's excellence, it is important that construction practitioners not only concentrate on technological advances but also put ethics in action. It is important to reflect on ethical issues and unethical practices prevalent in construction industry in order to overcome the problems prevailing in the industry, hence this reduce the performance of project.

II. LITERATURE REVIEW

R.K.Shah, M.Alotaibi reviewed about the to conflict interest amongst the professionals like client and contractor project managers, site engineers, the quantity surveyors and designers/architects play crucial roles for the unethical practices and consequently these practices have adverse impact on product quality, faith of clients and investor's confidence in the construction industry. This paper also highlighted that the issues like benefit to employees, avoiding conflicts of interests, strict monitoring and proper supervision can be some effective ways to discourage and minimize the unethical practices amongst the stakeholders in construction industry. [3]

HamimahAdnam, Norfashiha Hashim, NorazianMohdYusuwan and Norizan Ahmad discussed about the present to minimize the lapse of ethical issues in the industry, the suggested solutions are divided into short, medium and long-term categories based on the project time frame. The findings provide the useful information to stakeholders how to deal with the pressing ethical issues confronting in construction industry. Despite the innovation and advanced technology that has taken place in industry, good ethical practices by players in industry are crucial for its growth. Professional institutions and government agencies plays a crucial role in minimizing the ethical lapses in the construction industry.[9]

Zulkifli Ibrahim, Noraini Hamzah, Muhamad AzryKhoiry in this paper the unethical conduct and practices amongst the professionals in construction industry were reviewed. In the previous studies, the mechanism suggested whereby they are divided into three mechanism included short, medium and and long term solutions based on the project factors which are time, cost and quality. The mechanism suggested can be catalyst in achieving and enhancing the ethical conduct and practices among the professional in the construction industry. The mechanisms of prevention from unethical conduct and practices also be discussed and reviewed in this paper. This review will provide useful information to every stakeholder in the confronting with the unethical conduct and practices amongst professionals in the construction industry involved. [1]

Norsiah Mohamad, Rusian Abdul Aziz highlighted were tendering practices, sub-standard quality of construction work, safety culture, payments woes, corruption and, and most importantly, public accountability for money spent on public buildings and infrastructure. The result of the study identified education and professional training in ethics, the role of organisation and industry in implementing codes of ethics, and legislation and regulation as the key factors towards establishing ethical practices for construction industry to ultimately improve project performance. The result of the study also affirms that professional judgement on ethical practices stems from responsibility towards customer and public, through the endorsement of "Public and Customer Satisfaction" index to measure satisfaction and accountability. This study fix to provide guidelines to construction professionals, organisation, industries and government as a step towards self-regulation and image improvement of industry players. This development will have an impact upon the ethics of construction industry, which is leading role in economic development. [13]

Vee, C. and Skitmore, R.M analyzed questionnaire survey of typical project managers, architects and building contractors concerning their views and experiences on a range of ethical issues surroundings construction industry activities. Current literature has highlighted the growing demand for good ethical practice and professional behaviour in all forms of business, including the construction industry. The objectives of this survey was to provide an indication of the current trends in the industry through a questionnaire survey of a sample of professionals in urban construction market. The research used a structural approach resulting in the extraction of the respondents belief and values. The research however does provide future researchers with the basis to analyse professional ethics in detail and indicated and confirmed the types of ethical impropriety that exist and also confirmed continuing role of contractors as champions of unethical behaviours. [26]

M.Suresh babu, K. Chanda Sekarr, reviews about the construction industry in India makes a significant contribution to the national economy and provides employment to large number of people. In spite of its contribution the construction industry was affected by number of problems. One of these pressing problems was the unethical behaviour of professionals in construction industry, which affects long-term business dealings and influence quality, time and costs. And this project concludes by showing the necessity of ethical policy for the construction company. It shows a brief explanation regarding the actual scenario happening in the construction industry. It helps a project manager to monitor the malpractice at construction site. These issues could fit to every department at every level for a construction company. The requirement of legal requirement and ethical principle were shows the necessity for construction company to avoid or reduce the unethical practice. [4]

M.Suresh babu, K. Chanda Sekarr represents the construction industry is the second largest industry of country after agriculture. It makes a significant contribution to the national economy and provides employment to large number of people. The unethical behaviour of professionals in industry which affects long-term business dealings and influence quality, time and cost, and most of firm has not utilized the legal requirements unfortunately the industry was infected with corrupt and unethical productivity of the industry. It concludes by showing the necessity of the ethical policy for the construction company. It shows a brief explanation regarding the actual scenario happening in the construction industry. It helps a project manager to monitor the malpractice at construction site. These issues could fit to every department at every level for a construction company. The requirement of legal requirement and ethical principle were shows the necessity for construction company to avoid or reduce the unethical practice. [14]

SnehBhojak, Avinash Patel, Dr. P.J. Patel reviews about that construction sector in India is one of the biggest sector which is play most important role in the growth of nations, but in spite of its contribution there are many Ethical Issues in construction industry of Gujarat. Well-structured questioner was developed and validated by professional bodies and reviewed by construction professionals. RII (Relative Importance Index) was used to analyse the questioner survey. Despite the various laws and ethical guidelines there are still ethical issues in our industry and these are likely caused by lack of self-restriction, self-discipline, responsibilities, personal behaviour, greed, more responsibilities and less accountability, political and social interest. As result of these issues, we loss the trust of public and causes dissatisfaction to the clients. For minimize the ethical issues there must be aware

by himself regarding ethical issues in construction industry. Scope for future work can include survey for the harmful effects of these ethical issues in overall country. And finds more different ways to reduce the ethical issues in India. And there is also scope to suspect that in which department the unethical practices are high or in which profession of construction industry the level of ethical issues are high and how to minimise it. [2]

III. PROBLEM STATEMENT

In the construction industry contractor faces ethical and unethical issues in life cycle of project. The value of worldwide construction industry is increasing but the industry still faces problems especially the unethical conducts and practices among professionals. But if the unethical conducts and practices amongst professionals cannot be resolved, this goal is difficult to achieve, practice and apply. The frequency of unethical conduct and practices amongst professionals leading to the high effect towards the construction industry and hence this reduces the performance of project. Hence, study the ethical and unethical issues ongoing project, analysis by RII method, and recommendations for implementation in further projects by questionnaire survey.

IV. OBJECTIVES OF STUDY

- 1) To identify the ethical and unethical issues in construction industry: contractor's perspective to ensure the successful completion of project.
- 2) To investigate of ethical and unethical issues through documentation review and questionnaire survey.
- 3) To evaluate and rank of ethical and unethical issues by RII Method (Relative Importance Index).
- 4) To give Recommendation based on technical analysis by reviewing questionnaire survey.

V. METHODOLOGY

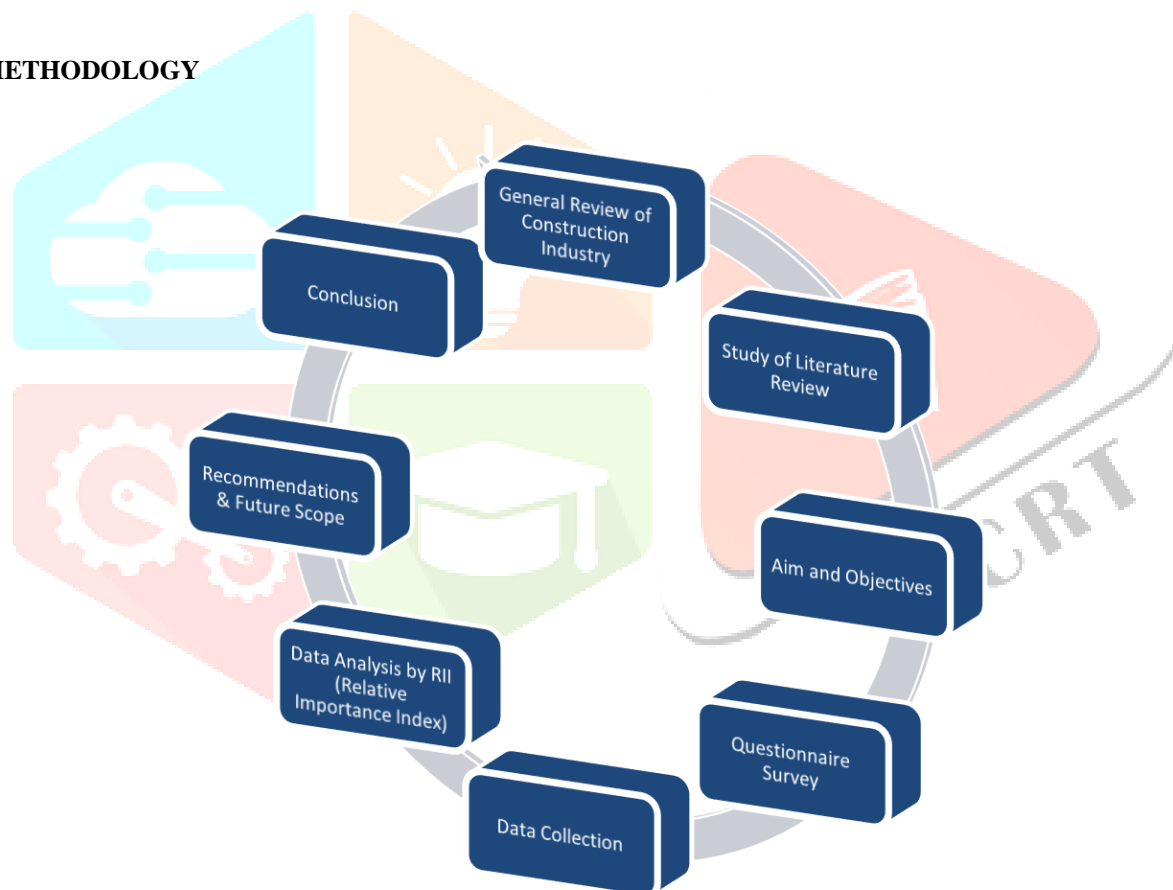


Figure 1:- Flow Chart of Methodology

VI. RESEARCH FRAMEWORK BASED ON METHODOLOGY

- 1) Conducted general review of construction industry and literature review to know about present scenario of ethical and unethical issues.
- 2) Prepared the questions based on literature review for conducting questionnaire survey focused on defined objective.
- 3) Questionnaire survey among the professionals and experts associated with relevant field, officials of public body, Govt. organization, project management consultant.
- 4) Data collection based on likert Scale rating factor :
1 : Minor; 2 : Low ; 3 : Moderate; 4 : High; 5 : Extreme
- 5) Analysis of data by Relative Importance Index (RII) Method, obtained from the Questionnaire survey, issues frequently affecting the performance of project.
- 6) Recommendation based on questionnaire survey.

VII. DATA COLLECTION

Respondents are categorized based on their professional experienced and no of project completed by each professional is collected. The data is produced as follows.

Table 3:- Demography of respondent based on experience

No. of Respondents	No. of years of experience	No. of Project Assessed
3	0 - 5 years	6 Nos.
15	5 - 15 years	53 Nos.
12	above 15 years	99 Nos.

VIII. TECHNICAL ANALYSIS BY RII (RELATIVE IMPORTANCE INDEX) METHOD

- 1) Relative Importance Index (RII) is a type of relative importance analysis.
- 2) RII is used to determine the probability and impact of ethical issues and unethical issues attributes by assigning rating to each variable.
- 3) RII is used for the analysis because it best fits the purpose of this study.
- 4) RII value will be calculated for both probability and impact for ethical and unethical issues and RII value is calculated using 5 points Likert scale by formula.

$$RII = \frac{\Sigma w}{A \times N} = \frac{5n_5 + 4n_4 + 3n_3 + 2n_2 + n_1}{A \times N}$$

RII ranges from zero to one ($0 \leq \text{index} \leq 1$)

“w” is weighting given to each criterion by the respondents it ranges from 1 to 5 where 1 is very less and 5 is very high;

“A” is highest weight (5 is the highest in this paper);

“N” is total number of respondents;

n1, n2, n3, n4, and n5 are number of respondents for each factor for ethical issues & unethical issues.

Table 4:- Tabular representation of factors ranked on the basis of RII and Mean Value for Ethical Issue

Sr. No.	Factors	Mean	RII	Rank
1.	Addition in scope of work	4.36	0.873	1
2.	In-adequate budgetary provision and delay payment	4.33	0.86	2
3.	Scarcity of manpower/skilled labour	4.26	0.853	3
4.	Poor performance of sub-contractor	4.13	0.826	4
5.	Unrealistic time limits for completion	4.06	0.813	5
6.	Delay in decision by clients	4.06	0.813	6
7.	Non-availability of required land for execution (Land Execution)	4.03	0.806	7
8.	Falsification of experience and expertise	4	0.800	8
9.	Disputes due to discrepancy in contract document	3.96	0.793	9
10.	Monitoring and controlling of project	3.9	0.78	10
11.	Inflation of bills	3.9	0.780	11
12.	Increased project cost	3.9	0.780	12
13.	Fines	3.86	0.773	13
14.	Delay in approval of design and drawings	3.83	0.766	14
15.	Lack of training in ethics	3.83	0.766	15

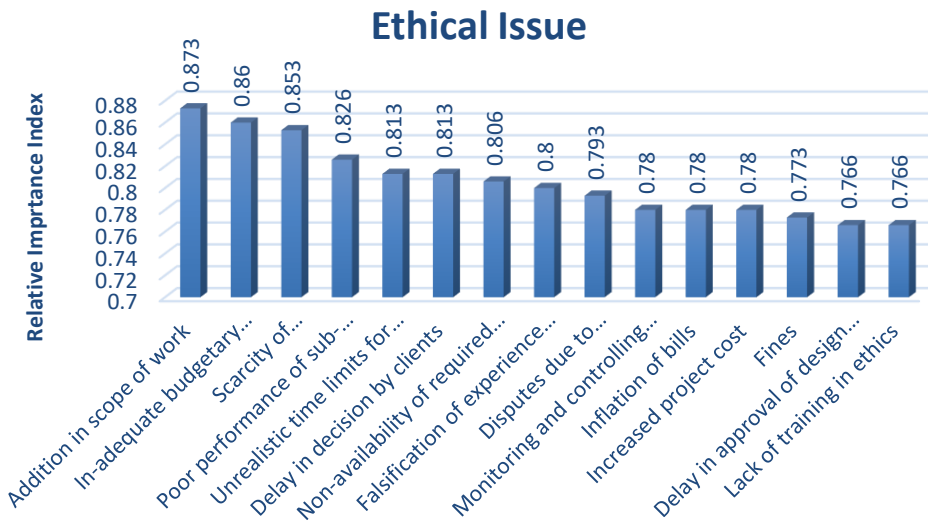


Figure 2 : Graphical Representation of Top 15 key factors affecting by Ethical Issues in Construction Industry

Table 5:- Tabular representation of factors ranked on the basis of RII and Mean Value for Unethical Issue

Sr. No.	Factors	Mean	RII	Rank
1.	Bribery	4.68	0.937	1
2.	Misuse of power authority	4.4	0.88	2
3.	Favouritism, Discrimination and Harassment	4.12	0.825	3
4.	Lack of fair competition and justice	4.1	0.82	4
5.	Abuse of company and clients resources	4.1	0.82	5
6.	Blackmail	4.08	0.817	6
7.	Criminal prosecutions	4.08	0.817	7
8.	Extortion and threats	4.02	0.805	8
9.	Political Influence	3.98	0.797	9
10.	Accident due to moving traffic adjacent to project site	3.98	0.797	10
11.	Opposition by local due to inadequate conceptual design	3.97	0.794	11
12.	Accident due to construction equipment/machinery	3.92	0.785	12
13.	Lack of protection to environment and public health	3.88	0.777	13
14.	Misrepresentation of financial status, Record, completed work and value of work	3.87	0.774	14

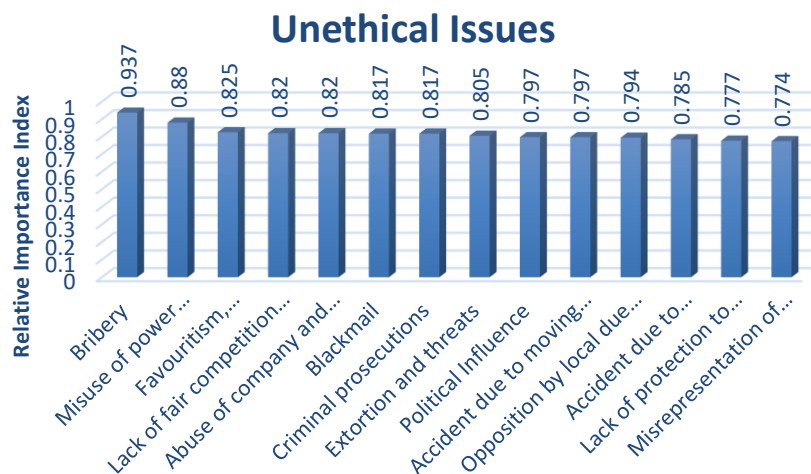


Figure 3 : Graphical Representation of Top 14 key factors affecting by Unethical Issues in Construction Industry

IX. CONCLUSION

- 1) The identification of ethical issues & unethical issues attributes are consistently in countered in the execution of Infrastructure projects. These attributes are leading towards the,
The attributes from questionnaire survey, literature review brainstorming sessions are land acquisition, change in design, utility relocations, change in scope of works etc.
 - 1) Delay in completion of projects – Time Overrun.
 - 2) Increase in cost of budgeted cost – Cost Overrun.
 - 3) Impact on quality of construction
 - 4) Challenges to be achievement overall project achievement.
- 2) By Pilot survey the questionnaire prepared, brainstorming sessions are encountered the land acquisition, change in design, utility relocations, change in scope of works and additional land after commencement of project is difficult task. It is affecting directly on the completion of project in time and require additional capital for compensation towards acquisition of additional land. Delay in acquisition further affects the idling of machinery, manpower, underutilization of resources.
- 3) The data of infrastructure project is not maintained from ethical issues & unethical issues management point of view i.e. regular review meeting for identification of probable risks, brainstorming sessions for identification of ethical issues & unethical issues in anticipations, assessment of issues & impact of issues in terms of time, cost, quality and goals of the projects. There is lack of dedicated ethical issues & unethical issues management call which is required on mega construction projects.

X. RECOMMENDATIONS

- 1) The preferable contracting methods shall be combination of EPC & item rate contract. Definite scope shall be including in the lump sum contract. Variable parameters shall be considered under the item rate part to minimize the risks during the execution.
- 2) Land acquisition problems become certain for each project with more or less %. Project should be launched after confirmation of at least 90% land in possession before award of contract. For balance land, i.e. accepted risk, the time frame for acquisition shall be finalized and binding over the parties.
- 3) During the preparation of DPR, requirement of local habitats, social aspects, topographical conditions, Geological conditions is not being studies in details in due to unrealistic time constrain hence the period for preparation of DPR & execution of contract shall be realistic.
- 4) In case of joint venture agreement, both J.V. partners shall be imposed to full fill the minimum technical criteria like experience in relevant field based on their share in Joint Venture consortium.
- 5) Relocation of major utility shall be excluded from scope of principal contract and it should be executed through separate agency prior to the commenced of principal contract.
- 6) Application of ethical issues & unethical issues management at site through deployment third party or in house ethical issues & unethical issues management unit as a part of contract. They should dedicatedly work of identification of risks in anticipations, assessment of ethical issues & unethical issues already identified, impact of issue, planning and close monitoring of the same.

XI. FUTURE SCOPE OF WORK

It is observed that, the attributes like that change in scope, political Interference, land acquisition, change in design and drawings, sub-contractor selection, can be eliminated or minimized at pre-tendering work is study of present scenario of ethical issues & unethical issues management during pre-tendering stages.

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