

Factors Affecting the Bidding Strategies in a Government Project

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Abstract - Bidding is the easiest means by which a work can be done and be awarded. Bidding does not always lead to opportunity but also sometimes makes a company or a person suffer due to selection of project unsuitable to the company or person. The bid strategy made on experience and familiarity has high probability to fail as compared to the person or company bidding on the basis of factual data. To understand and analyze the current situation of high competition of bidding, one must be aware about factors affecting the bidding process. Certain methods are used to win the bid such as reviewing older bids, the strategy of the awarded bid, familiarity with the winning of bid. This paper points down the factors which affect the bidding strategy in Government project located all over Gujarat. This paper will help in analyzing the bid strategy for future.

Key Words: (Size 10 & Bold) Key word1, Key word2, Key word3, etc (Minimum 5 to 8 key words)...

1. INTRODUCTION

The construction industry contributes massively to the GDP in the nation. This is all the more so applicable to India, with quick pace of framework improvement. All the while, getting nonstop and commendable works contracts is a simple test to the bidders. Bidding is the most widely recognized route by which the contractual workers go into the fry to acquire works. It is for the most part accepted that unseemly bidding practice is a significant supporter of the development business' wastefulness. In the event that the bidding methodologies are improved, it will improve the business as well as upgrades it. Since starting, Construction Companies utilized serious bidding procedures to get occupations rendering little degree for additional dealings. Be that as it may, in the current state, serious bidding is the most [rather exclusive] basic methodology utilized for temporary worker determination. Clearly, experience of a temporary worker consistently assumes a significant job in

bidding. As of now, development firms who can dissect the future situation and issues precisely can have a legitimate bidding methodology just as appropriate bidding cost. As of now, every third organization in the development business faces the misfortune of unpredicted elements that are straightforwardly or by implication influencing the bidding procedure. A structure organization may either deal with the customer or utilize a reasonable acquisition component to get an agreement. The most well-known methodology utilized for picking the contractual workers is serious bidding. An organization picks an assortment of merchants to offer on the arranged task at open bidding level. The contractual workers chose must decide if to offer or not. At the point when they wish to sell, the temporary workers will offer an inexact sum. A good bidding strategy may not only help the contractor from baring a loss but can also provide him with a good profit. Irrelevant to project, the bidding strategy needs to change and also from time to time.

Let's consider the current scenario, the contractors are ordered to take a COVID insurance despite they are having a labour insurance. It does not make a huge difference when insurance premiums are considered but what happens in the case of lock down. Supposing say, a contractor took a turn key contract and procured all the materials on site and suddenly a curfew or lockdown occurred for several months. The materials with a limited time usage need to get suffered due to this as after the time surpasses the material is just a waste and the contractor has to bare the loss. Without the consideration of future forecast one can never earn profit from the said project.

1.1 OBJECTIVE

To study the factors affecting the bidding strategy in a government project and to improve the process that is going on in bidding process.

To analyze and understand the methodology for the factors affecting the bidding strategy in a government project and to improve the process that is going on in bidding process.

1.2 LITERATURE REVIEW

Literature was collected, studied, analysed and sorted So many publications. After sorting the papers and publication which were relevant to the topic where zeroed down. Furthermore, these papers & publications which were sorted to the relevancy of the current topic. Many other sources such as techno social platform (Quora, LinkedIn), books were referred.

Here, the key factors influencing the BIDDING STRATEGY in construction industry which imparted their effect directly or indirectly. Many method of analysis, such as DEMATEL method, Reliability Index method, Reliability test method, Theoretical, ranking method, navigation and military strategy, triangulation, System Literature Review Method, Case study, where studies, analyzed and concluded by researchers.

Till now factors analysis was not used as part of analysis for bidding. It is useful at it is a method of data reduction and errors are eliminated using the iterations employed along with it.

In certain researches the factors were limited upto a country and a situation. The consistency of factors was not consistent. There was not any standard practice employed to list down the factors.

2. DATA COLLECTION

Numerous obstacle occurred during the collection of data such lock down, unavailability of contractor, resource limitation. So, a online questionnaire was floated to the contractors and engineers and the

people linked with government bodies. A total of 65 questionnaire were circulated out of which 39 responses were submitted which means the response rate was 65%.

The sample size was calculated as:

$$ss = \frac{Z^2 \cdot p \cdot (1-p)}{C^2}$$

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. 0.1)

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

Table -1: QUESTIONNAIRE VALIDATION TABLE

Number of distributed questionnaires	Number of respondents	Number of valid respondents	Percent of valid respondents to No. of distributed questionnaire
60	39	39	65%

2.1 NEED FOR WORK

The need for work a consequence of current workload of contractor, the accessibility of other projects on the market, the company's economic situation and ideal resources such as plant and equipment's. Overhead salvage and expenditure return levels decide career needs. The business has fewer workloads and a large number of idealship capitals which increases the need for work for company. Since the organization has to make sure the workers get paying for their jobs.

2.2 STRENGTH OF FIRM

Business strength represents the success of the project, and the variables were given higher priority by the smaller sized contractors than normal. The firm strength meaning the contractor willingness to fulfill a tender requirements set by a client; the sufficient money needed for the project; the

expertise in a specific project, Expertise with the state of the site, availability of resources, availability of subcontractors, subcontracting of content suppliers and percentage of the jobs. The terms of tender represent the requirements of the customer for both the contractor and the project. Only the client will win and can meet the terms and conditions of the deal. Working cash is essential for keeping the company in business. The tele-money may influence the undertaking execution. The temporary worker's experience remembers the encounters for development methods; development and office the executives; structure ability and nature with site conditions.

2.3 PROJECT CONDITIONS CONTRIBUTING TO PROFITABILITY

The conditions of the venture direct the temporary worker's capacity to lead the activity and accomplish the advantage objective. The prerequisites of the undertaking incorporate venture scale, structure, setting, length, past benefits made on related activities, and installment terms. The scale, structure, position and length of an undertaking are firmly identified with the capacity of the temporary worker. The aptitudes incorporate the measure of money accessible; the quantity of talented laborers accessible; hardware; plant; administrative ability; involvement with development strategies. For instance, the little temporary worker will be unable to do a huge undertaking in light of the fact that the bigger venture needs increasingly proficient staff, hardware, money, the executives mastery, and any type of task may likewise require any unique specialized expertise.

2.4 RISK OF THE PROJECT

A plan involves a considerable number of dangers. Venture dangers can be characterized into two separate classes of dangers: work related dangers and large scale condition related dangers. The business related dangers can be partitioned into a couple of subgroups including task precariousness, work trouble, contract status and customer and administration chief. Vulnerability of the activity implies condition of the site; fulfillment of the agreement papers. Multifaceted nature of the work incorporates venture calculated intricacy, mastery with regulating contractual workers and condition of the site. The agreement quality contemplations might be separated as the type of acquirement; points of interest of particulars; length of both undertaking and offer

readiness; terms of installment; guarantee issues; punishment.

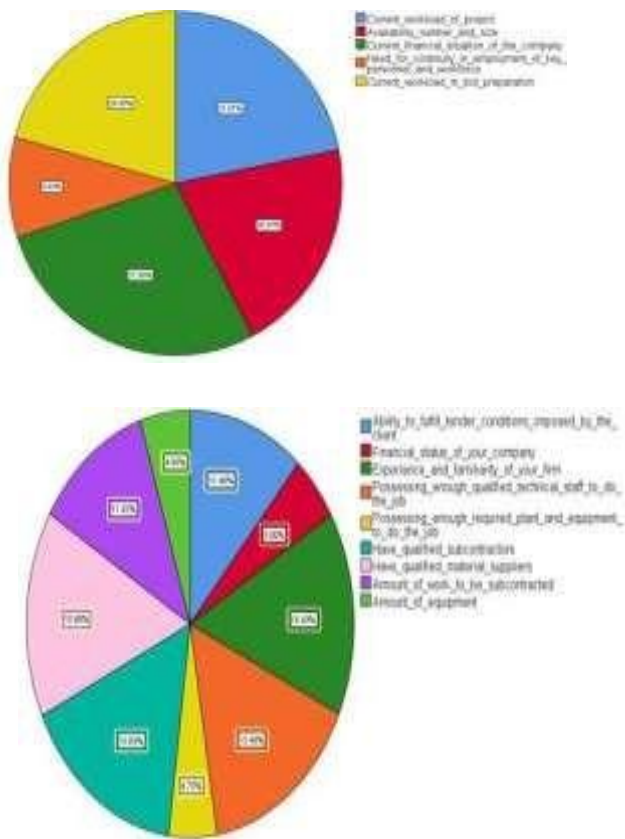
2.5 COMPETITION

The business sectors can be assessed from two focuses: the opposition which considers the present economic situations and the present proposition. The challenges in the present task focusing basically on the measure of contending members taking an interest in offering and the members awaiting results. The rise of contenders on the present market implies that measures of other future rewarding endeavors available, the most elevated feasible increase rates on the present market and the measure of new organizations are joining the rising engaging quality of the market.

2.6 STRATEGIC CONSIDERATIONS

The contractor's maximum expectations are the price offered by the contractors, the contractor experience and the contractor resource availability. The future financial position outlook for the economy and the company dictates the challenges and opportunities that the firm will face in future, such future course of the business; the likely lucrative opportunity possible in the future; the financial condition of the company showing the financial challenges. Customer and project considerations rely mainly on the long-term advantages that the business will gain from them, such as: the partnership that the contractor will render between the customer and other stakeholders, and the amount of work that the customer usually does.

3. DATA ANALYSIS



3.1.1 Assumptions:

- It should be uncorrelated to errors.
- The coding should have the same value in the products.
- Assignments of subjects are presumed randomly in the Split Half Test.
- The findings should be independent from one another.
- Variances can be considered equivalently in the Split Half test.

Table -1: Reliability Statistics

Reliability Statistics	
Cronbach's Alpha	N of Items
.309	49

3.1 RELIABILITY ANALYSIS

Reliability mentions to the degree which a system comes up with accurate out-puts when measurements are replicated many times. The study of reliability is called the measurement of reliability. Investigation of reliability is calculated by getting the proportion of systemic variability in a measure, which might be achieved by determining the correlation of scores derived from dissimilar scale administrations. Thus, if the correlation in the reliability analysis is strong, the scale produces steady outputs and is therefore accurate.

Reliability coefficients (also called coefficients of stability) vary between 0 and 1, where:

- 1: perfect reliability,
- Between 1 and 0.9: excellent reliability,
- Between 0.8 and 0.9: good reliability,
- Between 0.7 and 0.8: acceptable reliability,
- Between 0.6 and 0.7: questionable reliability,
- Between 0.5 and 0.6: poor reliability,
- Between 0 and 0.5: unacceptable reliability,
- 0: no reliability.

3.2 DESCRIPTIVE STATISTICS

Descriptive Statistics			
	Mean	Std. Deviation	Analysis N
Current_workload_of_projects	6.4103	1.06914	39
Availability_number_and_size	6.0000	0.88852	39
Current_financial_situation_of_the_company	8.0769	0.73930	39
Need_for_continuity_in_employment_of_key_personnel_Land_workforce	2.7692	1.44115	39
Current_workload_in_bid_preparation	6.0513	0.94448	39
Ability_to_fulfill_tender_conditions_imposed_by_the_client	6.0000	0.94591	39
Financial_status_of_your_company	2.6154	1.09100	39
Experience_and_familiarity_of_your_firm	8.0769	0.80735	39
Possessing_enough_required_technical_staff_to_do_the_job	8.1026	0.82062	39
Possessing_enough_required_plant_and_equipment_to_do_the_job	2.4872	1.07292	39
Have_qualified_subcontractors	8.2821	0.82554	39
Have_qualified_material_suppliers	8.2051	0.86388	39
Amount_of_work_to_be_subcontracted	5.9744	0.98641	39
Amount_of_equipment	2.5897	1.14059	39
Project_size_TOTAL_BID_VALUE	8.0769	0.83932	39
Terms_of_payment	8.0513	0.85682	39
Project_type	3.0256	2.01947	39
Profits_made_in_similar_projects_in_the_past	7.9487	1.25549	39
Uncertainty_related_to_the_construction_site_condition	5.6154	1.24848	39
Completeness_of_the_bid_documents_drawing_specification	8.3590	0.62774	39
Technological_difficulty_of_the_project	8.1795	0.68333	39
Management_of_similar_size_projects_in_the_past	8.3333	0.73747	39
Rigidity_of_specification	2.6410	1.54728	39
Allowed_project_duration_being_enough	5.8462	1.08914	39
Penalty_conditions_for_not_being_late_completion	5.8462	1.06471	39
Payment_conditions_of_the_project_creating_a_risky_environment	8.3077	0.65510	39
Allowed_duration_for_bid_preparation_being_enough	8.2308	0.87243	39
Current_financial_capability_of_the_client	8.2821	0.64680	39
History_of_client's_payment_in_past_projects	8.3333	0.66227	39
Client's_attitude_characteristics_and_stability_in_needs	5.7436	1.04423	39
Availability_of_required_qualified_labour_within_the_region	5.8462	1.06471	39
Availability_of_the_required_qualified_materials	8.1795	0.72081	39
Availability_of_the_required_plant_within_the_region	2.8462	1.28838	39
Possible_number_of_competitors_passing_the_requirements	5.7179	1.21284	39
Desire_of_qualified_contractors_to_bid_and_win_the_project	5.8718	1.17383	39
Market's_decision_whether_it_is_declining_expanding_etc	5.9487	1.09901	39
Amount_of_possible_upcoming_profitable_projects	5.8974	1.11909	39
Existing_financial_conditions_indicating_risk_in_near_future	2.8462	1.22557	39
Ratio_of_your_firm's_current_market_share_to_the_expected	5.7436	1.16343	39
Amount_of_work_the_client_carries_out_regularly	5.8462	1.03970	39
Amount_of_repeat_business_level_that_the_client_has_following	5.8718	1.03057	39
Contribution_to_increase_the_contractor_firm's_classification	5.8462	1.01407	39
Contribution_to_increase_the_firm's_identity_and_strength	5.5897	1.06914	39
Increasing_firm's_market_share_and_dominance_in_market	8.1795	0.68333	39
Building_long_term_relationships_with_other_key_parties	2.6667	1.28418	39
Maintaining_long_term_relationships_with_important_influence_markets	2.2821	1.23435	39
Possible_contribution_to_improving_your_firm's_staff_expertise	2.7692	1.24523	39
Contribution_to_break_into_a_new_market_with_productive_future	5.5897	1.25064	39
Firm_future_due_to_value_of_the_completed_project_to_the_public	5.9744	1.08790	39

Fig -1: Descriptive Statistics

3.3 RANKING OF FACTORS

FACTORS	RANK
Completeness of the bid documents (drawing, specification)	01
Management of similar size projects in the past	02
History of client's payment in past projects (considering delays, shortages)	02
Payment conditions of the project creating a risky environment	04
Current financial capability of the client	04
Have qualified subcontractors	04
Allowed duration for bid preparation being enough	05
Have qualified material suppliers	06
Technological difficulty of the project being beyond the capability of the firm	07
Availability of the required qualified materials within the region	08
Possible contribution in increasing firm's market share and dominance in market	08
Possessing enough qualified technical staff to do the job	09
Experience and familiarity of your firm with this specific type of work	10
Current financial situation of the company	10
Project size (total bid value)	10
Terms of payment	11
Profits made in similar projects in the past	12
Current workload of project, relative to the capacity of your firm	13
Availability (number and size) of other projects within the market	14
Current workload in bid preparation	14
Ability to fulfill tender conditions imposed by the client	14
Amount of work to be subcontracted relative to the total volume of work	15
Contribution to firm's future due to value of the completed project to the public	16
Market's decision (whether it is declining, expanding, etc.)	17
Amount of repeat business level that the client been following	17
Allowed project duration being enough	18
Penalty conditions for not being able to complete the project on time	18
Availability of required qualified labour within the region	18
Desire of qualified contractors to bid and win the project	18
Amount of work the client carries out regularly	18
Possible contribution to increase the contractor firm's classification	18
Amount of possible upcoming profitable projects out for tender in near future	19
Client's attitude, characteristics and stability in needs	20
Ratio of your firm's current market share to the expected or aimed share	20
Uncertainty related to the construction site condition	21
Possible contribution to increase the firm's identity and brand strength	22
Possible number of competitors passing the requirements	23
Possible contribution to break into a new market with productive future	24
Availability of the required plant within the region	25
Possible contribution in building long-term relationships with other key parties	26
Possible contribution in improving your firm's staff expertise	26
Financial status of your company (WORKING CASH REQUIREMENT OF PROJECT)	27
Need for continuity in employment of key personnel and workforce	28
Existing financial conditions indicating a financial risk in near future	28
Amount of equipment that needs to be hired and the hire rates in the market	28
Possessing enough required plant and equipment to do the job	29
Rigidity of specification	30
Project type	31
Contribution in maintaining long-term relations with important influence markets	32

4. CONCLUSIONS

From the above data collection and data analysis, we can conclude:

- Majority of the focus during the bidding was kept on top 10 factors. Next section of factors used to vary from project to project and from client to client.
- The response rate was 65 % and the scoring varied from respondent to respondent despite having same turnover and working for same type of project.
- The time of asking for response was also an issue. If the questioning was done

when the respondent was busy, then one used to give answers haphazardly. During the respondents convenience, the survey made and explained thoroughly.

- Literacy and education played an important role, as many of the respondents were either uneducated to English or did not cope with technical terms.
- Despite being uneducated, some of the respondents knew how to get the work done on the basis of experience.
- Respondents never disclosed their ingredient to obtain the work as it may open their monopoly to the market.
- Attitude and behavior during the conversation was also considered as mood swings adversely reflected the survey.
- Some respondents said that this survey cannot decide the exact strategy as the industry is less dependent on pre- planning then on the planning made at the time of an issue.
- This survey can be used to analyze and understand the philosophy and psychology of the awarded contractors.
- The survey may or may not produce the exact result.
- Some of the respondents commented that experience, familiarity of work and current financial condition of the contractor decides the level of accuracy. With more work comes accuracy but with more familiarity comes precision.

5 RECOMMENDATIONS

5.1 TAXATION SYSTEM:

Tax system in our country is tough to understand and construction industry is the one industry which is directly linked with more than 25 other industries and indirectly linked with more than 150 other industries. So the taxation in any one

industry may a bit or largely affect the construction industry.

When GST was implemented on a sudden pace, the ongoing works had to suffer as the materials had GST included which was not considered during bidding. To counter react, on the awful implementation of GST, many contractors went on strike. After the negotiation with authorities, the work resumed with satisfactory settlement.

One of the respondent nicely commented on this saying, "the moment you thoroughly understand one tax, their sudden implementation of other and all your hard work for old tax goeswasted.

Other respondent commented, "number of taxes exceed the population of our country, it is mess, full of loop holes".

5.2 BEHIND THE CLOSED DOOR

This call up for bribery and corruption that has entered deeply into our system.

5.3 COMMENTS BY RESPONDENTS

- ☒ Know your company's capacity and credit.
- ☒ Check the profitability of the other available projects
- ☒ Know your bottom and top limit
- ☒ No extra or useless personnel to be employed, Why pay more.
- ☒ If you can't fulfill, then better don't get the work avoid fines, penalties and more of losing your name
- ☒ Cash, loan and assets with the company
- ☒ Jack of none, master of one. Excel in one type of project only.
- ☒ Right person at right place at right time
- ☒ If it does not affect then o affect, but if affecting then delay
- ☒ Small and small make a big one
- ☒ Punctuality = delivery in time
- ☒ More the workers, more is the management required
- ☒ Check whether the equipment is needed to buy, hire or rent
- ☒ Always know your cards before placing them on table

- ☒ Payment must be such that no reasons for delay can be made or tolerated.
- ☒ Profitability = familiarity
- ☒ All the documents are made legal and verified by said authorities.
- ☒ If you need work then time for bid is not needed
- ☒ Financial capacity of client. Converse with contractor who have worked with the client in the past.
- ☒ Clients result varies from client to client and from project to project.
- ☒ Don't hesitate to work under a bigger company
- ☒ Check the stability of client
- ☒ Client is god, always remember that.
- ☒ Branding by work

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