

# Indispensability of Cost Management in Construction Projects

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## Abstract

*Construction Industry is gaining momentum again, after the devastation of demonetisation of one thousand rupee and five hundred rupee notes. The demonetisation had very badly hit, particularly the construction industry. The situation has appreciably improved now. In a way, the act of Government has brought in perfect system in construction industry which was, earlier, a platform for high level cash transaction that has transformed into compliance of strict procedures for transparency. Further, the easily made available housing loan facilities have enabled the purchasers, particularly, the youngsters, to avail the institutional finance for a longer period enabling them to buy apartments of their choice. Big Builders with a renewed vigour are vying with each other in cashing in on the construction market. We have been able to see widespread construction activities, once again, in Cities and outskirts of same. Apart from established companies, small and medium builders are also in the field, catering to customers' requirements in their own way*

**Key Words:-**Cost Management, Quality Management, Time Management, Safety Management

**Scope of Research:-**The scope of research was restricted to Ten Construction Sites in the Chennai City Outskirts. The details are tabulated below.

**Table 1 – Site Details**

Contours	Specifics
No. of sites visited	10
No. of projects with 8 floors	1
No. of projects with 5 floors	2
No. of projects with 4 floors and less	7
Swimming Pool, Gym, Social Club House, Super Market	1

**Table 2 – Details of Personnel at the sites**

Contours	Specifics
Availability of Qualified Construction Engineers	Only at 3 sites
Site In Charge	All 10 sites
<b>Qualification Details (for all the ten sites)</b>	
Civil Engineers	8
Graduates	36
Under Graduates	337
Male Personnel	314
Female Personnel	67

## Discussion

Personal discussion at the sites and availability of secondary data.

## Reasons for cost shoot up

Costs are of two types. One is anticipated and the other one is onslaught. The anticipated costs are well/ managed and controlled and the onslaught costs will shake the projects.

**Anticipated Costs:**

All the costs that are chalked out during the planning stage itself come under this. Material Costs, Labour Costs, Transportation Costs, Insurance Costs, Rent for hired machineries, Administrative Costs, Payment of Fees and other exigencies to Statutory Bodies and Authorities etc.,.

**Onslaught Costs**

These are sudden costs. These produce a jerk in the system and would even bring the projects to a standstill at times. Unexpected increase in material prices, soaring transportation charges, sudden demand for increased wages, cost penalty due to purchase from alternative sources, costs due to reworks or alterations etc.,

**Contractors should be prudent enough**

Gone are the days when people respected word for more than a deed; mutual co-operation and leaning on one another was existent, a deal was executed only when all the formalities were complied with to the full satisfaction of parties concerned, breach of word was never there.

Business was going fine - the suppliers and buyers; builders and contractors had a perfect and mutual understanding and no cut throat behaviour was seen.

Present day scenario is totally different.

A deal is governed by more of technicalities and several agreements. No activity is ever thought of without a valid legal document. Papers have relegated the words. Hence, the contractors should be prudent enough to pen down 'all' the activities to be covered in the agreement.

The Builder is the ultimate person answerable to both the Contractors (labour and material) and Customers.

The provisions of RERA (Real Estate Regulation Act) are more favourable to purchasers than to builders. As such, the builders should be extremely wary enough in their contracts – suppliers/customers.

**How to contain Costs?**

Costs are silently creeping, eroding the profits to the builder. While the customers are protected with the price per sq ft, any increase is only to be borne by the builder. Neither can he say no to the supplier nor pass on the price increase to the prospective buyers.

Since the customers have chosen the builder based on the price already indicated to them, revising the price will either lead to cancellation of the purchase or litigation.

The Builder has the comfort only with the supplier. A Prudent Builder would always enter into an agreement with the Suppliers (both men and material) so as to protect himself from any fluctuation in price or deviation from practice.

**A well drafted agreement is a Must**

Whatever be the value of the contract, it is advisable to get protected by clauses and sub clauses for the purpose of hassle free execution. One builder made a frustrating remark that his project was badly affected due to delayed supply of sand.

Though Man Made Sand or Artificial Sand is there, its acceptance with builders is yet to be popular.

The delay in supply of river sand has virtually brought the project to a halt. The Builder only had to accept all the losses owing to the delayed supply of river sand by the supplier.

One builder said that if they insist on agreement, bringing in the clause of penalty for delayed delivery, no supplier is coming forward to accept the deal. The supply of river sand being very limited and the demand getting more and more, no river sand supplier is ready to get into agreement with the builders.

The real situation is that the builders are at the mercy of sand suppliers.

There were also occasions when the prices of river sand have gone up at exorbitant levels and supply becoming erratic, the builder had abandoned the projects, suffering huge loss. This is not an uncommon sight at small sites. The big and well established builders either have their own sand quarry or enjoy wide range of suppliers with assured price and delivery.

Their business always starts with well chalked out Agreements. The suppliers are assured of business and they in turn guarantee unstinted delivery of river sand at the agreed prices for the given period of agreement coverage.

Since this is the practice with large scale builders, they feel safe. This is not the case with small builders and hence, they are always at the mercy of sand suppliers.

#### **Not only Sand and Bricks but also for all Materials**

The Agreements cover both the parties in contract. A carefully worded agreement is a shield for all practical purposes. This will become a matter for consideration only at the time of an untoward occurrence taking place.

When the work is inordinately delayed due to undue delays in delivery, the bone of contention would be who should bear the loss. The Builder who is incurring the loss has every right to have it recovered from the supplier, provided the contract agreement is crystal clear in its form.

The binding clauses of agreement would make the supplier more committed in his delivery schedule. Large scale Builders, have Contract Agreement with almost, all suppliers. This is, perhaps, the reason for their roaring success in the field.

#### **How to measure cost overrun?**

At the time of design stage itself, cost sheet is prepared by the builder detailing the various cost heads and the likely costs to be incurred during the course of construction. In fact, all the builders, while preparing the cost sheet, adds a provision clause by which they take an average escalation of about 20% in the overall cost, for any exigency that might arise during the course of the project execution.

The total cost depicts a picture of estimated costs plus a reasonable cover for escalation. Hence, the total cost arrived at will be very fair in terms of reflecting the actual situation.

#### **Work in Progress must always be measured and quantified**

The basic costing principle is that work in progress should always be quantified. For each work allocation, budget allocation is also simultaneously made. Hence, at any point of time, cost comparison can always be made. This will give a realistic picture of whether there is cost overrun or not and whether the project is satisfactorily moving forward. The work completed will be compared with the cost of work for that given point of time. For example, half the work is completed with half the cost estimated, the situation is quite under control.

In case not even half the work is completed for the estimated cost, it only shows that project is lagging behind the schedule and hence, more attention should be given to set it right to fall in line with the cost – schedule.

Suppose, for half the work done, full cost has been expended, it will only convey that the work is costing ‘double’ the expenses.

#### **Periodic Review is inevitable**

Periodic cost review with the performance should always be conducted. While normally, the cost review is done on a monthly basis, it is restricted to between comparing the costs of what was indicated and what has happened.

One of the builders made a plain remark that mere comparison won't do. The reason for variation is to be found out and the root cause is to be detected and cleared.

He said that in one of his earlier projects he made a scrutiny of spiralling costs in labour wages. It was noticed that the extra labour wages was just for the rework done many times.

Two things were observed by him. The customers who booked the apartments were free in giving suggestions of their choice to be implemented in their apartments. The Site In Charge was very liberal in acceding to their requests and kept on modifying the job, almost in all the apartments.

On an inspection, the builder was quite surprised that many deviations were done in almost, all the apartments, just to cater to the fine requirements of the purchasers.

This has cost him, besides materials, negative labour output. This is only just an example.

Periodic review of costs is to be done and the cause for such cost escalations are to be found out and eliminated forthwith.

This is applicable to Labour, Materials, Transportation, Insurance and other Administrative costs as well.

### **Design and Execution**

It is observed that 80% of the cost projections are well done at the design stage itself. The remaining 20% costs only play a crucial role in the project execution. Sudden shoot up of material prices, transportation costs and wasteful labour costs such as explained above, cause tremors to the builder.

While the builders are safe in budget allocation and finance apportioning, they are only struck and badly hit by the 20% execution costs. However carefully planned, it was opined that the execution costs are only the cause for concern.

All experienced builders, especially the renowned big builders, pay a special attention on this 'execution costs'.

While Cost Management is a broad thing, there are several important areas which contribute significantly on cost reduction or badly on soaring costs. A few very important areas are classified below.

The discussions with various builders confirm that these crucial areas are to be given personal attention by the builders. They are:

Quality Management

Time Management

Safety Management etc.,

### **Quality Management**

Quality is no longer a 'Quality OK' Seal pressed on the product. The modern concept is quality is the price paid by the customer for the product. In other words, the price of the apartment is for the quality of the apartment. Present day Customers are quite aware of things and they demand quality from the Builder.

While the Big Builders are always quality conscious, the small builders are wooed by sub quality products to get extra profit. The problem starts only here. While in look, shape and other aspects, they exactly resemble the original products, durability is poor. This will come to light only after some time – probably the occupants will feel, soon enough that they are provided with a poor quality products.

Some builders lost their reputation and had to quit the field owing to poor quality image. Hence, never make any compromise on quality of the product.

While quality products are always higher priced, there are several ways to save on costs on this as well.

Enter into a Rate Contract with the Suppliers for a specific period. During the currency of the contract, the items are to be supplied only at the rates agreed to. Even if there are price increases, such are to be borne only by the supplier and not the contractor.

Another important thing is that never bank upon a single source only, however sound they are. Large Builders always have more than two suppliers so that they can always remain safe in the wake of any exigencies.

Their style of business is that the off take is distributed to the two suppliers (some builders have more than 3 sources) so that they are always in the loop. This adequately safeguards the business interests of both the supplier and also the contractor.

Small builders have to learn this from larger builders as this is the safest mode for cost saving without compromising on quality standards.

### **Time Management**

This is well observed by large builders only. In one site, it was observed that time management was the essence of their success in the field. This is being followed by them at a very commendable level. In fact, that's why they are the most sought after builder.

In another site also, time management concept was understood by the Builder and the staff and they were doing all their best for that.

Barring these two sites, in other 8 sites, it was negligibly felt or for that matter, hardly felt. The underlying reason is that the builders, per se, are not very keen on this aspect. Probably, this would be a major reason for their not being able to scale the height in the business. Customers today are very knowledgeable and their expectations are also very high.

'Word of Mouth' plays an important role in construction projects. One satisfied customer will bring forth many to the builder. Same way, a dissatisfied customer will prove to be chasing out prospective customers from the builder. This is very important.

It was learnt from a 'Big Builder' that they would not mind spending even more on a thing, provided it gives absolute satisfaction to the customers and will ensure timely handing over of the apartments. Customer satisfaction, they said, is their motto.

Money is secondary and customer satisfaction is primary, the Builder said. They are known for their time management and commitment and that is the reason for their reputation.

The Builder further said that, if necessary, he would ask the work force to stay back and continue the activities overnight also, with an assured double wages to them. The workers were quite happy and in fact were eagerly looking for overtime.

He further said that it would be costing him more (the extra money spent) but he is sure that the work is completed ahead of the schedule.

One important thing to be noted here is that additional cost is not always burdensome or eroding the profits but would also prove to be good and winning the game.

The Builder further said that while chalking out the cost estimate at the design stage itself, he would make 'sufficient buffer' for such exigencies and would decide on his 'pricing' accordingly. As such, such additional expenses will not have any bearing on his profits.

What is required is only sheer prudence.||

### **Safety Management**

At many sites, safety management was not in practice at all. In one site (the mega builder) all sorts of safety devices and the safety precautions were clearly written in local vernacular (Tamil), English and Hindi.

All the workforce were quite clear about the role of their performance and reporting system.

Language was not a barrier at all. It was noticed that even the migrated workers were at ease at the site.

Helmet wearing was compulsory. Even the helpers (Sitthhal – ladies meant for small and odd jobs) were found to be wearing helmets.

Hand gloves was furnished to the workmen.

First Aid Box, packed with full medicines, was there.

Aluminium ladders were in use.

The scenes at the other sites were causing dismay. The workers were doing the job facing risks from all over. Not even emergency medicines were there. The ladders were made of broken wood pieces tied with rope and cloth.

A Site In Charge made an off the record remark that in the event of any accident, the builder would pay some paltry sum to the victim and send him off from the site.

The case of migrated workers was very pathetic. When they were asked to leave the site, they would only plead with the builder to permit them to continue working in the site, braving further accidents|.

They were not aware of the statutory protections to be provided to them by the Builder. They were also not worried about any compensation for the accidents but were only interested to continue their work at the site. They were that much worried about the loss of job. Probably, this would come handy to the avaricious builders.

The small builders are aware that if any untoward incident occurs, huge compensation is to be paid to the victim. In spite of this, they are not worried about taking insurance cover for the persons working at the site.

Some builders even said that their responsibility is only to give them wages once in a week for the job they do and nothing else. Safety is their (workers) bother and not their (Builders) work.

Administrative Management matters a lot. Trying to avoid or save on unavoidable expenses will only result in penalty and legal entanglements. Never be Penny Wise and Pound Foolish.

While big builders have their own machinery, small builders survive only by using them on rent. It is a fact that construction machineries are in great demand for rent. Use of machineries is cost saving and fast executing the job. Hence, even small builders prefer to use machineries as far as possible. This has led to jumping of rent charges by the equipment suppliers.

For small and even for the medium builders, taking the machineries on rent is inevitable and hence they have to make careful planning of the work in advance. The best way is to get all things ready and then call the machineries so that everything can be done at one go.

While the rent charges cannot be avoided, optimum utilisation of the machineries is quite possible. Careful planning and organising will yield better cost output benefits.

## **2. Conclusion**

Construction Industry is attracting the attention of not only established builders, but also new comers with venturesome attitude.

The demand for housing flats is on the surge. The higher disposable income of people, the increasing movement of people from rural areas to town for employment and other purposes, easily available institutional finance for longer periods and the recent surge after demonetisation and all these have been contributing for the construction projects on the increase.

The positive attitude of youngsters to possess own accommodation is yet another factor for this.

Except a few large scale, disciplined builders, most of the small builders fall behind their promises and they have to face the frustration of customers often. The actual cause for this sliding commitment is cost overruns.

They are not able to withstand the delays in sale of finished apartments. Interest cost is pressing them hard and eroding their profit margins.

All these can be avoided only by proper planning and execution.

## **Recommendation**

Interest cannot be avoided. Whereas, borrowing can be definitely restricted to minimum. One of the builders, in his anxiety for speeding up of the second project, took heavy loan from private market at exorbitant rate of interest.

The project was also completed ahead of schedule, but most of the apartments remained unsold, literally beating him up. He had to manage the payments to money lenders by making fresh borrowings from one place to another.

Capital structure is the back bone of business. Doing business with borrowed funds is dangerous, particularly in construction projects where competition is more and the sale is also determined by the whims and fancies of customers. Cost check measures are to be strictly implemented.

Meeting with all concerned should be organised once in a fortnight to assess the situation. This is necessary to plan and initiate corrective action.

Many builders believe that massive advertisements promote sales. While it may be true, for the amount of money spent on Ad, the sales promotion took place is far from satisfactory. Advertisement may be a promotional tool; but it cannot be all that is deciding the purchase. The cost of advertisement should be given due attention.

One Senior Official of the Mega Builder privately said that it is their reputation that is strengthening their customer base and not the advertisements they flash. This is generally true also.

Given the aggressive competition in the field, cost reduction should be the prime consideration of the builders. They have to necessarily achieve this and then only their price will be really competitive to result in large scale sale and excellent profits.

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