

# A Study on Payment Problems in Construction Industries in Goa: Prevalence, Nature, Underlying Causation Factors and Remedies

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## Abstract

Infrastructure Development is the back bone of economic development of a country. Due to increased construction activities, the problems related to the construction industry are also getting more. Due to this, a lot of difficulties and hurdles are increasing day by day. The scenario is the same in private and public construction projects where there are lots of contractual issues between the client, contractor, sub-contractor and materials suppliers. The increasing complexity of construction projects combined with the inefficiencies in conventional construction management techniques has led to unnecessarily elongated payment cycles and other payment problems which can adversely affect the performance of projects and involved stakeholders. Payment issues are the common challenges in the construction industry, and contractors often face delays or difficulties in receiving timely payment. The main objective of this paper is to investigate construction payment problems, their common root causes, impacts and answers to the payment issues in the construction project in Goa. Generally, construction projects are very large in scope ranging from building projects, civil engineering projects to industrial engineering projects, but the causes of delay on these contracts remains virtually the same although it may be more in terms of cost or time implication in some than the other due to lack of complete certification and expertise. This research aims to identify the main causes of delays in payments by contractor by collecting data from contractors. Due to limited time and availability of information, research is conducted through literature reviews and questionnaire surveys. The findings of this research work will help the contractors and subcontractors in Goa to mitigate or control the irregularities in the future construction works. Based on the findings of the survey, the causation factors for the delay in payment and remedies are suggested in the research work.

**Keywords:** Construction Management, Contractor, Subcontractor, Payment, Delay in Payment, Impact of Delay, Contracts Management

## Introduction

Payment issues are a common challenge in the construction industry, affecting stakeholders at every level of the project lifecycle. These issues arise from the complex and often fragmented nature of construction projects, which involve multiple parties, including clients, contractors, subcontractors, and suppliers. The payment process in construction is intricate, governed by contractual agreements, project milestones, and

regulatory requirements.

Delays in payments, disputes over amounts, underpayments, and non-payments can lead to significant consequences such as project delays, financial strain, and even litigation. These problems often stem from factors such as unclear contract terms, poor cash flow management, variations in project scope, and disagreements over work quality or completion.

Understanding payment issues is critical because they directly impact the financial health of contractors and subcontractors, influence project timelines, and affect industry relationships. Resolving such challenges requires a combination of strong contractual frameworks, effective communication, and dispute resolution mechanisms. This introduction provides a foundation for exploring the causes, impacts, and solutions to payment issues in the construction industry.

Here's an overview of key payment-related problems and their implications:

- 1. Delayed Payments:** Owners or clients fail to pay contractors on time, causing cash flow issues throughout the supply chain.  
Reasons: Bureaucratic delays, disputes over completed work, or financial problems on the client's side.
- 2. Underpayment or Non-Payment:** Contractors or subcontractors are paid less than the agreed amount or not at all, often due to disputes over quality, scope changes, or claims of incomplete work.
- 3. Disputes Over Variations:** Changes to the project scope (variations) may lead to disagreements about the additional costs, resulting in delayed payments.
- 4. Retention Money Issues:** A portion of payment is held as retention to ensure project quality and is often not released promptly after project completion or defect liability periods.
- 5. Inadequate Payment Schedules:** Ambiguous or poorly structured payment schedules in contracts can lead to disagreements over milestone achievements.
- 6. Lack of Documentation:** Incomplete or incorrect invoices, timesheets, or lack of supporting documentation for claims may lead to payment delays.
- 7. Bankruptcy or Insolvency:** Financial instability of project owners, contractors, or subcontractors can halt payments.
- 8. Disputes Over Performance:** Conflicts about whether the work meets contractual requirements can delay payments.

### **Construction Delay and Reasons for Delays in Construction**

Construction delay is the major problem in the construction industry and are extensions or interruptions in the project schedules that prevent the construction work from being completed on time. Project delays can be caused by wide variety of factors, including social causes, financial stability, uncontrollable weather conditions, shortage of materials, and disputes between various stakeholders in the project. While many delays are caused by uncontrollable forces and no one is to blame, there can still be significant financial and legal fallout or disputes when planned project completion time and budgets are not successfully met.

### **Reasons for Delays in Construction**

Issue will raise when the construction project is delayed. Only Contractors cannot be blamed always for the delays. Sometimes, a client will make decisions or initiate changes or deviations that significantly impact the work schedule which is deviating from the contract. Examples of delays caused by client include:

- Delay in the design and necessary changes requiring rework or additional resources
- Slow in the approvals for contract documents, updates and construction contingencies
- Disputes in the Contract that lead to stopping of the construction work
- Delays in arranging the finance or funding or agreed-upon payments to the contractors, sub-contractors and materials suppliers
- Issues related to the access of construction work site based on environmental regulations or zoning.

### Impacts of Payment Issues

1. Cash Flow Problems: Contractors and subcontractors may struggle to pay suppliers, labourers, and other operational costs.
2. Project Delays: Financial instability can slow down work or lead to stoppages.
3. Disputes and Litigation: Payment conflicts often escalate to legal battles, increasing costs and further delaying projects.
4. Damaged Relationships: Payment issues erode trust between stakeholders and harm long-term business relationships.
5. Reduced Quality: Cash-strapped contractors may cut corners to save costs, leading to substandard work.

### Objectives of the Research Work

This study focuses on delay in payment by the client to the contractor. The purpose of this study is to find various factors that cause payment problems in construction projects, their impact, and answers to issues. This research aims to identify the main causes of delays in payments by contractor by collecting data from contractors. The objectives of the study are to:

1. Reasons or Causation Factors for the delay in payment.
2. To determine the impact of the delay.
3. Recommendations for minimizing or controlling delay in payment.

### Literature Review

**MI, Hoque., et al. (2021)** investigated on the impact of delays in construction projects includes time overrun, cost overrun, and compromised quality. The top 5 delay factors: progress payments, rework, lack of skilled labour, poor monitoring, delays in decision making & top 5 damaging effects: time overrun, cost overrun, disputes, arbitration, litigation were identified.

**Ajayi (2016)** noticed that Payment delays can reduce the efficiency of contractors, increase costs, and extend project timelines. According to this study, which used the statistical package for social sciences (SPSS), the reasons for late payments included exaggerated cash flows, claim mistakes, poor financial health, and disagreements about the value of the labour. According to the findings, clients should look for co-investors to back their financial commitment, and stakeholders should collaborate to prevent bottlenecks when deciding how much to pay contractors.

**Sindhu Vaardini U et al. (2015)** identified that Time overruns are the crucial problems faced in the construction industry. Since delays are considered to be a serious problem in the construction industry this study examines the factors that cause delay in construction projects. Based upon the relative importance index method the most critical factors ranked were Inaccurate construction planning, Owners delay in freeing the contractor financial payment, Improper scheduling resulting in poor judgment of time and res-

ources, Shortage of construction materials at site and Contractors financial difficulty.

**Designing and collecting data through a questionnaire survey**

The questionnaire (consisting of 46 questions) was designed based on factors identified as majorly added to the causes of delay, the effects of delay and the methods to minimize delay with reference to the literature reviewed and analyzed. A questionnaire survey was adapted towards assessing the insight of contractors and clients of the relative importance of causes and effects of construction delay. A questionnaire survey was conducted as a source of primary data. A cross-sectional survey method was chosen due to the time limitation of this study. Information collected through the literature review was used to generate questionnaire surveys.

The survey was conducted by using ‘Google form’, and this was forwarded to the potential or identified contractors via email or WhatsApp to save time and money, Face-to-face interviews with contractors were also conducted in few cases wherever the contractor was interested to give concrete response and feedback.

**Data Collection**

We have forwarded the questionnaire to 63 contractors across Goa. However, we have received the responses from 36 contractors (57.14%) regarding delay in the work and delay in the payment.

**Rating Scale**

Each statement in these questions should be rated on a scale from strongly agree to strongly disagree, starting with the rating system was given as follow;

Strongly Agree – 5, Agree – 4, Can’t Say – 3, Disagree – 2, Strongly Disagree - 1

**Table 1: Questions Asked to the Contractors**

Q. No	Questions
1	Changes in the material types and specifications during the construction
2	Changes in the project by owner / client
3	Delay by owner in handing over process or delay in delivering the construction site to the contractor
4	Delay in decision making by the client
5	Delay in financing and payments by client
6	Lack of experience of the client in construction project
7	Legal dispute between client and others (relatives or partners)
8	Problem with nearby structure or facilities
9	Poor management by client in business and finance
10	Unrealistic enforced contract duration
11	Complex payment mechanism
12	Poor planning and scheduling
13	Weak cost control systems
14	Lack of use of modern technology
15	Delays in inspection and testing of work
16	Financial stability of client

17	Withhold of payment by client
18	Insufficient documentation and information for valuation
19	Lack of regular cash flow forecasting
20	Increase in the interest rate resulting in the delay of payment
21	Variations to the construction works
22	Scope of work non-compliance

**Table 2: Questions Asked to the Contractors and Clients**

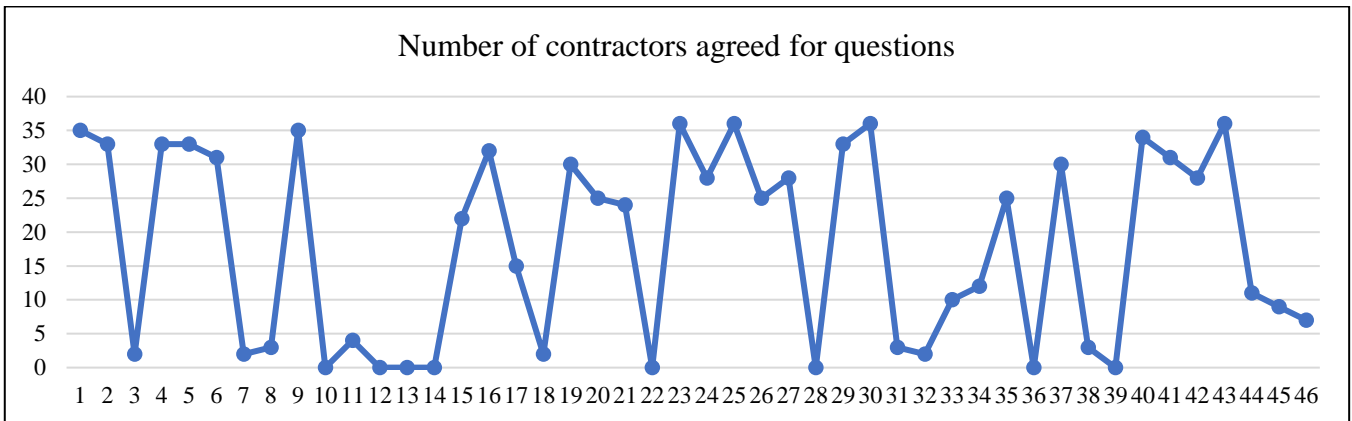
Q. No	Questions
23	Accident during construction activities
24	Changes in government regulation and laws
25	Delay in approval of submittals, drawing, shop drawings and sample materials etc.
26	Financial stability of sub-contractor
27	Delays related to sub-contractor’s work
28	Force majeure (earthquake, etc.)
29	Increased operation cost in the project
30	Inflation and escalation of material prices
31	Lack of experience of sub-contractor
32	Poor communication and coordination with other parties
33	Shortage of construction materials in the region
34	Failure of equipment or plants or machineries
35	Unforeseen or unexpected site conditions
36	Unsafe practice at site
37	Variations / design changes during the construction
38	Material theft on sites
39	Shortage of skilled personnel
44	Increased cost of machinery and equipment
41	Additional work not mentioned in the contract
42	Late delivery of materials and equipment
43	Delay in the work dur to pandemic (COVID – 19)
44	Delay in the work execution due to migration of labor force
45	Difficulties in getting loan from financiers / banks
46	Breach of contract / Contract terminations / Suspensions

**Result and Analysis**

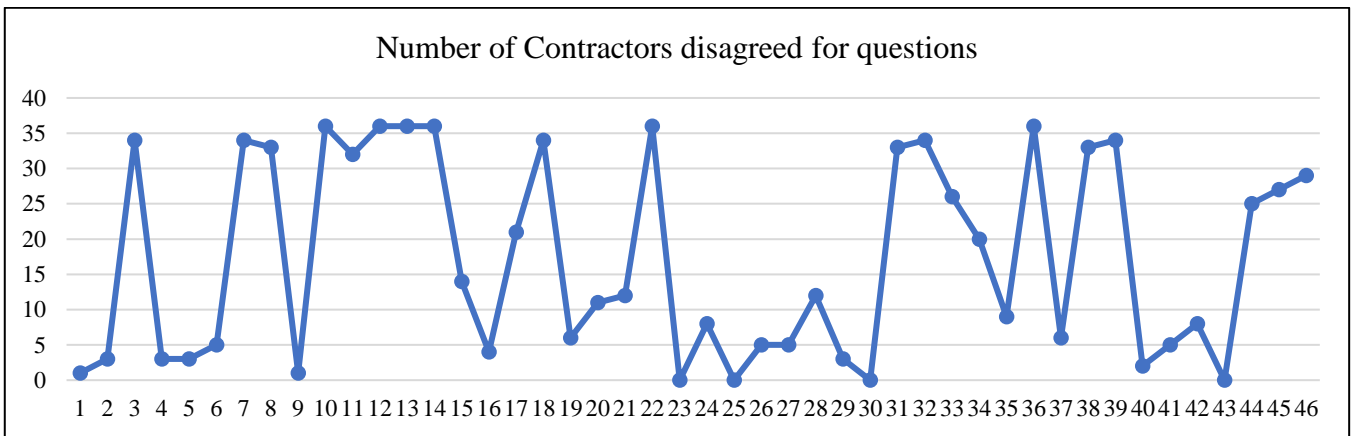
**Table 3: Result Analysis Chart**

Q. No	Number of Contractors 5 & 4 (Agree)	Number of Contractors 3 (Can’t Say)	Number of Contractors 1 & 2 (Disagree)
1	35	0	1
2	33	0	3
3	2	0	34
4	33	0	3

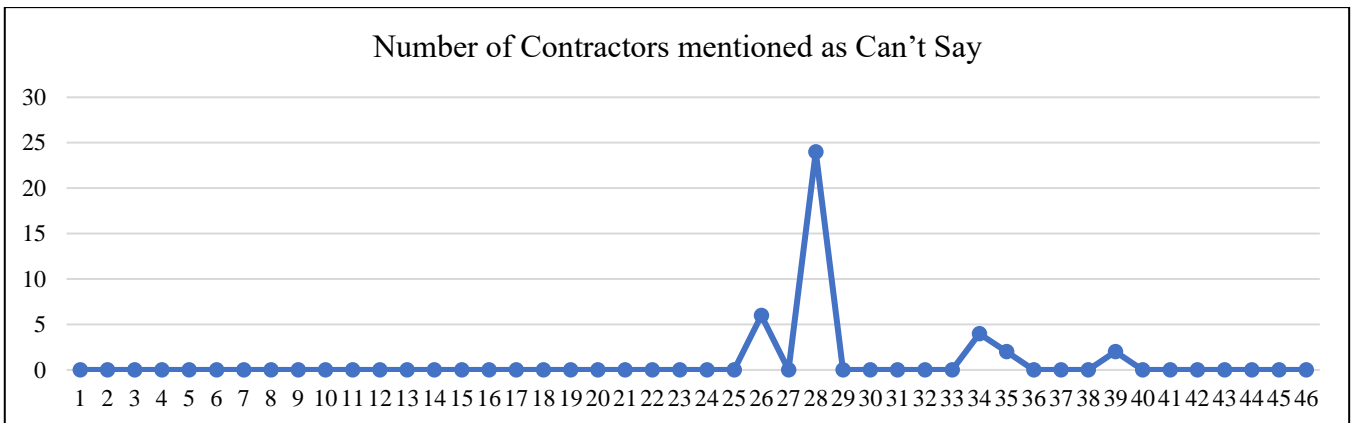
5	33	0	3
6	31	0	5
7	2	0	34
8	3	0	33
9	35	0	1
10	0	0	36
11	4	0	32
12	0	0	36
13	0	0	36
14	0	0	36
15	22	0	14
16	32	0	4
17	15	0	21
18	2	0	34
19	30	0	6
20	25	0	11
21	24	0	12
22	0	0	36
23	36	0	0
24	28	0	8
25	36	0	0
26	25	6	5
27	28	0	5
28	0	24	12
29	33	0	3
30	36	0	0
31	3	0	33
32	2	0	34
33	10	0	26
34	12	4	20
35	25	2	9
36	0	0	36
37	30	0	6
38	3	0	33
39	0	2	34
40	34	0	2
41	31	0	5
42	28	0	8
43	36	0	0
44	11	0	25
45	9	0	27
46	7	0	29



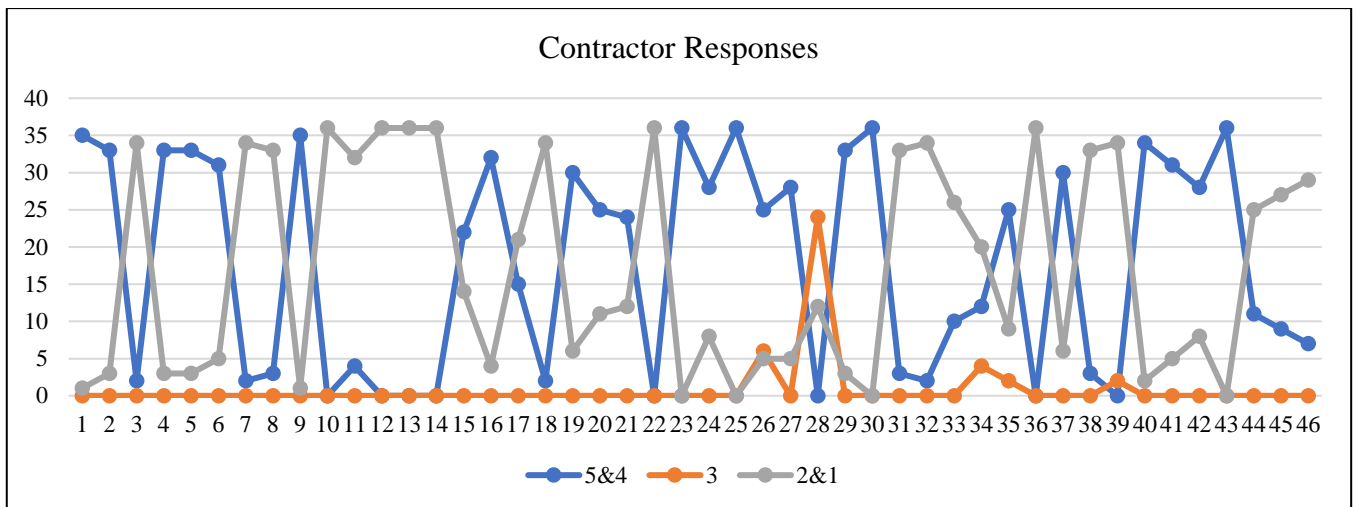
**Graph 1 – Number of Contractors agreed for questions**



**Graph 2 - Number of Contractors mentioned as Can't Say**



**Graph 3 - Number of Contractors disagreed for questions**



**Graph 4 - Graph showing pattern of agree, disagree and can't say mentioned by contractors**

### CONCLUSION AND RECOMMENDATION

After analysing the data and above-mentioned tables of 46 questions, we can categorise all the questions in the following five areas:

- Materials and Equipments
- Contracts Management
- Payment / Financial Planning
- Quality Assurance and Quality Control
- Site Management

In each of the above-mentioned area or category, I have listed few parameters for which majority of the contractors have expressed their willingness which will reflect in the collective opinion regarding the delay in the project completion and payment related issues:

#### Materials and Equipments

Following issues related to materials and equipment were observed during the interaction with contractors:

- Q1- Variations in material specification due to nonavailability of material with specification as mentioned in the contract
- Q30- Material prices increased due to inflation
- Q42- Materials and Equipments were delivered to the site with delay

It was observed that due to non-availability of material as mentioned in the contract, material with similar specification but higher cost was used in the construction work which has resulted in the increase of material cost. Also, the price of material was escalated due to inflation which was deviated from the materials cost as specified in the Bill Of Quantities (BOQ). In addition to this, the materials and equipment were delivered to the site with delay due to which the project was delayed which resulted in the payment issues. Hence effective materials planning and equipment planning are necessary before the start of the work. Also, there should be an agreement between the client or contractor and materials supplier to finalise the materials price in advance which will not give an opportunity for price escalation.

#### Contracts Management

Below mentioned 9 contracts management related issues were observed which resulted in the payment



issues.

- Q2 - client is frequently changing some of the works in the project
- Q4 - Client has delayed his / her decision about the project
- Q6 - Client has less experience in construction work / Lack of experience of the client
- Q15 - Inspection and evaluation of the work delayed by the client / his representative
- Q21 - Variations to the construction works
- Q25 - Client has delayed in getting approvals submittals, revised design drawings, shop drawings
- Q37 - Changes in the design during the ongoing construction site
- Q41 - Extra work are proposed by the client during the ongoing work
- Q43 - Delay in the work due to pandemic (COVID – 19)

It was observed that the client had less experience in construction related work and hence client suggested changes in the project during construction which resulted in variations of original work than agreed in the contract. Due to this, the work was delayed and the delay in decision making, inspection, and approval of revised drawings were resulted. Delay in the work resulted due to pandemic situation which was not mentioned in the contract. Hence there is a need of additional contract clauses between client and contractor which will take care off above mentioned uncertainties which will not increase the project cost and will not create adverse contractual situations.

### **Payment / Financial Planning**

Majority of the contractors have agreed with below mentioned 8 parameters which affected payment related issues and hence project was delayed.

- Q5 - Client couldn't arrange the finance, hence payment was delayed
- Q9 - Client has limited knowledge in managing the resources / business / finance at site
- Q16 - Preparedness / Readiness of the client in arranging finance / Financial stability
- Q19 - Financial planning / budgeting is not updated regularly
- Q20 - Increase in the RIPO rate in interest for the loan availed which resulted in the deviation in payment
- Q26 - Sub-Contractor is not having exposure in mega projects, hence financial stability of the subcontractor was not correct / good
- Q27 - Less readiness of the subcontractor resulted in the delay
- Q40 - Machineries and equipment cost got increased due to wear and tear with respect to original budgeting

It was observed that the financial planning of the client went wrong due to uncertainties which affected in arranging funds, this resulted in doing payment to the contractor. In addition to this, the financial stability of the subcontractor was not good. Because of all these issues, contractor has slowed down the construction work which extended the completion time of the project. Hence, it is very important for the client as well as contractor and subcontractors to confirm the source of finance (Banks / Partnership / Joint Venture / Hand Loans) to ensure regular cash flow throughout the project. Hence it is recommended to contact well established financial institutions which will solve the finance or funding issues.

### **Quality Assurance and Quality Control**

Contractors have agreed with below mentioned 3 parameters which affects the quality assurance and qua-

lity control and hence the project was delayed.

- Q1 - Variations in material specification due to nonavailability of material with specification as mentioned in the contract
- Q15 - Inspection and evaluation of the work delayed by the client or his / her representative
- Q21 - Variations to the construction works

Due to nonavailability of material with specification as mentioned in the contract, material types and specification were changed during construction as per client's suggestions. There is a possibility that clients sometimes suggest or pressurise the contractors for changes or variations. Therefore, unnecessary changes in type and specification of materials should be avoided by the client.

### Site Management

Following 3 factors were observed by the contractors:

- Q23 - Safety and hazard issues at construction site
- Q25 - Client has delayed in getting approvals submittals, revised design drawings, shop drawings
- Q29 - Operation Cost of the project increased due to various reasons

Safety and hazard issues at construction site will slow down the work. Hence more focus to be given on health, safety, environmental issues and to control accidents at work site. This will reduce operation cost and replacement cost which should be taken care by the contractor. Also, whenever there is a variation or changes in the work, it is the responsibility of the client or representative to get the approval for the revised work with variation and related issues from the competent authority (Urban Development Authority / Municipality / Corporation / Government Departments).

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