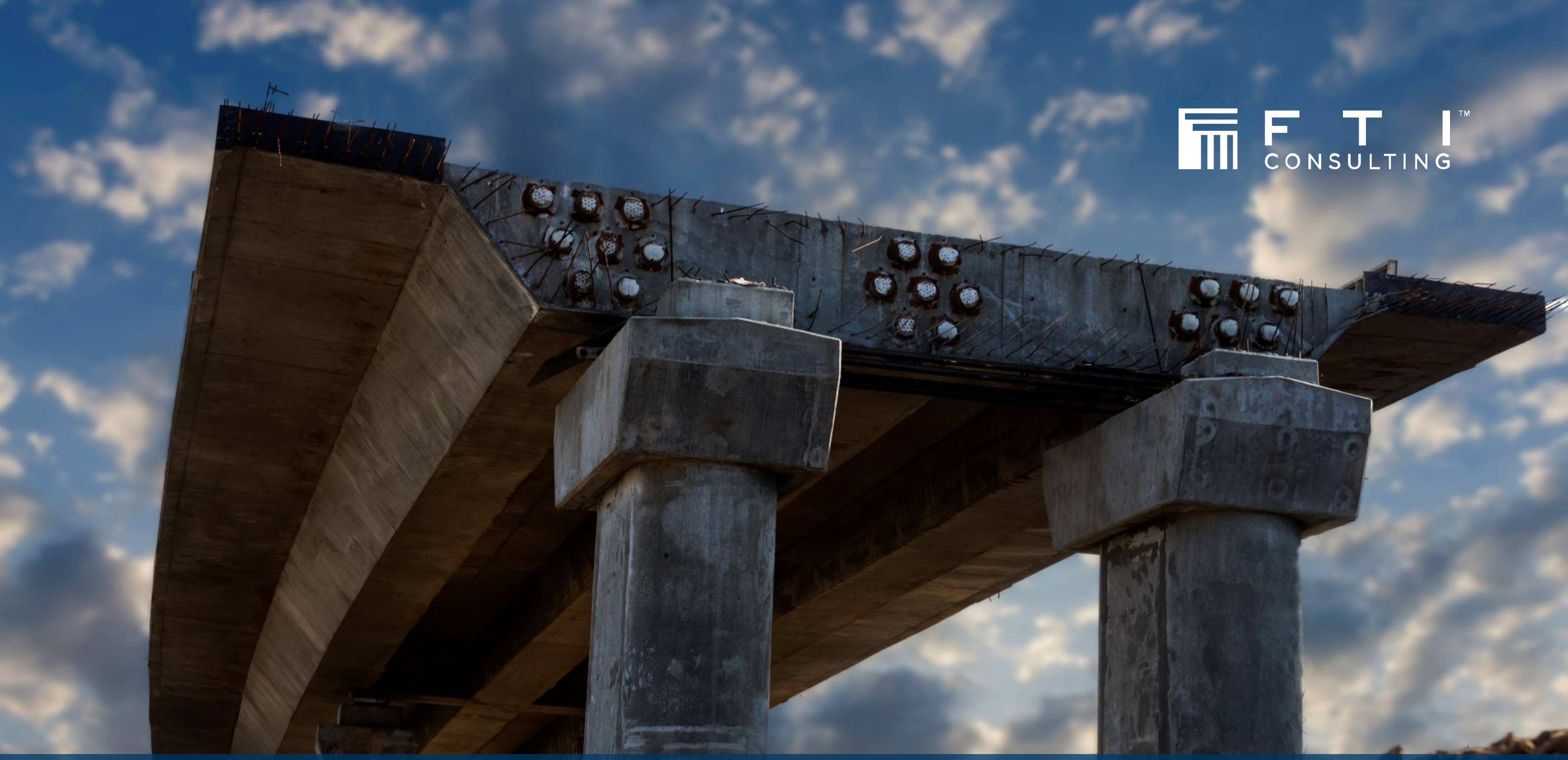


COUNTING THE COST OF DELAY & DISRUPTION

How are costs assessed and what records should you be keeping?

Delay and disruption are endemic throughout the entire building and construction industry and lead to time and cost overruns. In this article, we discuss why identifying delays and/or disruptions early and good record keeping are essential in effectively managing corrective action, quantifying financial impacts and demonstrating liability.

Delay and Disruption – The Distinction

Delay is time related and disruption is productivity and/or production related. A delay may cause disruption, disruption may cause delay, and both often occur at the same time.

Loss Caused By Delay

A contractor's claim for further payment as a result of delay is typically made under the following heads:

Direct additional construction costs: A contractor will usually incur additional site labour costs for working over a longer period, overtime and/or on multiple shifts.

Site overheads: Often referred to as preliminaries or indirect job costs, these relate to items such as site huts, toilets, and equipment and plant items used to carry out the work. When work is delayed, the contractor may incur additional costs to keep these items onsite for longer. If contract terms permit, the valuation of these claims will be based on agreed rates for site overhead items in the contract. However, most often, a claim for additional payment is based on a loss and expense or a damages assessment and is calculated based on the actual additional costs incurred. This information generally comes from the contractor's cost account and/or cost records.

Head office overheads: These types of claims are rare as most contractors can accommodate the additional work using existing resources. However, because resources were tied up on the delayed project, a contractor may be denied an opportunity to take on another project that would have contributed to the payment of head office overheads. To recover for this 'lost opportunity', the contractor must provide evidence that it declined invitations to tender because it did not have the capacity to undertake a new project due to the delayed project.

Loss of profit: Contractors may claim for a reduction in turnover or loss of profit suffered as a result of the delay. A contractor must demonstrate that, had there been no delay, it could have used the lost turnover more profitably. Even if they were making a loss on the project, the question is what the contractor would have done with the money had they received it at the proper time. If the contractor's business was making a loss at the time a sum equating to the loss of profit is recoverable if the loss of turnover increased loss.

Subcontractors: Main contractors may receive claims for delay costs from subcontractors. These delays can be caused by the main contractor, the employer or both. If it relates to delays caused by the employer, the main contractor may make its own claim to recover additional costs paid to the subcontractor.

Quantifying Loss Caused by Disruption

The most common causes of disruption are loss of job rhythm caused by premature moves between activities, out of sequence working and repeated learning cycle; work area congestion caused by stacking of trades, increase in size of gangs; and increase in length or number of shifts. However, these are also symptoms of a contractor's own poor site management and therefore not recoverable.

There are several methods used to calculate loss caused by disruption, including:

- actual costs;
- total and modified total cost;
- project comparison studies;
- speciality industry studies;
- general industry studies;
- the measured mile;
- baseline productivity;
- system dynamic modelling; and
- earned value analysis.

The measured mile and baseline productivity methods are generally seen as the most robust methods. Both compare production and/or productivity during one or more periods when:

- the contractor's progress on site was not impacted by the employer;
- the contractor's progress was impacted by the employer; and
- avoids any comparison with the tender — thus avoiding the argument that the tender was inadequate.

The same principles apply to subcontractors who are disrupted by the main contractor and so on down the supply chain. In fact, it is essential for the main contractor to ensure that its subcontractors conduct a proper assessment of loss caused by disruption as that will most likely form the basis of their own claim to the employer.

"Good record keeping is crucial in avoiding (or successfully claiming) additional costs caused by delay and/or disruption."

Avoiding Global Claims for Delay and Disruption

Good record keeping is crucial in avoiding (or successfully claiming) additional costs caused by delay and/or disruption. If not properly tracked over the course of a project, it becomes difficult later to link them to a cause retrospectively and the contractor then lacks sufficient evidence to demonstrate entitlement to those additional costs.

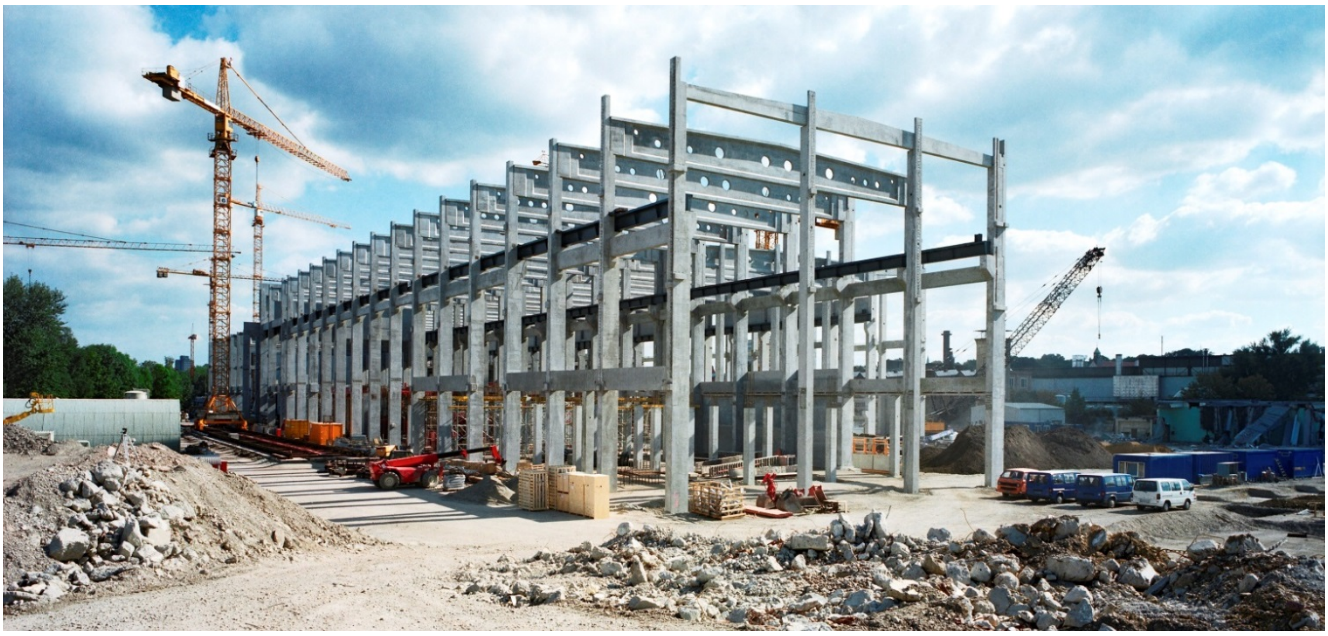
This leads to global claims which are often rejected in negotiations and judicial proceedings because they do not demonstrate the actual cause for the additional costs.

Record Keeping

To support the assessment of delay and/or disruption claims, a contractor's cost recording and record keeping system must capture information that demonstrates:

- additional costs were incurred;
- those costs relate to the delay and/or disruption alleged; and
- why those costs were incurred.

For example, a contractor should be able to identify additional head office, administrative and support costs caused by a delay and/or disruption from those incurred during the non-impacted period. If they cannot, it will be nearly impossible to demonstrate the additional costs caused by change and/or breach, prove the loss and recover the additional costs for which the employer is liable.



Records should also identify the functions of the staff being claimed and demonstrate that their tasks undertaken correspond to the cause of delay and/or disruption. It is quite easy to identify staff costs when 100% utilised for a specific period of time, but less easy if only part utilised in functions relating to the delay and/or disruption.

Further, site establishment costs may be incurred for off-site staff and it will be necessary to distinguish them by using appropriate timesheets. Similarly, there may be head office staff based on site but who are working on more than one project. Again, specific time spent on the particular project in question needs to be recorded appropriately.

Labour costs that increase due to delays and/or disruption are generally difficult to monitor and control and even more so when main contractors subcontract much of their work. In this situation, the additional labour costs will most often be the subcontractor's but becomes the main contractor's loss when payment is made by the contractor to the subcontractor. Once the subcontractor has been paid, the main contractor must demonstrate the loss to the employer and show that the payment was reasonable. Therefore subcontractors must also prove their loss to the main contractor who needs to ensure this is done properly in order to be paid itself.

In Summary

If the costs of a delay and/or disruption are not tracked properly, there will almost certainly be problems in quantifying the loss and apportioning liability. While setting up the right cost recording systems around an existing system is not always easy, it will ultimately assist with identifying delays and/or disruptions early in the project cycle so that corrective action can be taken and the financial effects can be effectively quantified.

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