



Construction payment delays and losses: Perceptions of New Zealand

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Abstract

Payment delays and losses are not a new phenomenon in the construction industry. Both of these combine to elevate the operational risks of construction businesses. In spite of new provisions in the Construction Contracts Act (CCA), New Zealand, construction businesses are still not immune to payment delays and losses. This study investigates the extent of the payment problem and possible solutions that could mitigate payment risks on construction projects. An online questionnaire survey was administered to contractors, subcontractors and consultants for their opinions on the issue. The study found that payment delays and losses are experienced by contractors (10-40%) and subcontractors (10-80%) on the total projects undertaken by them since the CCA implementation. Retention sums are very often delayed while final and interim payments are delayed less than often. Contractors and subcontractors indicated that payment bonds, direct payments and the use of trust accounts were preferred solutions to the payment problems experienced by industry.

Keywords: payment delays, losses, solutions, New Zealand

Introduction

Payment delays and losses have been widely recognized as a bane of the construction industry (Banwell 1964; Latham 1994; Kenley (cited in Gibson (2002); Cheng, Soo, Kumaraswamy, & Jin, 2009); Ye and Rahman (2010); Jin, Kumaraswamy et al (2011). This has driven most countries to provide legal protection by promulgating construction payment-specific security of payment Acts. In New Zealand, the Construction Contracts Act (CCA) 2002 was enacted to improve cash flow to contractors, following the liquidation of many large construction companies that left several subcontractors unpaid (Degerholm, 2003). Although the CCA and other Acts are referred to as Security of Payment Acts, they are not designed to provide security for contractors and subcontractors who are unsecured creditors to construction projects. It was suggested that the CCA would enable the early detection of any disguised inability to pay, thus minimising creditors' loss (The Law Commission, 1999). Therefore it is not uncommon to realise cases of payment delays and losses even after the CCA enactment. Anecdotal evidence suggests that delays and losses are prevalent within the industry and have diverse consequence on the efficiency and stability of the entire industry.

Delays in interim payments and/or release of retention sums by project owners affect the cash flow of contractors and which in turn affects other project participants down the supply chain. These practices often result in the insolvency of construction businesses operating at the lower end of the supply chain (Ang 2006; Wu, Kumaraswamy et al. 2008; Ye & Rahman, 2010). Sherindan (2003) identified the major causes of disputes in adjudication to be associated with the valuation of variations or final accounts and failure to comply with payment provisions. While failures to honour payments by construction clients are caused by bankruptcy and liquidation/receivership of these clients (Chilli Marketing, 2010). Other studies suggest that failure to pay for completed works, delays in payment by agencies to contractors, improper financial and payment arrangements invariably result in project delays (Odeh & Battaineh, 2002; Alaghbari, Kadir, & Salim, 2007). Very often payment delays which result in disputes drive construction parties to suspend and terminate projects. The construction industry is notorious for its high rate of liquidation and insolvencies.

At a larger scale, payment delays drive down the productivity of the industry. For example the stoppage of material delivery to site due to non-payment to suppliers and late issuance of progress payments to main contractors are the top most out of fifty factors that contribute to labour productivity (Kadir, Lee, Jaafar, Sapuan, & Ali, 2005). Durdyeve and Mbachu (2011) suggest that late payments pose significant internal constraints to onsite labour productivity in New Zealand. Little wonder why the New Zealand construction industry ranks within the bottom four in productivity among OECD countries (Constructing Excellence New Zealand, 2008). It is therefore vital that the industry addresses the dire effects of payment delays if it is to achieve its vision of increasing construction productivity by twenty percent in 2020.

Research Objectives

The research aims to propose feasible solutions that will secure payments to construction parties on construction projects. Towards this aim, the study investigates the following themes within the New Zealand construction industry:

- The nature and extent of prevalence of payment delays and losses
- The causes of payment delays and losses
- The feasibility of solutions that could mitigate the payment problem

Research approach and methods used

An online questionnaire survey was administered to construction project consultants, contractors and subcontractors, with operational base in New Zealand. 263 (representing 16%) of the total research participants (1600) responded fully to the survey. This paper presents summaries of the main findings using simple descriptive techniques such as frequency charts and mean value analyses to ease understanding.

Survey findings

Profile of participants

Table 1 provides a summary of the demographic information collected from the participants. It shows that more than 25% of the participants are architects while about 22% and 17% are project managers and quantity surveyors respectively. Majority (over 60%) of the participants have practice experience of more than 20 years in the industry. Participants were also required to give an indication of the number of projects they had undertaken since the implementation of the CCA. Nearly 65% have undertaken more than 50 projects since 2002. Overall the summary in table 1 gives a good participants' profile which suggests that the study findings are reliable.

Table 1: Profile of participants

Questions asked	Responses
Profession	
Number of years of experience	
Number of projects undertaken since CCA in 2003	

Extent of payment delays and losses

The graphs displayed in Figure 1 give the analysis of the frequencies by which contractors and subcontractors experience payment delays and losses on construction projects in New Zealand. It shows that delays are more frequent than losses in the industry. The extent of the problem to subcontractors is higher than contractors. The result show that contractors have experienced payment problems in 10-40% of projects while majority of subcontractors encounter this on 10-80% of their projects.

Figure 1: Frequency of payment delays and losses as a % of total projects

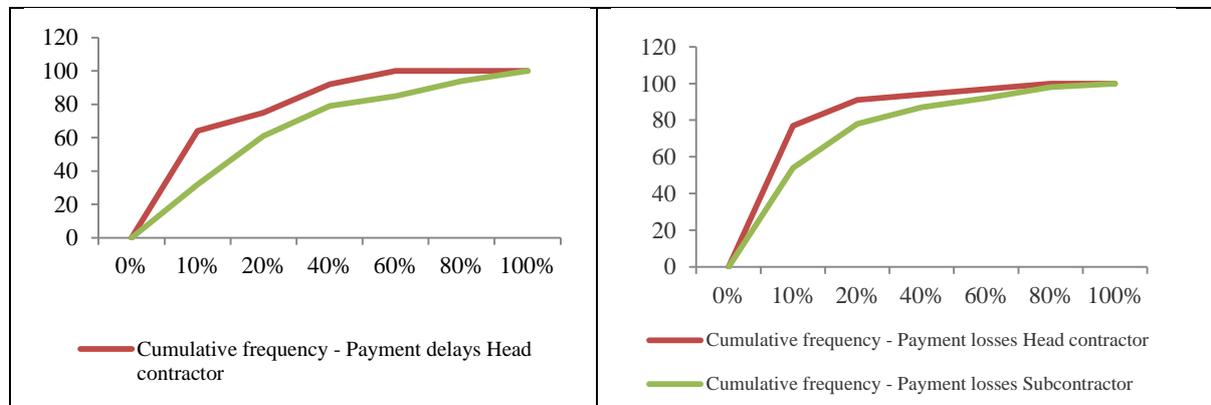


Table 2 gives a summary of the participants’ response to the question eliciting the frequency of delays and losses from interim/staged and final payments, release of retentions sums and other claims. Most of the participants (44 %) indicated that retention sums are very often delayed while final and interim payments are delayed often and sometimes respectively.

Table 2: Frequency of types of payments in delays and losses

Types of payment	Very often	Often	Sometimes	Rarely	Never
Interim/Staged payments	18	20	31	30	8
Final payments	15	34	24	30	8
Retention money (release)	44	25	16	18	46
Claims	23	21	27	20	8
Other (please specify)	0	0	4	1	5

Solutions to construction payment delays and losses

In finding the effectiveness of the solutions the participants were asked to rate a number of solutions on a scale of 1 to 5, 1 representing - Not at all Effective and 5 – Extremely Effective. The data obtained was ranked using mean score and rank analysis techniques.

Table 3: Solutions to mitigate payment delays and losses

	Consultants	Rank	Contractors	Rank
	Mean		Mean	
Payment provisions in the standard forms of contract	3.334	1	2.831	11
Payment provisions in the Construction Contracts Act	3.311	2	3.066	6
Use of trust/escrow account	3.025	3	3.109	4
Pre-qualification of upper tier to their financial status	3.025	4	3.055	7
Use of retention bond to secure retention money	2.975	5	3.227	3
Principal/Payment bond	2.933	6	3.341	1
Disclosure by upper tier of funding arrangements	2.901	7	3.055	7
Direct payment/Tripartite agreement with the funder	2.851	8	3.262	2
Advance bond	2.836	9	3.102	5
Payment guarantee by upper tiers	2.833	10	3.000	9
Payment default insurance	2.738	11	2.819	12
Letter of credit from funder	2.698	12	2.949	10

The results are presented in Table 3 and shows 12 regulation and non-regulation remedies which could mitigate payment problems in the construction industry. The ranking show payment provisions in the standard forms of contract, the CCA, and use of trust/escrow accounts as the top three solutions indicated by consultants, whereas contractors and subcontractors indicated, payment bonds, direct payment and use of retention bonds as the top most preferred solutions to payment problems. A further analyses of the two rankings (consultants and contractors) for their rank agreement, gave a Rank Agreement Factor (RAF) of 3.25 and a Percentage Disagreement of (PD) of 54%. This means that consultants and contractors held extremely different perceptions regarding the effectiveness of the 12 solutions provided to them.

Conclusion

This research investigated the payment problems and the possible solutions that could mitigate the payment problems in the New Zealand construction industry. It collates perspective views of construction consultants, contractors and subcontractors on the issue. The results show that payment delays and losses are still prevalent within the industry, in spite of the enactment of the CCA to improve cash flow, using speedy dispute resolution measures. The result shows that payment delays are more frequent than losses. Subcontractors experienced payment delays in 10-80% of the projects undertaken, more than 10-40% experienced by contractors. Regarding the solutions to the payment problem, consultants and contractors suggested alternative solutions. Contractors and subcontractors prefer the use of payment and retention bonds, direct payment to them as security against payment risks, whereas consultants indicated that payment provisions in the standard forms of contracts and CCA may be more effective solutions to payment problems. However, both parties are in agreement to some extent that the use of trust accounts and retention bonds could help to secure retention monies. Although consultants indicated the payment provisions in both standard forms of contract and CCA as most effective solutions, the individual provisions are identified as moderately and slightly effective.

References

- Al-Khall, M. I., & Al-Ghafly, M. A. (1999). Important causes of delay in public utility projects in Saudi Arabia. *Construction Management and Economics*, 17(5), 647-655.
- Al-Momani, A. H. (2000). Construction delay: A quantitative analysis. *International Journal of Project Management*, 18(1), 51-59.
- Alaghbari, W. E., Kadir, M., & Salim, A. (2007). The significant factors causing delay of building construction projects in Malaysia. *Engineering Construction and Architectural Management*, 14(2), 192-206. doi:10.1108/09699980710731308
- Assaf, S. A., Al-Khalil, M., & Al-Hazmi, M. (1995). Causes of delay in large building construction projects. *Journal of Management in Engineering*, 11(2), 45-50.
- Banwell, H. (1964). *The placing and management of contracts for building and civil engineering work*: HMSO, London.
- Cheng, T., Soo, G., Kumaraswamy, M., & Jin, W. (2009). Security of Payment for Hong Kong Construction Industry – Workable alternatives and suggestions. *Building Journal Hong Kong China*, 60-77.
- Constructing excellence New Zealand. (2008). *New Zealand Construction Industry vision 2025*: Building Research Ltd.
- Degerholm, P. (2003). *Managing Contractors' Cashflow*. Auckland: Rawlinsons Media Limited.
- Dlakwa, M. M., & Culpin, M. F. (1990). Reasons for overrun in public sector construction projects in Nigeria. *International Journal of Project Management*, 8(4), 237-241.
- Durdyev, S., & Mbachu, J. (2011). On-site labour productivity of New Zealand construction industry: Key constraints and improvement measures. *Australasian Journal of Construction Economics and Building*, 11(3), 18-33.
- Gibson, A. (2002). Milking the cash cow. *The New Zealand Herald*. Retrieved from <http://www.nzherald.co.nz/business/news/article>
- The Law Commission. (1999). *Protecting construction contractors*. Wellington New Zealand: Ministry of Commerce.
- Ye, K. M., & Rahman, H. A. (2010). Risk of late payment in the Malaysian construction industry. *World academy of science, engineering and technology*, 65.
- Jin, W., Kumaraswamy, M. M., & Soo, G. (2011). Regulative Measures Addressing Payment Problems in the Construction Industry: A Calculative Understanding of Their Potential Outcomes Based on Gametric Models. *Journal of construction engineering and management*, 137(8), 566-573. doi:10.1061/(ASCE)CO.1943-7862.0000336
- Kadir, M. R. A., Lee, W. P., Jaafar, M. S., Sapuan, S. M., & Ali, A. A. A. (2005). Factors affecting construction labour productivity for Malaysian residential projects [Research paper]. *Structural Survey*, 23(1), 42-54.
- Latham, M. (1994). *Constructing the team: final report of the government/industry review of procurement and contractual arrangements in the UK construction industry*: HMSO: London.
- Mansfield, N. R., Ugwu, O. O., & Doran, T. (1994). Causes of delay and cost overruns in Nigerian construction projects. *International Journal of Project Management*, 12(4), 254-260.
- Odeh, A. M., & Battaineh, H. T. (2002). Causes of construction delay: traditional contracts. *International Journal of Project Management*, 20(1), 67-73.
- Okpala, D. C., & Aniekwu, A. N. (1988). Causes of high costs of construction in Nigeria. *Journal of Construction Engineering and Management*, 114(2), 233-244.

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