

Wither Monetary Retentions for Subcontract Work? A Theoretical Framework for Rationalising the Use of Retentions

Vasantha Abeysekera
University of Southern Queensland, Springfield, Queensland, Australia

Abstract

Despite advocacy for and against monetary retentions, it continues to be used unabatedly clouded by paradoxes, problems, and pitfalls. In order to lay the foundation to rationalise its use for subcontract work, a model was developed using three concepts, namely, mortgaging future payments, factoring current progress, and generating a level of safety for contractors. Labelled as the LOS model, it supplements and clarifies the notion of retentions and lays the foundation for a framework for rationalising the use of retentions by focussing on three fundamental issues that need to be understood and resolved, namely, 1. Intrinsic issues focusing on ‘do we need retentions for subcontract work?’ 2. Quantum issues focusing on the ‘level of safety’ or comfort available for contractors quantified in dollar terms with retentions rates serving as a threshold level, and 3. Operational issues focussing on implementation. It is expected that this framework labelled as IQO will assist in building theory on monetary retentions in the future furthering our understanding on this seemingly simple yet complex construct.

Keywords

Factoring performance, Retentions, Monetary retentions, Mortgaging payments, Subcontracts

1. Introduction

This paper focuses on a unique practice, a practice where a certain amount of money is retained from each and every payment to contractors as well as sub-contractors, commonly known as ‘monetary retentions’ or simply ‘retentions’. This practice continues world-wide with many paradoxes, problems, and pitfalls. Its value has been highly debated by many authors over the years (Abeysekera, 2008; Champion, 2005; Mendes, 2003; Stockenberg, 2001) despite being labelled as a wasteful practice (Latham, 1997). Several researchers have proposed various solutions such as retention bonds, trust accounts and retention-based funds (Abeysekera, 2003, 2005, 2008; Mendes, 2003; Pearman, 2004) with limited success mainly due to the limited understanding of its purposes and ramifications. In order to address this gap in understanding and to generate greater insights on how to manage retentions, Abeysekera (2008) developed five theories taking a metaphorical approach. It is this *unique* practice that this research examines with specific reference to work undertaken by subcontractors.

2. Monetary Retentions – A Complex Construct

2.1. Desirableness

Despite its apparent simplicity, ‘retentions’ is a complex concept given the lack of a clear understanding of its purpose as evidenced by a plethora of explanations considering also that the purpose of retentions has changed over the years (Abeysekera, 2003, 2006, 2008; Mendes, 2003). In fact, the amount retained has reduced too, from 20-25% over a century ago, to approximately 0-10% at present (Abeysekera, 2003,

2008; Fullerton, 2000). Rates of retention around 20% for subcontract work with a ceiling of 10% are also being used by large contractors in Australia although 5-10% is more common. The Queensland Building and Construction Commission (QBCC) Act 1991 (Australia), for instance, implies a condition into building contracts in relation to limits for retention amounts (and securities) which is set at 5%. However, as so long as parties expressly agree to any retention/security, the contract is not subject to the limits specified in the Act. Accordingly, it is possible for contractors to agree on higher rates before awarding the subcontract. A recent (unpublished) study in Australia by Jensen (2014) highlights that some contractors levy percentages higher than the legislated amount even without such agreements! In the US, all but three states have legislation (in 2004) covering public and/or private work with '95% of the states requiring 5% or less compared to 20 years ago when the typical retained percentage was closer to 10%' (Bausman, 2004). Interestingly, the opposite has happened in New Zealand having regulated retentions as far back as 1892, it was repealed in 1987 permitting industry to decide how much to set. At the time of repealing the legislation, the retention rate originally set at 25% (i.e. in 1892) declined to 10% on the first \$200,000 and 5% on the next \$800,000, and a further 1.75% thereafter with a ceiling of \$200,000. Clearly, the rates and regimes seem to vary around the world.

This is not surprising as the purpose of retentions is not clearly specified let alone being understood. Many have attempted to explain its purpose as noted before: protection against insolvency; rectification of defects during construction and the defects liability period (DLP), as a leverage to get defects put right; as a performance security; incentive for early or timely completion (see Abeysekera's Steroid Theory, 2008; financial security in case of over payment; as an administrative convenience; for quality assurance; and also as a source of working capital for clients and main contractors (Abeysekera, 2008, 2012; Champion, 2005; Raina & Tookey, 2012; SECG, 2002). Furthermore, Abeysekera (2008) in his Cash Cow Theory explains how retention regimes may differentiate a positive cash flow for contractors. Unfortunately, none of the standard form contracts provide any definition either; the only instance the author has come across a definition that explicitly states the purpose of retentions is in the QBCC Act. To quote, the purpose of retention is to 'give financial protection to the contracting party in relation to the need to correct defects in the building work, or otherwise secure, wholly or partly, the performance of the contract' (vide Clause 67C (b)); indeed, this is noteworthy as there is a need to have a clear understanding of its purpose.

Despite its desirableness, there is no evidence yet that a systemic and a rational approach has been adopted for setting up a retention regime for construction work carried out by head contractors (Abeysekera, Priyanka, & Nietzert, 2009; Bausman, 2004; Mendes, 2003) or for subcontract work. Standard form contracts provide no guidance either other than to indicate an approximate range that can be levied (see, AS 4000:1997, NZS 3910:2003) and this too for work carried out by main contractors only and not by subcontractors. No plausible explanations are available either as to why such percentages (or a range of percentages) should be applied but for a study by Abeysekera and Soysa (2012) with regards to subcontract work, and an unpublished study by Das (2008) for work carried out by main contractors in New Zealand with an attempt to set up retention rates for defects liability period (DLP) under the supervision of the author.

2.2. Undesirableness

Abeysekera's Beastly Theory of Retentions (2008) highlights the beastly characteristics of retentions. However, as this study focusses on subcontractors, it is useful to examine problems faced by subcontractors due to this practice. The negative impact on subcontractors' cash flow and how contractors strategically manipulate retention regimes is well explained in Abeysekera's Cash Cow Theory (Abeysekera, 2005, 2008, 2012; NSCC, 2007). This is aggravated by the costs involved in actually having to chase overdue retentions, a significant overhead for the majority of subcontractors, who often have very little idea if or when the retention has even been released to the main contractor. In fact, most subcontractors are vulnerable given that many are small, family-run businesses that depend on a good cash flow to manage their projects (Bill, 2009). One would expect that such problems should not be

experienced in countries where security of payment legislation has been enacted promoting 'pay now, argue later' provisions but there are problems in enforcing the laws as release of retention moneys do not seem to be comprehensively covered in such legislation.

Lost retention is another major issue for subcontractors: Retention monies are either not returned in their full amount due to seemingly false claims, and at times lost through the insolvency of the companies holding retentions, or simply written off by subcontractors because the cost of recovery is disproportionate to the amounts withheld. 'The combination of these factors can equate to substantial sums belonging to subcontractors being written off, which further reduce the already small profit margins' (NSCC, 2007).

Main contractors more often than do not apply the owner's retention regime to their subcontractors in what is referred to as 'back to back' contract terms. This seems to be fair prima facie but there is evidence to suggest that relaxations offered by clients to contractors are not made available to subcontractors: The use of retention bonds is a good example in point as this facility is rarely made available to subcontractors in New Zealand and Australia. Additionally, according to one of the interviewees, a large scale contractor in Australia *'provide for subcontractor retentions to be released in line with Head Contract times for practical completion (PC) and end of DLP (not at Subcontractor's PC and DLP), although this requirement may be relaxed if the time frame between Head Contract and Subcontract completion is minimal or if any defects in the work/supply provided by the subcontractor would be evident at the time of incorporation into the works, or at subcontract PC (allowing the release at Subcontractor's PC, with remainder released still to align with Head Contract PC'*. On large projects, frontend subcontractors may have to wait for over two to three years to get their retentions released!

Interestingly, on the issue of whether the retentions for the defects liability period should be higher than for the construction period, one respondent had this to say: *'As most defects should be identified at PC, the reduced retention held during the DLP seems logical. However, if the potential for defects only becoming apparent during the DLP is reasonably high, then the level of DLP retention should be considered'*. Clearly, there is a need for greater understanding on how to set up a retention regime taking into account that a subcontractor may have multiple contracts with the same contractor.

3. Laying the Foundation for Rationalising Use: The LOS Model

Given the debate on the desirability and the undesirableness of retentions, it is important that a theoretical framework be developed to resolve this matter as there exists none at present. The LOS model described herein lays the foundation for doing so.

Let's examine the payment profile of a typical trade subcontractor. Generally, payments to subcontractors are made monthly in Australia and New Zealand. The subcontractor works for the first month, submits an invoice at the end of the month which is paid at the end of the second month (the actual payment cycle may be slightly different). In other words, at the time of making the first payment to the subcontractor, the main contractor has two months' worth of work in hand provided the subcontractor continues working (in the second month). Accordingly, the contractor, on the average, seems to have at least a month's work in hand as a 'level of safety' (LOS) which can be used for overcoming any financial losses in the event of a default. This scenario is shown in Fig. 1 (for a monthly payment regime). In relation to the defects liability period, a LOS of approximately a month's work would still be available but only during the first month. This begs the question as to why contractors would need retentions as the LOS available seems to be much more than the retention more often than not! In this regard, it would be interesting to propose that the payment-delay is a mechanism for countering the need for retentions!

It must also be pointed out that, in order to effectively ensure an adequate LOS throughout the project, it would be possible to impose a provision through conditions of contract that if no retentions are to be held,

the amount paid will always be subjected to a minimum threshold level of roughly a month's value of work or a portion of it (say equalling to retentions) as a **level of safety**. In essence, this amounts to mortgaging future payments (see Abeysekera, 2002, 2003) and **factoring good performance**. Additionally, it must also be pointed out that if the construction period is less than a month, there isn't a need for holding any retentions during the construction period. Moreover, there isn't a need for retentions during the first month of DLP with any retention held only for the remaining DLP.

**Level of Safety
for contractor
(LOS)**

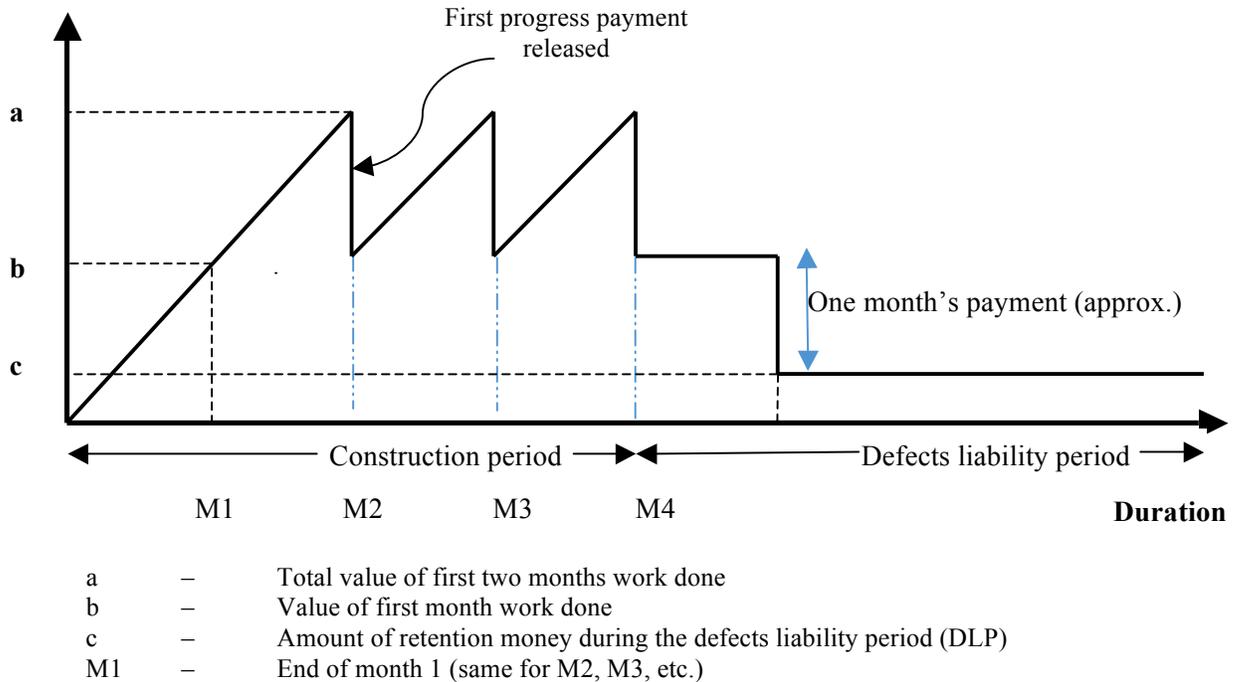


Figure 1: A symbolic payment regime for a project with a three month construction period

4. Evaluating the LOS Model

4.1. Sensitivity of LOS

In order to understand the practical implications of this approach, it would be useful to consider a few scenarios:

Case 1: Duration 3 months; contract price \$300,000; uniform rate of turnover; no retentions

	1 st month	2 nd month	3 rd month	4 th month
Value of work done	100,000	100,000	100,000	
Payments		100,000	100,000	100,000
Level of safety – LOS	100,000	100,000	100,000	0

In this case, if the retention rate was 10%, the amount retained would be 10,000. The LOS would then be 100,000+10,000 = 110,000 which is only a marginal increase. If the limit of retention is only 5%, then the total retention for the whole project is 5% x 300,000 which is 15,000. This compared with the monthly

payment in hand is only 15%. As before, the increase in LOS due to retentions is only marginal. In the event of a performance default, the level of safety of a month's value of work seems significantly higher than the retention. It is only when the duration of the contract becomes larger that the impact of the LOS is diminished. In this case, the contract period needs to be around 10 months for this to manifest. Given that most subcontracts are of a shorter duration, there does not seem to be sufficient grounds to hold retentions as per the LOS model.

This arrangement will certainly reduce the cash flow problems of the subcontractor while also providing a higher level of safety to the main contractor but without of course the cash flow benefits that may be available to contractors who differentiate retentions (see Abeysekera's Cash Cow Theory, 2007).

Case 2 - Scenario 1: Poor second month's performance: Duration 3 months; contract price \$300,000; uniform rate of turnover; no retentions during construction period (CP) but with retentions during DLP

	1 st month	2 nd month	3 rd month	4 th month
Value of work done	100,000	10,000	190,000	
Payments		100,000	10,000	190,000 – R
Level of safety – LOS	100,000	10,000	190,000	R (DLP retention)

In this case, LOS drops to 10,000 by the end of the third month and the payment held in hand would be sufficiently close to the retention held (10% of 100,000+10,000). If a greater level of safety is required, then a portion of the payment made in the second month could be held back as the progress in the second month may be 'poor'. This could be the retention (or higher if necessary). In other words, there is a need for a performance check (i.e. physical progress, quality of work, etc.) if the payment is to be without retentions. In other words, performance needs to be linked with retentions with the monthly turnover acting as a trigger on a 'good' or 'bad' rating. If the rating is 'poor', then retentions are to be held.

Case 2 - Scenario 02: Progress is good but the last month turnover is less than the default retention

	1 st month	2 nd month	3 rd month	4 th month
Value of work done	100,000	190,000	10,000	
Payments		100,000	190,000	10,000
Level of safety - LOS	100,000	190,000	10,000	0

In relation to the last month, if the default retention rate was 10% and DLP rate was 5%, the amount that should have been available to the main contractor should be 5% x 300,000, i.e. 15,000 but the amount of the last payment in this case is 10,000 which may not provide a sufficient LOS. This can be overcome easily by ensuring that the remaining value of work to be done is greater than the required retention failing which it would be necessary to hold the DLP retentions on the penultimate invoice. To make this operationally easier, it would be necessary to establish a **threshold LOS** for a given project. **This is a new concept that supplements the notion of retentions whilst it is different to how retentions work.**

Case 3: Duration 3 months; no retentions; payment delay 0.5 months

Based on this case, the LOS model would appear as shown in Fig. 2. It is clear that if the payment delay is reduced, the LOS reduces too but is still greater than half a month's of turnover, provided performance is maintained. On reflection, the payment delay is what gives birth to the concept of LOS.

In essence, what these cases show, despite variations in **payment profiles, payment cycles, and subcontract project duration** is that retentions aren't generally required for CP based on the notion of a LOS given the possibility of **mortgaging future payments and factoring current performance, except under special circumstances.** Establishing a **threshold level** for LOS is necessity. Interestingly, this

gives an opportunity for contractors to feel much safer than when using default retention regimes for high risk work (Abeysekera & Soysa, 2012) particularly in projects where the subcontract period is short. As for the defects liability period, a LOS can be established based on the nature of work and other factors by using existing DLP retention regimes as a guide until further research provides new insights on how issues related to DLP can be dealt with.

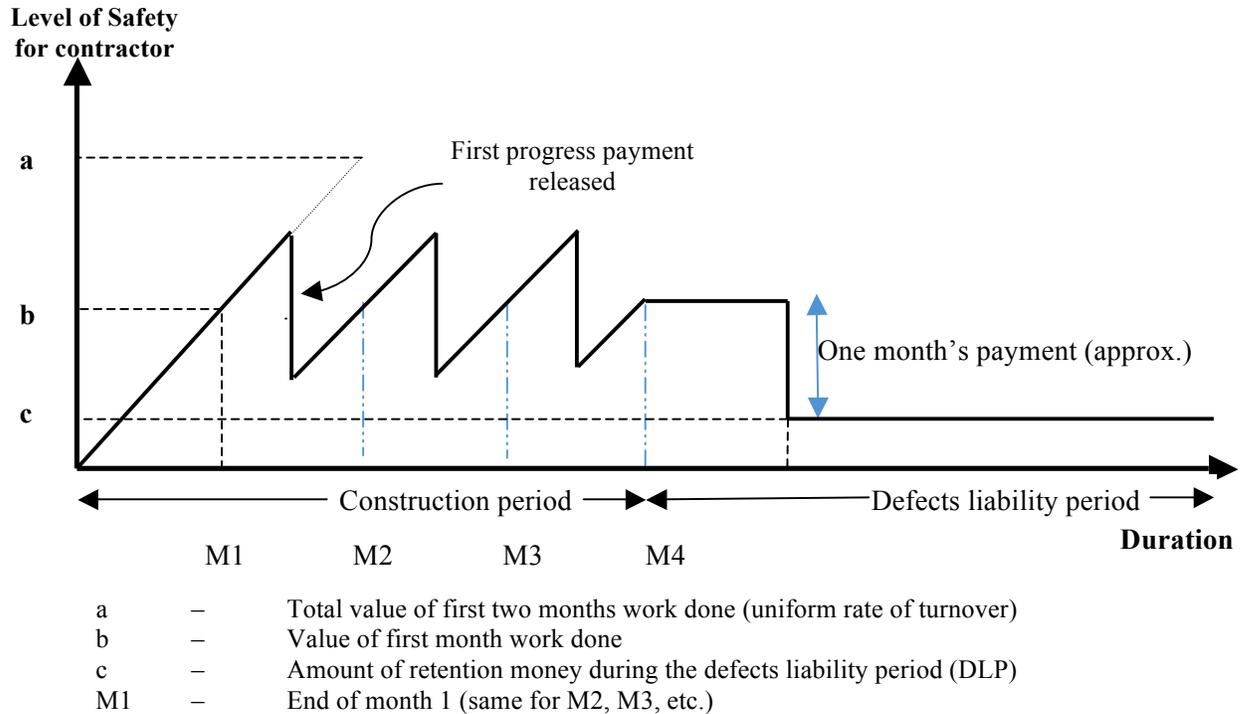


Figure 2: A symbolic payment regime for a project with a three month construction period

5. A Framework for Rationalising the Use of Retentions: The IQO Framework

Discussions in the preceding sections highlighted some of the major issues that impact on retentions. These issues have been synthesised into three main areas labelled as primary, secondary, and tertiary in order of their importance but named as intrinsic attributes, quantum attributes, and operational attributes (I-Q-O) focussing on the characteristics of monetary retentions.

5.1. Primary issues: Intrinsic attributes

The LOS model explained above along with the discussions in section 2 bring to focus the following fundamental issues which need to be resolved to rationalise the use of retentions for subcontract work:

- Retentions aren't necessary for the construction period (as per the LOS model) except in special circumstances.
- LOS is a concept that supplements retentions but is more meaningful and powerful; it is a financial measure of the contractor's ability to cope with subcontractor performance risks and defaults.
- Future payments can be mortgaged and current project performance can be factored to cope with performance risks during construction.

- Special circumstances arise mainly due to trade risk profiles, payment characteristics, subcontract period, and performance reliability of subcontractor.

5.2. Secondary issues: Quantum attributes

Whilst the above attributes impact on the necessity for retentions, the following impact on the quantum of retentions; in fact, these attributes deal with the LOS required with a focus on performance and at different stages of the project:

- A threshold level of LOS needs to be established to respond to ‘poor’ levels of performance taking into consideration project risks; in effect this represents the retention amount.
- Ceiling on retentions should be a dollar amount (as against a rate).
- Technological complexity of the work package (i.e. the nature of the work) has an impact on the quantum of retentions required (i.e. the threshold LOS).

5.3. Tertiary issues: Operational attributes

As the title implies, attributes in this section needs to deal with implementation issues listed below:

- If progress of work is ‘poor’ in the period immediately succeeding the period for which the invoice is applicable, LOS threshold/retentions may need to be applied.
- LOS model may need to be legislated.
- Beastly characteristics such as the practice of differentiating retention regimes, imposition of back-to-back contract terms in negative ways, and the like needs to be eliminated for LOS-IQO framework to be feasible.
- Ownership issues of retentions/LOS threshold deductions need to be resolved including how interest should be paid if held in trust.

6. Work to date

A main purpose of this paper is to present the LOS model and IQO framework. Essentially, these were developed with a focus on the commercial sector where retentions are commonly used. Initial discussions with industry personnel indicated that mortgaging future payments in lieu of retentions is a new concept although practice shows that it has been used unknowingly as would become evident in due course.

There was a general reluctance from main contractors to let go of retentions but were inquisitive to find out more about how LOS-IQO approach may work given that it offers a greater opportunity to deal with trades with a higher risk profile than at present. In fact, on one occasion, a senior commercial specialist of a large construction company in Australia said this in response to whether it would be easier to rectify defects during the CP than the DLP: *‘Whilst the amount of retention held during construction may be greater than during DLP (and hence more available to the client should it need to draw on the security to correct defects), the client’s leverage during the construction period in terms of making further payment or setting off defect rectifications costs against payments would perhaps be a greater influence than the level of retention moneys held’*. This comment exemplifies the value of the LOS concept, and the power of using monies due to a subcontractor. In other words, the power of mortgaging future payments, rather than retentions itself is of high value. Interestingly, the opportunity exists currently but not legitimised, therefore, what is necessary is to formally recognise the opportunity that is available by incorporating new contract clauses and in doing so eliminate the need for holding retentions during the construction period except under special circumstances.

In relation to the concept of factoring current progress to make a call on whether or not to hold retentions, once again, this seems to be a new concept as it has never been tried before although past track record of subcontractors have had an impact on receiving favourable retention regimes. As noted before, when using the LOS model, a call has to be made whether or not to hold retentions and one of the factors that impacts on this decision is whether substantial progress has been made after an invoice has been submitted. This should be feasible as progress of work carried out by subcontractors is monitored regularly in formal construction. Moreover, the LOS-IQO approach provides an opportunity to make checks on quality as well when ascertaining progress thereby improving integration. Further work is underway to develop a greater understanding of this approach.

7. Conclusions

The debate on whether or not to hold retentions have continued for well over a century without a rational basis for making decisions. However, this papers bridges this gap through the LOS-IQO approach wherein it is argued that there isn't a need for retentions during the construction period for work undertaken by subcontractors due to inherent 'level of safety' available to contractors except in special circumstances.

LOS is a more meaningful and easily understood concept than retentions powerful enough to replace the notion of retention. However, as 'retention' is a concept that has been used for well over a century, it is recommended that the concept of retention be supplemented with the notion of a 'level of safety to the contractor' in the case of subcontract work as it forms the basis discarding retentions for work carried out during the construction period. A threshold LOS acts similar to retentions (though different in concept); a rational approach needs to be developed in due course to establish threshold LOSs, i.e. the retention rates/regimes etc. for a given project.

It is only when the IQO framework is explored fully that industry would be able to develop a rational basis for dealing with retention related concerns; the foundation has been laid in this paper.

References

- Abeysekera, V. (2002). *Financing construction: The case for a construction guarantee fund. Environmental and economic sustainability: Cost engineering down under*. Paper presented at the ICEC Conference, Melbourne, Australia.
- Abeysekera, V. (2003). Exploring the case for a construction guarantee fund in New Zealand. Knowledge Construction. In G. Offori & Y. Y. Ling (Eds.), *Proceedings of the Joint International Symposium of CIB Working Commissions W55: Building Economics, W65: Organisation and Management of Construction, W107: Construction in Developing Countries* (pp. 1-12). Singapore: Dept. of Real Estate and Building, National University of Singapore.
- Abeysekera, V. (2005). Harnessing the Power of Retentions: The Case for a Retention Based Fund for Financing Construction Work, *Construction Quarterly Information. The Journal of the Chartered Institute of Building, UK*, 7(1).
- Abeysekera, V. (2006). Differential Regimes of Retentions: Harnessing the Power of Retentions through Contract Retentions. *The Journal of Building and Construction Management*, 10.
- Abeysekera, V. (2008). *Building theory for the built environment: the case of monetary retentions [keynote address]*. Paper presented at the International Conference in Building Education and Research (Bear) Heritance Kandalama, Sri Lanka.
- Abeysekera, V. (2012). *Resolving retention polarity: the perceptions of structural steel fabricators*. Paper presented at the World Construction Conference 2012: Global Challenges in Construction Industry, Colombo, Sri Lanka.

- Abeysekera, V., Priyanka, R., & Nietzert, T. (2009). *Building Theory on Monetary Retention Regimes. Collaboration and Integration in Engineering, Management and Technology*. Paper presented at the 5th International Conference on Construction in the 21st Century (CITC-V), Istanbul, Turkey.
- Abeysekera, V., & Soysa, M. (2012). *Monetary retentions for subcontract work: a risk-based approach*. Paper presented at the World Construction Conference 2012: Global Challenges in Construction Industry, Colombo, Sri Lanka.
- Bausman, D. (2004). *Retainage Practice in the Construction Industry*. (PhD), Clemson University, Foundation of the American Subcontractors Association, Inc. Alexandria.
- Bill, T. (2009). Out of credit: How the banks took away the industry's overdrafts. Retrieved from <http://www.building.co.uk/story.asp?storycode=3134711&origin=bldgweeklynewsletter> website:
- Champion, R. (2005). Do we need retention? *Construction Law Journal*, 21(6).
- Das, S. (2008). *A Rational basis for Setting up a Retention Regime for the Defects Liability Period*. Master's Thesis. Auckland University of Technology, New Zealand
- Fullerton, J. D. (2000). R.E.T.E.N.T.I.O.N. *Business Credit Magazine*(November/December), 22-24.
- Jensen, C. (2014). *Securities Payments for Subcontractors in the Queensland Construction Industry*. (Bachelor of Engineering Dissertation), University of Southern Queensland, Australia.
- Latham, M. (1997). Giving up Retentions. *Building*, 262(23).
- Mendes, D. (2003). Retainage: An Idea Whose Time Has Come, and Gone. *Business Credit*, 105(4).
- NSCC. (2007). Retentions: Striking Out Cash Retentions. London: Royal London House.
- Pearman, R. (2004). Specialists' lobby to quiz DE on retentions. *Contract Journal*, 422(4644).
- The Queensland Building and Construction Commission (QBCC) Act (1991).
- Raina, P., & Tookey, J. (2012). *The purpose of retentions: a review of the existing literature*. Paper presented at the World Construction Symposium organised by CIB, CIOB(SL) and University of Moratuwa, Sri Lanka.
- SECG, S. E. C. G. (2002). The Use of Retentions in the Construction Industry: A Submission to the Trade and Industry Select Committee. New Zealand.
- Stockenberg, R. (2001). Retainage uses and abuses. *Building Design and Construction*, 47(7), .