

Association of Researchers in Construction Management

TWENTY-THIRD
ANNUAL
CONFERENCE

2007

September 3-5

Belfast

Volume 1

Association of Researchers in Construction Management (ARCOM)
Proceedings of the 23rd Annual Conference

Edited by David Boyd

First published 2007

ISBN 978-0-9552390-0-7 (2 Vols.)

Published by
ARCOM, Association of Researchers in Construction Management
c/o School of Construction Management and Engineering
University of Reading
PO Box 219
Reading
RG6 6AW, UK

© Association of Researchers in Construction Management

All rights reserved. No part of this publication may be reproduced in any material form (including photocopying or storing in any medium by electronic means whether or not transient or incidentally to some other use of this publication) without the permission of the copyright holder except in accordance with the provisions of the Copyright Designs and Patents Act 1988. Authors of papers in these proceedings are authorized to use their own material freely. Applications for the copyright holder's written permission to reproduce any part of this publication should be addressed to:

Professor David Boyd
School of Property, Construction and Planning
University of Central England
Perry Barr
Birmingham B42 2SU
Email: david.boyd@uce.ac.uk

ARCOM Declaration:

The papers in these proceedings were doubled refereed by members of the scientific committee in a process that involved, detailed reading of the papers, reporting of comments to authors, modifications of papers by authors and re-evaluation of re-submitted papers to ensure quality of content.

TYPES OF CONSTRUCTION CLAIMS: A PORTUGUESE SURVEY

Helder Moura¹⁶ and José Cardoso Teixeira²

¹Civil Engineer, Estradas de Portugal, R. Eng^o Ferreira Dias, 2^oDt, 4100-555 Porto, Portugal

²Associated Professor, Department of Civil Engineering, University of Minho, Guimarães, Portugal

Dealing with construction claims is a difficult task nowadays. Not only claims became an inescapable issue in construction project management but analysing and resolving them adequately raises a number of difficulties. The first step for overcoming this problem is an adequate claims classification and identification. In Portugal, previous studies had identified eight different types of construction claim each one of them covered a specific process of documentation, submission, quantification and settlement, in the scope of the Portuguese construction legal frame. In order to evaluate which type of claims are currently presented in construction projects concluded in Portugal, an internet based inquiry was settled to owners and contractors. The results indicate that *changes claim*, particularly the subtypes *direct changes*, *indirect changes* and *errors and omissions*, represents 64% of claims presented in the construction projects surveyed, and together with *delay claims*, represented an aggregated frequency of 84%. In respect to the amounts requested and paid, the ratio was 0.76.

Keywords: claims, conflict, Portugal.

INTRODUCTION AND BACKGROUND

The key issue in construction project success is not whether or not it was subjected to claims, but if it has achieved the desired goals: cost, time, quality, safety, environment performance and, most of all, stakeholder satisfaction. And, it is recognized by experts (Kutner 1989, Mbabazi 2004) that a project can possibly accomplish all these features and still be subjected to construction claims, during the delivery stage. The key to the problem is the management of the claims process, which includes proper identification, notification, documentation (and quantification), presentation and resolution, within the sequence displayed in Figure 1.

The first step, the claim identification, is perhaps the most important, and involves timely and accurate claim prediction. This should be done after the occurrence of some event, or by the absence of it, as well as by inspecting contract documents.

Field staff seldom has enough experience and skill to perform this task correctly, and often need assistance and legal advice, which in general is not requested because it is expensive and sometimes unavailable, especially for small projects.

On the other hand, all the actors in the construction business recognize that claims are becoming an indispensable part of modern contract systems, seen in almost any type of construction projects, and growing in sophistication with the evolution of construction processes and deliveries (Zaneldin 2006).

¹⁶ helder.mmoura@gmail.com

So, one way to help solve this problem is to look for a unified international system for claim classification, allowing to group them into main types, subtypes, and possibly sub-subtypes, assuring the coverage of all relevant issues.

Recognizing the importance of correctly managing the claims process, has led to several attempts to study the different types of construction claims, that can possibly be submitted according to several legal and contractual frames (Gjertsen 1990, Rubio 1992, Rubin *et al.* 1999), each of one with its own particularities and specificities.

Among other reasons, this occurs, not only because it is easier for the contractor to evaluate and separate the damages caused by each particular event, but also to link these events to the legal theory or to the breach of the contractual clause that allows recovering inducted losses (Semple *et al.* 1994).

However, in spite of the large construction investments made in recent years in Portugal, the presentation of claims by contractors still follows the old principles of global claims, expecting that negotiation with clients and commercial relationships, are a substitute for proficient documentation and the necessary burden of proof to link claim events to the occurrence of unexpected damages to contractor (Moura and Teixeira 2005).

In order to understand the present situation regarding the presentation of claims, and its classification by different types, a survey has been made embracing public construction projects, for which information is easier to collect, concluded in Portugal during the last years.

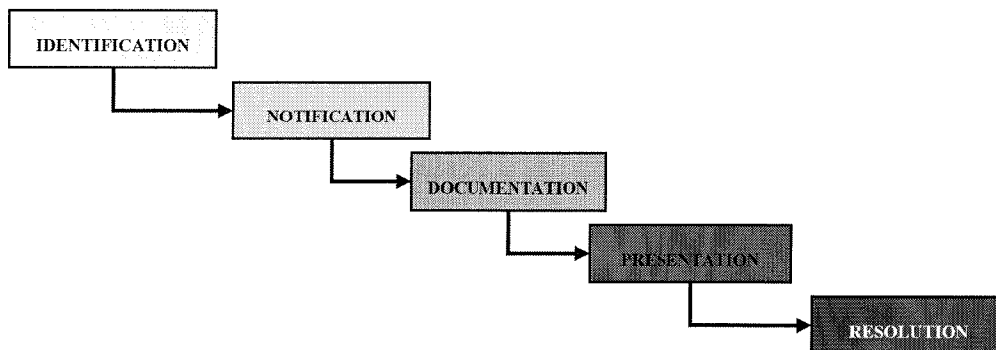


Figure 1: Claims management process

SCOPE OF THE SURVEY

Although Portuguese legal system is based on codification, and not on civil law as in the Angle-Saxon tradition, construction events and client's actions that create liability and the obligation to pay contractors extra-costs are roughly the same. For that reason, it is possible to aggregate those events in order to specify different types of claims. This attempt has been made in a previous study (Moura 2003), where the following types of construction claims were identified: *changes, delays, force majeure, measurement and payments, suspension of works, beginning and ending acts, acceleration and termination of contracts.*

Against this background, the main purpose of the present survey was to investigate whether construction claims presented by contractors, could be broken down into different types, and what types or sub-types were more frequent.

The cluster of information gathered in the database comprised nearly 500 public relevant construction projects, concluded in Portugal between 1998 and 2004. Clients and contractors involved in these projects were contacted by email and fax. They were also asked to fill an internet based questionnaire, with relevant project information, like, client and contractor(s) identification, initial contract value, type of contract, starting date and initial project duration.

In respect to the claim management process, respondents were asked about what type of the eight different types of contractual claims listed in the inquiry, had been addressed. They were also demanded to fill in the amount of each type of claim requested by contractor, the amount awarded by client, and the method used to settle the dispute.

DATA ANALYSIS

After a 6 month period of inquiry, only 66 answers were received although almost 500 projects had been previously surveyed and introduced in the database. Additionally, 2 global responses representing a total of 53 projects were also received, but not considered in the analysis, because no quantitative data was provided. Therefore the results presented further will be based on the 64 individual answers. Table 1 illustrates the weight of the various types of construction projects surveyed:

Table 1: Types of projects surveyed

Type of construction	Weight (%)
Civil Works (Buildings, Urban development)	19%
Infrastructure (Water, Gas, Sewer)	17%
Industrial	8%
Dam/Maritime	16%
Roads/Highway/Railway	36%
Environment	5%

The 64 construction projects analysed represented more than € 1 billion of investment, and were characterized by the average amounts, in respect to delays and cost-overruns, as represented in Table 2:

Table 2: Average project characterization

Project data	Average value
Initial contract amount	€ 16,530,674
Final project cost	€ 18,584,954
Costs overruns	€ 2,054,280
Initial contract duration	512 calendar days
Actual duration	713 calendar days
Delay period	201 calendar days

In respect to construction claims, data received indicated that a total amount of € 234,196,145, was claimed by contractors, representing 23.6% of the initial contract values of all 64 projects surveyed. On the other hand, the amount paid by clients totalled € 176,963,636, which represents 17.8 % of the initial contract value of all

projects, regardless they experienced claims or not (the ratio between projects that suffered claims and those who had not, reached the high value of 0.71).

It is also important to denote, that the ratio between amounts awarded/amounts requested by contractors was 0.76. This average rate is significantly high, when compared to similar studies (Zaneldin 2006), given an idea that the majority of the risk of presenting and winning claims is on the side of the clients.

Another relevant aspect of these results was the procedures used to resolve construction claims. In fact, as represented in Figure 2, the direct negotiation between parties, with or without a mediator, was responsible for 80 % of the claims settled, and just in two of the situations (2% of results), the dispute was settled in a court of law:

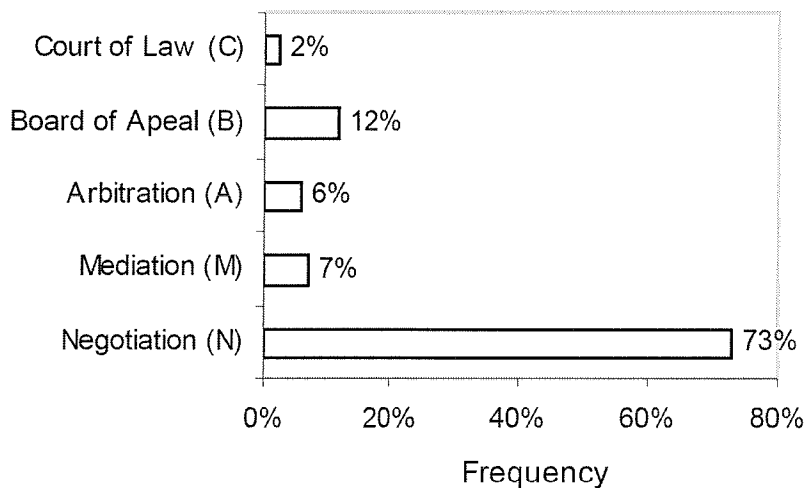


Figure 2: Frequency of different resolution procedures

The different type of claims indicated by respondents was based on the options presented in the inquiry, which mention the eight types referred above, proposed in previous studies. However, anticipating that *changes* claims ought to be the most common, it was separated in its two main sub-types: *indirect changes and errors and omissions* claim.

According to the results presented in the next graph (Figure 3), *direct changes* claim, as expected, represented the most frequent ones (36%), followed by the sub-type, *errors and omissions* (21%), *delays* (16%) and *indirect changes* (9%), leaving for the other types very low frequencies.

If the total of *change* claims is considered, these represent 66% of all claims presented in the construction projects surveyed, and together with the *delays* type of claim, reached a frequency of 84%, meaning that, these two types of construction claims should deserve special attention by the analysts:

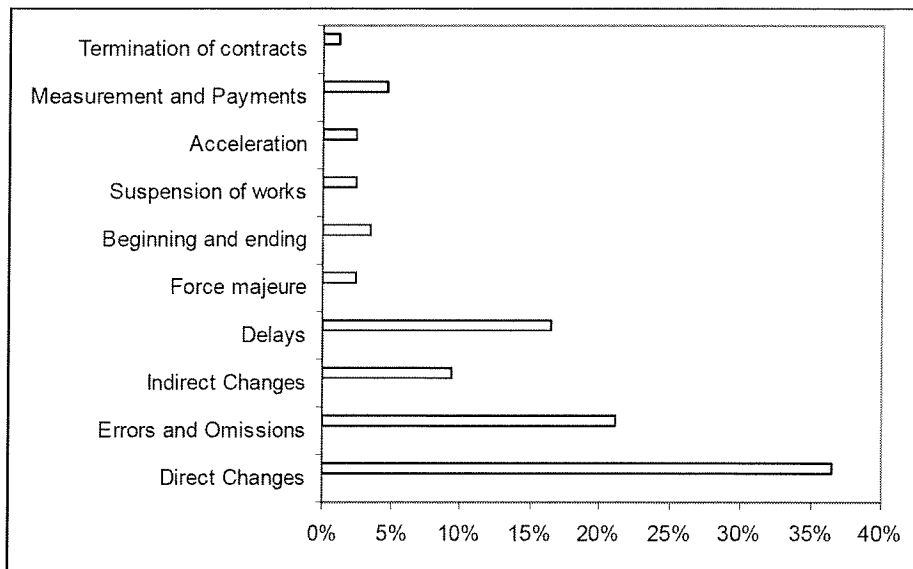


Figure 3: Frequency of different type of claims

Next Figure presents the amount requested by the contractor and the amount paid by the client for each type of claim, identified in the survey. We denote that apart from *change claims*, and its subtypes, *indirect changes* and *design errors and omissions*, *delay claims* was once again the most valued type of claim, with an amount claimed of € 28,899,571, and an amount paid of € 15,334,048.

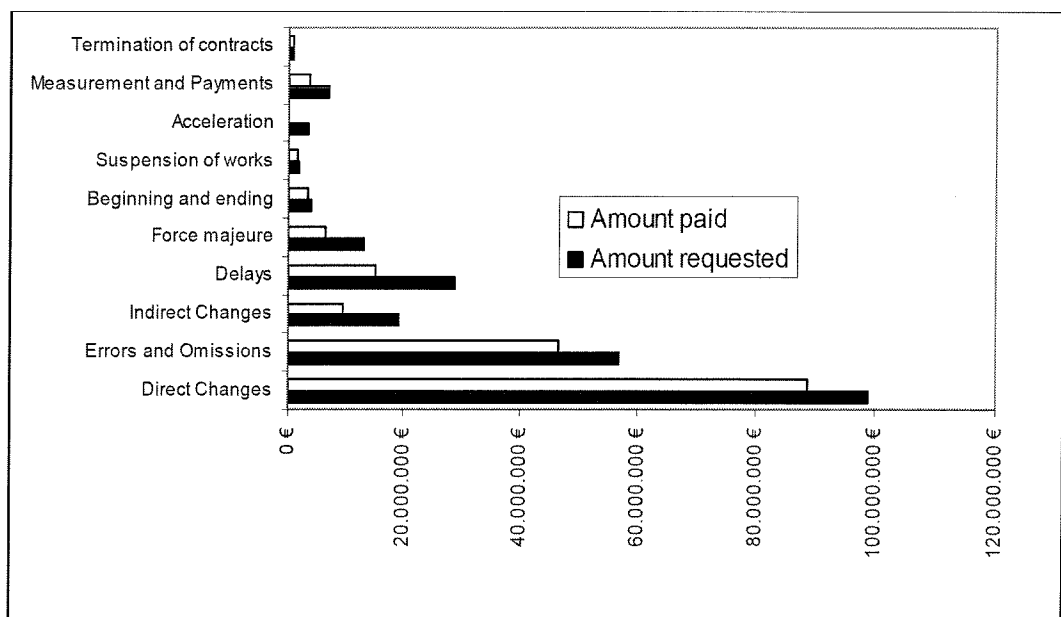


Figure 4: Amount requested and amount paid by different type of claims

The analysis of Figure 4 also reveals that *direct changes* was the most “expensive” type of claim responsible for almost € 100 million of requested amount for compensation, while contractors received about € 88 million, representing a ratio of success of 0.89, considerably above the average of 0.76, relating to all types of claims.

Once again this statement reflects the recognition by clients that change orders they issued, provoked damages to contractors, which gave them the necessary arguments to present well supported claims.

Other evidence is that *acceleration claims* presented by contractors had no success among clients, and no amount was paid on behalf of his type of events, perhaps because clients do not recognize this as their responsibility.

CONCLUSIONS

The main objective of this paper was to investigate what types of claims were presented by contractors, in construction projects concluded in Portugal in the last years. The survey revealed that the eight different types previously identified in a theoretical research supported by the Portuguese legal frame, were all mentioned by respondents. Results pointed out that *direct changes* claim, with a frequency of 36%, the other main subtypes of *changes* claim, namely *indirect changes* and *errors and omissions*, and *delays* claim with 16% were the most invoked. In relation to the amount requested by contractors it totalled more than € 245 million, representing 23.6% of project's initial contract value, while the amount paid by clients was about 76% of the demanded sum, indicated that contractors just requested to be paid for damages they could easier demonstrate. These conclusions also stand for the methods of settling disputes arising from presentation of construction claims, as direct negotiation between parts was used in 73% of the cases, while in just two of them the dispute went to the courts of law.

Finally, the analysis of the amounts requested and paid by different types of claims reveals that *changes claim* was responsible for 83% of the amount requested (€ 245 million), distributed by subtypes with 42% for *direct changes*, 24% for *errors and omissions*, and 8% for *indirect changes*, followed by *delays* type of claim (12%). These are, in fact, the most important type of issue, and should deserve special attention by researchers

FURTHER RESEARCH

In spite of these conclusions, the few responses obtained (only 66) in respect to the considerable number of public projects contained in the database (almost 500), indicated that contractors and clients in Portugal do not have a real claim management system allowing them to get instant data. In fact, the direct contacts established by the research team with management personnel, and the difficulties transmitted during the completion of the inquiry, may indicate that global claims are still the rule, and that practitioners aren't yet directed, or obliged, to present different types of claims accordingly to specific events, thus contributing to an unified classification.

For that purpose, future research on this subject by the authors aims at developing an unified international system for construction claims classification, according to different events that may arise during construction projects. Furthermore, a decision support system aimed at helping site engineers to identify, classify, document, quantify and present different types of construction claims, in a quick and inexpensive way.

REFERENCES

- Bramble, B. and Cipollini, M. (1995), *Resolution of Disputes to Avoid Construction Claims, NCHRP Synthesis of Highway Practice 214*, TRB, National Research Council, Washington D.C.
- Gjertsen, K. (1990), *An expert system for claims classification*, Unpublished MSc Thesis, University of Colorado, Boulder.
- Kassab, M., Hipel, K., Hegazy, T.(2006) Conflict resolution in construction disputes using the graph model. *Journal of Construction Engineering and Management*, **132** (10), 1043-1052.
- Kutner, S. (1989), Claims management. In R. L. Kimmons and J.H. Loweree, (eds.) *Project Management: a reference for professionals*. New York: Marcel Dekker Inc.
- Kumaraswamy, M. (1998), Tracing the root of construction claims and disputes. In *Proceedings of COBRA '98 RICS Construction and Building Research Conference*, 3-5 September 1998, Oxford, UK.
- Mbabazi, A. (2004) *Quantification and analysis of construction claims*, Unpublished PhD Thesis, University of Waterloo, Canada.
- Moura, H. (2003) *As Reclamações nas Empreitadas de Obras Públicas: Alterações e Atrasos*, (Construction Claims in Public Works: changes and delays, in Portuguese), Unpublished MSc Thesis, Department of Civil Engineering, Minho University, Portugal.
- Moura, H and Teixeira, J C (2005), Claims in Railway Projects in Portugal. In: Ribeiro, L. (Ed), *Proceedings of CIB W102 International Conference on Information and Knowledge Management in a Global Economy*, 19-20 May 2005, Instituto Superior Técnico, Lisbon, Portugal,.
- Moura, H and Teixeira, J C (2006), Taxonomy of construction claims. *1st ICEC & IPMA Global Congress on Project Management*, 24-26 April 2006, Carkajev Dom, Ljubljana, Slovenia.
- Powell-Smith, V., Stephenson, D., Redmond, J. (1999), *Civil Engineering Claims*, 3ed. London: Blackwell Science, Ltd.
- Rubin, R., Fairweather, V., Guy, S. (1999), *Construction Claims: Prevention and Resolution*, 3ed, New York: John Wiley & Sons, Inc.
- Rubio, U. (1992) *Las Reclamaciones en las Obras para las Administraciones Públicas* (Claims in construction projects for Public Administration, in Spanish), Madrid: Edition Paraninfo.
- Semple, C., Hartman, F., Jergeas, G. (1994), Construction Claims and Disputes: Causes and Cost/Time Overruns, *Journal of Construction Engineering and Management*, **120** (4), 785-795.
- Yates, D. and Hardcastle, C. (2003), The cause of conflict and disputes in the Hong Kong construction industry: a transaction cost economics perspective, *RICS Foundation Research Papers*, **23** (4).
- Zaneldin, E.K.(2006) Construction claims in United Arab Emirates: Types, causes and frequency. *International Journal of Project Management*, **24**, 453-459.