Book review

Integrated Cost–Schedule Risk Analysis

David Hulett. Gower Publishing, Farnham, UK, 2011,
ISBN 978-0-566-09166-7, £65.00, 218 pp.

This book is both a successor to and an update of David Hulett's earlier book, *Practical Schedule Risk Analysis* (Gower Publishing, 2009). Although the new book does reproduce some basic theory chapters from the earlier book it is fully comprehensible in its own right and does not require the reader to have any prior knowledge of the earlier book. The book targets one of the central issues in detailed risk analysis, namely the relationship between time and cost and how these should both be considered.

Unlike most of the other risk texts, this book is specifically linked to a particular software package, the Primavera Risk Analysis software from Oracle, formerly known as Pertmaster. However, the principles outlined in the book could equally well be used with other commercial software packages and this does not limit the value of the integrated time and cost approach.

At the front of the book a foreword by Philip Rawlings, Director of Euro Log, emphasises the advantages of trying to integrate time and cost and the value of the practical guidance included in the text. A second foreword by Charles Bosler, President of Risk Trak International, gives an example of the application of the cost–schedule approach, although I think the statement that the book contains 'all the tools we need to improve ...' is a little optimistic.

The first three chapters of the book introduce the purpose and nature of cost risk analysis, which is in itself a fairly contentious issue. The chapters provide an explanation of distributions, analysis, the Monte Carlo simulation and other aspects of basic theory. Chapter 4,

'Collecting High-Quality Data on Cost Risk Methods and Challenges', is largely taken from Chapter 5 in the earlier book. This is quite a lengthy chapter which clearly sets out the implications of the variable quality and completeness of data in performing risk analysis. The chapter also contains an interesting discussion of the problems of 'bias' and of 'data capture'.

Correlation, an important and much misused term, forms the basis of Chapter 5 and this chapter is largely based on Chapter 10 of the earlier book. The chapter recommends the use of pairs of project element costs to establish levels of correlation. Interestingly, the book recommends the use of the Pearson product moment approach to correlation as opposed to the more common Spearman rank order approach. Chapter 6 then explores the use of risk registers to identify the risk drivers, a chapter largely taken from Chapter 8 of the earlier book.

In the second half of the book, Chapters 7 to 11, this theory is brought together to develop an 'integrated cost and schedule risk analysis' approach. As older readers will appreciate, the rehabilitation of the use of cost 'hammocks' is continued as the book demonstrates the merits of being able to spread costs across several activities and times. Chapter 9 provides a case study of the use of the approach to a generic construction project, which is a very useful addition and helps to clarify how the approach can be used in practice.

Overall, this book outlines an approach for integrating time and cost information in risk analysis but it is not a panacea for all aspects of risk management. The proposed method does require reasonably complete and accurate data which are not always available. Nevertheless, this book is a useful addition to the practice of risk analysis.

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