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### Editado por

José F. Oliveira  
Clara B. Vaz  
Ana I. Pereira  
Carla A. S. Geraldès

Escola Superior de Tecnologia e Gestão  
Instituto Politécnico de Bragança

## Sessão 4A2

## Economia e Finanças

Moderador: Rui Alves

**Management of a R&D portfolio: a 0-1 integer linear programming model**

Anabela Costa, José Paixão

We introduce a 0-1 integer linear programming model for a R&D portfolio with a budget constraint. Considering that the budget is associated to the development phase, in the formulation presented, we determine the optimal decision policy for each project, as a series of improvement/continuation/abandonment options, in each stage of the development phase that respects the limited budget and maximizes the overall value of the portfolio. Accordingly to the computational experience developed, we draw the main conclusions relatively to the adoption of this mathematical model. Further, we discuss the possibility of incorporate additional managerial choices in the formulation presented.

**Keywords:** R&D project evaluation, managerial flexibility, 0-1 integer linear programming

**Project Appraisal: A reflection**

Nuno Moutinho, Helena Mouta

We present project evaluation approaches that should be used as a basis for decision. We try to find what aspects must be considered in project analysis, acknowledging the need to consider intangible aspects that are impossible to measure and that lead to subjective analysis in evaluation. We also investigate whether firms have adequate tools and methods to incorporate all non financial aspects. We have identified several aspects that influence projects' evaluation and decision-making. This is not a mere financial activity, but involves a diversity of behavioural and organizational factors, and business perception, which should be adequately adjusted to achieve success.

**Keywords:** Real Investment Projects, Non-Financial Analysis, Decision-making

**CSR of Portuguese Companies listed on Euronext Lisbon: a multivariate analysis**

Sandra Afonso, Paula Odete Fernandes, Ana Paula Monte

The purpose of this paper is to present a cluster analysis applied to group companies by their social performance and to compare the results. The results indicate that companies with better social performance are not the ones with better economic performance, and it suggests that the middle path might provide a good relation CSR-Economic performance, as a basis to sustainable development. The results indicated that three clusters were classified in CSR Low, CSR Medium and CSR High. According to the cross validated classification based on discriminant analysis, the results reveal that 94.7% of the cases were classified correctly.

**Keywords:** Corporate Social Responsibility, multivariate analysis, PSI-20 companies