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## Editorial

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**Biographical notes:** Minwir Al-Shammari is a Professor of Management and the Dean of the University of Bahrain's College of Business Administration. He holds a PhD in Business Administration from the University of Glasgow, UK in 1990 and MS in Industrial Management from the Central Missouri State University, USA in 1986. He has been involved for 25 years in teaching, research, training, and/or consultancy. He has published more than 40 research papers. He is the author of the premier reference source: *Customer Knowledge Management: People, Processes, and Technology*, 2009, IGI-Global Publishing, USA and Editor of the book: *Knowledge Management in Emerging Economies: Social, Organizational, and Cultural Implementation*, 2010, IGI Global, USA.

Hatem Masri is an Associate Professor at the College of Business Administration, in the University of Bahrain, Kingdom of Bahrain. He received his PhD in Management in 2004 and Master in Operations Research in 1999 from the University of Tunis, Tunisia. His research interests include multiple objective stochastic programming, supply chain management, financial engineering, and vehicle routing problems. His research has been published in several international journals (*EJOR, ANOR, FSS, IJAR, ...*) and funded by the University of Tunis, the University of Nizwa and the University of Bahrain. He is a member of the International Society on Multiple Criteria Decision Making, IEEE and the Tunisian Decision Aid Society.

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Quantitative methods in decision-making process aims to cover up-to-date scientific methods (mathematical models, databases and computer programs) for helping decision makers, managers and directors to solve complex problems in modern organisations. Decision making is the process by which an optimal choice between alternatives can be made. These decisions are related to different field such as management, banking and finance, investment, manufacturing, transportation, etc. Quantitative methods may include multiple criteria analysis, optimisation models, simulation, stochastic processes, game theory, statistics, etc.

This special issue includes seven papers. The first paper entitled 'Multi-objective methods in development planning' by Al-Agha proposes a multiple objective model for development planning. A comparative study between up-to-date methods used to develop economic plans is reported. The second paper by Hakro reviews and assesses the existing institutional framework of public investment management system in Kuwait. Hakro uses quantitative models to conclude that the system suffers from shortage of technical staff, evaluation of alternatives and rigorous cost benefit analysis. In the third paper, Khayati

evaluates the impact of foreign direct investment (FDI) on Bahraini economy. By using a fuzzy screening methodology, the paper presents interesting results on the positive impact of FDI on Bahraini economy. The fourth paper entitled 'A multi-criteria policy set optimisation framework for large-scale simulation models', by Myers and Karwan, deals with simulation modelling for the analysis of large and complex systems in a multi-criteria decision-making framework. The paper presents solution methodologies that aim to minimise the computation time required to come up with results. The fifth paper, by Brauers, Zavadskas and Ginevicius, addresses the problem of decision making in macro and micro economics using the MULTIMOORA method. In this paper, authors add a full multiplicative form of the traditional MULTIMOORA method. In the sixth paper, Sufian analyses the efficiency of Malaysian banks using data envelopment analysis. The paper shows the importance of bank size, capitalisation, and foreign ownership in determining the efficiency of banks. The last paper offers a comparative study for the routing of automated guided vehicles. Fatnassi and Chaouachi present different procedures that can be used to develop a set of good quality lower bounds for the routing problem.

We take this opportunity to thank the authors who have contributed to this special issue for their efforts to submit high quality papers, and the international referees for their relevant comments and suggestions that improved rigor of the research papers.