Book Review

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In recent years, more and more companies, even small and medium-sized enterprises, are taking advantage of big data collection and storage and using them in developing business analytics tools and methods for better decision-making. "As executives seek solutions to enable better, faster decisions, we are seeing relatively healthy (big data and business analytics) spending across all industries", said Jessica Goepfert, IDC's vice president of customer insights and analysis. Therefore, job growth in this sector is expected to be robust.

The book *Business Analytics* contributes to disseminating knowledge that can be useful for students and professionals in business analytics. The book is organised into five parts and divided into several chapters. Each chapter begins with learning objectives that help students to understand what knowledge, methods, and tools they can learn and become skilful in their implementation.

The first part presents business analytics in two chapters. Chapter 1 explains the characteristics of big data and how companies can use business analytics to create added value. It also familiarises the four pillars of business analytics (descriptive, diagnostic, predictive, and prescriptive) and their roles in business decision-making and problem-solving. Chapter 2 provides spreadsheet analytics alongside valuable tools and functions supported by illustrative practical examples.

The second part brings closer the first pillar of business analytics – descriptive analytics, which answers what happened based on available data. Chapter 3 deals with descriptive statistics and shows the possibilities of describing data through spreadsheet examples. The research of data using pivot tables on concrete examples is given in Chapter 4. Chapter 5 introduces the visualisation of data implemented in DataViz. Data visualisation is vital for all business analytics phases, meaning using DataViz brings better insight into available data and obtained results.

The third part refers to the second pillar of business analytics, diagnostic analytics, which answers why it happened. Chapter 6 deals with the methods and tools used for correlation analysis, implemented in a spreadsheet, which helps identify the relationship between variables. The methods for detecting outliers are specified in Chapter 7, and the role of drill-down analysis for multi-dimensional problems is given in Chapter 8.

The fourth part, which consists of Chapters 9, 10, and 11, refers to the third business analytics pillar, predictive analytics, and covers methods, techniques, and tools for forecasting, regression analysis, and data mining with a focus on logistic regression implemented by stat tools in MS Excel.

In three Chapters 12–14, the fifth part describes the most complex pillar of business analytics – prescriptive analytics. Chapter 12 focuses on methods, techniques, and tools for decision analysis, such as decision trees implemented in DPL 9 software. The principles of optimisation models and methods implemented and solved in MS Excel are described in Chapter 13. Data envelopment analysis as a method for performance analytics and a tutorial for MaxDEA is explained at the end of this chapter. The last Chapter 14 of this part introduces the multi-criteria decision method analytical hierarchical process – AHP and its implementation of Super Decision software.

This book represents a comprehensive and extensive textbook for learning business analytics supported by numerous practical examples solved in spreadsheets and other specialised software packages (Syncopation Software's DPL 9 Professional, MaxDEA, Super Decisions, and MonsoonSIM). The students can easily follow the path of developing business analytics models to describe and visualise data, to find out why something happened, what and when it could happen, and last but not least, what we can do to achieve the best results. The knowledge acquired from this book could help students enter the world of business analytics and become more competent in the workplace.