Chapter XX

A New Approach to Evaluating Business Ethics: An Artificial Neural Networks Application

Mo Adam Mahmood and Gary L. Sullivan
University of Texas at El Paso, USA

Ray-Lin Tung
Taiwan

Stimulated by recent high-profile incidents, concerns about business ethics have increased over the last decade. In response, research has focused on developing theoretical and empirical frameworks to understand ethical decision making. So far, empirical studies have used traditional quantitative tools, such as regression or multiple discriminant analysis (MDA), in ethics research. More advanced tools are needed. In this exploratory research, a new approach to classifying, categorizing and analyzing ethical decision situations is presented. A comparative performance analysis of artificial neural networks, MDA and chance showed that artificial neural networks predict better in both training and testing phases. While some limitations of this approach were noted, in the field of business ethics, such networks are promising as an alternative to traditional analytic tools like MDA.
INTRODUCTION

Stimulated by the proliferation of incidents such as tax evasions, defense contractor scandals, insider trading, golden parachutes, executive salaries and bonuses and the savings and loan fiasco, concerns about business ethics have increased significantly over the last decade. Consequently, practitioners and academics are showing increased interest in ethical issues in business. Businesses are updating codes of ethics. Academics are authoring an increasing number of research articles and books.

Research studies have focused on developing theoretical and empirical foundations for understanding the ethics of decision making. Empirical studies have used traditional quantitative analytic tools such as multiple regression and multiple discriminant analysis to investigate ethical issues. The present research considers a new procedure, artificial neural networks (ANNs), to analyze ethical decision data. It investigates whether ANNs can outperform discriminant analysis in understanding ethical dilemmas. This comparative test uses ethical judgment data obtained from college students. Using ANNs and discriminant analysis, relationships between these factors and attitudinal variables are assessed.

Several studies of ethical decision making are summarized next. A short presentation of ANNs and discriminant analysis used in analyzing students’ ethical perceptions follows. Then, the results of the empirical test are presented along with a discussion of implications. Concluding remarks, including suggestions for future research, complete the paper.

LITERATURE REVIEW

As stated earlier, both public and scholarly interest in business ethics have increased significantly over the past decade (Vogel 1991). In the next few paragraphs, some recent empirical work in business ethics is reviewed. Empirical work is emphasized in this study because of its centrality to the present research.

This review of empirical studies focuses on business students’ and practitioners’ judgments regarding ethical issues. For example, DePaulo (1987) examined students’ perceptions of the incorrectness of sellers’ deceptive bargaining tactics. Interestingly, students were more critical of sellers than were buyers. Claypool, Fetyko and Pearson (1990) compared the responses of CPAs and theologians to ethical dilemmas. When faced with potential ethical dilemmas, both groups indicated that the concepts of “confidentiality” and “independence” were more consequential than “seriousness of breach” and “recipient of responsibility.”
Assessing the Dimension of Magnitude in Computer Self-efficacy: An Empirical Comparison of Task-Based and Levels of Assistance-Based Methodologies
www.igi-global.com/chapter/assessing-dimension-magnitude-computer-self/53098?camid=4v1a