

Chapter 102

Game Theory vs. Business Ethics: The Game of Ethics

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ABSTRACT

*In 1954, the British philosopher Richard Braithwaite gave his inaugural lecture, *Theory of Games as a Tool for the Moral Philosopher*. Braithwaite predicted game theory would fundamentally change moral philosophy. However, in hindsight, John von Neumann and Oskar Morgenstern's publication of *Theory of Games and Economic Behaviour* was the moment modern game theory entered the discipline of ethics. The purpose of this chapter is to analyze the relationship between game theory and business ethics. In other words, this chapter explains how game theory plays a role in business ethics and affects business ethics for emerging economies and covers in detail: 1) the history of game theory; 2) types of/definition(s) of games; 3) business ethics; 4) business; and 5) ethics. The chapter concludes with the role that game theory and business ethics play in emerging economies.*

INTRODUCTION

In economic behavior, game theory and technology are assuming an increasingly prominent position in the world and emerging economies. In 2002, emerging economies not only received significant amount of Foreign Direct Investment (FDI) inflows, but also accounted for 12 percent of the world's FDI outflows which grew from US\$65 billion in 1980 to US\$849 billion in 2002 (UNCTAD, 2003). This change has come primarily because these economies comprise countries with a rapid pace of development and government

policies which favor economic liberation. Of the 64 emerging economies identified by Hoskisses, Eden, Lau, and Wright (2000), a total of 51 are rapidly growing developing countries and 13 are in transition from centrally planned economies, often known as *transition economies* (Wright, Filatotchev, Hoskisson, & Peng, 2005)¹.

The growing importance of emerging economies is reflected in an upsurge of strategy research on the topic in recent years. Since the first major overview of the field by Hoskisson and colleagues (2000), numerous publications have appeared to push the frontier of this research. In

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addition to journal articles, researchers of books also covered more than one country or region in this area, and include Cavusgil, Ghauri, and Agarwal (2002), Estrin and Meyer (2004), Hooke (2001), Mathews (2002), and Peng (2000). Four conceptual perspectives² have been identified by Hoskisson et al. (2000) in the context of emerging economies in general, by Peng, Lu, Shenkar, and Wang (2001) in greater China, and by Meyer and Peng (2005) in Central and Eastern European as leading theories when probing into the subject of emerging countries.

Nevertheless, on the topic of economic behavior, game theory, and technology in emerging economies, game theory has yet to be applied in relation to business ethics. Regarding game theory, in 1954 the British philosopher Richard Braithwaite gave his inaugural lecture entitled *Theory of Games as a Tool for the Moral Philosopher* (Braithwaite, 1955). Braithwaite predicted game theory would fundamentally change moral philosophy. Braithwaite's prediction came less than 10 years following the publication of John von Neumann and Oskar Morgenstern's *Theory of Games and Economic Behaviour*. This book initiated a completely new branch of social science and applied mathematics (Von Neumann & Morgenstern, 1944), and in hindsight this was the moment modern game theory entered the discipline of ethics.

Game theory is the formal study of conflict and cooperation, and game theoretic concepts apply whenever the actions of several agents are interdependent (Varoufakis, 2001). These agents may be individuals, groups, firms, or any combination of these. The concepts of game theory provide a language to formulate structure, analyze, and understand strategic scenarios. In other words, a game refers to an interactive situation involving two or more players making strategic decisions. Game theory is a branch of applied mathematics concerning optimal or purposeful behavior in different types of situations involving strategy and rational decision.

The purpose of this chapter is to analyze the relationship between game theory and business ethics. In other words, this chapter will explain how game theory plays a role in business ethics, and effect business ethics for emerging economies. In so doing, this chapter will cover in details:

1. The history of game theory,
2. Types of/definition(s) of game,
3. Business ethics,
4. Business, and
5. Ethics.

The chapter will conclude with the role that game theory and business ethics play in emerging economies.

THE GAME IN GAME THEORY

The object of study in game theory is the *game* which is a formal model of an interactive situation. The game in game theory typically involves several *players*. A *player* is defined as a rational agent in which a rational agent is not necessarily a person as a rational agent could be an institution or a firm, where rationality consists of "complete knowledge of one's interests and flawless calculation of what actions will best serve those interests" (Dixit, Reiley, & Skeath, 2009: 30). An individual decision or choice of a player is defined as a *move* and a series of moves of a given player is a *strategy*. A unique combination of players' strategies will result in a game outcome.

A game with only one player is usually called a *decision problem*. The formal definition defines the players, their preferences, their information, their strategic actions available to them, and how these influence the outcome. Games can be described formally at various levels of detail. A *coalitional* (or cooperative) game is a high-level description, specifying only what payoffs each potential group, or coalition, can obtain by the cooperation of its members. As such, the result of a game for a given player is defined as the

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