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Summary Brief
Conflict and Cooperation Among Firms

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Roberto Friedmann, University of Georgia

Marketing theories and research have placed more emphasis on issues related to customer response than competitive response. This lack of attention is surprising, because as we argue, it is rather difficult to imagine a marketing decision that is not affected by competitive activity. In considering the actions of firms in the marketplace, there is always room for the firms to engage in a variety of behaviors ranging from conscious cooperation to conflict. The objective of this paper is to present a conceptual model that relates selected market characteristics to a firm's type of interaction (cooperation to conflict) with others in the industry. Given that game theory decisions are based on selecting optimal strategies according to the interdependency of the payoffs for the players and, since most strategic marketing decisions involve interdependent outcomes, basic concepts of game theory are used to develop the conceptual framework.

Introduction

In almost all strategic situations, firms' decisions are interrelated. That is, what the best course of action might be for marketer A (in a hypothetical example of two major competitors), depends many times upon marketer's B choice. Firm B in turn, must take into account the options open to A. Therefore, the general idea of optimizing results in terms of a particular marketing strategy, or choosing a "best" outcome can easily become somewhat hazy, if not quite muddled. The end result, is that in considering the actions of firms in the marketplace, there is always room for the firms to engage in a variety of behaviors ranging from conscious cooperation to conflict.

The objective of this paper is to present a model that relates market characteristics (concentration, product homogeneity, growth) to the type of interaction among firms in an industry, using a conceptual framework suggested by game theoretical models. The dependent variable (i.e. type of interaction) is relevant to marketing strategies because virtually all aspects of the marketing mix, are influenced by the type of interaction of the firm with its competitors (Ramaswamy, Gatignon, and Reibstein, 1994; Corfman and Lehman, 1994). Given that game theory decisions are based on selecting optimal strategies according to the interdependency of the payoffs for the players (Chen and MacMillan, 1992; Armstrong and Collopy, 1996), and, since most strategic marketing decisions involve interdependent outcomes, it seems that game theory would apply well to marketing strategy problems (Camerer, 1991; Corfman and Lehman, 1994).

The benefits and limitations of game theory applications to business have been critically reviewed elsewhere (e.g., Moorthy, 1985; Camerer, 1991; Branderburger and Nalebuff, 1996). Critics insist that game theory does little more than identify critical features of anecdotes of business strategy. Supporters claim that game theory can effectively isolate key strategic issues and clarify thinking -- as evidenced by game theory's integration into MBA and executive programs at top business schools. According to Branderburger and Nalebuff (1996), there has been a growing recognition that game theory is a crucial tool for understanding the modern business world. In fact, in 1994 three pioneers in the field of game theory were awarded the Nobel Prize in economics. This paper argues that if game theory applications can spark the imagination, stimulate strategic thinking, or clarify the strategic context, they then serve a useful purpose.

A Conceptual Model of Firm Interaction

The net effect of a firm's marketing decisions and implementation efforts is usually influenced by the countermoves (or the lack thereof) of the other participants in the industry. In the case of most marketing decisions which end up having a significant effect in the marketplace, the impact is much more significant on a relative, than at an absolute level. Many attempts or strategic initiatives to increase market share, sales, profits, or enhance distribution, never would have been made if one were aware of the competitors' immediate countermoves (Ramaswamy, Gatignon, and Reibstein, 1994).

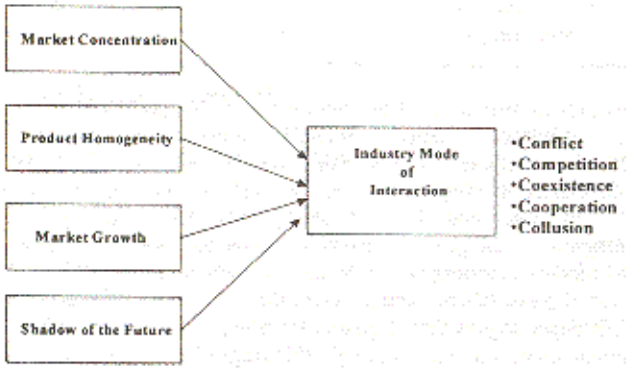
Game theory is particularly useful for framing such predictions, because game theoretic decisions are based on selecting optimal strategies according to the interdependency of the payoffs to both players (Chen and MacMillan, 1992). The primary insight of game theory is the importance of focusing on others-namely, allocentrism. To analyze how other players will react to your move, you need to play out all the reactions (including yours) to their actions as far ahead as possible. You have to look forward far into the game and then reason backwards to figure out which of today's actions will lead you to where you want to end up. Managers can profit by using these insights from game theory not only to select appropriate strategies for given games, but also to design a game that is right for their companies. Successful business strategy is about actively shaping the game you play, not just playing the game you find (Brandenburger and Nalebuff, 1996).

The Dependent Variable: Industry Mode of Interaction

The conceptual model of competitive response is presented in Figure 1. Ramaswamy (1994) for example, uses a dichotomic model to analyze competitive marketing behavior, where firms supposedly engage in either retaliatory or cooperative behaviors. We would suggest that, in general, one can think in a continuum

between retaliatory (conflict) firm behavior and collusive marketing behavior, with a variety of conditions in between. Easton (1990) refers to such a continuum as Competitive Dimension. He proposes that in this continuum, it is possible to identify five prototype situations: conflict, competition, coexistence, cooperation and collusion.

Figure 1. Conceptual Model of Firm Interaction



The Independent Variables

As the industrial economic literature suggests, the strategic options facing an organization are significantly constrained by the structure of the industry in which the firm conducts business. This structure includes variables such as number of competitors (market concentration), kind of product being marketed (homogeneous versus heterogeneous), and market growth. The time-horizon of the interaction (shadow of the future), also can be thought to affect the likelihood or type -- if any -- of resulting cooperative behavior. Four conceptual propositions are suggested regarding the impact of these four market characteristics on the Industry Model Interaction, using the framework given by game theory.

Discussion

In the increasingly interdependent markets of the modern economy, marketing managers face the important and often difficult task of better understanding their competitors. Doing so is important because the success of a marketing strategy depends critically on the reaction of competitors, as well as the reaction of customers (Moore, 1992; Ramaswany, Gatignon, and Reibstein, 1994). As we have stated too, there is often a strong interdependence among firms in a given market. What is optimal for one firm depends on what other firms do, and what the other firms do depends on what the first firm does.

Because game theory highlights the existence, relationship, and/or consideration of other firms, it appears worthy further study marketing strategic decisions under the prism of game theoretic models (Moorthy, 1985; Saloner, 1991; Camerer, 1991; Branderburger and Nalebuff, 1996).

However, marketing theories and research have placed more emphasis on issues related to customer response than competitive response (Moorthy, 1985; Bowman and Gatignon, 1995). This lack of attention is surprising, because as we argued, it is rather difficult to imagine a marketing decision that is not affected by competitive activity. Odd thought it may seem, until game theory came along, economists also tended to assume that firms could ignore the effects of their actions on the behaviors of others. This might be fine when markets are perfectly competitive, or when unchallenged monopolists hold their way. But in real situations, many industries are dominated by a few firms (oligopoly). Thus, by building a new plant, by cutting prices (or threatening to cut them), by increasing advertising, or by intensifying distribution, firms can certainly affect how rivals behave (Carlton and Perloff, 1994; Heil and Robertson, 1991).

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