International Business Management 1 (2): 30-34, 2007

Competitive Marketing Rivalry. Explaining the Time of Response to Strategic Actions

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Abstract: Firms have incentives to improve their competitive position. For this purpose they carry out a variety of aggressive marketing actions, introducing new products, lowering the prices of existing ones, or increasing their marketing budgets. The success or failure of such actions and the achievement of the competitive advantages deriving from them depend on the responses of their competitors. We justify theoretically a set of hypotheses on the effect of 2 marketing actions-price cut and sales promotion- and of the characteristics of the firm that responds, on the time that the firm took to respond. These are then tested empirically with data provided by marketing managers of industrial firms.

Key words: Rivalry, competitive interaction, competitive behaviour, market signals, action-reaction dichotomy

INTRODUCTION

The competitive reaction to the marketing actions has been studied from different perspectives. Hauser and Shugan (1983) developed an analytical model of consumers' response (Defender) in which, assuming heterogeneous consumers who maximise utility in a multi-attribute space, they derive a set of prescriptive implications as to how firms established in the market should defend their results when a rival firm launches a new product. Using a complete equilibrium version of the Defender model, Kumar and Sudharshan (1988) obtain similar results.

Other researchers proposed and tested models of competitors' reaction derived from the study on Strategic and Marketing Management. Smith *et al.* (1992), Bowman and Gatignon (1995) focused on the length of time that rival firms took to respond. Kuester *et al.* (1999) considered the type, speed and amplitude of the rivals' response. Shankar (1999) examined the intensity of marketing expenditure and Debruyne *et al.* (2002) the probability that there would be a response from competitors.

Our study takes this research approach. We focus on one of the traditional dimensions of competitive response-speed-whose importance as a predictor of the success of the strategy of reaction has been verified by Gatignon *et al.* (1989).

CONCEPTUAL MODEL

The conceptual model shows that the marketing actions-price cut and sales promotion-and the characteristics of reacting firm-relative size and level of information on rival organisations-are expected to influence the speed of the competitive reaction. We also propose that the competitive reaction is affected by several industry characteristics that are considered as control variables.

Effect of the marketing actions on the time that the firm took to respond: Competitive reactions in response to the observed marketing actions may, or may not, lead to an aggressive confrontation between the initiating firm and those "attacked". Retaliation varies in their speed, intensity, type, breadth and domain; no retaliation may consist of ignoring the launch, withdrawal the product or accommodation (Kuester *et al*., 1999).

When the marketing action clearly signals its intentions, the managers of rival firms can interpret it accurately and will therefore be able to decide the response more easily and quickly, as there is less need to consider alternative scenarios (Heil and Langvardt, 1994). Such actions do not require much effort and time on the part of rival managers to understand its intentions, which may delay the competitive response (Heil and Robertson, 1991).

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Dutton and Jackson (1987) posit that competitors are more motivated to respond if an action is seen as threatening. The greater the expected consequences of the marketing action for the profitability of rival firms, the faster will be their response in order to avoid the negative effect of the action. In their study of commercial banking, MacMillan *et al.* (1985) found that, as the threat of the attack increased, the response time was reduced. Equally, Smith *et al.* (1989) found that the more threatening an action, the shorter the delay of the response. And later, Smith *et al.* (1992) showed that, in the airline industry, the speed of the competitive response was a function of the extent of the action and of its degree of threat. Specifically, as the threat of the action increased, the time taken by firms to respond decreased.

In their empirical study, Kuester *et al.* (1999) combining the signal of consequences with that of hostility to generate a dimension that they call "threat", find that this combined signal is a significant predictor of the speed of the reaction. So, we propose:

H1: Actions regarding with sales promotion, as opposite to price cuts, will provoke slower reactions on rival companies.

Effect of the characteristics of the responding firm on the time that the firm took to respond.

The characteristics of the responding firm have the potential to explain the speed of competitive reactions.

Although the effect of the degree of information on rivals on the speed of response has not been examined empirically, the effect of the strategic orientation of the responding firm, a variable associated with competitive knowledge, has been analysed. Using personal interviews with the executives of electrical manufacturing firms with a sales volume between 275 and 500 million dollars, Smith *et al.* (1989) found that firms with an inward orientation responded more slowly to competitive actions, suggesting lower aggressiveness.
We therefore, propose that:

H2: The higher the responding organisation's degree of information about threatening firms, the lower the time that the firm took to respond.

The size of the responding firm is a factor influencing the competitive reaction (Robinson 1988). Financial, material and human resources facilitate, or hinder, the competitive movements that a firm can undertake.

Bowman and Gatignon (1995) posit that the greater the firm's share of the target market, the faster the reaction; though the opposite can also be argued, since firms with a high market share could lose more due to cannibalisation. Small firms may compete with faster responses than big ones because speed can be a key strategic advantage for small firms.

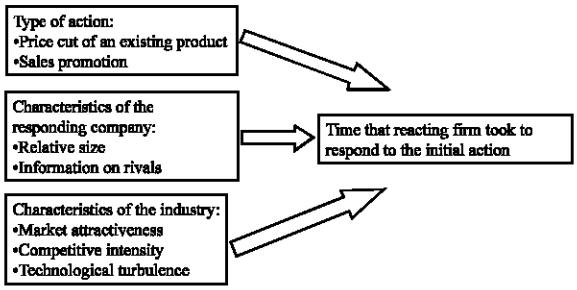

Fig. 1: Conceptual model

Gatignon and Reibstein (1997) found that firms in markets with high change costs present slower responses to the actions of rivals.
We therefore, propose that:

H3: The higher the relative size of the responding firm, the lower the time that the firm took to respond.

The conceptual model guiding our research is shown in Fig. 1.

MATERIALS AND METHODS

The population of interest is formed by industrial firms. In view of their number, two sectors were chosen: food and chemicals. Furthermore, only firms with sales greater than 1.5 million Euro were considered. According to Dun and Bradstreet's database for 2000, the population of interest numbered 1,128 firms. They were all sent the questionnaire, which asked the respondents (the marketing/commercial manager) to recall "a recent price cut/sales promotion of any rival firm to which your firm have reacted".

Ninty seven questionnaires that fulfilled the requirements for the analysis constitute the basis for examining the model presented in Fig. 1. Given the size of the sample, the results obtained only provide an exploratory test of the model.

The questionnaire asked the respondents (the marketing/commercial manager) about two information-related and 2 size-related characteristics of the firm: The degree to which the firm possessed procedures for monitoring the actions of rival firms, the degree of knowledge of the competitive strategy of rival firms, the size of the firm relative to the industry average and its negotiating power with customers. They were also asked to value: The attractiveness of the market (2 items), the competitive intensity (3 items) and the technological

turbulence (2 items). The constructs relating to the characteristics of the responding firm and the industry were measured on 5-point Likert scales.

The dependent variable, the time that the firm took to respond, was measured by the number of days that the firm had taken to implement its response to the action. It is important to point out that the results are based on managers' perceptions. Given the nature of those interviewed, this study focuses on the evaluation made by the management of the responding firms and not on the opinions of the managers of the firms that launched the new product. Furthermore, our model predicts the speed of the reaction conditionally, on the basis that a reaction does occur.

RESULTS AND DISCUSSION

The average speed of the reactions was 3.70, varying between 1 and 5, while the average number of days taken by the firms to respond was 34.35, varying between 20 days and 365.

Since the data were bi-sectorial (52 actions by food firms and 45 by chemical firms), we examined the possible relationship between belonging to a specific industry and the competitive response. The data indicate that no significant relationship exists, at level 0.05, between the sector and the time that the firm took to respond.

We also valued the sector effect on the rest of the variables considered in the study and found no significant difference. As there is no sector effect, the analysis is performed on the aggregate of the whole set of data.

The hypothesis relating to the time that the firm took to respond were tested by a hierarchical regression (Sharma *et al*., 1981). The three models of multiple regression equations for the dependent variable are:

Model 1:

$$Y = B_0+B_1X_1+ B_2X_2+B_3X_3+e$$

Where Y is the dependent variable (time that the firm took to respond); X_1, X_2 and X_3 are the control variables (market attractiveness, competitive intensity and technological turbulence); B are the unstandardised coefficients of regression; and e is the error term.

Model 2:

$$Y = B_0+ B_1X_1+ B_2X_2+ B_3X_3+ B_4X_4+e$$

Table 1: Regression models for time that the firm took to respond

	Model 1, control variable	Model 2, principal effects and type of action	Model 3, principal effects and independent variables
B_0	-17.804	38.024	80.845
B_1	14.668	16.142[c]	16.306[c]
B_2	-11.728	-13.112[c]	-11.990
B_3	3.470	3.571	4.056
B_4		-30.664[c]	-33.301[c]
B_5			-17.017[c]
B_6			2.868
R^2	.090	.145	.193
R^2 (adjusted)	.057	.103	.131
F	2.710[c]	3.440[c]	3.143[b]
ΔR^2		.055	.047
ΔF		5.214[c]	2.322

[a]Significant at level .001; [b] Significant at level .01; [c] Significant at level .05

Where X_4 is the action type: 0 refers to a sales promotion and 1 refers to a price cut.

Model 3:

$$Y = B_0+ B_1X_1+ B_2X_2+ B_3X_3+ B_4X_4+ B_5X_5+ B_6X_6+ e$$

Where X_5 is the relative size of the responding firm and X_6 is the responding firm's degree of information about its rivals.

We used model 1 to test the proposition relating to the effects of the control variables on the time that the firm took to respond. The results reveal that the model 1 is significant at a level of .05 (Table 1).

The results improve when the action type is considered (model 2). The model now explains 10.3% of the variance with a significance level of .05. The change in the F value is significant (5.214, $p<0.05$). The action type (b_4 = -30.664, $p<0.05$) is significant and affects negatively on the time that the firm took to respond. That is, when the initial action is a price reduction, the time that the firm took to respond is lower than when the initial action is a sales promotion. Moreover, when we incorporate type of action in the model, the attractiveness of the market (b_1 = 16.142, $p<0.05$) and the competitive intensity (b_2 = -13.122, $p<0.05$) are also significant, which means that the higher the market attractiveness and the lower the competitive intensity of the industry, the greater the time that takes to the firm to react.

Again, the results improve when the characteristics of the responding firm are also considered (model 3). The model now explains 13.1% of the variance with a significance level of .01.As well as the market attractiveness (b_1 = 16.142, $p <0.05$) and the action type (b_4 = -30.664, $p<0.05$), one characteristic of the responding firm appears as significant variable: Its relative size (b_5=-17.017, $p<0.05$). Therefore, the greater the size of the responding firm in relation to the average of the sector, the faster its reaction. Nevertheless, the change in the F value is no significant.

CONCLUSION

Research in the area of retaliatory behaviour is difficult because of the lack of reliable data on competition. Its availability is limited to a large extent because firms tend to keep secrecy in matters relating to competition. This study investigated competitive reactions to two marketing actions.

Clark and Montgomery (1998) suggest that adequately anticipating competitive responses to market signals has a positive impact on the profitability of the firm initiating the action.

Agreement exists on the idea that competitors will be motivated to respond if the marketing action threatens their market position. Our results show that a price cut generates a faster reaction that a sales promotion. We can argue that price reductions are actions easier of interpret and quicker to implant.

The results reveal the importance of the market attractiveness and the competitive intensity within the industry, in the speed of the reaction. This result emphasises the importance of considering the industry characteristics.

The relevance of our research for managers can be assessed from the point of view both of the existing firms, who have to defend themselves and of the initiating firm, which attacks by introducing a marketing action. From the point of view of the firm that launches the action, managerial implications are when to expect reaction. This information is an important input for the managerial process into the market.

Price cuts provoke faster reactions than sales promotions, this speed will increase with the competitive intensity and will decrease with the attractiveness of the market.

Although the study presented here helps to better understand marketing actions, it is limited by three factors that offer opportunities for future research.

First, the study is limited by a relatively small sample size. Second, the data for this study were gathered using the key informant approach. When the methodology is based on people's perceptions of a past event, questions relating to recall, post-hoc rationalisation and the rigorous evaluation of the validity of information inevitably arise. Third, although this study includes several variables relating to the constructs reviewed in the literature, their number is limited, so future studies must incorporate new organisational variables.

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