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Strategic Behavior of Companies for Prosperity in Dynamic Environments: An Empirical Study

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Abstract

Competitive dynamics is a phenomenon that is becoming more evident in many industries, even in those that were considered relatively stable until recently. Theoretical approach of competitive dynamics shows that relationship between firm´s strategy and firm performance primarily depends on firm strategic behavior, but also on competitors´ behavior and interactions between them. The goal of this paper is to theoretically and empirically indicate the relationship between firms' strategic pattern – certain behavior and gaining competitive advantage in hypercompetitive industries. Even though a growing number of empirical studies dealing with the issue of achieving and maintaining competitive advantage in dynamic environments could be seen, they were primarily focused towards analyzing competitive dynamics and its impact on the financial performance of the firms. Thus, the main intention of this paper is to define and examine the link between firms' strategic behavior in dynamic environment and achieving competitive advantage that could be indicated not only through financial performance indicators but also through some particular indicators of firm performance compared to the largest rival. Research results showed that there is positive connection between higher level of firm agility and firm strategic innovation, and superior profitability of the firm. In other words, firm characteristics that increase firm aggressiveness, i.e. firm agility and firm strategic innovation, represent a significant predictor and are crucial firm's behavior in the dynamic environments if the firms are to survive, prosper and retain the competitive advantage.

Keywords: strategic patterns, firm strategic innovation, firm agility, temporary competitive advantage

Introduction

There has been an alternation in the competitive conditions in various industries, i.e. *hypercompetitive shift*, visible through a sudden increase in competitive activity, greater variability in the profitability of the industry, as well as in noticeable changes in market shares (Ferrier, Smith and Grimm, 1999). Although a growing number of empirical studies dealing with the issue of achieving and maintaining competitive advantage in an era of hypercompetition could be seen, they were primarily focused towards analyzing competitive dynamics and its impact on the financial performance of the firms. Therefore, in his longitudinal study, *Chen* shows that the most important factors that influence firm strategic behavior include context recognition and motivation and ability to undertake actions (Chen, 1996). Firm´s abilities should encompass organizational preconditions for strengthening its competitive potential (Ferrier, 2001), as well as individual assumptions of firm´s strategic decision makers (Bazerman and Schoorman, 1983; Goodstein, and Escalas, 1994). *Ferrier* shows the faster the decision-making process related to action implementation is, the increase in the market share of the firm will be more visible (Ferrier, 2001; Smith, Ferrier and Grimm, 2001).

When dealing with the competitive reality – hypercompetition, firms need to be aggressive by taking a large number of actions with great speed. Action aggressiveness is considered as a firm response to the phenomenon of temporary advantage. Firms able to respond quickly to market demands strengthen their market power and generate advantages; but those that can be even faster, will generate even greater market power and advantage over its competitors. However, there is no guarantee that competitive advantage achieved today will remain unchanged in the long run. Equally important, firms need efficient internal structures to support this high level of activity in the marketplace. The top management team is the kingpin that coordinates and mobilizes organizational resources and efforts for firms' aggressive competitive engagement (Baron, R. A., 2007; Ozgen, E. and Baron, R. A., 2007). Thus, the most important characteristic of competitive advantage in hypercompetition is aggressiveness in taking actions (Chen et al., 2010). The focus is on being prepared to take an action, i.e. the extent to which the firm is willing to participate with competitors and act quickly in the involvement and participation.

Existing researches related to achieving competitive advantage in the hypercompetitive conditions offer different approaches regarding to analysis and research of mentioned field. This paper provides conceptual framework of strategic behavior, i.e. specific strategies firms may follow in order to achieve competitive advantage in the dynamic industries. Therefore, the research problem stems from an insufficient understanding of key determinants of the firm strategic behavior and offers a new research approach to the analysis of achieving competitive advantage in the hypercompetitive industries with the practical application. Given approach encompass defined and structured behaviors of firms that are framed in the newly formed strategic taxonomy of strategy patterns, supported with an empirical study of the strategic behavior of firms in Croatia.

Prosperity model of desired firm characteristics

Daraboš (2014) developed the model that explains relationship between proposed strategic patterns and competitive advantage in the hypercompetition (Fig 2). There are a lot of previous studies that have partially examined some characteristics of firm strategic actions and their influence on firm performance (Ferrier, 2001; Chen, Smith, Grimm, 1992; Chen, MacMillan, 1992; Smith, Grimm, Gannon, 1992).

In order to investigate the extent to which certain firm behavior affects firm performance in the hypercompetitive conditions, different firm behaviors were defined and structured at first, which were then framed in the newly formed strategic taxonomy of strategy patterns. Firms' strategic patterns were defined by two key variables, i.e. constructs that define and influence the firm behavior in hypercompetition: (1) firm agility and (2) firm strategic innovation (Darabos, 2014).

Depending on the firm level of every individual variable, possible strategic patterns of specific firm behavior have been theoretically developed.

Strategic patterns of firm can be defined as the perceived and identified conceptualizations based on a limited number of variables (firm agility and firm strategic innovation), where a clear delineation in the firm strategic behavior in the hypercompetitive conditions can be assumed (Darabos, 2014). Stated means that it is possible to determine four groups of different strategies firms may follow based on an alleged taxonomy and that are: (A) Positioning Innovation, (B) Competitive Inertia, (C) Positioning Agility, and (D) Innovative Agility (Fig.1) (Darabos, 2014; Darabos Longin, 2016). Such a classification was developed on dichotomous definitions and represents a starting basis for the research.

After developing taxonomy of strategic patterns, it was crucial to establish and clarify the basic variables that differ given firm strategies. The first construct that shapes firm behavior is firm agility. It is complex variable measured by the mean value of two defined variables that explain in detail and show strategic actions initiated by the firm. The first variable is the *frequency of undertaking specific types of strategic actions* that measures undertaking certain types of strategic actions compared to actions of direct competitors. The second variable is *firm's reaction speed* that shows firm recognition, reaction and anticipation of strategic opportunities and challenges in the environment in comparison with the speed of direct competitors. The assumption is; the greater firm agility is, or higher frequency of undertaking actions; it is more likely the firm will succeed in achieving a temporary competitive advantage.

Firm strategic innovation represents the second construct defined by the mean value of complexity level and unpredictability of the actions initiated by the firm, as well as characteristics of actions itself initiated by the firm. This construct is determined by the two key variables: *general and specific strategic innovation*. *General strategic innovation* shows innovation in the firm behavior in relation to its competitors in the industry through the introduction of new products/services, new production technologies, organizational solutions, as well as new management techniques. On the other hand, *specific strategic innovation* is explained through three auxiliary variables: the level of unpredictability, the level of complexity and the specific level of innovation. First mentioned, the level of unpredictability explains and describes the sequence of undertaking actions depending on the type of given action initiated by the firm in relation to direct competitors. The level of complexity (second auxiliary variable) describes the time it takes to prepare and initiate certain type of firm action in comparison to direct competitors. Consequently, actions are divided into simple or complex. Specific strategic innovation is the last auxiliary variable in strategic

innovation model and it illustrates the importance of undertaken action for the firm and/or industry in comparison with direct competitors.

Lower level of strategic innovation, i.e. undertaking simple and predictable strategic actions, on the one hand improves firm performance due to rapid implementation, and raises the possibility that competitors in this case can respond quickly enough and thus suppress the possibility of improving the firm performance that acted in the first place. On the other hand, complex and unpredictable actions will reduce the speed of implementation leading to the slower response of competitors because it is difficult to predict such actions, but also increases the possibility of improving firm performance (Ferrier, 2001). Therefore, it is important to observe the process of dynamic interaction between competitors through sequences of competitive actions and reactions of the rivals.

A special measure was constructed for every individual key variable by examining the attitudes of Top Management Team members (TMT) by using a Likert measurement scale of five degrees of intensity, forming the level of agility, i.e. the level of strategic innovation for each firm from the sample. In the model the agility levels, as well as firm strategic innovation levels, equal to 3.00 or greater is defined as a high level of the variable, while the mean values below 3.00 represent a low level of the variable. The values of 3.00 or above show significant activity in the market compared to direct competitors, as opposed to values below 3.00, which show lower activity in the market in comparison with the most important competitors. Considering that so far there was a very little similar research in this area, point of division in dichotomous terms "low-high" was made based on the presumption that the set measuring scale adequately match anticipated taxonomy.

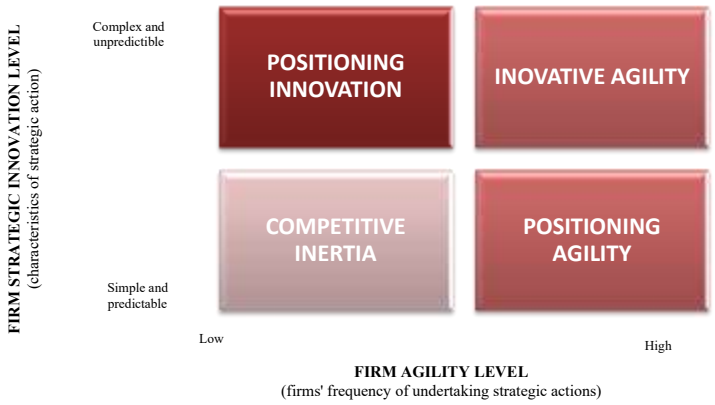

Fig 1. Taxonomy of strategy patterns

The high level of firm agility encompasses two strategic patterns in the model: positioning agility and innovative agility. Both represent a frequent undertaking of actions by the firm, which means a constant presence and high level of competitive activity. Highly agile firms are those extremely competitive-oriented and those that enhance and improve their business in every way. If the firm is constantly better or a leader in the industry and leverages its strengths in order to further strengthen its reputation and increase market share, it will be able to overcome its competitors. The assumption is the higher level of firm agility is, i.e. higher frequency of undertaking action, it is more likely that the firm will succeed in achieving a temporary competitive advantage, in other words to improve its firm performance (Darabos Longin, 2016).

On the other hand, higher level of firm strategic innovation encompasses two strategic patterns in the developed model: positioning innovation and innovative agility. These patterns are distinguished by firm agility, or by the frequency of undertaking actions. But still, both represent undertaking of complex and unpredictable actions by the firm, for which it is assumed that improve firm´s firm performance, since it is more difficult for competitors to predict such an action and thus, it is less likely competitors will response quickly enough (Darabos Longin, 2016). Stated will result in an extended duration of competitive advantage for the firm that has come out as a result of that strategic action.

The hypotheses that will be tested in order to test the validity of the proposed model are:

H1. The higher level of firm agility will lead to better firm performance, i.e. achieving competitive advantage in dynamic environment.

H2. The higher level of firm strategic innovation will lead to better firm performance, i.e. achieving competitive advantage in dynamic environment.

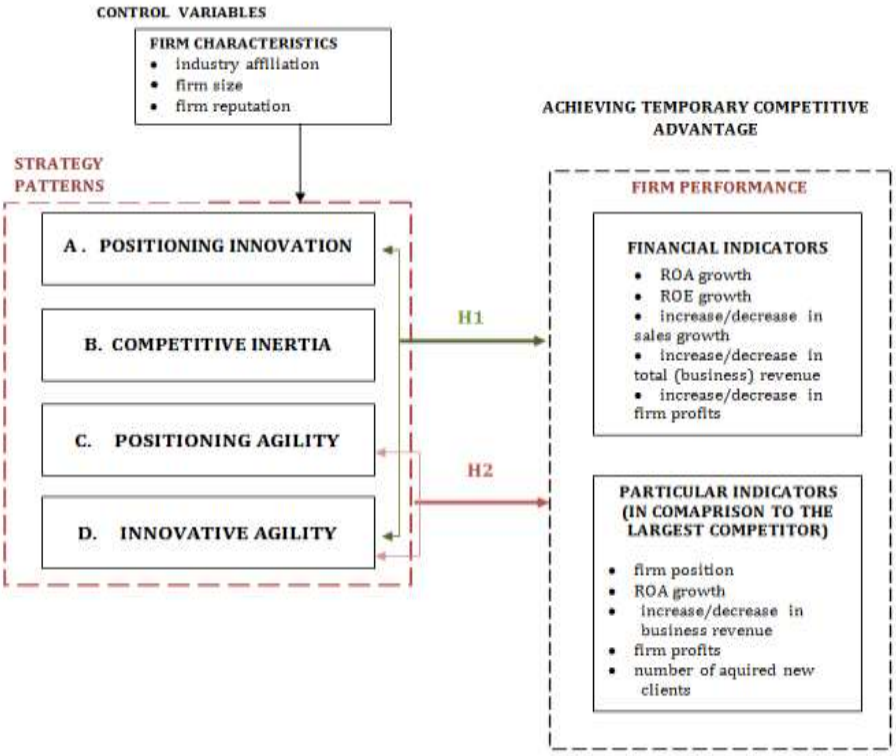

Fig. 2 Proposed model of relationship between strategy patterns and competitive advantage in the dynamic environment

Methodology

The research was conducted on Croatian large and middle-sized firms that are operating in the mobile telecommunications industry, cosmetics industry, printing industry and retail industry that were in preliminary research defined as hypercompetitive. For collecting primary data, a poll survey was conducted, and the final sample for this research was 61 different companies (out of 104 in selected industries), representing a 58.65% response rate. The above rate is acceptable given the sensitivity of the analyzed phenomena and the complexity of analysis (only one completed questionnaire from TMT member of every firm in sample – the firm strategy was analyzed).

So, the first step needed for testing hypotheses was defining the level of each construct for each firm from the sample. This is the first step necessary for distribution of firms into theoretically defined strategy patterns. According to the research results mean value of the frequency of undertaking strategic actions (the level of agility) is 3.26, while the mean value of the level of strategic innovation for firms from the sample amounts 3.24 (Fig 3).

	N	Minimum value	Maximum value	Mean value
A1) Frequency of undertaking specific types of strategic actions (A11-A16)	61	1,50	5	3,12
A2) Firms reaction speed (A21-A24)	61	1,50	5	3,41
FIRM AGILITY LEVEL (A = A1 + A2)	**61**	**1,50**	**4,92**	**3,26**
I1) General strategic innovation	61	1,75	5	3,30
I2) Specific strategic innovation	61	1,40	5	3,18
FIRM STRATEGIC INNOVATION LEVEL (I = I1 + I2)	**61**	**1,68**	**5**	**3,24**

Fig 3. Mean value of key constructs in strategy pattern model for firms from sample

Additionally, based on calculated values and obtained results, strategic patterns for all firms from the sample have been identified. (Fig 4.).

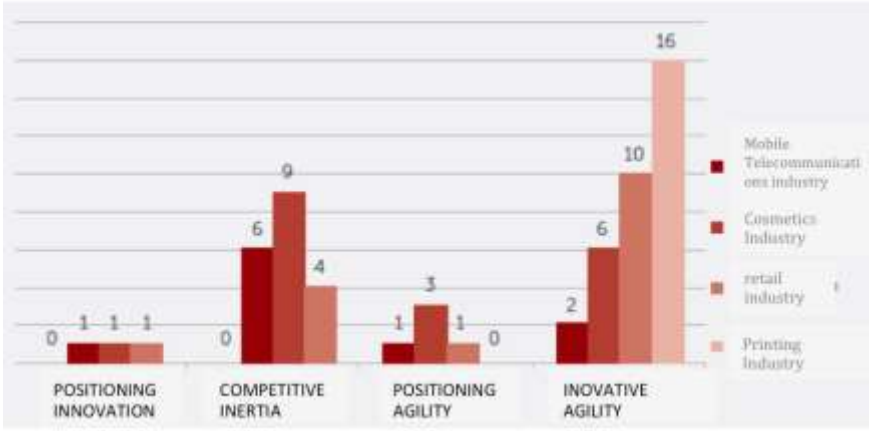

Fig 4. Distribution of firms from sample based on defined strategy pattern and industry

Based on calculated values strategic patterns for all firms have been identified. Strategic pattern of Positioning Innovation follows a total of three firms from the sample. Competitive Inertia is a strategic pattern in which 19 firms have been redistributed. Strategic pattern of Positioning Agility assumes a high level of agility and low level of firm strategic innovation with the five firms from the sample following this pattern. Firms that have extremely high level of competitive activity, i.e. a high level of agility and strategic innovation are arranged in the pattern of Innovative Agility with the total of 34 such firms from the sample.

In most of the researches of this type, as a measure of firm performance researchers usually use market performance indicators. Since Croatia, like most developing countries, is characterized by underdeveloped and illiquid capital market, it is believed that the use of capital market indicators cannot illustrate firm performance sufficiently well. Thus, different "non-market" firm performance indicators were used in this empirical research. Financial data was collected for a period of three years. Firstly, data on total revenue and business revenues were used in the calculations of growth (or fall) of its value, more specifically, one-year, two-year and three-year growth/fall. Secondly, indicators that measure firm's profitability have also been calculated: increase/decrease in return on sales (ROS), increase/decrease in return to equity (ROE) and increase/decrease in return to assets (ROA). Mentioned measures were used in order to calculate their value growth (or fall), in the same way as shown for the total and business revenue. One of the reasons why firm performance measures were used as a value of three-year growth is that in 2010 economic crisis and recession in the domestic economy reached the peak. So, with the firm performance presented in this way it is believed that exogenous influences that are not a direct result of firm management will be mitigated, at least to some extent.

In the analysis, aside from the above-mentioned financial indicators of the firm performance, the particular indicators of firm performance were collected through subjective assessment of the respondents (TMT members), for period of last three years. These particular indicators are: (1) firm position in the comparison to the largest direct competitor, (2) ROA growth in comparison to the ROA of the largest direct competitor, (3) increase/decrease in the firm revenue

compared to the one of the largest direct competitor, (4) firm profits compared to the profits level of the largest diract competitor, and (5) number of new clients aquired in the comparison of new clients aquired by the largest competitor.

The first hypothesis assumes that there is a positive relationship between the level of agility and firm performance in dynamic environment. Results of regression analysis show that the level of firm agility is statistically significant predictor of the likelihood the firm will achieve profitability growth. In this analysis, both, financial and particular indicators of firm performance were observed for the period of last three years as well as their relation with the level of firm agility. The analysis confirmed a statistically significant correlation between both financial indicators of firm performance (the three-year growth of the total and business revenue) and firm agility level, at 10% level of significance (sig=.069; sig=.090). Also, the results indicate a significant positive influence of the level of agility on the particular indicators of firm performance, i.e. firm market position and ROA growth indicator compared to the largest competitor at 1% level of significance (sig=.000), and the rest three particular indicators at less than 1% level of significance (sig=.006). The above link is a positive direction, which in other words means that a higher level of firm agility, i.e. higher frequency of undertaking action, will more likely lead firm to succeed in achieving a temporary competitive advantage, in other words the firm will improve its firm performance.

Regression analyses for second hypothesis confirm the assumption that there is an empirically provable positive relationship between the level of firm strategic innovation and firm performance in the hypercompetitive industry. In this analysis, financial and particular indicators of firm performance and their relationship with the firm strategic innovation were also observed. The results show a positive statistically significant relationship; at 10% level of significance; between some financial indicators of firm performance, i.e. the three-year growth in total revenues (sig=.092) and a three-year growth in business revenues (sig=.072), and the level of firm strategic innovation. Positive results were obtaining also for the particular indicators of performance, at 1% level of significance for firm market position (sig=.000), as well as for revenues growth, firm profits growth and new clients growth compared to the largest rival (sig=.007). Furthermore, the results indicate a significant positive influence of the level of strategic innovation and ROA growth indicator compared to the largest competitor at 5% level of significance (sig=.021). The presented results show that the firms with a higher level of strategic innovation, i.e. the ones undertaking more complex actions, will more likely lead firm to succeed in achieving a temporary competitive advantage, in other words the firm will improve its firm performance.

Conclusion

The results show how the level of the key variables firm agility and firm strategic innovation represent a significant predictor of the likelihood that a firm that operates in the hypercompetitive conditions will experience superior profitability, i.e. achieve the temporary competitive advantage. The link was strong and positive for both, the financial and particular indicators of the performance, that shows that the firm that want to be more successful than its competitors should undertake a large number of actions, very fast and that those actions should be more complex so that the competitors could harder predict them and that the advantage from these actions last longer. Likewise, the firms that are more agile and innovative in taking the actions will more likely have better market positions than its competitors and overall, they will be more competitive in comparison to other players in the industry. In other words, these characteristics should be seen as crucial characteristics of firm's behavior in the dynamic environments if the firms are to survive, prosper and retain the competitive advantage. This research contributes to the field research by providing new insights into the understanding of the strategic behavior of firms in hypercompetition especially through development of new taxonomy of strategy patterns and furthermore by analyzing the firm specific behavior to these patterns.

Thus, the research results provide empirical evidence that can help in understanding the determinants of corporate behavior in hypercompetition. Identifying important factors, processes and dynamics that influence the achievement of competitive advantages in such environments as well as establishing links between the strategic behavior of firms and changes in the firm performance, are of great importance when identifying ways how could firms raise their competitiveness in such specific conditions.

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