Chapter 16

Firms’ Strategic Positioning Modeling in Dynamic Strategy Space Agent-Based Approach

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ABSTRACT

The aim of this research is firms’ strategic positioning modeling in a dynamic strategy space consisting of the customers and competitors. Presented model provides the possibility of choosing superior position to other competitors and customers for each firm, so that it can maximize its profit and market share. According to this that the best position choice can have different meanings for different companies in an industry, so the studied firms were divided into six groups based on a series of the obtained indicators of experts in the cosmetics-sanitary industry in Iran and two scenarios were tested for the superior position choice (closing to the best firm, locating in the best position) on them. Finally, the appropriate approach was offered for firms in each group in choosing the superior position by using the simulation results agent-based approach.

INTRODUCTION

World economic markets had never been competitive to that extent and while the managers of different industries want to develop products and services that merge different technologies and cross industry boundaries, and to build new business models. In these fast-changing industries managers must consider and act on strategies based on different competitive rules. The essence of strategic management is that companies not only create appropriate future-oriented strategies while adapting to environmental change,
but build strategies to optimize each business element comprising the corporate system and achieve continuous growth through this integrated, dynamic development. Managers for this reason paid attention to new strategies that static methods and models no longer were able to analyze competitors and customers fast and persistent changes in current markets. Deciding to enter into the market, the deciding issue is converted from a static to a dynamic issue, based on the mutual position of customers and competitors and also change in the company position, because of the change in the position of competitors and customers. On the other hand this dynamic view needs modeling this landscape and examining different scenarios as strategies and choosing the best one, so this paper proposes a modeling framework for dynamic strategy landscape with agent-based modeling and Kauffman’s (2003) NK modeling concept.

LITERATURE REVIEW

Competitive strategy had been the main core of success in various industries in strategic management for continuous decades (Hitt et al., 1996). Many researchers emphasize that the competitive strategy is not a static phenomenon, but is a sequence of interconnected actions and reactions that occur over time (Galbraith & Schendel, 1983). De Obeso Orendain and Wood (2010) investigate strategies for complex, dynamic problem solving in a fire-fighting microworld. They developed a cognitive model with the aim of providing insight into the development and selection of strategies participants use. Kodama (2010) suggested a framework for building a dynamic strategic management theory is “change process management.” Changes comprise those in the external environment and the internal corporate system, and dynamic congruence of corporate boundaries is the first proposition of these process changes. Najmaei (2011) proposes an analytical archetype based on Dynamic capabilities theory (DCT) in order to show theoretically how a dynamic approach to innovate business models provides executives and researchers a handful of insights into the realm of value innovation in the current challenging landscape. Hadjis and Papageorgiou (2012) examine the use of the system dynamics approach to capture the market evolution structure. They developed a holistic model of market evolution involving the most important components of the business environment problem situation such as the buying process, product life cycle characteristics, Customer Satisfaction and plausible Marketing Strategies. Prezenskin and et al. (2017) applied the method of cognitive modeling on a complex rule-based category learning task to gain a better understanding of the underlying processes of dynamic decision-making in strategy formation.

Today each firm that competes in an industry has a clear or implied competitive strategy. The reason of the competition is that one or more of the competitors feel a kind of pressure or they feel that the opportunities for advancement have been provided (Porter, 1980). In most industries, competitive actions have an important effect on other competitors by one of the competitors and therefore it may provoke a retaliatory attempt or an attempt for competition, this indicates that the companies are interdependence to each other. Nature of competition in an industry depends on five competitive basic factors, these five competitive factors include: the entrance of new investors, the threat of substitution, bargaining power of customers, bargaining power of suppliers and competition among the existing competitors that is reflecting this fact that the competition exceeds far the level of its established actors in an industry (Porter, 1985). In most industries, if not all, there are companies that have adopted very different competitive strategies. Five major competitive forces create a space for competition of all existed companies within the industry, but we should know why some companies always are profitable than their competitors and this feature is directly related to the strategic position of those firms. Porter and other researchers believe