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Determining competition power by performance driver analysis

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Abstract

Competition power is main indicator for performance of a corporate. But the competition concept involves different factors that have affected the performance of corporate in the industry or segment. At the same time competition has vagueness due to coming events, future decisions, and behaviors of rivals. These factors can be driver or brake for corporate performance. Hence, structure of competition requires a fuzzy and multi criteria approach. The aim of this study is to determine the competition power of a corporate based on the driver analysis concept by using fuzzy analytic hierarchy process (AHP) technique. In the study, firstly the factors that have affected the competition power of corporate and strategies were selected. Then factors have been classified as drivers or brakes according to the effects on the competition power of corporate. After these steps integrated, the model has been formed with performance driver analysis and AHP technique. The weight of factors has been calculated by using fuzzy number. At the end of the study, the competition power has been determined based on the proposed model.

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1. Introduction

One of the factors determining performance of a corporate is competition power. The competition power of a corporate indicates how much its success with which level according to rival corporates in its internal and external environmental activities. The competition fact has an uncertain structure such as events, activities, decisions and behaviors of rivals. Because of this feature, studies using the competition fact as an analysis issue with fuzzy logic are seen in the literature^{1,2,3,4,5}. In addition to this, according to studies being in the literature it is realized that the competition fact and so competition power of corporate are related to a lot of variables or parameters. This point

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makes examination of competition fact with multidimensional approach essential. Besides, on the one hand there are driver factors affecting competition power performance of a corporate on the other hand there are brake factors obstructing it. Hence this situation should be taken into consideration to determine competition power performance. When the literature is examined, studies analyzing competition issue with multidimensional approaches are found^{4,6}. However studies making competition power performance of a corporate topic of analysis on the basis of driver and brake factors according to corporate strategies are not found in existing studies. In examination of literature it is concluded that this issue can be solved by performance driver analysis.

Performance driver analysis which is provided to the literature by Grundy and Brown⁷ is a developed approach for diagnosing of fundamental key issues in the context of strategic management. The primary function of this analysis is being able to diagnose performance. Performance driver analysis can have a subject of all or a part of corporate and an activity. In this approach, having determining unit of analysis or an activity, driver and brake factors which affect performance are determined. Driver factors as factors that improve performance through drawn on a horizontal axis are shown upward with vertical drawn arrows. On the other hand, obstructer elements as factors which decrease performance are shown with downward arrow. Arrows are drawn short or long according to driver and brake factors' influence on corporate performance. Long arrows show elements that have higher degree of impact on corporate performance than short arrows. This display indicates relative importance of driver and brake on the performance^{7,8}. Nevertheless, performance driver analysis in literature with its current form is not adequate in terms of measurement and evaluation despite offering analytic approach to any performance issue. According to the aforementioned knowledge, this study aims at determining performance of competition power of a company the context of performance driver analysis. Two issues in this study are considered to contribute to the literature: The first one is the development of performance driver analysis's dimensions of evaluation and assessment; thus, the feature of analytic solution is developed a step further. Another contribution of this study to relevant field is that it has proposed a model so as to determine competition power of a company on the basis of performance driver analysis.

2. Method

In this study Fuzzy Analytic Hierarchy Process (AHP), one of the multi criteria decision making techniques, has been used. As it can be seen in the literature, there are a lot of fuzzy AHP methods that have been proposed by several authors^{9,10,11,12,13}. But in this study Chang's^{11,12} extent analysis method, the steps of this method are functional and easier than the other fuzzy AHP approaches, has been used. As it is well known Chang's^{11,12} extent analysis method has not been explained in this study.

In this study the proposed model for measuring and evaluating competition power of corporate by performance driver analysis includes steps as following:

Step 1. Determining the corporate strategies.

Step 2. Determining the factors that affect competition power of corporate.

Step 3. Determining drivers and brakes factors that affect competition power of corporate as positive and negative.

Step 4. To structure integrated model according performance driver analysis concept

Step 5. Calculate the local and global weights of the factors and sub-factors according to the pair wise comparison matrices. In this study pair wise comparisons have been made with fuzzy scale (Figure 1 and Table 1) that has been proposed by Kahraman et al¹⁴.

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