

Chapter 7

Initial Price Strategies of Polish Micro and Small Enterprises: An Application of Game Theory for Industrial Organization of the SME Sector

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ABSTRACT

The sector of micro, small and medium size enterprises is important for any economy. It is important also for Poland. Analyzing the industrial organization of this sector it was confirmed that the owners and managers of such companies are applying strategies, which are rational from their point of view, but not from the perspective of real market conditions. It is argued therefore that the game theory is for them a solution in enhancing competences and performance of their organizations. Based on randomized sample of Polish micro and small companies the chapter aimed to find out if the managers apply the game theory rationales when choosing price strategy when enter the market. It was confirmed that they do not and that they don't play Nash equilibrium in the strategic interaction when it comes to the price level. There was applied maxmin strategy, which maximises the worst - case scenario from the game. Thus there is a real chance that if entrepreneurs would analyze the situation with respect of game theory, their strategies would be more accurate and provide better outcomes.

INTRODUCTION

Industrial organization is concerned with the functioning of markets and industries, in particular the way firms compete with each other. However, in the mainstream economics the study of how markets operate is the object of microeconomics. But, as stated i.e. by Tirole (1988, pp. 7-12), the main reason for considering industrial organization as a separate subject, respectively in a heterodox way of economic

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thought, is its emphasis on the study of firm strategies that are characteristic of market interaction, i.e. price competition, product positioning or research and development.

Entrepreneurs and managers, especially small, incl. micro, and medium size enterprises (SMEs) can be guided by many reasons in choosing a strategy from different strategic options. They are applying strategies, which are very often rational from their point of view, but not from the perspective of real market conditions. Therefore, in the wake of knowledge-based economy, to elicit the tacit knowledge and face it with rational guidelines the use of directions based on rational and optimal choices, i.e. game theory, seems to be a useful solution for them in enhancing competences and organizational performances. The use of game theory guidelines in such companies is however at infancy.

Regardless if it is conscious or not, the game that every company must play, and is playing, is the game of price strategy, i.e. while entering the market. Entrepreneur can be guided by different reasons in choosing this strategy. If an owner or a manager of SMEs tries to create an image of a cheap company, the price level will be set very low. If the company is trying to seem expensive and sophisticated and offers high quality products or services, the price level will be set rather high. If the entrepreneur won't think about the image but just focus on price margin, the price level can be similar to the competitors. Entrepreneurs from the SME sector can have different visions about their company. But they usually have the same goals (see Audretsch & Beckmann, 2007, pp. 45-47): to generate profit and try to eliminate competitors. In achieving these goals, game theory seems to be a reasonable tool to use in establishing an initial price strategy.

As far as Polish micro and small enterprises are concerned, it was shown by the previous studies (i.e. Smolarek, 2012, pp. 53-68) that they have very limited preferences that allow to examine their initial price strategies. Usually in a typical Polish micro or small company the manager is also the owner. This is very important for the study, because such a person is able to answer questions about company's strategy and conditions in the first months of activity. Also, micro and small-sized companies are usually younger than medium or large firms. The younger the company, the more accurate will be the answers about its initial price strategy. So far there has not been research carried out about the initial price strategies of Polish micro and small enterprises. And this work is trying to fill this gap.

The primary goal of this chapter is to present how rationally, from the perspective of game theory, Polish micro and small size enterprises behave once they develop their initial prices on the market. Additionally it aims both: to present in which areas of their activities SMEs could strategically use the game theory achievements as well as to present the importance of micro, small and medium size enterprises for the Polish economy.

DATA AND METHODS

Apart from an in-depth critical literature review the author has applied a primary research on Polish micro and small companies, which were analysed by the game theory assumptions. For the purpose of the study there were 153 Polish entrepreneurs questioned through in depth interviews executed in 2013 and 2014. The sample was selected randomly. All researched companies operated locally in the Mazovia province of Poland. The selection of the companies was limited by two main restrictions: number of employees (not more than 50 workers in the company) and time of presence on the market (at least one year of activity).

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