The reference model of competitiveness factors for SME medical sector

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ABSTRACT

The paper presents the issue of SME competitiveness in terms of determining their competitive position on the market. The proposed reference model, focused on the evaluation of the competitiveness of a selected group of SMEs on the market of medical services, was developed to support strategic decision-making. The usefulness of the model is verified in the process of determining the competitive position of a selected group of participants, applying research methods of strategic analysis. Relationships, observed during the study, occurring between the competitiveness factors and the competitive position taken by a company, provide knowledge, whose utilization directs the company's business to improving its market performance, organizational and economic conditions.

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1. Introduction

Studies on competitiveness and competitive advantage have been conducted by many researchers (e.g. Betts and Ofori, 1992; Hitchens et al., 2003; Pettigrew, 1988; Porter, 1980, 1982, 1985, 1987). Competition is currently recognized as the most important mechanism, which by promoting best solutions, in terms of economic criteria, leads to the development of the economy, unleashing the creativity of competing market players (Garengo et al., 2005). It is therefore necessary to constantly monitor and promote their market condition, measured by the level of competitiveness achieved.

SMEs (*Small and Medium Enterprises*) need to have competencies in order to survive in a changing environment (e.g. Blackburn and Jarvis, 2010; Teece et al., 1997; Tenai et al., 2009) and the model of competitiveness factors, supporting the strategic decision-making, is a way to achieve this target. The choice of medical clinics, as the object of the research, was due to the fact, that their functioning is regulated and constrained by separate legislation.[1] They are also subject to a competitive market of medical services, which constantly requires them to improve the model of management strategies. For all these reasons the paper presents the answer to the research question:*Which of the key competitiveness factors have a decisive impact on the competitive position of SMEs in the medical services industry, and how they can be used in supporting the strategic decision-making?*

In this context, the literature framework is presented in Section 2. Hypothesis and methodology are described in Section 3. It provides a basis for the developed reference model of competitiveness factors for a selected group of SME medical clinics, which can be found in Section 4. Verification of usefulness of the proposed model is illustrated in Section 5 and final conclusions of the research are in Section 6.

2. Theoretical framework

According to K'Obonyo (2004) all firms operate in dynamic and competitive markets. Success in such markets depends on a firms' strategic positioning for competitiveness. Porter (1980) sees the firm's competitive strategy as a multi-dimensional concept. Hambrick (1983) and Miller (1988) identify five dimensions of competitive strategy: innovation differentiation, cost efficiency, asset parsimony, reactive and domain scope. K'Obonyo (2004) further posits that small firms need to focus on keeping a coherent pattern in their strategy for better performance given intensified market competition and paucity of resources particularly in less developed countries. Adhikari and Regmi (2001) argue that competition is the heart of efficiency, which is a prelude to effectiveness and induces a firm to aspire for excellence in its performance. McFetridge (1995) gives competitiveness at three different levels of aggregation: the firm, the industry or groups of industries and the nation. These different approaches combine the one common element — competitiveness could be cultivated by any firm irrespective of size through a clear strategy orientation.

The outcome of strategy may be moderated and influenced by an array of factors within and outside the firm (Tenai et al., 2009). This involves the necessity of constructing indicators to assess the effectiveness

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of moderating the competitiveness of enterprises. Literature studies have presented several methods for assessing competitiveness of firms, which is conditioned by the fact, that although a multitude of factors is hypothesized to impact on business outcomes, there is no consistent pattern to the characteristics which contribute to business competitiveness, success and growth (Gibb, 1996; Ray, 1993). The competitiveness is modeled and evaluated in the cross section over the country (Huovari et al., 2001; Nathan Associates GBTI consortium and J.E. Austin Associates, 2004; Porter, 1990, 1995; Porter et al., 2009), over the industry (Crouch and Ritchie, 1999; Dubinas and Stonkuvienë, 2005; Tan et al., 2007; Yoon, 2002), or over the market sector (Curran, 1999; Jones and Tilley, 2003). Definitely the least study concerns cross-sectional company or group of companies (such as Settecase, 1999), despite the fact that most traders, especially SMEs, do not identify with the global cross-section of the market and rarely give a positive opinion on the general solutions, emphasizing their autonomy in relation to large enterprises. Therefore it is reasonable to search for a reference model of key competitiveness factors, which will assess a competitiveness of selected group of SMEs in a defined range of applications.

Key competitiveness factors can be seen as critical success factors and defined as the essential areas of activity, that must be correctly performed or applied to achieve the mission and objectives or goals for business or project (e. g. Gray, 1990; Sanvido et al., 1992; Saqib et al., 2008; Wenderoth, 2011). The aim of the construction of the reference model is to support SME development, through the designation of their competitive position *CP* and such combinations of key competitiveness factor values, which guarantee an increase or maintain the actual *CP*. J. Takala carried similar research for determining the index of critical success factors (Ingman and Takala, 2011; Nadler and Takala, 2010; Ranta and Takala, 2007). Based on literature examples can be concluded, that the aggregate index of a competitive position is the carrier of information about the current enterprise condition. This conclusion is the base to formulate main hypotheses of the paper.

3. Hypotheses and methodology

Starting from the formulated research question and basing on the above discussion two hypotheses can be formulated:

H1. There is a set of competitiveness factors having a decisive impact on the competitive position of the considered SMEs.

H2. There is a set of competitiveness factor values guaranteeing the assumed competitive position of the considered SMEs.

The proof of these hypotheses requires to define a reference model of key competitiveness factors for a selected group of SMEs. Construction of the reference key competitiveness factor model refers to the information pyramid (Fig. 1). Starting from the primary data, through
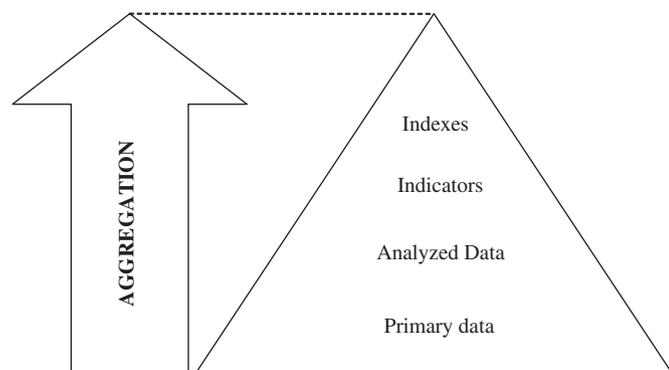

Fig. 1. Information pyramid.
Source: Hammond et al., 1995, p. 1.

their analysis, it leads to the determination of values of key competitiveness factors and to the identification of *CP* index value.

The implementation of research required to: define of a research area, identify key competitiveness indicators, develop a reference model of key competitiveness indicators, verify the usefulness of this model and draw conclusions. Detailed diagrams of the research methodology are illustrated in Figs. 2 and 3.

Construction of a reference model of key competitiveness factors (shown in Fig. 2) was conducted for selected group of medical clinics (C1 stage in Fig. 2), which: belong to the SME sector (employ from 2 to 250 employees and have annual revenue at the level below PLN 210 million), provide dental services, and employ dentists.

The preliminary analysis was conducted on about 15 research reports (reports available in the literature of the problem, surveys realized by Pentor Research International and PKPP Lewiatan[2] in years 2005–2011) on determining factors of competitiveness of SMEs on the Polish market. The complete list of these reports was presented in the end of this paper (in the section titled Polish Research Reports and includes: Mruk, 2010; Pentor Research International, 2008; Starczewska-Krzysztoszek, M., 2005, 2006, 2007, 2008; Walkowska, 2010, 2011; Wilmańska, 2010; Żołnierski, Pyciński, 2007; Żołnierski, Zadura-Lichota, 2008; Żołnierski, 2009). These analysis used data of the entire SME sector, but without taking into account the various forms and sectors of activities.

According to the research of Pentor Company (Pentor Research International, 2008),[3] conducted on a sample of 1000 Polish SME sector companies, the following were mentioned among the most important competitiveness factors: *the quality of delivered product/service*, *having an established reputation*, *attention to individual needs of customer*, *quick and timely delivery of products/services* and *the stability of relations with customers*. According to a report prepared by the Lewiatan organization, on the basis of a study on a group of 1100 companies in the SME sector, the most important factors of competitiveness of the SME sector are (Starczewska-Krzysztoszek, 2007: 23–24): *price* (*of products/services*), *quality* (*of products/services*), *lasting relationships with customers*, *customer service quality*, and *narrow specialization* (*specialized knowledge and skills*). According to studies conducted in the area of dental clinic management model by H. Mruk (2010) the most important factors in the competitiveness of dental industry are: modernity and quality of services provided and the degree of patient satisfaction, which translate into sales performance of these services. This is a significant change from the previously conducted research, usually confined to the area of finance and obtained results in this area. The author's survey was developed based on these conclusions.

Author's survey research was conducted by direct interview, using the electronic form CAPI (*Computer Assisted Personal Interviewing*). It was done in November 2009 on a group of 150 medical clinics providing dental services, consistent with the characteristics given above (C2 stage in Fig. 2). The questionnaire was always completed by the person managing the clinic. The analysis of obtained results revealed that the respondents declared the need to benchmark their operation against the action of competitors in the following areas: *the use of modern technology*, *the price structure for services provided*, *materials and medicines used in the clinic*, *the knowledge of the market of distributors and medicines*, and *the modernity of services provided*. The results of the survey show that managers of medical clinics in the SME sector focused primarily on the current financial problems and business costs, neglecting the benefits that can result from increased quality of service and good customer relations.

Compared with the rank lists of competitive factors, identified in the research of Pentor Research International and PKPP Lewiatan, factors such as: *quality of products/service sold* and *the ability to meet customer needs* occupied lower ranks in the assessment of those

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[2] PKPP Lewiatan — Polish Confederation of Private Employers.
[3] Included in the report on the state of the SME sector in Poland for 2006–2007 (Żołnierski and Zadura-Lichota, 2008).