REGIONAL STRATEGIC GROUPS AS AN INSTRUMENT FOR THE LOCATION'S DECISIONS SUPPORTING ON THE EXAMPLE OF FOOD INDUSTRY

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A b s t r a c t

Process of planning the location of enterprises still lacks the method allowing for combining spatial analysis with the competitiveness analysis of the industries or their clusters, while taking into account the competitive position and competitive potential. The purpose of the study is to create a new methodical pattern in the location analysis of the company based on regional strategic groups, and to show the possibilities and limitations of the proposed tool's application, supporting location decisions on the example of food industry companies in NUTS 2 level regions in Poland. The study included medium and large enterprises of the food industry in 2013.

This paper contains an attempt of application of a modified McKinsey matrix for spatial analyses, using the investment attractiveness indexation of regions. The suggested modification of McKinsey matrix is a new proposal in this respect, while at the same time being an attempt to solve the problem of the management.

Regional strategic groups analysis allows one to propose possible strategic actions for businesses, which helps to solve the problem of location management of group of companies, including regional clusters. It is worth noting that the proposed instrument also contributes to the actions of the local government units (regions), concerning the adaptation of investment offer to the needs of business entities.

REGIONALNE GRUPY STRATEGICZNE JAKO INSTRUMENT WSPOMAGAJĄCY DECYZJE LOKALIZACYJNE PRZEDSIĘBIORSTW NA PRZYKŁADZIE PRZEMYSŁU SPOŻYWCZEGO

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S ł o w a   k l u c z o w e: lokalizacja, grupy strategiczne, przemysł spożywczy, konkurencja.

A b s t r a k t

W planowaniu lokalizacji przedsiębiorstw brakuje metody pozwalającej na łączenie analizy przestrzennej z analizą konkurencyjności sektorów lub ich wiązek, z jednoczesnym uwzględnieniem pozycji konkurencyjnej i potencjału konkurencyjnego. Celem opracowania jest stworzenie nowego wzorca metodycznego w analizie lokalizacji przedsiębiorstwa na podstawie regionalnych grup strategicznych oraz ukazanie możliwości i ograniczeń aplikacyjnych zaproponowanego narzędzia wspomagającego decyzje lokalizacyjne, na przykładzie przedsiębiorstw przemysłu spożywczego w regionach szczebla NUTS 2 w Polsce. Badaniami objęto średnie i duże przedsiębiorstwa przemysłu spożywczego w 2013 roku.

W pracy opisano próbę aplikacji zmodyfikowanej macierzy McKinseya do analiz przestrzennych, z wykorzystaniem waloryzacji atrakcyjności inwestycyjnej regionów. Proponowana modyfikacja macierzy McKinseya stanowi nową propozycję w tym zakresie, będąc jednocześnie próbą rozwiązania problemu zarządczego.

Analiza regionalnych grup strategicznych pozwala na zaproponowanie możliwych działań strategicznych przedsiębiorstwom, co się przyczynia do rozwiązania problemu zarządzania lokalizacją grupy przedsiębiorstw, w tym klastrów regionalnych. Warto zauważyć, że proponowane narzędzie przyczynia się jednocześnie do dostosowania działań jednostek samorządu terytorialnego (regionów) w zakresie kształtowania oferty inwestycyjnej do potrzeb podmiotów gospodarczych.

Introduction

The increasing number of operations and the organisational complexity of the enterprises create new information needs concerning the functioning of entities at different levels of spatial division (from international, through regional to local one), while taking into account the sectoral and cross-sectoral analysis.

Based on the literature and described cases of locating businesses, one can indicate that the choice of location is based on multi-level procedures, which allow to select a location from a set of suitable options.

Various recommendations for the conduction of the location selection procedure are formulated on the basis of these different approaches. The most

general guidelines are related to the strategic approach. The choice of location comes down to the evaluation of different variants of location based on the analysis of location factors of a general nature – regarding the region, and detailed – concerning a specific property. One often uses a gravity method (THAI, GREWAL 2005, p. 3–24), grading point methods (SCHROEDER 1993, KASIEWICZ 2002, p. 187), mesh model allowing modelling of nonlinear transport costs (ASHAYERI, RONGEN 1997, p. 97–109, 188), or more complex models comparing locations in terms of transport and storage costs.

There is still no method to combine spatial analysis with the analysis of the sectors' competitiveness or their clusters, while taking into account the competitive position and competitive potential. Therefore, the purpose of this study is to create a new methodical pattern in the location analysis of the company based on regional strategic groups, and to show the possibilities and limitations of the proposed tool's application, supporting decisions of enterprises' localisation optimisation (optimal choice of location) on the example of food industry companies in the NUTS 2 level regions in Poland.

The authors have chosen the food industry due to the fact that it is very diverse internally. It shows links to other sectors of the economy, especially agriculture. This industry is characterised by strong spatial connections with local and regional markets and, to a lesser extent, with international markets. Currently it is changing, because international ties in the era of globalisation are growing, and competition strategies of food businesses are focused on various forms of internationalisation – nearshoring, offshoring, etc.

This raises the need to improve the location analyses at various spatial scales, including in cross-border and wider – international terms.

The authors make a thesis: „the use of McKinsey matrix may be a useful tool for decision-making in terms of making location decisions in enterprises, allowing to efficiently use the available management information".

Research Methodology

In the literature one recommends various model solutions to identify the optimal location, e.g. using localisation triangle, izodapan model and more sophisticated linear programming methods based on the objective function, usually in the form of minimising the total transport cost (WEBER 1909, PREDÖHL 1925, PALANDER 1935, ISARD 1956, LÖSCH 1961, HOOVER 1962). The companies participating in globalisation need new instruments to compare different regions as potential business locations, including potential partners for the creation of cluster structures. Therefore, the paper shows the possibilities offered by the McKinsey matrix in spatial research using the original

concept of regional strategic groups. Regional groups are the strategic clusters of regions similar to each other in terms of the attractiveness of the sector and position, or competitive potential (GODLEWSKA-MAJKOWSKA, KOMOR 2014, p. 133).

McKinsey matrix (industry's attractiveness matrix, the attractiveness of the product, market's attractiveness, the General Electric matrix) is one of the portfolio analysis methods and so far has been mainly used for the diagnosis of the strategic business unit (SBU) of defined objectives and well-defined products and clients. The matrix was used for the presentation of a diversified enterprise's business activity portfolio, which operates in several sectors. It is a method of measuring and presenting the competitive position of a diversified enterprise based on two variables: the attractiveness of the industry and the competitive position of companies in the sector. According to both analysed variables units can be rated as low, medium and high. According to the matrix's structure, the company should operate in the most attractive sectors and focus on investing in products for which it has a strong competitive position (THOMPSON, STRICKLAND 1987, p. 192, HAX, MAJLUF 1991, GIER-SZEWSKA, ROMANOWSKA 2002, p. 222–225).

McKinsey matrix is the basis for the development of strategies recommended for the strategic business units of the company. Figure 1 shows the division of units according to the recommended strategies.

The following recommended strategies for companies depending on their competitive position and attractiveness of the industry can be specified (KOMOR 2014, p. 86–87 on the basis of: PIERŚCIONEK 1998, p. 248–250, OBŁÓJ 2001, p. 278, GIERSZEWSKA, ROMANOWSKA 2002, p. 226):

– „winners" strategic units should use the strategy of investment and growth, and look for the way to dominate the market (area *A* in Fig. 1),

– „winners" units should implement selective growth strategy based on investments in selected segments (area *B* in Fig. 1),

– units called „question marks" – one recommends strategy of selective analysis of the options associated with a specialisation in market niches or taking over companies with significant strategic advantage (area *C* in Fig. 1),

– average business units should implement the strategy of selective options' analysis based on specialisation and selective investments (area *D* in Fig. 1),

– units called „profit producers" – one recommends strategy of the selective analysis of options based on investments that will maintain market share (area *E* in Fig. 1),

– „losers" units should pursue strategies of profit maximisation or divest businesses (area *F* in Fig. 1),

– „losers" strategic units should divest businesses or implement short-term profit maximisation strategies (area *G* in Fig. 1).
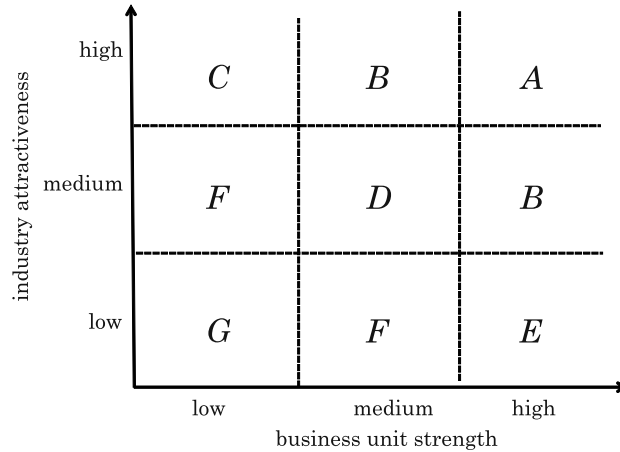
Fig. 1. McKinsey matrix – division of units according to recommended strategies
Source: KOMOR (2014).

The use of industry attractiveness matrix for the needs of spatial analyses was suggested by GODLEWSKA-MAJKOWSKA (2013, p. 129–132). According to the author's concept, an individual enterprise was replaced by a collective enterprise, i.e. a group of companies from the same sector operating in the region, and strategic business units were replaced with different locations (regions).

In place of industry's attractiveness indexation, found on the OY axis of the traditional McKinsey matrix, in a regional matrix one can use indicators of investment attractiveness, treated as elements allowing the comparison of location data and assessment of the competitive position of companies in the region. The OX axis can show competitive position of companies in the industry located throughout the region, e.g. measured by the share of a given region in the value of production sold/sales revenues. In case of the absence of statistical data, indirect indicators of the competitive position of the region, or businesses located can also be used there, e.g. the share of a region in a group of all economic entities of the given industry, or in fixed assets' gross value or investments of a reference area (e.g. the European Union for international analyses, or the given country for domestic analyses). Because the matrix is created on the basis of the presentation of the location's three dimensions, hence the third dimension is presented in the matrix in the form of a circle, whose size can show the level of entrepreneurship, determined by the share of the region in the total employment in the sector. This measure also demonstrates the competitive position of the region and shows its intermediate competitiveness. Dividing units according to the above criteria into low, medium and high allows the strategic position analysis and identification of

possible strategies to compete in the sector. McKinsey matrix modified in such a way for the need of spatial analyses consists of nine fields, which include units identified as regional strategic groups. Each group has a set of recommended strategies for entities that are a part of them.

Regional Strategic Groups in Food Industry in Poland

In order to identify and analyse regional strategic groups, data from the financial statements of medium-sized and large food industry companies for 2013 years has been used. The matrix's design was based on two variables – the assessments of the competitive position of the region and the attractiveness of the industry. Competitive position of the region has been determined on the basis of the share of the province in the value of the sold production of the food industry in Poland.

Attractiveness assessment of the sector has been based on the indexation of the potential investment attractiveness for industrial investments (*Atrakcyjność inwestycyjna regionów...* 2012, *Atrakcyjność inwestycyjna a przedsiębiorczość...* 2011, *Innowacyjność jako czynnik...* 2010). This indicator describes the most important areas for industrial investments of a labour intensive character and allows a multi-criteria analysis for the location of the investment, taking into account various factors. The index construction is based on the weight-correlation method (BRZOZOWSKI, POGORZELSKI 1992, p. 42–44) enabling the construction of a synthetic pseudo-one-feature vector expressing the key location factors for the processing industry grouped in the so-called microclimates: labour resources, technical infrastructure, social infrastructure, market, administration, social and innovativeness microclimate (*Atrakcyjność inwestycyjna regionów...* 2012).

Matrix depicting the distribution of regional strategic groups has also another dimension presented as circles of different sizes. It can show the level of entrepreneurship, determined as the region's share in the total employment in the sector on the reference area (in Poland). This measure also demonstrates the competitive position of the food industry enterprises of the region and shows the intermediate competitiveness of the region.

According to the results of the research, it can be said that the Mazowieckie province is a leader in terms of competitive position – measured by a share of the province in the national value of sold production of the food industry in 2013 (cf. Fig. 2), which also has the highest ratings of location advantages for labour-intensive industries included in the PAI 2 indicator. Enterprises in the food industry operating in the analysed area can be described as „winners" strategic units that are suited for the development strategy. They should maximise investments and dominate the market.
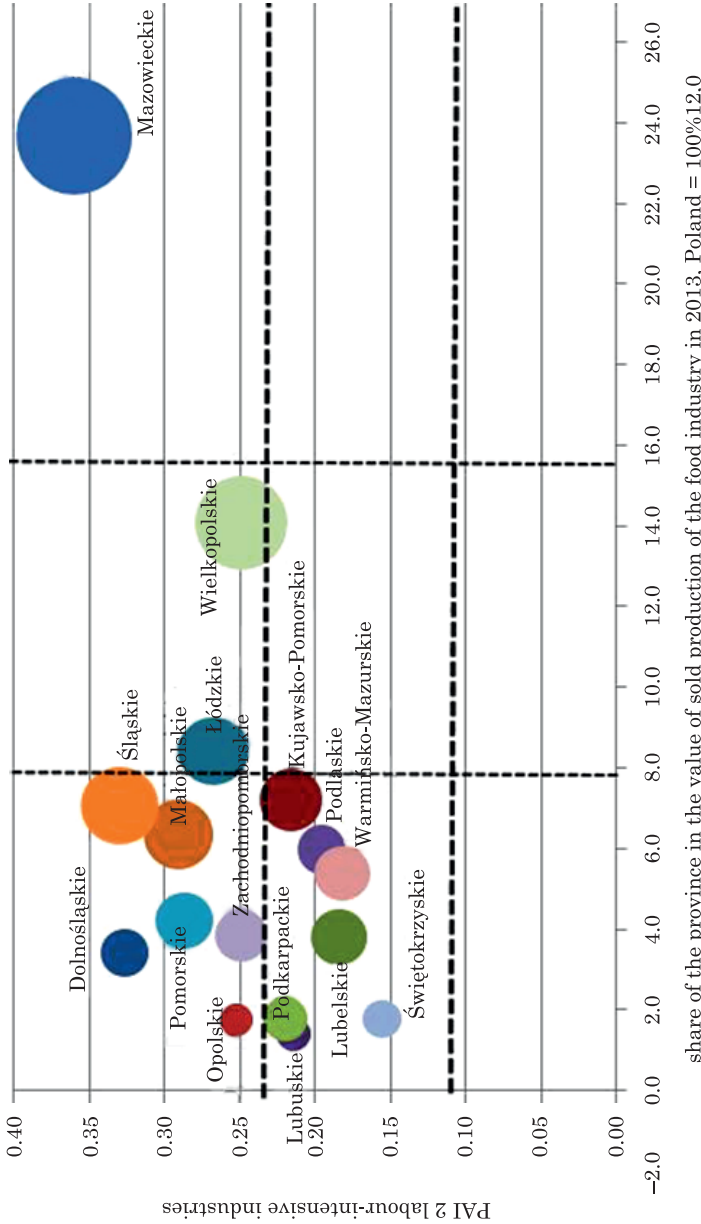
Fig. 2. Regional Strategic Groups in Food Industry in Poland According to Provinces in 2013

Attention: the size of circles corresponds with the share of particular provinces in the number of employed in the food industry in Poland in 2013 (Poland=100%)

Source: own study based on: investment attractiveness indicators (PAI 2) developed in Institute of Enterprise under the academic supervision of H. Godlewska-Majkowska within statutory research of Collegium of Business Administration of Warsaw School of Economics in 2015 and Statistical Bulletins of Provinces.

Wielkopolskie and Łódzkie provinces have worse competitive position than the leader and at the same time, these regions are characterised by the above-average assessments of the location advantages for labour-intensive industries (Fig. 2). Hence, one can recommend in this situation the strategy of selective growth based on investments in selected segments of the market. The provinces can be described as „winners". However, it is worth noting slightly worse competitive position of the Łódzkie province, measured by the share of the region in the value of sold production of the domestic food industry. Enterprises operating in this region should take steps to improve the competitive position through, e.g. taking over firms with a significant strategic advantage. Otherwise, there is a risk of moving to a group of units known as „question marks".

The group of units called „question marks" includes the following provinces: Dolnośląskie, Śląskie, Małopolskie, Pomorskie, Zachodniopomorskie i Opolskie, which are characterised by the high rating of universal location values for labour-intensive industries and the low competitive position in the food industry (Fig. 2). This is due to the historically shaped industrial traditions of the regions concerned and the conditions for the conduction of agricultural production, which is the source of raw materials for the food industry. Food industry enterprises located in these regions are recommended to use the strategy of selective options' analysis based on specialisation, finding market niches, selective investing in the potentially most profitable activities providing good growth prospects, or acquisition of another company in the industry.

Other analysed regions – Lubuskie, Podkarpackie, Lubelskie, Podlaskie, Świętokrzyskie, Warmińsko-Mazurskie and Kujawsko-Pomorskie – may be assumed for „losers" (Fig. 2), for which the most likely strategy is to maximise profit or descent from the market (acquisition of competitors' profit, reducing product range, minimal investments, or alternative sale of a business). It is therefore important to create conditions conducive to keeping investors focused on short, or medium-term profits there.

Summary

In this paper, regional strategic groups in regard to food industry were distinguished, based on the assumption that the companies from a given region can be treated as a collective enterprise in a particular industry.

When using this tool, it was found that Mazowieckie province performs best both in terms of competitive position, as well as competitive potential.

Wielkopolskie and Łódzkie provinces have worse competitive position than the leader, but because of the above-average overall assessment of the location

advantages, can apply selective growth strategy based on investing in selected segments of the market. It applies especially for raw materials industry, as confirmed by the high share of these regions in the value of agriculture's sold production.

The proposed adaptation of the McKinsey marix for the needs of spatial analysis in the form of regional strategic groups brings new benefits to the enterprises, regardless of the analysed industries. They include:

– comparisons of both individual areas (regions), as well as subsets of potential business locations using complex assessments of investment attract-iveness of statistical regions,

– monitoring changes in the whole industry and the actions of competing companies with emphasis on the spatial factor,

– identifying potential rivals within an industry's strategic group in a given location,

– the search for partners in building strategic alliances or establishing cooperation based on coopetition – coopetition relies on the simultaneous presence of cooperation and competition in relationships between competitors; competitors cooperate within certain functions of the value chain, while they compete on the other grounds (BENGTSSON, KOCK 2000, p. 411–426, CYGLER 2009).

Analysis of regional strategic groups allows to propose possible strategic actions for enterprises. In this context it contributes to solving the problem of managing companies' locations. It is worth noting that the proposed instru-ment also contributes to the actions of the local government units (regions), concerning the adaptation of investment offer to the needs of business entities.

Therefore, a research hypothesis assuming that the McKinsey matrix can be a useful tool for enterprises' decision-making processes concerning location, allowing to efficiently use the available management information, has been positively verified.

When making strategic decisions and choosing strategic options one should however bear in mind that all statistical measures are subject to certain structural failure. A special attention should be paid to the fact that the intra-regional scale, i.e. NUTS2, may not reflect the actual interregional relationships taking place within the spatial connections of a network charac-ter. In addition, data on entrepreneurship and employment may not corre-spond to the actual involvement of companies on the individual regional markets due to the fact that part of the turnover is made in non equity form. Also financial reporting is highly corrupted, and does not reflect the location of companies in the region, but rather their head offices.

Validity of the available statistical data and too general character of investment attractiveness indicator used in the construction of the matrix for

the attractiveness of the region assessment are application limitations of the proposed tool. Although the investment attractiveness indicator is created based on a wide range of data, it may not adequately reflect the sector-specific location factors. This effect can be however eliminated, through correcting the indicator by taking into account additional factors included in its composition.

Among the directions of future research on the concept of regional strategic groups one can mention the need for more detailed analyses of individual elements of enterprises' competitive potential. It seems particularly important to conduct in-depth analyses of specific sector's links with elements in the supply and distribution chain. In addition, it is worth making an attempt to apply this concept to the lower levels of aggregation than the industry's sector (which requires more detailed definition of investment attractiveness indicators of regions), the transition from a static to a dynamic approach to determine the direction and strength of shifts in strategic groups. An attempt to transfer other portfolio analyses tools to the mezoeconomic level, which have been used at the microeconomic level so far, may also be an interesting issue.

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