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BUILDING THE ATTRACTIVENESS OF THE SECTOR BASED ON SOLID CO-OPERTITION RELATIONS

Abstract:

The analysis of the sector, therefore, both micro- and macro-economic factors constitute the source of valuable information for companies wishing to be or being a part of the local economy. Generating profits in the sector is associated with demand and competition. To generate profits, the enterprise must create value for the customer so that the price the consumer is willing to pay is higher than the costs incurred by the company to produce goods. The higher the competition in the sector the more significant portion of the surplus goes to competitors and the smaller one to manufacturers. Profits generated by companies in the sector are also dependent on the bargaining power of producers in relation to suppliers and customers. It is important to build solid relationships with the immediate environment of the company and particularly with competitors. Establishing relationships in the sector companies from the same industry is difficult. In order to make competitiveness bring beneficial effects it is worthwhile to consider coopetitive relationships – particularly in terms of attractiveness in the industry and, at the same time, the sector. The paper presents the analysis of the furniture sector as the industry being one of 10 sectors placed in the latest strategy for the Benefit of Responsible Development in Poland.

Keywords:

coopetitive, cooperation, industry

JEL Classification: M21

Introduction

Building relationships in such a globally competitive environment is very difficult for entrepreneurs. The cooperation, resulting from relationships between entities, is based on a certain level of trust, which, along with competition, is a great challenge. These hard relationships and competition combined with cooperation are known as coopetition. This issue is characterized by the concept of networking and particularly clusters since building relationships in a small area is concentrated on the enterprises of the SME sector which, in the overwhelming number, create the local economy.(Pypłacz, 2013) It is these companies that have the largest problem with competing with a small (in geographical terms) group of large entrepreneurs. The problems with raising funds do not allow small entrepreneurs for the development of innovation, which automatically prevents their share in creating a modern economic sector.

The districts representing individual municipalities very often describe the economic dimension of subsequent areas of the national economy. The authors claim that it is necessary to concentrate on the development of local sectors to strengthen the power of the national market. This action will allow to subsidize prosperous and very prosperous industries whose entrepreneurs will be competitive on global markets.

The aim of the paper is to present the benefits resulting from simultaneous competition and cooperation. The authors will characterize the cluster market in Poland according to the Interactive Cluster Map (available on the website of the portal "mapaklastrow.pi.gov.pl"). As an example of a development sector there will be described the furniture sector, which is an underfunded sector with a very large development potential.

Recognizing the key trade partners

To build an attractive sector, at first, it is necessary to conduct the analysis of enterprises, both the ones creating the industry itself and the ones that support this industry. In the analyzed region, there are based 136 enterprises of the furniture industry, out of which 77.52% are the enterprises employing up to 9 employees, 17.97% are small enterprises; the employment ranging from 50 to 249 people was assessed at the level of 3.2%, whereas only 1.31% amounts to enterprises employing more than 250 employees.

Table 1: Entities of the national economy recorded in the REGON register - section C chapter 31 by size class of employment in individual locations of the analyzed area

Size class of employment			Locations	Type of production by PKD			
MICRO	SMALL	MEDIUM	LARGE	of the analyzed area	31.09	31.01	31.02
16	5	1	0	А	14	3	5
8	2	1	1	В	7	2	3
1	1	1	0	С	3	0	0
16	6	0	0	D	19	1	2
31	6	3	0	E	26	6	8
2	0	0	0	F	2	0	0
6	0	2	1	G	6	1	2
2	1	2	0	Н	3	0	2
6	2	0	0	I	4	1	3
8	1	0	0	J	3	1	5
4	0	0	0	K	2	0	2

Source: Own calculations based on the data acquired from Central Statistical Office.

The share structure of production of lounges, bedroom furniture etc. amounts to 65.42% of the total furniture production in the district, 20.17% amounts to kitchen furniture, whereas the production of office and shop furniture amounts to 14.41%.

The discussed area – the characteristics of local governments, associations, offices, chambers of commerce, financial institutions and innovation agencies:

- District Office, District Bureau, Municipal Office, District Court, Post Office, District Employment Agency, Customs Office – Customs Post, Tax Office, Social Insurance Company - Branch, District Sanitary-Epidemiological Station, District Construction Supervision Inspectorate, District Road Administration, Poviat Police Headquarters, Poviat State Fire Service Headquarters, Municipal Police;
- Polonia S.A. Zakład Ubezpieczeń i Reasekuracji (Insurance and Reinsurance), PKO Bank Polski (Bank of Poland), Alior Bank S.A. – a partner establishment, Bank BPH – a partner establishment, Bank DnB Nord, Bank Zachodni WBK S.A., EuroBank – a banking establishment, Gospodarczy Bank Wielkopolski S.A., Kredyt Bank S.A., Monetia Sp. z o.o. – a bank agency, Spółdzielczy Bank Ludowy;
- Handlowo-Produkcyjna Spółdzielnia Pracy (Commerce and Production Cooperative), Okręgowa Spółdzielnia Mleczarska (District Dairy Cooperative), "Społem" Powszechna Spółdzielnia Spożywców (Grocers Cooperative), Spółdzielnia Rzemieślnicza Ogólnobranżowa (Craft Cooperative);
- Local Government Initiative, Chamber of Commerce, Center for Supporting Entrepreneurship and Initiatives, Association of District Municipalities, Association for Supporting Economic Initiatives and Enterprise Development, Environmental Services Plant of the National Foundation for Environmental Protection, Agricultural

Counselling Centers (Regional), Agency for Restructuring and Modernization of Agriculture.

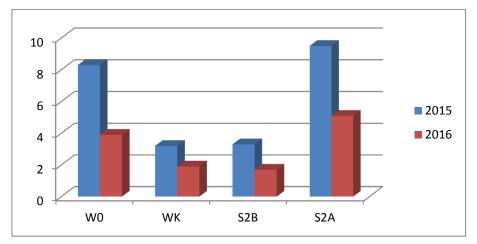
The neighboring establishments:

- City 1: "Business Incubator" Foundation, Regional Training Center EFS, Statistical Office with the Local Branch, Association of Commerce and Services of South Wielkopolska;
- City 2: Eurocentrum Innovation and Entrepreneurship, Europe Direct South Wielkopolska, "Center for Entrepreneurship" Association, Chamber of Commerce of South Wielkopolska, Commerce and Services Association;
- City 3: Regional European Information Center, Agency for Enterprise Development LLC, Regional Financing Institutions, Marshal Office, Statistical Office.

Description of the furniture industry

In order to specify production capacity it is necessary to characterize the raw materials as well as the existing condition of the sector. The competitiveness of the entire timber economy in the current situation is threatened by the EU requirements in the field of achieving the required indicators of energy from renewable sources, supported with the regulations of the Minister of Economy. The problem of "green" energy has a great impact on an increase in prices of wood in all forms and very important supply management (shortages) for industries running their activity based on this branch of natural resources.

Figure 1: Sales volume of softwood (pine, spruce) in the forest division in years 2015-2016 [million m³]



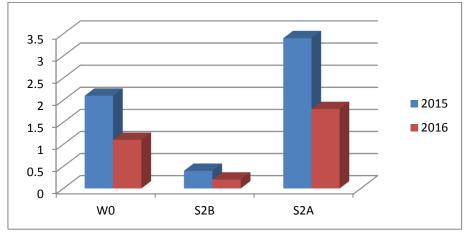
W0 – large-size timber wood-long timber; wk – large-size timber wood-logs; s2b – medium-size timber wood used for mechanical processing; s2a – medium-size timber wood used in industry and of general purpose

Source: Own study based on the data from the Marketing Bureau of General Directorate of State Forests

The data presented in the figure above indicate a clear decrease in sales compared to the previous year. However, the data for this year represent only the values for half a year, therefore, it can be predicted that at the end of the year the values will exceed the size of sales compared to 2015. The largest number of the sold wood referred to long timber and industrial wood.

Figure 2: Sales volume of hardwood (beech, oak, birch, alder) in the forest division in

years 2015-2016 3.5

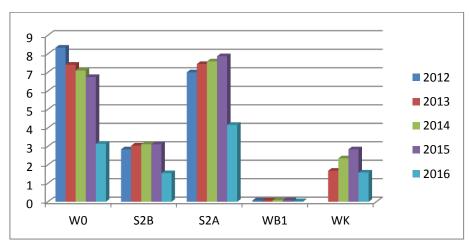


Source: Own study based on the data from the Marketing Bureau of General Directorate of State Forests

The sales of hardwood and softwood are characterized by similar dependencies.

Due to the preferences of the enterprises of the furniture industry the focus of attention is one type of timber wood – pine, which, due to its processing properties, is one of the easiest raw materials for furniture production.

Figure 3: Sales volume of wood in forest divisions in years 2012-2016 for pine [million m^3]

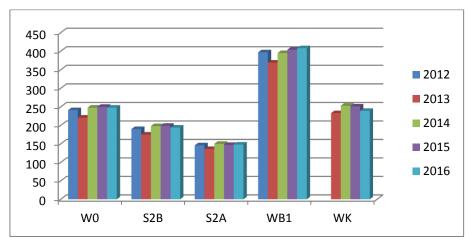


W0 - large-size timber wood-long timber; wk - large-size timber wood-logs; s2b - medium-size timber wood used for mechanical processing; s2a - medium-size timber wood used in industry and of general purpose; wb1 - large-size timber wood - plywood

Source: Own study based on the data from the Marketing Bureau of General Directorate of State Forests

Sales volume of pine depends on the demand for a specific product. It can be concluded that these pieces of information correlate with each other. On the other hand, the difference can be observed in relation to sales volume in the context of years. There can be observed inversely proportional relationship of sales volume in years 2012-2016 for long timber and industrial wood.

Figure 4: The average net price of 1 m^3 for timber wood in forest divisions in years 2012-2016 for pine [PLN/ m^3]



W0 – large-size timber wood-long timber; wk – large-size timber wood-logs; s2b – medium-size timber wood used for mechanical processing; s2a – medium-size timber wood used in industry and of general purpose; wb1 – large-size timber wood - plywood

Source: Own study based on the data from the Marketing Bureau of General Directorate of State Forests

As it can be seen from the above chart, the selection of the most frequently used timber wood depends on its price since the price of industrial wood is the lowest price. There can be noticed a clear regression line of the fixed price with a clear but slight decrease in 2013.

At the beginning of 2016 the average price of roundwood was around 284.29-343.00 PLN/m³. In 2014 it amounted to 188.99 PLN/m³, in 2011 the average price was at the level of 186.68 PLN/m³, for comparison – in 2003 it amounted to 107.7 PLN/m³. Timber harvesting in State Forests National Forest Holding by large timber assortment amounted to 28164 thousand cubic meters in 2005; in 2010 – 31882 thousand cubic meters; whereas in 2013 it rose by 2367 thousand cubic meters compared to 2013 and in 2014 it amounted to 35686 thousand cubic meters. The prosperous chain of the wood industry, providing both economic and environmental effects, begins with the demand for veneer wood and plywood (large-size raw material of the specific performance parameters); the next step is some specific sawmill wood, the raw material for the construction of wooden houses as well as the parts of buildings constructed in other technologies. Subsequent steps refer to all-purpose sawmill

wood, the raw material used in the production of packaging and elements of garden architecture. The next one is the production used in the pulp and paper industry and households, ending with the manufacture of briquettes and pellets. At the end of the chain, there are the needs of the power industry, which may utilize low-quality wood in the form of mechanical and chemical waste, arbomass from woodchips and branchwood from planting, field and roadside cutting as well as orchard maintenance. (Lis, 2011) This order will ensure the economic growth, brought about by the liquidity of the activities of the entrepreneurs operating on the markets associated with the wood industry. Moreover, there will be also satisfied the requirements in the field of "green" energy imposed by the EU.

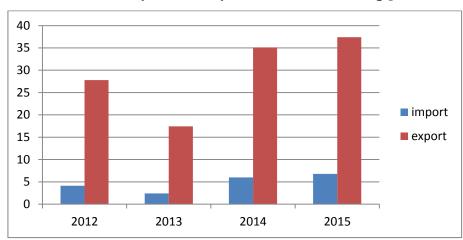
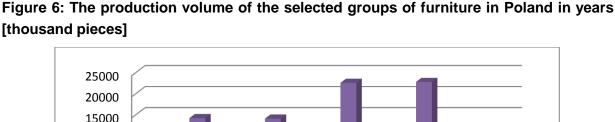
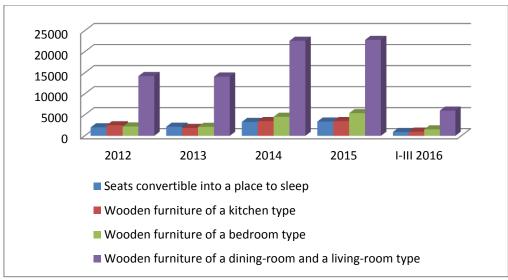


Figure 5: The size of Polish import and export in furniture trading [PLN million]

Source: Own study based on OIGPM.

Over the last few years there have been observed steadily growing exports of Polish furniture to the markets of mainly Western Europe, most of all, Germany and Belgium. The value of imports has also increased, but most likely this is due to an increasing market share of the popular foreign retail chain manufacturing furniture.





Source: Own study based on OIGPM.

The furniture of a living-room type has the greatest share in creating the Polish furniture market. The other furniture groups have comparatively the same share.

The identification of clusters -comparative scale

The regional and local market shows the concentration of the enterprises of few dominant manufacturing and services sectors, which may constitute a dynamic process of creating a network of enterprises. (Nowakowska-Grunt, 2005) The phenomenon of networking is one of few economic phenomena whose social dimension has been described since the beginning of the 21st century and which has had durable and universal nature. The network of enterprises is recognized as a free phenomenon of high volatility of factors. Its competitiveness is closely related to the resources and abilities of the participating companies. The network company is characterized by the integrated group of enterprises whose interdependence is the source of their own competitiveness and development. (Pierścionek, 2011) Clusters are characterized by one of the forms of "cooperation" occurring between enterprises, taking into account relationships with institutions and organizations from the immediate environment. Its idea, given the overwhelming number of their practical solutions, translates into development at the regional level. It is based on the concept of supporting small and medium enterprises in the field of innovation and expansion into foreign markets. The classification of clusters, resulting from the territorial scope of the location of units participating in the cluster, identifies the basic division into local, regional and national and international clusters. (Wiśniewska-Sałek, 2013)

In order to illustrate the situation of clusters in Poland the authors will characterize the "cluster market" in Poland using the data of the innovation portal in terms of their number as well as the data of European Cluster Observatory (ECO) in terms of their quality. The measure of quality is the scale of achievement of so called "critical mass of specialization" by the cluster, which is created and defined with three key factors:

- size when employment in the cluster reaches a sufficient share in the total employment policy the more likely it is for the cluster to achieve significant economic effects;
- specialization significant regional specialization in the cluster compared to the overall economy of all regions can be a sign that the economic effects of the regional cluster are strong enough to attract the related economic activity from another region, and its positive effects and the ties will be stronger. The measure of specialization is the comparison of the proportion of employment in the cluster with the total employment policy;
- concentration when the cluster constitutes a larger part of the region of the total employment the more likely it is that there will be side effects and ties which will play a greater role than suppressing interactions in another part of the regional economy. The measure of concentration indicates the extent to which the regional

economy concentrates on the industry the cluster operates in and is associated with comparing the employment in the cluster to the total employment in the region.

Critical mass factors are the measure granted to industries in the specific region according to the adequate number of the acquired stars (0-3), which symbolize the accomplishment of individual objectives. In the case of the size and concentration the first star is acquired if the indicator shows that the cluster is among the 10% of the most highly valued clusters in Europe in the same category in terms of the number of employees. On the other hand, the other factor conditions granting the star on taking at least two actions in the field of the adaptation of the external economic activity. (Protsiv, 2011)

The characteristics of clusters and cluster initiatives in Poland is presented in the summary table according to the data coming from the interactive cluster map whereas the description of clusters, according to the report by EOC, has been the indication of the most prosperous industries recognized in Europe as clusters. Polish territory, due to the clarity of the data, was divided into the following areas: central, southern, eastern, northwestern, southwestern, northern, which were assigned the corresponding voivodeships (Tables 2-7).

Table 2: The characteristics of clusters and cluster initiatives for Central Poland

Łódź Voivodeship	2011	2016
Number of clusters	11	2
Masovian Voivodeship	2011	2016
Number of clusters	15	3

Source: Own study based on the interactive cluster map: www.pi.gov.pl

EOC in the Łódź Voivodeship distinguished the clothing and textiles industry as the most significant for the Łódź Voivodeship, in the second place, indicating the clusters dealing with building materials and processed food. The weakest sector was production and transmission of energy. The Masovian Voivodeship has the most developed cluster dealing with education and teaching along with the telecommunication industry; the average level is represented by the industries: biotechnological, financial services, jewelry and precious metals, publishing and media and pharmaceutics and processed food. In turn, transport and logistics is the least typical industry in this region. (Protsiv, 2011)

Table 3: The characteristics of clusters and cluster initiatives for Southern Poland

Lesser Poland Voivodeship	2011	2016
Number of clusters	13	6
Silesian Voivodeship	2011	2016
Number of clusters	11	11

Source: Own study based on the interactive cluster map: www.pi.gov.pl

EOC did not grant three stars to the region of Lesser Poland. In turn, the sectors of education and teaching, footwear, leather goods, oil and gas, production and

transmission of energy, excavations and tobacco got an average rating. The food processing industry took the last position. The highest rating in the Silesian Voivodeship refers to the industry of facilities, equipment and construction services as well as oil and gas. Three industries such as: construction equipment, production of furniture and processed food occupied the second position, the ranking is closed with the industry of production and transmission of energy. (Protsiv, 2011)

Table 4: The characteristics of clusters and cluster initiatives for Eastern Poland

Podkarpackie Voivodeship	2011	2016
Number of clusters	13	4
Podlachian Voivodeship	2011	2016
Number of clusters	11	4
Świętokrzyskie Voivodeship	2011	2016
Number of clusters	11	3
Lublin Voivodeship	2011	2016
Number of clusters		

Source: Own study based on the interactive cluster map: www.pi.gov.pl

The above voivodeships did not obtain the highest score according to European Cluster Observatory. The industries such as: 1) education and teaching, processed food; 2) aerospace, automotive, facilities, equipment and construction services, processed food; 3) education and teaching, processed food; 4) facilities, equipment and construction services, processed food, excavations occupied the second position respectively for the voivodeships: Lublin, Podkarpackie, Podlachian and Świętokrzyskie. The last position in the Świętokrzyskie Voivodeship was taken by financial services, whereas the industry of transport and logistics was the least scored for the other voivodeships (Protsiv, 2011)

Table 5: The characteristics of clusters and cluster initiatives for Northwestern Poland

Greater Poland Voivodeship	2011	2016
Number of clusters	19	4
West Pomeranian Voivodeship	2011	2016
Number of clusters	6	4
	4	2016
Lubusz Voivodeship	2011	2016

Source: Own study based on the interactive cluster map: www.pi.gov.pl

Only the Greater Poland voivodeship has three-star clusters which include the clothing industry, facilities, equipment and construction services and processed food followed by the furniture industry, construction equipment and lighting and electrical appliances whereas the final position was taken by oil and gas. Transport and logistics as well as processed food occupied respectively the second and the last position in the West Pomeranian Voivodeship. The Lubusz Voivodeship has the most developed furniture and processed-food clusters. In turn, textiles are the least dominant field of clusters. (Protsiv, 2011)

Table 6: The characteristics of clusters and cluster initiatives for Southwestern Poland

Lower Silesian Voivodeship	2011	2016
Number of clusters	10	2
Opole Voivodeship	2011	2016
Number of clusters	4	1

Source: Own study based on the interactive cluster map: www.pi.gov.pl

EOC indicates that in the Opole and Lower Silesian Voivodeships there are no strongly developed clusters. The industries of construction equipment, lighting and electrical appliances, excavations, textiles in the Lower Silesian Voivodeship and processed food in the Opole Voivodeship are at the two-star level whereas processed food and production technology are in the last position according to the above rating. (Protsiv, 2011)

Table 7. The characteristics of clusters and cluster initiatives for Northern Poland

Kuyavian-Pomeranian Voivodeship	2011	2016
Number of clusters	9	9
Varmian-Masurian Voivodeship	2011	2016
Number of clusters	8	0
Pomeranian Voivodeship	2011	2016
Number of clusters	8	3

Source: Own study based on the interactive cluster map: www.pi.gov.pl

According to European Cluster Observatory, the highest position is occupied by the furniture industry in the Varmian-Masurian Voivodeship, two stars were granted to the clothing industry, the industry of facilities, equipment and construction services and processed food, one star to transport and logistics. In the other voivodeships, the average level was represented by the clusters of education and teaching, the maritime industry, transport and logistics for the Pomeranian Voivodeship and clothing, furniture and processed food for the Kuyavian-Pomeranian Voivodeship. The least typical sectors are respectively sporting and leisure goods and goods for children and the plastics industry. (Protsiv, 2011)

Conclusions

Business management requires managers to actively engage in learning the environment of the company. Many enterprises when finding their place on the market do not attach considerable importance to what surrounds them if some specific factors (other entrepreneurs, institutions, business entities) do not disturb the process of creating a positive financial result. At the same time, they do not feel the need for searching for new solutions – non-financial ones – that can improve the condition of their companies. This mainly refers to small and medium entrepreneurs who blame large corporations or companies possessing appropriate financial backing for the lack of access to "innovation". The Polish economy mostly consists of entities belonging to the SME sector. The solution of problems for all the countries, whose share in the

global economy is at a low level, is the concentration on the attractiveness of the sectors in terms of support for the local economy. Using clusters that are based on coopetitive relationships for this purpose should constitute the starting point.

Autonomous units need a lot of time to build a strong position. The selection of the furniture industry is an excellent example for the above considerations. This industry has not been considered as dominant in Poland for years. There were a lot of small enterprises that operated equally providing services to foreign investors. Consequently, the furniture imported to Poland under a foreign brand turned out to be a domestic product. Entrepreneurs, winning more and more orders, were forced to cooperate with the neighboring companies to fulfill them. In this way, minor cluster initiatives were established without the awareness of their formal existence. The characterized region shows its great coopetitive potential. An increase in the awareness of entrepreneurs in this field could bring about their even greater development. The result of the activities of the enterprises of the furniture industry was a gradually increasing export of furniture. As a consequence, there has been developed an interest in the industry – there have been taken the decisions to support it at the governmental level.

The analysis of the number of clusters operating in Poland, in spite of the downward trend, indicates that it is beneficial for the Polish economy. It can be assumed that the smaller their number the more participants there are and simultaneously the greater the concentration on the specific industry in cooperation with individual institutions. In this way, there can be specified the specialization of the region and built an attractive sector in terms of global competitiveness.

References

CENTRAL STATISTICAL OFFICE: www.stat.gov.pl

INTERACTIVE CLUSTER MAP: www.mapaklastrow.pi.gov.pl

LIS, W. (2011). Zaopatrzenie przemysłu w drewno na tle sytuacji gospodarczej w Polsce i Europie. www.przemysldrzewny.pl.

MARKETING BUREAU OF GENERAL DIRECTORATE OF STATE FORESTS: www.lasy.gov.pl

NOWAKOWSKA-GRUNT, J. (2005). Strategie logistyczne organizacji sieciowych w zapewnianiu dostępności polskich produktów spożywczych na rynku UE. Pr.Nauk.AE Wrocław. Vol. 1078.

PIERŚCIONEK, Z. (2011). Zarzadzanie strategiczne w przedsiebiorstwie. PWE Warszawa, s. 397-398.

PROTSIV S. (2011). *Star Clusters in Poland*, Stockholm School of Economics: www.clusterobservatory.eu

PYPŁACZ, P. (2013). *Clusters as an Opportunity for Development of Family Enterprises*. Polish Journal Of Management Studies. Vol. 7, s.212-220.

WIŚNIEWSKA-SAŁEK, A. (2013). Strategy Process Management to the Entrepreneurial and Innovative Possibilities of SME Sector Enterprises. [in] OTOLA, I. (eds). Determinants of Modern Management Concepts in the Enterprises. Resources - Strategies - Decisions. Vysoka skola banska-Technicka univerzita Ostrava, s. 29-41.