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ANALYSIS OF INNOVATIVENESS IN SMALL AND MEDIUM AGRIBUSINESS ENTERPRISES IN MAZOVIA PROVINCE

ANALIZA INNOWACYJNOŚCI MAŁYCH I ŚREDNICH PRZEDSIĘBIORSTW WOJEWÓDZTWIE MAZOWIECKIM

Key words: innovation, innovativeness, agribusiness, small and medium enterprises, Mazovia province

Słowa kluczowe: innowacje, innowacyjność, agrobiznes, małe i średnie przedsiębiorstwa, województwo mazowieckie

Abstract. Agribusiness is one of the most important sector in Economy. In Poland enterprises connected with agribusiness determine considerable part of GDP. Majority of agribusiness enterprises belong to small and medium size group. Thus, prosperity and efficiency of agribusiness in greater part depends on successful performance of small and medium enterprises, especially with regard to innovation. The paper presents situation of small and medium agribusiness enterprises in Mazovia with particular attention to innovativeness development. Based on research among 54 small and medium agribusiness enterprises, researched with questionnaire, general conclusions indicate that enterprises are willing to implement innovations, however knowledge about development possibilities is low. The paper argues that the level of innovativeness among analysed agribusiness enterprises is unsatisfactory.

Introduction

In Poland more than 99% of all enterprises belong to the small and medium enterprises (abr.: SME) sector [*Invest in Poland*... 2011]. Meaningful size of SME provides about pertinence of analysis and need of focusing on this sector. SME are characterised by constant development what is further associated with innovativeness. Major part of development is implementation of innovations. Innovations in enterprises allow to compete on the market, growth and generate more income. It can be easily stated that acting innovative is no longer additional asset but is a necessity to survive on the market [Klonowski 2009]. Enterprises pay more attention to the research and development of new trends in business what would allowed them to be outstanding. Due to competitive needs, effective innovation policy is extremely crucial in enterprise management.

One of the most important as well as the most developing sector in Poland is agribusiness. Polish agribusiness sales value determine about 24% of the sales value whole domestic industry, what puts Poland on the high rank position in European Union. Among EU countries on higher position than Poland is only Denmark (28%) and Greece (27%) [*Invest in Poland*... 2011]. 65% of entities in agribusiness are small and medium enterprises [*Invest in Poland*... 2011]. As indicates Maciejczak [2012] agribusiness in Poland is traditional, the most important is agriculture, however, the share of non-farm agribusiness activities, in particular the food industry, is growing each year. In terms of changes in the agribusiness value chain is a dynamic growing importance of particular activities supporting the primary production. At the same time as one of the main sectors of the EU economy agribusiness plays an important role in its development strategy. Of the 10 integrated guidelines for growth indicated in the Strategy "Europe2020" to 7 can be related to agribusiness. In consideration of the saved in the Strategy of the European Union's development paradigm towards smart and sustainable economy, guidelines on optimizing support for R & D and innovation plays a crucial role in the context of agribusiness. In particular, in Poland, where agribusiness sector now takes its lead from the resource and efficiency factors, should work towards building sustainable competitive advantages and potential for development based on innovation. A key factor, however, is the degree of knowledge transfer to business practice. Polish agribusiness sector is at an early stage of building their competitive position and generate growth based on innovation.

Mazovia province, similarly to its economic position, is the strongest Polish regions regarding the innovation and R&D activity. The Mazovia 's R&D leadership is remarkable as the region accounts for 43.1% of Polish GERD with almost €1b and 1.07% of the regional GDP spent on R&D, as compared with Polish average of 0.57% in 2007 [GUS, 2010]. Moreover, Mazovia is a leading region in terms of expenditures on innovation activity for product and process innovations by industrial enterprises: In 2008, it spent €1,46b, which accounts for 21% of all Polish innovation expenditures. Out of 1,157 R&D units in Poland (university units and private R&D centres), 335 are located in Mazovia, with conciderable majority of them in Warsaw. In addition, the region has the highest number of employees in the R&D sector: 26% of country's researchers, i.e. 25,489 out of 97,474 (including technicians and supporting staff) of employed in Mazovia. As the researches of Maciejczak [2012] show the Polish agribusiness sector, also in Mazovia region, is at an early stage of building their competitive position and generate development based on knowledge and innovations. Intensifying action is necessary to support the R&D activities of agribusiness companies themselves or their co-operation with research centres. At the same time investments in personnel, not only creating progress, but also the commercializing it in terms of innovation, and then managing them, is a challenge for policy development. It needs to be however noted [Maciejczak, 2010] that with regard to innovativeness of agribusiness sector in Mazovia there is much efforts needed to develop knowledge based approach and fully benefit from innovation diffusion.

Objectives, data and methods

The paper aims to analyze the innovativeness of small and medium enterprises of agribusiness sector from Mazovia region. A part of literature review, there was used standardised questionnaire with 48 questions. Collecting data took place in period between Jun and September 2011. Altogether 1500 questionnaires were sent to agribusiness enterprises from Mazovia. Those enterprises were chosen based on NACE code. As a result 3.6% of enterprises which received questionnaire sent it back. Based on 54 feedback questionnaires, as a random sample, particular opinion about situation in small and medium enterprises was drown using descriptive statistics.

Innovativeness in Small and Medium Enterprises in Poland

Polish modern economy was always characterized by high fragmentation in terms of enterprises size. 99,8% of Polish enterprises belong to small and medium sector what indicate importance of analysing this group [*Działalność innowacyjna…* 2012]. First of all, Polish SME is the richness sector where six of ten new working places come into existence. In 2010 the amount of employees in SME was 6,2 mln what was 69.9% of all people employed in enterprises [*Invest in Poland…* 2011].

Secondly, SME is fast developing sector which transform traditional production into advanced technologies. Moreover SME play crucial role in innovation development. Finally those enterprises contribute to global market development [Klonowski 2009]. Due to established policies SME sector should constantly implement strategic, innovative plans and enrich innovative factors such as knowledge, entrepreneurship or working labour know how. Despite the fact that Poland is actively developing those factors, ranking position among innovative EU countries is still low. In 2009-2011 percentage of innovativeness reached 18% whereas in Germany it was more that 75% and the lowest 16% was in Romania [*Działalność innowacyjna…* 2012].

Schumpter [1986], one of the pioneer of innovative thoughts, in his "creative destruction theory" explained that enterprises which do not follow new trends die and in their places comes new, innovative one. Due to this theory majority of Polish SME should be replaced. According to Oslo classification [*Oslo Manual* 2005] in terms of technological and non technological innovations Polish small enterprises in 2012 took last position among EU countries, where only 12% of enterprises implemented innovations not related to technological changes and 10% related to technology. In medium enterprises situation looks slightly better, percentage of innovativeness is as follow: 12% of enterprises implemented innovations not related to technology and 29% related to technology

[*Raport o stanie…* 2012]. It is commonly assumed that the innovativeness is strictly connected with investment expenditures, especially for the so-called advanced technologies, fixed assets, research and development as well as increase in qualifications and knowledge of employees [Siekierski 2011]. According to that in Poland less than one milliard of dollars goes for research and development, what is only 0.6% of GDP. Merely 25% of those expenditures are made by small and medium enterprises [Klonowski 2009]. Average medium Polish enterprise spent 325 thousand of Euro in 2010 for developing innovations. This gives Poland 20th position among European countries. Average value was ca. 541 thousand Euro [PAED, 2013]. Poland is still behind European average. These results force us to assume that development of innovation in SME is not sufficient.

Innovativeness of agribusiness companies in Mazovia

Agribusiness is a sector composed of many section connected with food production as well as development of rural area. To the major function of agribusiness belongs not only to production of food but its processing, trading, servicing as well as protecting of the natural environment [Pepliński 2009]. Agribusiness plays many strategic roles for country economy, thus it is very important to constantly develop and implement innovations into all sections.

Value added by Polish agribusiness in 2011 was ca. 4% of its value in economy and about 6% of GDP. Overall value of agribusiness in Poland is estimated for over 49 billions of Euro [*Invest in Poland…* 2011]. This results gives Poland high rank position among European countries.

Nevertheless, Polish agribusiness struggle with many problems, one of which is connected with high market fragmentation. In the food sector majority of enterprises employ less than 9 people, it is ca. 73% of all enterprises in food industry. Small companies, hiring 10 to 49 people is 22%. Amount of medium enterprises is 4.5% of all in the sector, whereas big enterprises with more than 250 people determined only 0.5% [*Invest in Poland…* 2011]. In a situation when market is divided by many small enterprises it is harder to find resources for development.

Research done for purpose of academic "Cluster of Innovation in Agribusiness" [Centrum Innowacji... 2012] shows clearly that the major obstacle for development of innovation in small and medium agribusiness enterprises is lack of money and qualify staff. 92% of respondents agreed that their problem is limited financial enterprise capital, whereas 63% of respondents stated that they poses not enough qualify staff to come up with innovations. Asking about external source of capital, less respondents (71%) agree and totally agree that this issue is problematic (Fig. 1). This fact is connected with availability of subsidiaries for agribusiness supporting innovative performance.

Researched enterprises express needs and willingness for implementing innovations, however another problem for them is access to information. About 70% of respondents agree that they possess limited technological information to implement innovations. Moreover, 59% of enterprises indicated that it is hard to find partnership in case of innovations (Fig. 2).

Among many possible partners, independent specialists were the most popular. 8% of respondents submit to cooperate with specialists often and 2% very often. Research institutes occur to be second popular entity in field of innovations. The less popular partners according to research were industrial

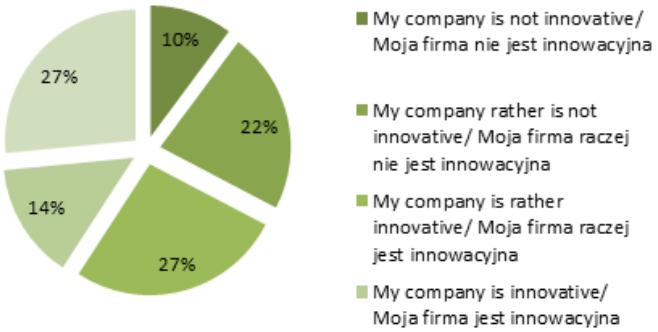

Figure 1. Assesment of level of innovativeness in agribusiness enterprises in comparison to competitors
Rysunek 1. Ocena poziomu innovacyjności w porównaniu z konkurencyjnymi firmami
Source: own study
Źródło: opracowanie własne

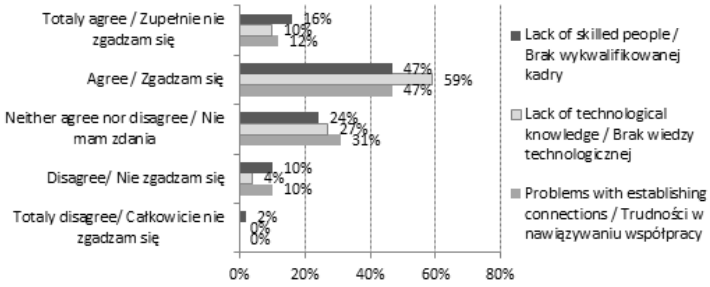

Figure 2. Assessment of factors connected with knowledge influencing innovation implementation
Rysunek 2. Ocena czynników związanych z wiedzą i ich wpływu na wdrażanie innowacji
Source: own analysis based on conducted questionnaire
Źródło: opracowanie własne

parks and areas, 78% of respondents had never cooperated with them. Worry results are presented in case of cooperation with Universities. Universities should be the entities where innovative ideas rise and together with business, pioneer solutions are tested. 39% of respondents collaborated with universities seldom. What is more, 41% of researched small and medium agribusiness enterprises claimed never to cooperate with academic institutions. Only 6% had a chance for often cooperation. Field in which enterprises cooperate with scientific research entities the most are trainings (30%). As much as 19% of companies get support in consulting, 13% in technical issues, 15% to provide expertise, 8% in purchase of patent and only 3% in recruitment processes (Fig. 3).

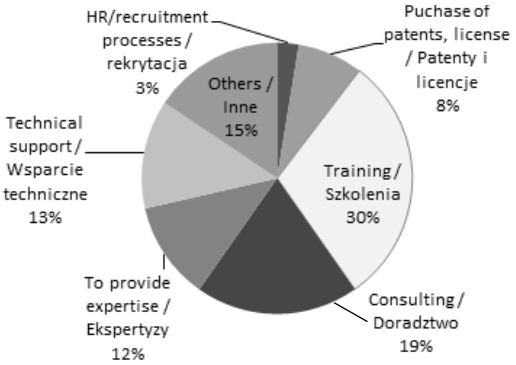

Figure 3. Fields of cooperation with scientific entities
Rysunek 3. Obszary współpracy z podmiotami naukowymi
Source: own analysis based on conducted questionnaire
Źródło: opracowanie własne

Taking into account enterprises operations, 74% respondents claimed that services are the area where innovations occur the most. Only 14% of enterprises indicated organization as innovative area. This result shows why in earlier questions work organization is the area where innovations are desired. Willingness for investments in work organization indicate that it is going to develop and increase share in innovative operation aspect. Following, 8% submit to implement innovations in trade, 2% in geographical factors and 2% in others factors.

Moreover enterprises chosen innovativeness in work organization generally as the most important aspect in running a business (41%). On second position was product innovativeness and then process and marketing innovations. Organization innovations are convenient in optimization of work and the best way for increase of efficiency. In such field necessary element is human engagement and cooperation between staff and managers. According to executed research the most popular way of communication with subordinates and clients are cooperation/projects group (24%). Those results proves that non technical innovations are the most desirable.

Conclusions

Based on conducted research small and medium agribusiness enterprises in Mazovia province can be characterized as rather not innovative. Among researched enterprises only 13% indicated to be rather innovative and 7% to be innovative. Majority of answers were negative or not decided. Surprisingly, respondents asked about innovative atmosphere in organization all agree to support innovative ideas of employees, deliver necessary tools for staff and to cooperate between departments in case of creation new solutions for business. The analysis of situation in small and medium agribusiness enterprises in Mazovia province show that enterprises are interested in implementation of innovations. Enterprises even claimed to be innovative or to support innovativeness in organization, however in reality percentage of innovative companies is low. What is

more those companies cannot precisely indicate in which field and to what extent they cooperate with scientific entities. The main reason of such situation is mentioned lack of resources. Small and medium enterprises are focus first of all on surviving on the market. Only when they survive, get enough profit and become stable on the market, innovative development is possible. Another problem lay in specific complexity of agribusiness sector. In Poland agribusiness is still traditional sector, during a process of transformation. Amount of working high educated people is low, thus innovative processes requires changes in the agribusiness structure. It can be argued that in case of small and medium enterprises in Mazovia province innovations are necessary to survive on the market, however its implementation is possible only when enterprise position on the market is stable, company is well managed, posses enough resources, know-how and is mature.

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Streszczenie

Agrobiznes jest jednym z najważniejszych sektorów w gospodarce każdego państwa. W Polsce przedsiębiorstwa związane z agrobiznesem generują znaczną część PKB. Ponadto, wydajność tego sektora świadczy o poziomie rozwoju kraju. Większość firm sektora agrobiznesu to małe i średnie przedsiębiorstwa. Oznacza to, że o powodzeniu agrobiznesu w znacznym stopniu decyduje sytuacja małych i średnich przedsiębiorstw, w szczególności w zakresie innowacyjności. Przedstawiono sytuację w małych i średnich przedsiębiorstwach agrobiznesu w województwie mazowieckim pod względem poziomu ich innowacyjności. Głównym celem badań było wskazanie kluczowych czynników wpływających na rozwój innowacji w małych i średnich przedsiębiorstwach agrobiznesu na Mazowszu. Próbę badawczą stanowiły 54 podmioty gospodarczee. Do ich właścicieli wystosowano kwestionariusze wywiadu. Z uzyskanych danych wynika, że właściciele analizowanych przedsiębiorstw są skłonni do wdrażania innowacji, jednak ich wiedza na temat możliwości rozwoju firmy jest mała,aa poziom innowacyjności niezadowalający.

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