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CHANGES IN THE LEVEL OF EDUCATION OF FARMERS IN POLAND

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Abstract

Education plays a pivotal role in the running of farms the world over and Poland is no exception, the level of education of farm owners is one of the key factors of their development. Considerations of the article were subordinated to questions about trends and diversification of the level of education among the agricultural population in Poland. Due to the biological and technical progress and the need to adapt to changing conditions in the market economy, special attention should be directed to the level of knowledge available to household members. Although knowledge is immeasurable and it is difficult to determine its level, education seems to be the best measure (Stawicka, 2012). However, the analysis was made with full awareness that this is not a perfect measure, because not always education in the formal sense coincides with actual knowledge. Nevertheless, it affects the level of living standards of households connected with agriculture, translating into satisfying the needs and development possibilities of the farm (Klerkx, 2012).

In 2010-2017, both the number of family farms and those working there decreased. This process resulted from the liquidation of small farms and the transition of people associated with them, both to the non-agricultural job market and to the group of inactive people. Among farm families, the share of older age categories increased. The percentage of farm owners with a relatively higher level of general education increased, and to a lesser extent, with school agricultural preparation. The tendency to improve the level of qualifications concerned farmers for whom income from agricultural production was important for household budgets as well as for persons managing farms focused on work outside agriculture. The improvement in the level of vocational education mainly concerned users of large and developing entities (Dudek, 2018). It should be emphasized that the level of education, especially of managers of farms (higher agricultural preparation) had a direct impact on the speed and effects of implementing technical, technological, social and organizational innovation, including eco-innovation, as it involved obtaining financial resources for business development. Among family-oriented family oriented farms with a relatively large production potential, progress has been made in professional preparation for the profession of a farmer, seeking knowledge or implementing agricultural investments.

The article used the data of the Central Statistical Office published in the study Agricultural Property Characteristics that came from the General Agricultural Census 2010 survey and the results of the farm structure survey (BSGR) carried out in 2013 and 2016. The study emplyed the comparative method and statistical data analysis

Keywords: Farmers, Family Farms, Level of Education, Development.

1. Introduction

The official public statistics indicate, that in the years 1995-2016 the role of agriculture in the Polish economy was significantly reduced. In this period, the agriculture's share in GDP has declined by approx. 8.3 percentage points, from about 10.7% to 2.4% (GUS 2018). As a result of a significant decrease in the number of farms, the percentage of people involved in agriculture decreased, and also the dependence of the rural population on the agricultural sector as a source of jobs.

The number of non-farming families and the migration balance increase, which resulted mainly from the sub-urbanization process. Still, Poland is a country with relatively high employment in the agricultural sector.

High qualifications of farmers is one of the key factors stimulating the development of family farms (Nowak, 2009). It has been shown that the level of education of the farm manager in Poland has a significant impact on the efficiency of the labor factor (Anna Nowak, Tomasz Kijek, Ewa Wójcik, 2017).

Over the last ten years, the level of education of managers of individual farms has been growing (improvement of the level of education, acquisition of current industry knowledge by farmers - additional education, the possibility of attending in agricultural courses). On farms, farmers use more and more modern technology, they implement innovations. Changes related to sustainable development and, above all, socially responsible strategies are increasingly leading to:

- modernization and growth of innovation in the agricultural sector,
- creating and transferring knowledge and technology for sustainable development,
- adapting structures to the changing challenges in Poland, the EU and on a global scale,
- promotion and expansion of markets for agri-food products (Stawicka, 2017).

The aim of the study is to determine the nature of changes in the human capital of Polish agricultural holdings in Poland in 2010-2016. The specific objectives are:

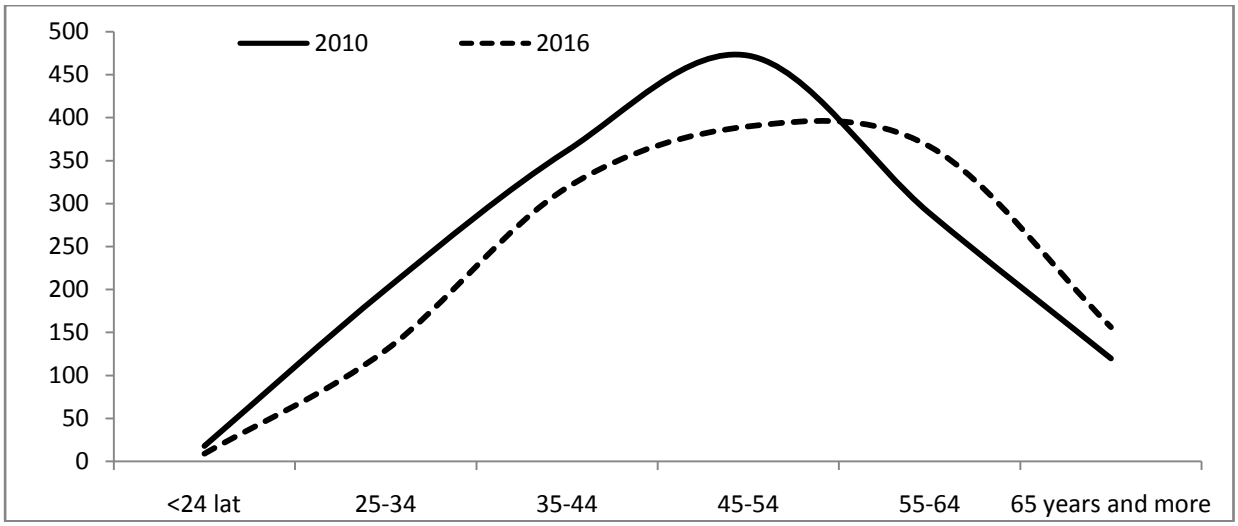
- socio-demographic characteristics (based on the analysis of such variables as gender, age, general and agricultural education) of family users of agricultural holdings in 2010-2016,
- determining the level of professional activity of family users of farms.

Data analysis is a contribution to further research on the development of individual farms in the field of sustainable development in the aspect of the quality of the human factor. The study analyzed the socio-demographic characteristics of the agricultural population, such as: age, sex, general and agricultural education, professional activity of these people in agricultural holdings, economic activity undertaken from agricultural and non-agricultural activities. The results are presented in graphic form using statistical and comparative methods.

2. Demographic Characteristics of the Agricultural Population in Poland

Analyzing public statistics, the majority of all 1.4 million family farms (over three-quarters) were small- (in terms of economic potential) and mainly poorly market-oriented entities. Families associated with them usually obtained the majority of their income from non-agricultural sources (wage labor, old-age and disability pensions), and the remaining agricultural assets at their disposal served as a safeguard and social function.Another attitude in this respect and other characteristics were evident in the case of families from profitable and economically strong farms, which belonged to a minority (about one fifth of all houseeholds). Family members in pro-market oriented farms had appropriate professional qualifications and were heavily involved in agricultural production. It should be noted that in the domestic agriculture for many years there has been a tendency to shrink the group of small farms and the growing collection of large and family-owned family entities. This process translated into the shape of part of the agricultural population characteristics.

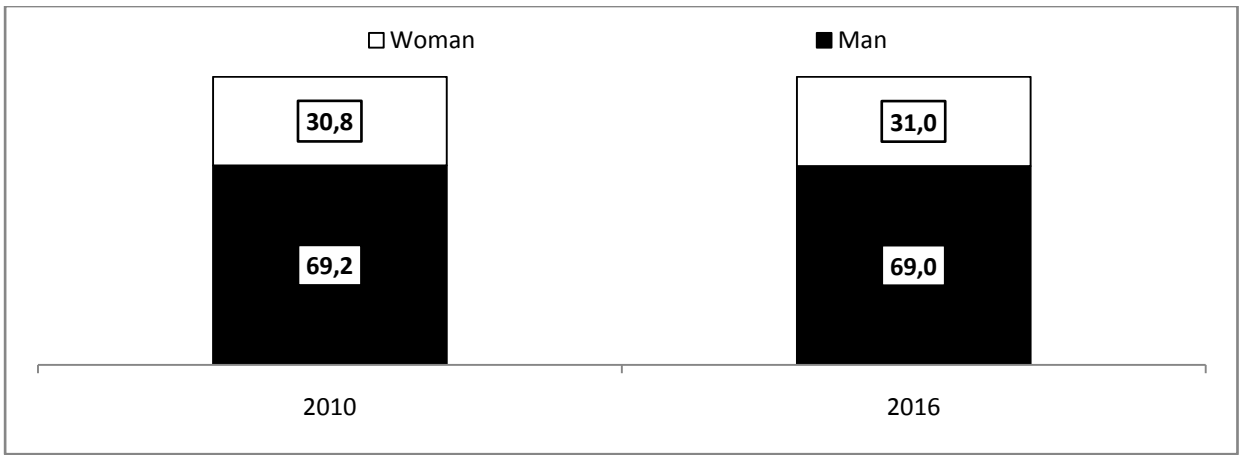
Fluctuations in the size of family farms were relatively the weakest in terms of changes in the population structure associated with them by gender. Farm managers were much more often men. Their advantage among managers of farming has been long-standing and had a deep socio-cultural background. The profession of a farmer was treated as a typically male occupation, which was reflected in the directions of transfer of land and production assets within families. These transfers were made by the owners generally to their sons. The largest age group in both 2016 and 2010 were farmers aged 45-54. However, there has been an increase in the number of managers aged 55-64 and 65 and over. It should be noted that the managers of farms with high economic potential were relatively younger, which meant that in the case of these entities, the problems related to succession were relatively less urgent (Figure 1).



Source:calculations based on the CSO, Warszawa 2017

Figure 1. People Managing Family Farms by Age in 2010-2016

People working in agriculture were relatively older than workers in the general population. In addition, in the population of people managing farms, less than a third of the total population were women. They usually ran small farms that were not oriented to the market. Often also the implementation of management tasks on farms resulted from a life or economic situation (loneliness, work of a spouse outside agriculture) (Figure 2).



Source:calculations based on the CSO , Warszawa 2017

Figure 2. People Managing Family Farms by sex in 2010-2016

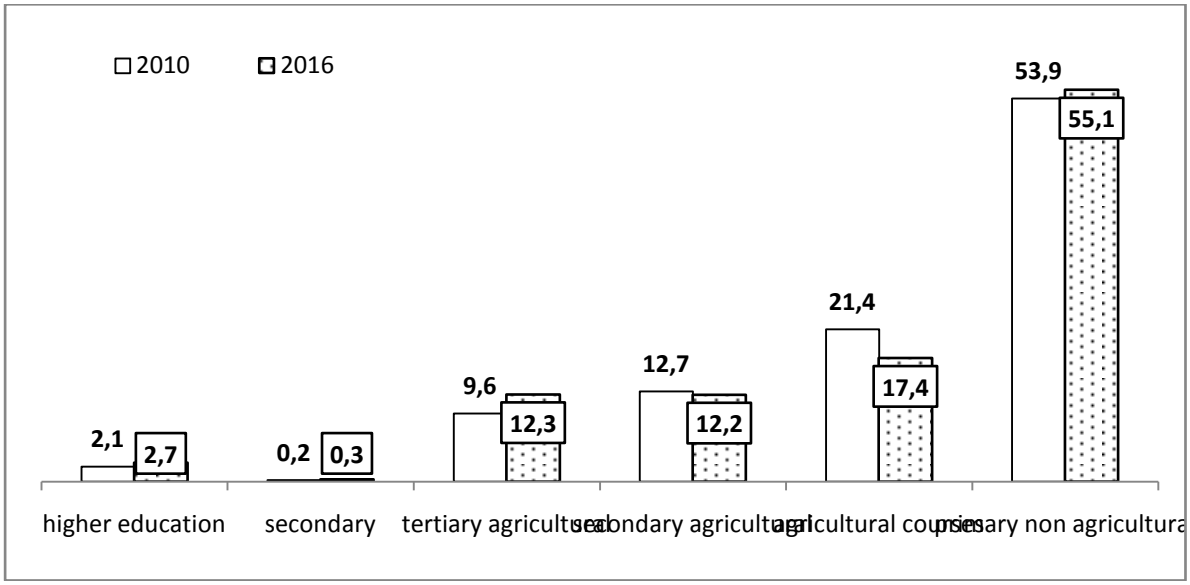
In the EU women account for 35.1 % of the agricultural workforce. The 2016 LFS shows that the proportion of women working in agriculture across the EU was much smaller than their share of the total working population (35.1 % against 45.9 %). Women accounted for more than 40 % of the agricultural workforce in only five Member States, namely Austria (44.5 %), Romania (43.1 %) Poland, Greece and Slovenia (41.1 % in each of three countries). By contrast, the lowest proportions of women farmers were reported in Denmark (19.9 %) and Ireland (11.6 %) (Eurostat, 25.03. 2019).

Aamong the spouses of managers of family farms in Poland, older people arrived and some of younger ones disappeared, which indicated the aging of this group. Other members of family farms, as a rule, children of farm managers and spouses, as well as parents or in-laws of the latter (much less often it was the siblings of managers and spouses) constituted a diversified category. At the same time it should be noted that the younger age categories of other members of farming families were more numerous than the older ones. However, there was a decline in the total number of farms and agricultural population, as well as a drop in fertility and migration of young people from rural areas.

3. Changes in the Level of Education of People Managing Family Farms in Poland

Demographic changes among the agricultural population were accompanied by changes in the level of formal qualifications of this population. This process also took place in relation to farm managers. From the point of view of the economic situation and the prospects of farm development, the quality of managers' competences was decisive due to their role in making current and strategic decisions regarding agricultural business operations. Farmers were in the socio-occupational category with one of the lowest human capital parameters measured by achievements in school education. However, over the period 2010-2016, the level of education of this group has improved. Among all farm managers there was an increase in the share of people with higher education (from 10 to 13%) and secondary vocational education (from 24 to 31%). At the same time, in the described group there was a decrease in the percentage of people with basic vocational education (from 40 to 37%) and lower secondary and primary education (from 17 to 12%). It should be noted, however, that the usually higher level of general education was characteristic of users of farms who were oriented to gainful employment in non-agricultural sectors. The improvement in the level of general education of farmers did not involve a change in their formal professional qualifications.

However, as for sectoral and agricultural preparation, over half of farm managers did not have any formal preparation for running a farm (Figure 3).



Source:calculations based on the CSO , Warszawa 2017

Figure 3. Structure of Agricultural Education of People Managing Family Farms in 2010-2016 (%)

Among the managers of farms, the largest share was held by people who completed the agricultural course. This type of agricultural education concerned mainly the relatively oldest people. Over one in ten family farm managers in turn held secondary vocational and basic vocational agricultural education. The population with agricultural, directional preparation at the higher level constituted minority (2-3%). It should be emphasized that managers with industry-related agricultural preparation usually had significant and modern production facilities and maintained a strong relationship with the market. This group often used financial resources for the development of activities in the form of loans or EU subsidies. In this context, it is worth adding that having a field agricultural education or a commitment to supplement it was a condition for using the means of supporting agricultural investments co-financed from the EU budget.

The decline in employment in this sector was a reflection of structural changes in domestic family farming. In 2010-2016, labor expenditures measured in the annual work unit decreased in family farms. These changes should be attributed primarily to a decrease in the number of farms as well as a progressive decline in the demand for agricultural labor. This process concerned, in particular, small

family farms (with UA area up to 30 ha), usually with a small scale of commodity production. In turn, in entities with a relatively larger economic potential and market-oriented (30 ha and more), labor inputs have increased. Farmers with agricultural preparation more often developed their farms. Farmers with agricultural education more often perceived a competitive advantage in a more labor-intensive, but increasingly more important, also in the aspect of EU policy, sustainable agriculture. Almost 90% of them emphasized that they see the positive effects of sustainable agriculture. The farmers most often pointed the improvement of the natural environment, the production of healthier and better quality food and high yields. It turns out that the sex of the farm manager has a big impact on the perception of sustainable development. Women more often than men emphasized the benefits of applying the principles of sustainable agriculture in practice in the form of healthier and better in terms of quality of food, higher yields, improved work safety of the farmer. Farmers, especially those with higher agricultural education, see the use of sustainable agricultural practices of the future for Polish agriculture (agrofakt.pl, 25.03.2019).

However, there was a decrease in the involvement of farming families in classes on farms. It also means the process of a progressive decline in the importance of the agricultural sector as a place of employment and source of income for rural residents. GUS (in English: CSO - Central Statistical Office) data showed that agricultural activity was the main source of income for about one third of families using farms. In their case, the person managing was a middle-aged man with agricultural qualifications.

In entities with a large economic size, production was earmarked for sale and, as a rule, investments aimed at business development were carried out. In farms where the manager was a person without agricultural preparation, as a rule, most of the family derived income primarily from wage labor. They used degraded agricultural wealth for production intended for self-supply or for sale as an additional stream of money supplementing home budgets. The group of families with farms living on agricultural activities and families with farms living on wage labor were similar in many socio-demographic aspects. Two features distinguished tchem working time devoted to classes at the farm and having qualifications useful for running it. A separate category was made up of farming families that mainly survived from retirement and disability pensions.

4. Conclusions

The adoption of sustainable development and social responsibility in agricultural enterprises causes more and more attention to be paid to activities not only in economic but also environmental and social terms. Good CSR models / strategies emerging in Poland are usually the result of a favorable market context and require good preparation of managers to conduct activities in the agricultural sector. In the intergenerational change, or more precisely in the level of knowledge and motivation of successors, the possibilities of family farms are seen as well as the possibility of quick adaptation to the requirements of sustainable development (Lobley M., Baker J.R., Witehead I.,)

In 2010-2016 both the number of family farms and those working there decreased. This process resulted from the liquidation of small farms and the transition of people associated with them, both to the non-agricultural job market and to the group of inactive people. Among farm households, the percentage of farm managers with a relatively higher level of education and agricultural preparation increased. The tendency to improve the level of qualifications concerned farmers for whom income from agricultural production was important for household budgets. Among market oriented family farm managers with a relatively high production potential, progress has been made in professional preparation for the profession of a farmer, seeking knowledge, establishing relationships (belonging to producer groups), greater focus on the pursuit of sustainable development.

The improvement in the level of vocational education mainly concerned people representing large and developing entities. The level of education (higher agricultural) had a direct impact on the speed and effects of implementing technical, technological, social, organizational innovations and Eco-innovations. Relatively despite the aging of the society, the younger age of the Polish economy (also against the background of Europe) and the systematically improving level of education is a positive signal in the pro-effective rebuilding of structures in Polish agriculture. The work is the basis for analyzing the impact of the level of education (gaining industry knowledge and training) on the implementation of the sustainable agriculture model on farms.

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