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SPATIAL DIFFERENTIATION AND CONDITIONS FOR NON-AGRICULTURE ACTIVITY ON THE FARMS OF ŚWIĘTOKRZYSKIE VOIVODSHIP

Summary:

Management transformations which started at the turn of the eighties and the nineties of the 20th century in Poland have thoroughly changed socioeconomic conditions of the development of the country and its regions. The transformation of state controlled management system required adjustment of various socioeconomic and spatial structures to the new rules of market economy. This process, being based on transformation of the previous structures created in the centrally-steered management system and on the development of the new structures, is being observed in many places in Poland, also in rural areas in Świętokrzyskie Voivodship. The space is characterized by great diversity resulting from natural, economic and cultural conditions, and, consequently, individual regions differ by their respective flexibility of adopting new management rules. Changes in the structure of activity on the farms in rural areas are of great importance in the transformation. The agriculture sector, which was dominant in rural areas in the central economy has changed since the nineties of the 20th century. The sources used in this work can be divided into two groups considering their accessibility: the published and unpublished sources.

The paper deals with geographical and agricultural aspects of the analysis of spatial differentiation of the non-agriculture activity of farms in the rural areas of Świętokrzyskie Voivodship¹. The structure of the non-agriculture activity of farms in the investigated region was presented. The level of this kind of economic activity was evaluated.

Key words: multifunctional development, non-agriculture activity of farms, rural areas

¹ The following terms refer to administrative units in Poland: **voivodship** (the major territorial unit, Polish: *województwo*), **county** (an intermediate level unit, also *powiat*, Polish: *powiat*) and **commune** (a basic level unit, Polish: *gmina*).

INTRODUCTION

Multifunctional development of rural areas has become a vital issue in social and economic transformation of villages. The introduction of a new economic system in Poland at the turn of the 1980s and 1990s forced the abandonment of agriculture as the dominant function of rural areas. The non-agriculture activity of farms is of great importance for the idea of multifunctional development of rural areas to be implemented. This kind of economic activity leads to a decrease in the number of people employed in agriculture. It also contributes to the strengthening of the non-agriculture sectors of economy in rural areas. Presently, with high unemployment rate, the prestige of non-agriculture functions of rural areas is growing and the non-agriculture activity of farms becomes more important [Kłodziński 2000]. Engaging in this form of occupation reflects farmers' active attitude towards the demands of market economy. It is also closely connected with a decline in agricultural production profitability level. Creating new jobs leads to the improvement in the living conditions of agricultural population.

In order to define the direction of multifunctional development of rural areas, it is necessary to specify the present level of non-agriculture activity of farms and investigate its structure. The analysis focussing on those two issues was made for the Świętokrzyskie Voivodship rural areas. Communes making up 13 counties were assumed to be basic entities undergoing investigations. The analysis time range covers mainly the year 2002 (the results of Agriculture General Census). The Voivodship Statistical Office based in Kielce made the data available. The data were collected from the Agriculture General Census Reports which covered all the communes in the area under consideration.

The present paper aims at analysing the spatial differentiation of non-agriculture activity of farms in Świętokrzyskie Voivodship. It also evaluates the level of non-agriculture activity and examines its structure. The paper is divided into three parts. The first one deals with the structure of farms engaged in economic activity (non-agriculture, agriculture and both). The next part focuses on the level and structure of non-agriculture activity of farms. In the third part, the directions of non-agriculture activity of farms are specified.

Structure of economic activities in agriculture in the rural areas of Świętokrzyskie Voivodship

173,816 farms operate in the rural areas of Świętokrzyskie Voivodship. The most farms, i.e. as many as 37,360 (21.49%) are located in Kielce County, the fewest farms are found in Kazimierza County – 6,641, i.e., 3.82% of the total number.

The structure of farms, as regards the type of economic activity they participate in, is characterised by great spatial differentiation (Table 1). Four categories could be assigned to farm businesses. The most numerous group are farm businesses engaged exclusively in agricultural activity. Their percentage in the total number of farms ranges from 24% in suburban communes, directly neighbouring the voivodship major cities like Skarżysko (e.g., communes: Skarżysko 11.7%, Suchedniów 13.6%) and Kielce (e.g. communes: Zagnańsk 41.3%, Masłów 43.1% or Daleszyce 44.4%) to approx. 90% in the south, in Kazimierza County (85.2%; e.g. communes: Opatowiec 87.6%, Skalbmierz 87.5%). High percentage of only-agriculture farm businesses is also found in Opatów County (81.4 %; e.g. communes: Wojciechowice 90.2%, Lipnik 87.7%) and Sandomierz County (79.2%; e.g. communes: Wilczyce 85.1%, Klimontów 83.6%).

Table 1. Farms engaged in economic activity (agriculture, non-agriculture) in the rural areas of Świętokrzyskie Voivodship

County	Farms, total	Farms engaged in economic activity [%]			Farms not engaged in economic activity [%]
		Agriculture only	Non-agriculture only	Agriculture and non-agriculture	
Busko	15,652	72.9	1.9	9.7	15.5
Jędrzejów	15,389	75.5	1.5	8.4	14.6
Kazimierza	6,641	85.2	0.5	9.5	4.8
Kielce	37,060	59.6	4.8	8.3	27.3
Końskie	14,321	47.4	4.0	5.3	43.3
Opatów	11,551	80.1	0.5	9.3	10.1
Ostrowiec	9,836	64.5	3.5	6.7	25.3
Pińczów	8,063	79.0	1.3	7.6	12.1
Sandomierz	15,587	79.2	1.1	9.5	10.2
Skarżysko	7,798	24.1	6.3	3.9	65.7
Starachowice	9,630	59.8	2.9	9.2	28.1
Staszów	13,255	71.6	2.3	6.8	19.3
Włoszczowa	8,773	68.1	2.7	7.5	21.7

Source: data collected by the author on the basis of Agriculture General Census 2002 (reports for individual communes)

The farms that temporarily suspended or ceased agricultural activity and run only non-agriculture type of business make another category. The highest percentage of such farms is found in highly urbanised counties, i.e. Skarżysko (6.3%; e.g. communes: Suchedniów 8.6%, Skarżysko 8.4%) and Kielce (4.8%; e.g. communes: Masłów 11.8%, Morawica 8.4%, or Daleszyce 7.7%). Counties characterised by rural features have the lowest percentage of such farms: Kazimierza County (0.5% of all farms; e.g. communes: Kazimierza 0.1%, Skalbmierz 0.5%) and Opatów County (0.5% of all farms; e.g. communes: Sadowie 0.3%, Iwaniska and Lipnik 0.5% each).

Farm businesses engaged in both agriculture and non-agriculture economic activity constitute a group that is larger than the previous one. They make more than 9% of all farms, both in suburban areas, e.g. in counties: Starachowice (9.2% on average; communes: Pawłów 13.9%, Mirzec 12.5%) as well as in areas where the agricultural function is predominant, e.g. in counties: Busko (9.7% on average; e.g. communes: Stopnica 12.5%, Busko-Zdrój 11.8%), Kazimierza (9.5% of all farms; e.g. communes: Bejsce and Kazimierza 10.6% each), Sandomierz (9.5%; e.g. communes: Obrazów 12.6%, Sandomierz 12.2% or Koprzywnica 11.9%) and Opatów (9.3% on average; e.g. communes: Opatów 13.3%, Iwaniska 10.9%).

Apart from farms conducting business activity, a large group of farms is found not to be engaged in any economic activity. The land lies fallow and no animals are bred. The source of income is provided mainly by old-age pensions, disability pensions or hired labour. Farms of this kind constitute a substantial percentage of all farms in the areas that are either highly urbanised or show natural conditions that are unfavourable for agriculture. The highest percentage of such farms was noted in Skarżysko County, as much as 65.7% (e.g. communes: Skarżysko 77.7%, Suchedniów 76.0%) and Końskie County – 43.3 % (e.g. communes: Stąporków 63.4%, Końskie 52.3%). In the majority of the counties of Świętokrzyskie Voivodship, such farms make from 10 to 30%. The lowest numbers are recorded in Kazimierza County – 4.8% (e.g. communes: Skalbierz 2.3%, Czarnocin 3.9%) and Opatów County – 10.1% (e.g. communes: Lipnik 3.8%, Sadowie 5.1%).

The structure of farms in individual communes with respect to economic activity they run is presented in table 1. It takes the form of chart diagram prepared on the basis of available statistical data.

Farm businesses that are engaged exclusively in agriculture constitute a majority in the rural areas of Świętokrzyskie Voivodship [Table 1]. North-eastern part of the , i.e. Końskie County or Skarżysko County, is an exception in this respect as farms not running any economic activity are high in number. Farms that join agricultural activity with that outside agriculture are generally found all over the voivodship, the highest percentage of them is seen in the south and east of the region. Farm businesses engaged in non-agriculture activities concentrate in the central and eastern part of the voivodship, often in the vicinity of urban centres, such as, e.g. Jędrzejów, Pińczów, Staszów, Opatów, Sandomierz, Ożarów, Ćmielów and Ostrowiec.

Level of non-agriculture activity of farms

According to the data produced by the agriculture census, farms engaged in the non-agriculture economic activity are those whose users running the joint household with the user became owners of businesses operating outside agriculture [Non-agriculture activity... 2003].

The basic measure of the level of so understood economic activity is the ratio of the number of farms engaged in non-agriculture activity (exclusively or together with agricultural activity) to the total number of farms [Table. 2].

Table 2. Non-agriculture activity of farms in the rural areas of Świętokrzyskie Voivodship

County	Farms engaged in non-agriculture economic activity		Non-agriculture activity in agriculture		
	Number of farms	% of the total number of farms	Farms in the total number of households %	Farms engaged in non-agriculture economic activity in total number of REGON system entities %	Index of economic activity in agriculture
Busko	1,828,	11.7	79.4	12.5	15.7
Jędrzejów	1,529,	9.9	52.7	11.5	21.8
Kazimierza	664,	10.0	58.5	20.0	34.2
Kielce	4,839,	13.0	65.0	42.8	65.8
Końskie	1,321,	9.2	25.4	37.6	148.0
Opatów	1,139,	9.9	61.7	39.4	63.9
Ostrowiec	901,	9.2	23.8	9.9	41.6
Pińczów	717,	8.9	59.1	30.6	51.8
Sandomierz	1,649,	10.6	59.6	29	48.6
Skarżysko	797,	10.2	26.1	10.9	41.8
Starachowice	1,158,	12.0	29.1	16.2	55.7
Staszów	1,241,	9.3	57.6	25.6	44.4
Włoszczowa	892,	10.2	59.7	32.4	54.3

Source: data collected by the author on the basis of Agriculture General Census 2002 (reports for individual communes) and the register of business entities in Świętokrzyskie Voivodship (Statistical Office in Kielce 2002).

The above mentioned ratio varies in space and ranges from 4-7% in typically agricultural communes in the south and east to 15-25% in selected suburban communes and single town-village communes in the south (including those lying in areas highly attractive to tourists). Statistical data show that most farms engaged in non-agriculture economic activity are located in Kielce County (the highest percentages in the following communes: Masłów - 23%, Daleszyce - 16.9%). They are 4,839 farms in all, which amounts to 13% of all farms in the county. In other counties of the region, the number of farms engaged in thenon-agriculture economic activity is over two times lower [Table 2]. Relatively high numbers and percentages of such farms can be found in the following counties: Busko (1,828, which makes 11.7% of all farms), Sandomierz (1,649, which makes 10.6%) and Jędrzejów (1 529, i.e. 9.9%). In Starachowice County 1,158

farms are engaged in non-agriculture economic activity, which corresponds to a high percentage (12.0%) with respect to all farms conducting business activity. Fewer farms running non-agriculture economic activity can be found in the following counties: Kazimierza (664, which makes 10% of all farms), Pińczów (717, i.e. 8.9%), Skarżysko (797, i.e. 10.2%) and Włoszczowa (892, i.e. 10.2%).

Apart from stating the percentage of farms engaged in non-agriculture economic activity, the analysis also deals with the position of farm businesses with respect to the general level of enterprise development, both in and outside agriculture. In the rural areas of Świętokrzyskie Voivodship, farms engaged in non-agriculture economic activity constitute, on average, almost 25% of all economic entities registered in the REGON system.

The ratio of this percentage to the percentage of farms in the total number of households, multiplied by 100 was adopted as an index of economic activity in agriculture. Its mean value in Świętokrzyskie Voivodship is 53 points, which indicates much lower activity of farms when compared with the non-agriculture households.

For counties, the value of the above-mentioned index ranges from 15-35 points in Busko County, Jędrzejów County and Kazimierza County to 66 points in Kielce County and 148 points in Końskie County [Table 2].

In Świętokrzyskie Voivodship, 14 communes (6 out of which are in Końskie County), have the rate of farms engaged in non-agriculture activity to the total of all economic entities higher than the rate of farms to the total of households (the index above 100 points). The group is represented both by communes strongly connected functionally with the neighbouring agglomerations (e.g., Masłów, Słupia Konecka, Fałków, Smyków, Gowarczów) and those of traditionally rural features (e.g., Łubnice, Zawichost, Kazimierza) or those where the tourist industry develops (Busko-Zdrój, Jędrzejów, Sandomierz). The fact indicates the complexity of the process of economic activation of rural areas.

Structure of non-agriculture activity of farms

The analysis of the structure of economic entities in the rural areas of Świętokrzyskie Voivodship shows a dominant role of units operating within one NACE Rev1.1 section. They constitute over 90% of all farms engaged in non-agriculture activity [Table 3].

In the group of single-section entities, trade and industrial processing play the most important role as the biggest group of farms (40-50%) engaged in non-agriculture activity is involved in those kinds of businesses. Thus, trade and industrial processing occupy a prominent position in the structure of economic entities. Trade constitutes, on average, 1/5 of all registered economic entities in agriculture. A large number of economic entities running this kind of business

started operating in early and mid 1990s, filling the gap in the market and replacing shut down retail outlets and service shops run previously by the state or co-operatives [Rosner 2002]. It must be added, however, that trade is the simplest form of business activity, which creates only a few jobs.

Table 3. Structure of non-agriculture activity of farms by NACE rev1.1 sections (%)

County	Within one NACE rev1.1 section							Within two NACE rev1.1 sections
	Total	Including						
		Trade	Industrial processing	Construction	Transportation and storage	Agri-tourism	Other sections	
Busko	95.2	21.0	22.7	6.3	2.6	1.0	41.6	4.8
Jędrzejów	92.9	23.9	21.5	4.4	2.5	-	40.6	7.1
Kazimierza	94.1	10.95	35.7	-	-	-	47.45	5.9
Kielce	93.3	23.8	16.2	6.7	6.1	0.6	39.9	6.7
Końskie	94.4	20.5	23.7	3.6	2.8	-	43.8	5.6
Opatów	96.7	19.8	27.2	3.6	3.7	0.3	42.1	3.3
Ostrowiec	94.8	20.3	16.8	3.8	4.8	-	49.1	5.2
Pińczów	94.8	17.9	25.9	3.4	2.9	-	44.7	5.2
Sandomierz	94.9	22.6	24.0	1.4	3.5	0.2	43.2	5.1
Skarżysko	90.9	16.9	24.1	2.8	2.0	-	45.1	9.1
Starachowice	94.7	17.9	32.3	4.4	4.2	0.3	35.6	5.3
Staszów	95.0	24.2	24.6	6.2	4.7	0.6	34.7	5.0
Włoszczowa	91.3	40.9	34.9	8.2	7.3	-	-	8.7

Source: data collected by the author on the basis of Agriculture General Census 2002 (reports for individual communes)

As regards the spatial distribution, the highest percentages of trade entities in agriculture (over 20%) are found in the central and western part of the voivodship (i.e. the following counties: Włoszczowa, Kielce, Jędrzejów) and in the rural counties in the east: Sandomierz, Staszów [Table 3].

A minor role of trade is seen in the following counties: Kazimierza, Skarżysko, Pińczów and Starachowice. Considerable spatial differentiation of trade businesses at the level of communes is observed, from approx. 5% in communes: Bejsce, Czarnocin, Opatowiec to over 20% in communes: Daleszyce, Busko-Zdrój.

The other important sector in non-agriculture activity is industrial processing. It groups approx. 20-30% of economic entities operating in agriculture. The sector is also characterised by high spatial differentiation. The lowest percentages are found in the voivodship central and north-eastern parts, in the following counties: Kielce (16.2%), Ostrowiec (16.8%), Jędrzejów (21.5%) and Busko (22.7%). The highest values as regards industrial processing are noted in the west, south and north-east of the voivodship in the following counties:

Kazimierza (35.7%), Włoszczowa (34.9%) and Starachowice (32.3%). Agriculture is of considerable importance in those areas.

Trade and industrial processing jointly constitute from 30 to 80% of all economic entities, thus they are the most important in the structure of economic entities. The leading role of those sectors in the non-agriculture activity in rural areas is confirmed by the studies covering the whole of Poland, conducted by Bański [2003].

All the remaining sections of non-agriculture activity are developed far worse. Transportation and storage together with construction constitute merely 10% of all farms engaged in non-agriculture activity. Weak development of both sections is reflected in the fact that in some communes of the voivodship not a single economic entity is registered as a construction company (25 communes) or transportation company (26 communes). Spatial distribution of those communes, however, is diverse. Both communes with favourable (Tuczępy, Skalbierz, Działoszyce, Opatowiec) and adverse natural conditions (Gowarczów, Falków, Ruda Maleniecka) are represented. They can be located close to urban agglomerations (Słupia Jędrzejowska, Słupia Konecka, Sadowie, Wojciechowice) or far from highly urbanised areas (Bejsce, Radków). Spatial dispersion is also seen in communes in which the above-mentioned sectors are characterised by high percentage value, e.g., Pawłów, Staszów, Zagnańsk, Busko-Zdrój, Morawica with a high number of construction enterprises, and Bieliny, Górnio, Chęciny, Miedziana Góra where many transportation and storage businesses are found.

Agri-tourism, which still continues to develop, is another kind of economic activity in farms, generating additional money to enhance farmers' incomes. Comparing the number of farms providing tourist services with the total number of farms or economic entities operating in rural areas, it can be seen that tourism (including agri-tourism) ends up in a weak position in the structure of farms incomes or the structure of rural population employment. In 88 out of 102 rural communes of the voivodship, there are no farms that provide that kind of services. It should be noted, however, that this function is being developed more and more dynamically in many areas, especially those having vast tourism and recreation potential. It refers to the region of the Świętokrzyskie mountains (e.g., communes: Daleszyce, Nowa Słupia, Bodzentyn, Chęciny), or such communes as Chmielnik, Busko-Zdrój, Sandomierz. Agri-tourism is the form of non-agriculture economic activity, which has excellent growth prospects due to the voivodship's tourist attractions and natural beauty [Pałka 2004].

Investigations conducted by Niedzielski [1998] dealing with the structure of business activities in rural area show that the structure undergoes significant changes. They are caused by, on the one hand, the low dynamics of the increase in the number of businesses engaged in trade and production and, on the other, a higher increase in service sector companies running estate agencies,

providing financial or advisory services, etc. This is confirmed by the analysis of the structure of non-agriculture economic activity by the type of it. The method of six subsequent quotients was used. It is commonly applied to geographical and agricultural studies to determine the elements that are dominant in a given structure. The following kinds of non-agriculture economic activity were taken into account:

- trade
- industrial processing
- other (construction, transportation, storage, agri-tourism and other).

The leading activities were assigned the following assessment: dominance (5 or 6 greatest quotients), majority (4 greatest quotients), balance (3 greatest quotients) and the lack of the dominant element (fewer than 3 greatest quotients). It should be added that the object of the investigations were farms classified within one NACE rev1.1 section.

The results of examinations are as follows:

- dominant share (dominance) in 14 communes,
- major share (majority) w 36 communes,
- balanced share (balance) w 48 communes
- concomitant share and minor share, which are of marginal significance.

Spatial delimitation shows that the communes with leading activity of a single-section type predominate in Świętokrzyskie Voivodship. That category covers the dominant share, major share and high share (3 quotients). Trade has been found to be the leading activity (dominance) in the western part of Jędrzejów County, in the western part of Końskie County, in the northern part of Skarżysko County. The dominance of industrial processing is seen in almost the whole of the following counties: Kazimierza, Ostrowiec (the Waśniów commune) and Końskie (the Stąporków commune). Processing is a major activity in individual communes of the following counties: Końskie (Ruda Maleniecka, Słupia Konecka), Skarżysko (Bliżyn, Skarżysko Kościelne, Łączna), Starachowice (Pawłów), Ostrowiec (Chmielnik), Opatów (Sadowie, Lipnik, Iwaniska), Sandomierz (Obrazów, Sandomierz, Łoniów), Staszów (Bogoria), Busko (Tuczepy and Nowy Korczyn), Pińczów (Kije and Złota), Jędrzejów (Imielno, Sędziszów) and Włoszczowa (Secemin). Not a single commune of Świętokrzyskie Voivodship reported agri-tourism as a leading activity. Due to high dispersion of non-agriculture activity, no dominant element was found in 13 communes, therefore no leading activity was specified.

The analysis shows great differentiation and complexity of the structure of economic entities in rural areas of Świętokrzyskie Voivodship. Broadly understood service sector is of the greatest importance. It covers mainly trade and processing and, to a lesser extent, construction, transportation and agri-tourism.

CONCLUSIONS

The introduction of the principles of market economy stimulated the development of a new category of farms, that is, the entities engaged in non-agriculture economic activity. This is a positive phenomenon that contributes to the multifunctional development of rural areas. Generating new workplaces, it results in lower unemployment rate and improvement in economic situation of farms. The analysis conducted in the paper shows great spatial differentiation as regards the level and structure of non-agriculture activity of farms in the rural areas of Świętokrzyskie Voivodship. Spatial differentiation is reflected in differences in the ratio of such farms to the total of all farms.

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