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IMPACT OF LOCAL BORDER TRAFFIC WITH THE KALININGRAD DISTRICT OF THE RUSSIAN FEDERATION IN SCOPE AND LEVEL MARKETING OF GOODS AND SERVICES

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Abstract. The special significance of the market of the Russian Federation as a partner Polish entrepreneurs and convenient location of Kaliningrad District to the organization promoting and selling Polish products, in gaining importance in the context of the agreement on local border traffic between the Kaliningrad District and part of Warmia, Mazury and Pomerania, in force since July 2012. There are new lower demand and new opportunities for the development of Polish-Russian economic cooperation. The article contains the results of studies aimed at assessing the impact of local border traffic with the Kaliningrad District in the form of cross-border cooperation. Examined the degree of its impact on trade in goods and trade in services between the Warmia and Mazury Voivodship and Kaliningrad District. Studies carried out among buyers of the Kaliningrad District were designed to identify the most frequently purchased products from Poland and examined the availability to them. Determined the impact of selected factors on the reduction of trade in goods and services between the Warmia and Mazury Voivodship and Kaliningrad District.

Key words: small border traffic, cross-border cooperation, trade in goods and services, factors limiting cross-border cooperation

INTRODUCTION

During the global crisis, Kaliningrad District of the Russian Federation is recognized by economists as being of great economic potential and investment. The special significance of the market of the Russian Federation as a partner Polish entrepreneurs and convenient location Kaliningrad District to the organization promoting and selling

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Polish products, in gaining importance in the context of the agreement on local border traffic between the Kaliningrad District and part of Warmia, Mazury and Pomerania, in force since July 2012. There are new lower demand and new opportunities for the development of Polish-Russian economic cooperation. Increased activity in the region and are interested in cooperating Polish contractors should be a priority in the development of Polish-Russian economic cooperation. Regional markets have a greater potential for growth and are not penetrated by the competition.

The development of cross-border cooperation is not a competition for the regions, but a complement or economic conditions create the basis for their operation. This cooperation allows for close-up and associate business partners, finding new markets for Polish products, and thus the increase in trade [Białobrzeska and Kisiel 2003]. One form of cooperation is the Euroregion, which is important, bottom-up plane. A positive example of an active and multifaceted cross-border cooperation is Euroregion Bałtyk. An important function of the Euroregion is to develop local and regional activities. Euroregional cooperation is a cooperation between border communities and local governments [Koszyk-Białobrzeska and Kisiel 2008]. Dynamic development of transborder relations triggered the downfall of barriers and prejudice, the developing of official and unofficial interpersonal relations, especially between members of local societies [Palmowski and Kondratowicz 2009].

In order to use existing and emerging opportunities for Polish-Russian economic cooperation should be increased activity at three levels: macro-economic, regional and businesses. Macroeconomic level are various instruments of foreign economic policy, including bilateral relations treaty, multilateral cooperation in international organizations and the internal system of export support. The development of regional cooperation between Polish and Russia requires detailed exploration of current and future economic opportunities of individual regions, including special economic zones. The Polish-Russian trade relations in the future more and more important role should exchange services. Poland could become an exporter of services to the population of Russia, particularly in the service sector: tourism, construction, transport and health [Batyk and Semenova 2013].

One form of cross-border cooperation, which is conducive to the development and strengthening and improving the living conditions of the inhabitants of border regions is cross-border trade. The importance of trade with neighboring countries for the local economy can be expressed by:

– export of products manufactured are made in the spatial unit to the markets of neighboring countries,
– providing service for the needs of transit traffic, including in particular the freight traffic generated by Polish foreign trade,
– small unregistered cross-border trade.

All of these elements have the potential to positively affect the local economy (especially on the local labor market). At the same time, they may also cause the economy to certain risks. Excessive concentration of exporters in the market of neighboring countries increases the risk of imported crisis. Transit trade affects the environment and road

safety. Cross-border trade (especially of goods subject to excise duty) is unfair competition for local businesses, and by criminalizing activities undertaken favors exclusion of certain cross-border groups [Komornicki 2010].

Specific forms of economic relations on a local scale are cross-border trade and services. This phenomenon is considered both on tourism research, as well as in the economic analysis. The importance of traditional trade was enhanced by new associations and unions of merchants and traders. Diminishing differences in prices of similar goods in the neighbouring countries caused the number of cross-border shoppers to decrease. As a result, the incomes of the vendors declined; however, new organizational changes introduced at a local level increase the revenues of territorial self-government units. This enabled the people to conduct activities which were directed towards the creation of a new structure accomplishing more and more complex functions. In particular, this was carried out through the expansion in the realm of operation of retail trade. In many shops and stores located in border regions, in addition to the re-distribution of goods, services were also offered, and trade performed a number of social and economic functions, including those pertaining to the process of local development. The implementation and enforcement of new laws regulating the flow of persons across borders and the differentiated pace of social and economic processes in the neighbouring countries as well as increasing unemployment resulted in changes in the intensity of retail trade in border zone areas [Powęska 2013].

Trade turnover shows a steady, upward trend. The Polish products dominating in the import to the Kaliningrad Oblast include foodstuffs, household detergents, construction and finishing materials, machines, furniture, footwear, and other consumer goods and plastic products. It is estimated that 20% of the Polish exports to the Oblast come from the Polish-Russian border region. There are approximately 80 Polish small and medium-sized enterprises operating in the Kaliningrad Oblast. Some of them are seated in Warmia and Mazuria Voivodship [Palmowski 2010].

As a result of leveling of prices and changes in tariff policy has decreased the importance of cross-border trade in the western and southern borders. Trading on these borders were mainly retail and did not create economic links, but had a significant impact on mass-border traffic. There is currently an increased cross-border trade on the border with the Kaliningrad District, which is for residents of border areas unofficial economic activity. Despite the heavy traffic it involves relatively few people who frequently cross the border. Kaliningrad residents come to the Warmia and Mazury Voivodship mainly in trade and purchase food products, shoes, clothing, household goods, electronics and furniture. Residents of Warmia and Mazury from communities of small border traffic travel to Kaliningrad District only for fuel.

Results of the Stefan Batory Foundation conducted in 2007 indicate that one of the main purposes of crossing borders between the European Union and Russia was shopping in neighboring countries. A few years ago European citizens interested in buying cheaper alcohol and tobacco products in Russia. However, due to rising prices of goods in Russia, the Russians are more interested in shopping in the European Union, and not vice versa [Monitoring of border crossings in the European Union 2008].

With the introduction of local border traffic between the Kaliningrad District and part of Warmia, Mazury and Pomerania, in the fourth quarter of 2012 there was a sharp increase in the Polish citizens crossing the border with Russia by 27.3%. Changes in provisions for crossing the border affect the changes in the intensity of cross-border traffic and border trade. Following the example of the local border traffic operation since July 2009 in the Polish-Ukrainian border which had a positive effect on the activation of the border area, as evidenced by a higher rate of increase in the number of commercial companies with foreign capital in this area, we can expect a similar recovery in the Polish-Russian border area [Cross-border movement and transport of goods and services... 2013].

Expenditure incurred on the purchase of goods by foreigners in Poland declared as the country of residence of Russia amounted to 470.5 mln zł, and exports of Polish goods to Russia amounted to 32.3 mld zł [The study trading of goods and services... 2013]. The value of exports of agri-food products from Polish to Russia in 2011 amounted to over $1 mld. In 2012, there was an increase in exports of agri-food products by almost 30%, including dominant in this group of edible fruits and nuts as much as 46% [Polish trade turnover with foreign countries... 2012].

The results of the study trading of goods and services at the external border of the European Union in the Polish indicate that the vast majority of people go abroad and back in one day, mainly in order to make purchases. The structure of expenditures outweigh the funds allocated for the purchase of goods, and a small part is spent on services [The study trading of goods and services... 2013a, b].

Research carried out by the Statistical Office in Rzeszów in the second quarter of 2013, indicate that the highest growth crossing the external border of the European Union on Polish territory, reported the Polish-Russian border. The local border traffic increased arrivals of foreigners (of whom 93.6 % were Russians) – by 60.3%, and Polish citizens – an increase of 56.9%.

In the second quarter of 2013, the expenses of foreigners stood at 2,036.1 mln zł, while Polish citizens – 178.8 mln zł, and were higher compared to the same period of 2012, respectively 34.5% and 14.4%. The largest increase in expenses incurred in Poland included both foreigners (54.8%) and Polish citizens (47.2%) in excess of the Polish-Russian border.

The estimated value of the expenditure incurred in Poland by foreigners crossing the Polish-Russian border under the local border traffic in the second quarter of 2013 amounted to 39.9 mln zł and was higher compared to the previous quarter of 121.6%. The value of expenses incurred abroad by Polish citizens crossing the Polish-Russian border under the local border traffic was 42.1 mln zł, which accounted for 48.1% of the expenditure this border. These expenses were higher as compared to the first quarter of 2013 by 6.3%.

The individual sections of the border were differences in the pattern of expenditure. Expenditure of foreigners as a crossing the Polish-Ukrainian and Polish-Belarusian borders on non-food goods (respectively 87.1% and 81.5%) was significantly greater than in the case of the Polish-Russian (55.9%). The share of foreign spending on food

products was higher in the case of the border with Russia (33.3%) than the border with Belarus (15.3%) and Ukraine (11.7%). Russians are far more being spent on services (10.9%), Belarusians (3.2%) and Ukrainians (1.2%). This was mainly catering services and accommodation. Foreigners in excess of the Polish-Russian border under the local border traffic at the most released: meat and meat products (20.3%), other food products (15.6%), clothing and footwear (15%), cleaning products and cosmetics articles toiletries (11%) and dairy products and oils (9.9%). Structure of foreigners crossing the border by the visit to Poland was different in the Polish-Russian border. The most Russians traveled to shopping (53.8%). There was a much higher percentage of foreigners crossing the border with Russia as tourists (18.9%), transit (17.3%) and work (3.4%) [The study trading of goods and services..., 2013a, b].

The article contains the results of studies aimed at assessing the impact of local border traffic between Warmia and Mazury and Kaliningrad District in the form of cross-border cooperation. Examined the degree of influence of local border traffic at trade in goods and trade in services between the regions. Studies carried out among buyers of the Kaliningrad District were designed to identify the most frequently purchased products from Poland and examined the availability to them. Determined the impact of selected factors on the reduction of trade in goods and services between the Warmia and Mazury Voivodship and Kaliningrad District.

MATERIAL AND METHODS

The basis for the analysis of the impact of local border traffic with the Kaliningrad District of the Russian Federation on the scope and level of trade of goods and services are the results of the survey conducted in 2012. The presented results are part of the extensive research carried out among residents of the Kaliningrad District and the people living in 13 districts in the Warmia and Mazury Voivodship (including Olsztyn and Elblag) who can use the small border traffic.

Results presented in this article are empirical studies carried out by questionnaire interviews of 200 residents of Kaliningrad District. Authors used a questionnaire containing questions: alternative, disjunct (which require the application of one of several responses) and questions conjunctive (allowing indicate more than one response).

Respondents have been selected by purposeful selection. Selected 10 towns and villages located in Kaliningrad District, and then conducted a survey among residents of each of them representing different social groups. The samples for research was to obtain information from respondents varied in terms of gender, age, place of residence, education, and the average monthly income per family member.

Statistical analysis was performed using Statistica PL. In the statistical analysis used the analysis of the frequency.

Characteristic of respondents are shown in Table 1.

Table 1. Characteristic of respondents

Characteristic	Specification	Percentage of respondents
Gender	female	50
	male	50
Age	18–25 years	25
	26–35 years	17.5
	36–45 years	25.5
	46–55 years	22
	more than 55 years	10
Education	basic	9
	vocational	19
	secondary	21
	bachelor's degree	21
	higher	30
Social status	self-employed	20
	working	30
	government employee	14.5
	unemployed	9
	student	20
	pensioner	6,5
Place of residence	city 250–500 thousand residents	25
	city 100–250 thousand residents	20
	city 50–100 thousand residents	20
	city for 50 thousand residents	20
	village	15
The average monthly income per person	to 5 000 rubles (500 zł)	18.5
	5 001–10 000 rubles (501–1 000 zł)	13.5
	10 001–15 000 rubles (1 001–1 500 zł)	25.5
	15 001–20 000 rubles (1 501–2 000 zł)	21
	more than 20 000 rubles (2 000 zł)	21.5
	more than 20 000 rubles (2 000 zł)	21.5

Source: Author's research.

RESULTS AND DISCUSSION

Research has shown that effective from July 2012 the small border traffic between the part of the Warmia and Mazury Voivodship and Kaliningrad District affects cross-border cooperation in a wide range. Among the three most important activities associated with the functioning of the local border traffic, the majority of respondents pointed to the increasing circulation of goods (97%) and the development of tourism (79%). Residents of the Kaliningrad District sees an opportunity to develop the region and raise the standard of living, by being able to exchange labor and services (both at 45%) – Figure 1.

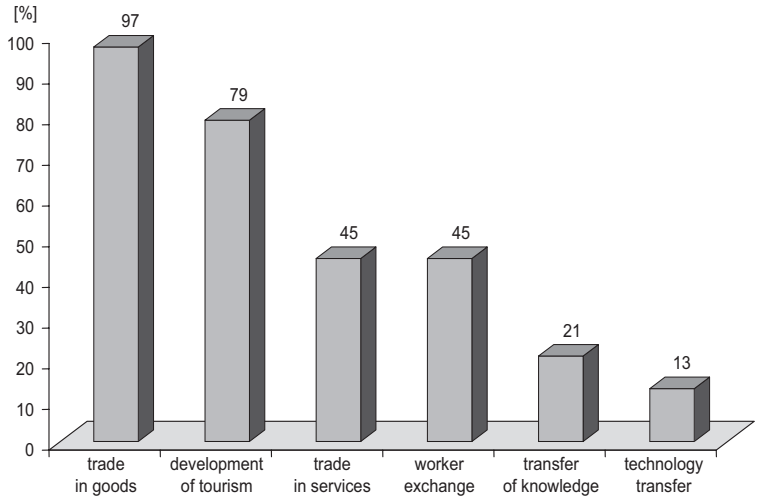

Fig. 1. Effect of local border traffic at the development of cooperation between the Warmia and Mazury Voivodship and Kaliningrad District in selected activities

Source: Author's research.

Local border traffic in the opinion of the majority of respondents to a large extent, affects both trade in goods and trade in services between the Warmia and Mazury Voivodship and Kaliningrad District (Fig. 2).

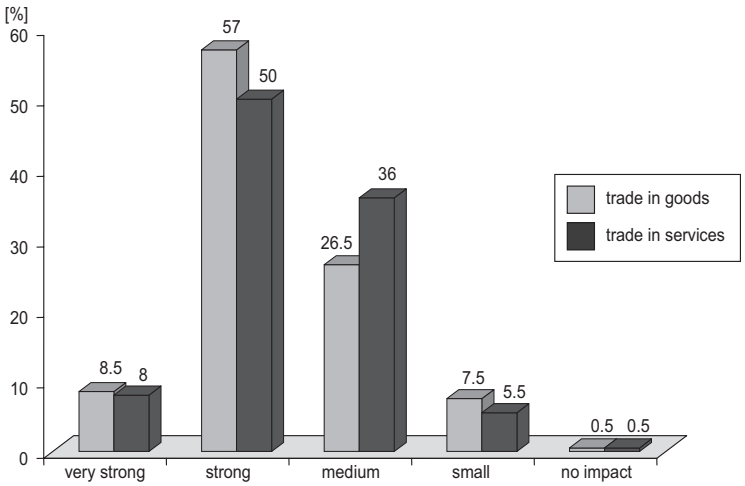

Fig. 2. The degree of the impact of local border traffic at trade in goods and services between the Warmia and Mazury Voivodship and Kaliningrad District

Source: Author's research.

Most respondents availability of products from Poland identified at a very good (8%) and good (76%). Only 3.5% of residents of Kaliningrad District considered it as small and 12.5% as medium.

Polish products the Polish were purchased at most street vendors (40.5%), in supermarkets (28.5%) and in the bazaars (27.5%). Only 3.5% of respondents declared that purchases of these products in small shops.

Respondents were able to indicate the three best-selling industrial Polish products (Fig. 3). The greatest interest of Kaliningrad's inhabitants enjoyed: shoes (69%), clothing (66%), cosmetics (50%) and electronics (38%).

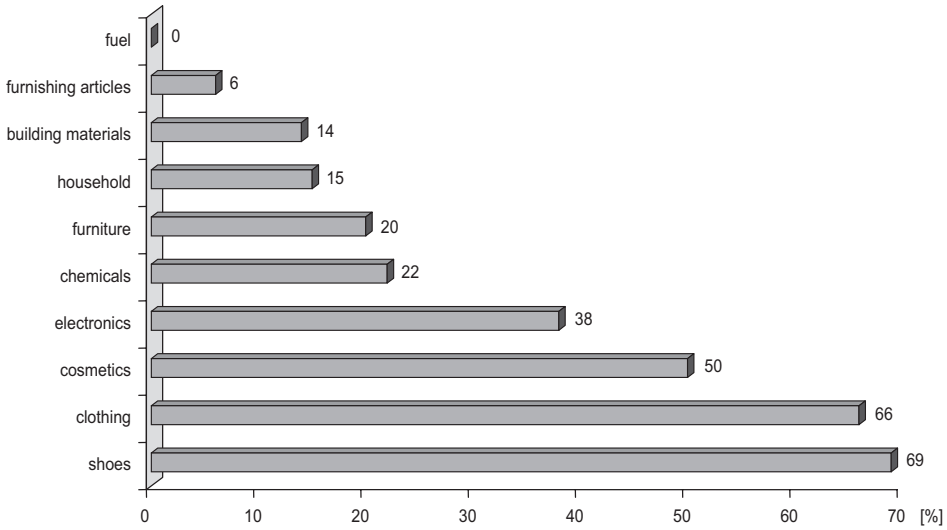

Fig. 3. Industrial products most frequently purchased by residents of the Kaliningrad District

Source: Author's research.

The study made it possible to know the impact of selected factors on the reduction of trade in goods and services between the Warmia and Mazury Voivodship and Kaliningrad District (Table 2).

Respondents acknowledged that the lack of an attractive range of goods and services, cultural differences, lack of security, language barriers or insufficient information only slightly affect the reduction of trade in goods and services. Purchasers of Polish products and customer services provided by Polish companies pay attention to their low price and high quality. Therefore, products and services are very popular and the price of the Kaliningrad District encourages residents to buy them.

Among the factors the greatest impact on reducing the trade in goods and services include: visa procedures, complicated border control procedures, long time to wait for border checks, complicated legal and administrative procedures, bad roads and small number of public transport. Recently, following the introduction of restrictions for residents of Warmia and Mazury for 10 trips a month on the territory of the Kaliningrad District, has significantly reduced the waiting time at border checks.

Table 2. The impact of selected factors on the reduction of trade in goods and services between the Warmia and Mazury Voivodship and Kaliningrad District

Selected factors	The impact				
	no impact	small	medium	strong	very strong
	% of responses				
Visa procedures	0.5	0.5	6	48.5	44.5
Complicated border control procedures	0	2.5	13.5	73	11
Long time to wait for border checks	0	2.5	6.5	38	53
High taxes and duties	8.5	5.5	62	15.5	8.5
Complicated legal and administrative procedures	1	14	21.5	61.5	2
Lack of attractive offers of goods and services	55	21	16	6	2
No certificates confirming compliance with quality standards	6	25.5	32.5	32.5	3.5
Poor quality products	4	72.5	8	10.5	5
High prices of products	4.5	61	11.5	16.5	6.5
Expensive service	3.5	63.5	9	18	6
Poor quality of service	3.5	62.5	18.5	9.5	6
Low availability of public transport	3.5	15.5	10.5	13.5	57
Bad roads	10	11	7.5	60.5	11
Insufficient information	21.5	26	24	20	8.5
Insecurity	28.5	26.5	31.5	10	3.5
Language barriers	25.5	21.5	38.5	14	0.5
Cultural differences (mentality)	33.5	40	24	1.5	1

Source: Author's research.

CONCLUSIONS

Rank interact with the Kaliningrad District is increasing mainly due to the location of the region, as enclaves within the European Union. Economic exchanges with the Kaliningrad District should be treated as a great opportunity and a great challenge. Border traffic exchanges is conducive to the development of commercial, service and regional cooperation on many levels. It consistently build business networks in the Russian Federation, using the direct vicinity of the Kaliningrad District.

Polish products are very popular among the residents of the Kaliningrad District and constitute a major competition for domestic products. There is a high availability for Polish products that can be purchased not only at street vendors but also in supermarkets and retail chains. You have to use the advantages of the position of the Kaliningrad District and seek competitive advantages that can be Polish goods and services. Economic cooperation with the Kaliningrad District can be an opportunity for many Polish companies in opposition to the economic crisis.

Although the situation with regard to market access Kaliningrad District and commercial and service activities is gradually improving, but there are still quite significant difficulties arising mainly from a variety of procedures: visa, border control, administrative and long waiting times at border checks and the lack of stability of the law.

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WPŁYW MAŁEGO RUCHU GRANICZNEGO Z OBWODEM KALININGRADZKIM FEDERACJI ROSYJSKIEJ NA ZAKRES ORAZ POZIOM OBROTU TOWARÓW I USŁUG

Streszczenie. Szczególne znaczenie rynku Federacji Rosyjskiej (FR) jako partnera handlowego przedsiębiorców polskich oraz wyjątkowo dogodna lokalizacja obwodu kaliningradzkiego dla organizacji promocji i sprzedaży polskich produktów, dodatkowo zyskują na znaczeniu w świetle umowy o małym ruchu granicznym między obwodem kaliningradzkim a częścią Warmii, Mazur i Pomorza, obowiązującej od lipca 2012 roku. Pojawiły się nowe nisze popytowe i nowe możliwości rozwoju polsko-rosyjskiej współpracy gospodarczej. Opracowanie zawiera wyniki badań mających na celu ocenę oddziaływania małego ruchu granicznego z obwodem kaliningradzkim FR na formy współpracy transgranicznej. Zbadano stopień jego wpływu na obrót towarów i wymianę usług między województwem warmińsko-mazurskim a obwodem kaliningradzkim. Badania przeprowadzone wśród nabywców z obwodu kaliningradzkiego pozwoliły na zidentyfikowanie najczęściej kupowanych produktów pochodzących z Polski oraz zbadanie dostępności do nich. Określono siłę oddziaływania wybranych czynników na ograniczenie wymiany towarów i usług między województwem warmińsko-mazurskim a obwodem kaliningradzkim FR.

Słowa kluczowe: mały ruch graniczny, współpraca transgraniczna, obrót towarów, wymiana usług, czynniki ograniczające współpracę transgraniczną

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WOMEN'S ACTIVITY STATUS AND FERTILITY IN POLAND

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Abstract. The intention of the analysis is to indicate socioeconomic determinants of fertility for Poland. The analysis is made with respect to the labour market structures, living conditions, gender norms and appreciated values. Logistic regression models of first and second birth order were used, based on the 2006–2010 Polish Labour Force Survey data. Despite registered rebound in TFRs, there is no evidence to prove the Hypothesis of Fertility Positive Turn holds for Poland. Incompatibility of paid-work and childcare points the premises of the positive turn have not been fulfilled yet. Instead, the stability hypothesis seems to have some evidence as models show significant relation of marital status, household status and the labour market situation of the partner to fertility.

Keywords: female employment, birth determinants, TFR

INTRODUCTION

Research interest in the reconciliation between women's activity on the labour market and childbearing has tremendously risen over few decades, especially in European countries with declining and very low fertility rates. Among them, Poland belongs to the countries with the "lowest low" fertility levels. Interestingly, Poland registered a slight rebound in the first decade of the XXI century, though not significant enough to recuperate the former drop in fertility. This phenomenon has been explained for many European countries by disappearance of period tempo effects and a cohort-driven recuperation at older ages of births postponed at younger ages [Bongaarts and Sobotka 2012]. The question arises what the determinants of the tempo effects are. It seems there is no answer for the latter question that would be universal for every country.

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The following paper presents the overview of hypotheses concerning determinants of fertility and assesses them with analysis based on logistic regression models. The manuscript starts with a brief review of most popular theories and hypotheses. Part 3 shows the design and Part 4 the results from logistic regression models on the transition to the first and second child that test selected hypotheses. Part 5 concludes.

INSTITUTIONAL CONTEXT OF THE MOTHERHOOD

Decision on the intended transition to parenthood is taken on the basis of many factors. The institutional context of fertility, following Matysiak [2009], can be divided into four dimensions: institutional settings (policies), labour market structures, gender norms and living standards. The relations between dimensions and fertility are often ambiguous and a multitude of hypotheses are put to find fertility determinants. Many of them were presented, for example, in work [Ibáñez 2010]. The neoclassical economic model of fertility [Becker 1960], in which "demand" for children is treated analogously to the demand for "durable goods", was a first attempt here. Following Becker, transition to parenthood is driven by the calculation on expected net pecuniary returns or direct utility from children. In the demographic field, the Second Demographic Transition theory [Van de Kaa 1987, 2001] explains drop in fertility by weakening the family ties and growing competition of the alternative life styles that do not emphasize having and growing up children. However, the theory fails to explain why countries like Poland have lower fertility rate than France, Denmark, Sweden or other countries, where the change of values was stronger and took place earlier. The reason for that is the aforementioned approaches merely neglected the role of the other institutional factors, including national cultures and a policy-mix. The latter were emphasized by specification of numerous patterns by which the Western countries are clustered and compared. The patterns concern state approach to gender division of labour [Lewis 1992], gender roles [Hirdman 1991, Duncan 1995] and female employment paths [Rubery, Fagan, Smith 1995]. These patterns are related to other, more general patterns concerning e.g. welfare regime [Esping-Andersen 1990, Castles and Mitchell 1993, Deacon 2000] and welfare-mix [Vogel 2003]. However, the work-family reconciliation patterns [Pfau-Effinger 2004] seem to be most useful for the analysis. Following that classification one can distinguish: the family economic gender model, male breadwinner/female home carer model, male breadwinner/female part-time carer model, dual breadwinner/state carer model and dual breadwinner/dual carer model. Preceding studies suggest there is a paid-work and childcare incompatibility [Glass and Camarigg 1992] i.e. a trade-off between working full-time and raising children. Following study of Pfau-Effinger [2004], there are two paths of development for traditional families in European countries that do not pose fertility at risk: (1) modernization of the male breadwinner family model, as has occurred in Great Britain, Norway, Netherlands and Western Germany, through the popularization of part-time work for women and greater involvement of fathers in childcare, and (2) the model of dual breadwinner and external childcare developed in France, Denmark, Sweden and Finland. Both models assume women have

the right and the need to be employed and put the emphasis on providing childcare (via parents or state). This goes in line with the Hypothesis of Fertility Positive Turn (named also the "positive turn" or "change of trend" hypothesis) that explains the recovery of fertility rates emerged in some Western countries that rooted social institutions allowing women to combine family responsibilities with employment [Hobson and Oláh 2006]. Conversely, countries with lower fertility rates are those in which women still have to endure severe work-childcare conflict. The supporters of the "positive turn" hypothesis say since the childcare is provided, female paid work is an advantage for having children as it provides income, which increases financial security. This goes hand in hand with the Theory of Security (stability hypothesis) [Hobcraft and Kiernan 1995] that says the decision to have children in modern societies, with a broad middle and low middle class, is associated with the sense of financial security and stability in general. The aforementioned hypotheses are somehow weakened by the Hakim's preferences theory that woman's preferences are the primary determinant of fertility and employment decisions. Hakim [2003] claims these preferences are heterogeneous and therefore the availability and flexibility of full-time paid jobs could raise fertility only if a woman has just a preference to combine both professional career and motherhood at expense of spare time – in case of other women the solutions facilitating part-time jobs or even the single-breadwinner model can be more suitable and effective. Following this hypothesis, career-oriented females are influenced by employment policies while home-oriented females are more responding to family policies, while adaptive females respond both types of policies. The validity of this theory for Poland has been tested and proved in the work [Frątczak and Ptak-Chmielewska 2013]. Gender equity theory [McDonald 2000a, 2000b] explains that the rise in education level and professional competences of women may lead to low fertility if it is not accompanied by the rise in gender equality in fulfilling household duties. See also the work of Frątczak and Ptak-Chmielewska [2013] that tested gender equity theory for Poland. Social capital theory [Coleman 1988, 1990, Bühler and Philipov 2005] relates fertility with social networks that can provide them with the support. Test of this theory for Poland was presented by Bühler and Frątczak [2007] as well as Frątczak and Ptak-Chmielewska [2013]. Among other hypotheses, Lutz, Skirbekk, and Testa [2006] claim that declining fertility process can be explained by the three self-enforcing mechanisms (The Low-Fertility Trap Hypothesis): demographic (fewer potential mothers in the future will result in fewer births), sociological (intended number of children is not larger than the number in the previous generation) and economic (fertility declines as a result of rising aspirations and declining relative expected income [Easterlin 1980]). Finally, place of residence (rural or urban) may have impact on the fertility behaviour, according to the modernization hypothesis [Nag 1980]. The urban areas are often associated with lower fertility levels and later transition to parenthood than in the rural areas, due to the differences in lifestyle, variety of challenges and opportunities, also connected with the economic activity. It is expected that the urban areas produce certain constraints relating to fertility, for example, in terms of available space at home (the desire of parents that their children have single room, or the problem when children cannot share a room because they are of different sexes), or time that mothers spend in child care.

MATERIAL AND METHODS

On the basis of the literature review presented in the previous chapter a decision was made to assess the validity of hypotheses on fertility determinants in Poland by measuring the impact of female employment status on fertility, controlling other personal characteristics as age, age of first child, marital status, labour market status of a husband/partner, education level, place of residence, household status and professional experience. To do this, Labour Force Survey for period 2006–2010 has been used. The survey provides a sample that is large enough to infer on the determinants of fertility. Response variable and covariates are taken from the observation year. Such selection has been made to avoid significant reduction in the sample size, due to limiting to the panel part of the LFS sample. However, labour market status of females is taken from a year before the observed year, using question about the perceived labour market status a year ago. Such choice reduces the threat of reversing the causality i.e. explaining rise in fertility by labour market status that in fact changed in reaction to a transition to the motherhood.

Concerning the research method, logistic regression models were built with having birth as a response variable. The following models were produced: first model investigated a transition to the first birth. Another one puts a transition to the second birth into investigation. The event of giving the first and the second birth is analysed in the group of women that are between 16 and 49 years old at the time of the interview. Transition to the motherhood is modelled on the dataset containing women that were childless until the event of giving the first birth or the last observed year. Transition to the second child is based only on women with exactly one child within the observation window until giving the second birth or censoring. The LFS sample includes 121,211 person-quarters for transition to the motherhood and 68,876 person-quarters for transition to the second birth. LFS data contains panel part and therefore some observations concern the same persons, registered in different quarters. LFS datasets were independently pooled and models do not include individual effects. Giving birth is taken as an event only once and then the observation is erased from the risk set. There is a slight difference in the covariates for both models. While the model of first birth includes age and age squared, the model for second births uses an age of first child (and squared age of first child) as a covariate instead.

RESULTS

Parameter estimates and their standard errors in the analysis of the first and the second birth determinants for Polish women aged 16–49, based on Labour Force Survey data, has been produced. Both models are presented in Table 1. See the Appendix for descriptive statistics corresponding to each model.

Table 1. Transition to first child and transition to second child in Poland – logistic regression models with covariates and interactions based on LFS

Explanatory variable	Category	Model 1 Transition to first child	Model 2 Transition to second child
1	2	3	4
Intercept	–	–5.478***	–3.821***
		(0.496)	(0.127)
Age at birth	–	0.253***	–
		(0.034)	–
Age at birth ^{2}	–	–0.007***	–
		(0.001)	–
Age of first child	–	–	0.355***
		–	(0.019)
Age of first child ^{2}	–	–	–0.025***
		–	(0.001)
Marital status (ref = Single)	Married, husband labour active	2.980***	0.655***
		(0.081)	(0.11)
	Married, husband labour inactive	3.424***	0.730**
		(0.203)	(0.272)
	Informal, partner labour active	1.617***	0.667***
		(0.141)	(0.198)
	Informal, partner labour inactive	1.068*	1.141*
		(0.469)	(0.491)
	Widow, divorced or in separation	1.728***	–0.310
		(0.197)	(0.199)
Marital status × Household status interaction (ref = Other)	Married, husband labour active × × living not in parents'/ /parents-in-law' house	–0.231	0.087
		(0.120)	(0.171)
	Married, husband labour inactive × × living not in parents'/ /parents-in-law' house	–1.250***	0.361
		(0.309)	(0.335)
Educational attainment (ref = Tertiary)	Primary and low-secondary	0.138*	–0.030
		(0.065)	(0.062)
	High-secondary and post-secondary	0.014	–0.234***
		(0.050)	(0.055)
Degree of urbanisation (ref = Urban population above 5 ths.)	Population below 5 ths.	0.246***	0.266***
		(0.043)	(0.048)
Household status (ref = Living in parents'/ /parents-in-law' house)	Living not in parents'/ /parents-in-law' house	0.299**	–0.136
		(0.113)	(0.164)

Table 1 – cont.

Explanatory variable	Category	Model 1 Transition to first child	Model 2 Transition to second child
1	2	3	4
Economic status (ref = Inactive)	Employed	–1.603*** (0.113)	–1.185*** (0.155)
	Self-employed	–2.055*** (0.269)	–0.889** (0.304)
	Unemployed	–1.434*** (0.088)	–1.100*** (0.106)
	In education	–2.025*** (0.087)	–0.465*** (0.137)
Economic status × spouse/ /partner economic status interaction (ref = Other)	Employed × labour active spouse/ /partner	0.282** (0.102)	0.823*** (0.154)
	Self-employed × labour active spouse/partner	0.476 (0.279)	0.446 (0.311)
Years of service (ref = 0 years)	1–3 years	0.130 (0.078)	0.084 (0.086)
	4–6 years	0.289** (0.089)	0.155 (0.088)
	7–9 years	0.513*** (0.102)	0.148 (0.094)
	10+ years	0.503*** (0.112)	–0.217* (0.091)
	Number of observations	104 034	56 835
	Number of events	3 220	2 235
	SC without covariates	28 732	18 856
	SC with covariates	21 124	17 051

*** significant at 0.1%; ** significant at 1%; * significant at 5%.

Numbers in parenthesis are standard errors. Estimates are unstandardized logisitic regression coefficients.

Model 1 concerns transition to the motherhood while Model 2 shows the transition to the second birth. Models include additional indicators of the economic activity status. Economic activity reflects personal and professional aspirations and it determines timing of giving birth.

First child

The results of the models of the first birth give no evidence to accept the "positive turn" hypothesis for Poland. Instead, both paid-work and childcare incompatibility hypothesis and stability hypothesis seem to be valid. Obtained results from the Polish LFS suggest

that being employed or self-employed in the year before giving birth delays transition to the first birth comparing with the state of inactivity. However, there is a significant difference between the state of inactivity and unemployment – state of unemployment reduces the odds of giving birth to similar extent as being employed. The difference between the effect of inactivity and unemployment goes in line with the preference hypothesis – women who prefer not to involve into the labour market decide more eagerly to have a child while women on the labour market who are looking for a job rather than do not treat unemployment as an appropriate moment for having a child. Then, being a student does not go in line with having children in Poland – women that described their status year ago as "in education" have significantly lower relative odds of having their first child comparing with status of inactivity, lower than for any other labour market status. Therefore, it is important to distinguish between involvement in education and other forms of labour market inactivity. Negative effect of being in education can be interpreted as postponing decision on the first birth until obtaining a tertiary level of education. Having in mind that in 2011 in Poland 44.5% of women aged 25–29 had a tertiary education level, this may lead to a conclusion that such popularity of tertiary education results not only in relatively late entering the labour market, but also in fertility postponent and, consequently, in low TFR levels.

It seems not only women labour market status matters, but also does its interaction with spouse/partner labour market status. Indeed, the odds of giving first birth increases for working women if her spouse/partner is active on the labour market. However, this cannot recuperate the negative effect of female employment on having first child.

Taking more detailed data on labour market status of working females into account is somewhat troublesome as it requires lagged data – this is available only for a fraction of the original dataset. For example, percentage of fixed-term contracts and fertility in Poland in 2010, by type of contract suggests there is a negative relation between fixed-term contracts and fertility, comparing with permanent contracts. Working part-time seems to have rather negative impact comparing full-time work. In Poland, part-time work also delays the transition to first child, as it is in large extent unwilled phenomenon and reflects a fragile position on the labour market [Matysiak 2007].

To fully reflect the impact of labour market participation and living standards on fertility, additional covariates were included into the models. These covariates concern age and age squared, marital status combined with labour market status of a spouse, level of education, place of residence, household status and professional experience measured by years of service. To fully reflect the relation between the husband labour market status and his household status, appropriate interaction has been added.

Age and squared age are crucial to reflect the shape of partial fertility rates. Investigated births concern a spectrum of ages though majority of births concern women born between 25 and 29. Taking transition to the first child into account one has found sufficiently strong impact of female marital status that endorses the Stability Hypothesis. Certainly, being in a relationship influences becoming pregnant with first child. In Poland, having a spouse is a stronger incentive to have first child comparing with informal relationships. However, it must be noted that the relation between marriage and fertility can be mutual, especially in Poland, where the out-of-wedlock pregnancy can be a reason for the beginning of cohabitation and marriage. Anyway, the share of out-of-wedlock births rises steadily and weakens the risk of reversed causality.

Taking labour market status of a husband/partner into account, one can see in Poland labour market inactivity reduces the odds of having first birth in informal relationship comparing with case for partner active on the labour market. In case of formal relationships one can observe higher odds of giving birth for inactive spouses but this holds only for those living in households where husband is a son or son-in-law of the head of the household. Otherwise, if a husband (or his wife) is a head of the household, labour market inactivity of the husband significantly reduces the odds of giving first birth.

While looking into the process of first births, not so much differences were captured due to the level of education. Model shows only minor positive impact of primary and low-secondary education comparing with tertiary education. The lack of stronger differences in the effects of education level may be a bit surprising but it can be somehow explained by other effects, correlated with education, as marital status and labour market status.

A significant relation between the place of residence and fertility is found – the odds of giving first birth is higher for areas where population does not exceed 5 thousand inhabitants. However, the difference in urban and rural fertility decreased in the last 20 years and it might be expected it will diminish in the nearest future.

One can observe the household status has a significant main effect in Poland – being a head of a household or his wife/partner increases the odds of having first child. A household status can be used as a proxy for owing or renting own house/flat, so this can be interpreted living not in parents'/parents-in-law' house is positively related with having first child. However, a reversed causality is likely for this particular variable as having a child is often a cause of moving out from the parents' home.

Finally, it seems professional experience might sufficiently reduce the negative effect of female employment on giving first birth – in Poland, the odds of transition to motherhood increases with the number of years with a climax between 7 and 9 years.

Second child

Estimation results for second births reflect some differences comparing with first births and they might be also the argument against the "positive turn" in Poland. Looking at LFS data, employment and self-employment seem to have still a negative impact on a decision to have a second child for Polish women comparing with the state of inactivity. However, this negative effect is significantly reduced if a spouse/partner is active on the labour market. It seems the difference between the state of inactivity and unemployment, noticeable in Poland for the transition to the first child, is still observable for the second child. Unemployment seems to be related with higher odds of having another child.

Age and age squared is not included to the models for second birth. Instead, the age of first child is taken into account. As in case of age, the squared effect is also included to reflect a possible change of a direction of the effect. Couples in relationships have stronger incentives to have second child. The process of second births among active women is strongly determined by having a partner but the difference in effects between formal and informal relationships disappears. There is also no significant difference between the case of having husband that is active and inactive on the labour market, except the aforemen-

tioned positive interaction of female employment and husband labour market activity. Higher odds of giving second birth for women in informal relationship when partner is not labour market active is surprising but it should be taken with a pinch of salt as this particular result is based on a relatively small number of observations in the category of marital status: Informal, partner labour inactive.

Results reflect interesting effect of education on the second birth process in Poland. In particular, women with high-secondary and post-secondary education seem to have lower odds of having a second child, comparing with women with tertiary education level. It seems tertiary education might be related to higher odds of having second child. There is some evidence that degree of urbanisation has an impact of having second child in Poland.

CONCLUSIONS

The "positive turn" hypothesis, which assumed that working women have higher of becoming pregnant, is far from having been proven for Poland. Women's labour activity status seems to be related with decision to have a child, though its impact on fertility differs slightly for the birth order. First, full-time job discourages women from having a child comparing with the state of inactivity in Poland and it is the strongest argument against "the positive turn" hypothesis. State of unemployment and "in education" has different effect than state of inactivity – women unemployed and in education have lower odds of giving birth than inactive women. Instead, the hypothesis on the incompatibility between work and raising children still can be supported by the evidence on reduced fertility of working mothers. There are some premises fulfilled for the appliance of gender equity theory, due to significant rates of educated women and inequality in fulfilling family chores.

There are some limitations for drawing conclusions from the models presented in this paper. First, decision on having a child is taken on the basis of the labour market status, household status and personal traits not from the year of birth but from the year preceding the birth of a child or even earlier. Therefore, using not lagged values (except the labour market status of women) in the research might result in biased results. Then, lack of lagged covariates leaves untouched the question whether the changes (improving or distorting their situation on the labour market) may have a positive or negative impact on fertility. Last, but not least, having a child might have an impact on the subsequent labour market status, what is advocated by the increasing bulk of research – for example, see meta-analysis [Baranowska-Rataj 2013]. Therefore, it is crucial to assure covariates to represent the state preceding births. Unfortunately, using lagged variables leads to a dramatic fall in the sample size. The inclusion of fixed-effects into model is not an option for the same reason. Fortunately, past labour market status is registered to LFS data, namely the perceived labour market status from the previous year is registered. This reduces the threat of reversed causality – giving birth is explained by the labour market status 12 months before filling the questionnaire. It can be expected the remaining covariates represent more stable characteristics than labour market situation and one can expect their values respond to the lagged values.

As a final remark, institutional analysis shows Poland has not fulfilled yet the prerequisites are needed the "positive turn" hypothesis to work, in particular there are still strong work-family tensions due to insufficient or inappropriate providing childcare by the state and inflexible working time arrangements. Therefore, the stronger "positive turn" might happen in Poland as soon as the aforementioned tensions are ceased.

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AKTYWNOŚĆ ZAWODOWA KOBIET I DZIETNOŚĆ W POLSCE

Streszczenie. Niniejsza analiza ma na celu wskazanie socjoekonomicznych determinant dzietności dla Polski. Analiza uwzględnia wpływ struktur rynku pracy, warunków życia, podziału ról ze względu na płeć i cenionych wartości. Zaprezentowano modele regresji logistycznej urodzeń pierwszego i drugiego dziecka, przygotowane na podstawie danych BAEL za lata 2006–2010. Pomimo zaobserwowanego odbicia w poziomie współczynnika dzietności, nie ma podstaw, by sądzić, że hipoteza o pozytywnym odbiciu współczynnika dzietności (the Hypothesis of Fertility Positive Turn) jest spełniona dla Polski. Trudności w łączeniu pracy zarobkowej i opieki nad dzieckiem wskazują, że przesłanki tej hipotezy nie zostały jeszcze spełnione. Wydaje się natomiast, że hipoteza o stabilizacji (the Stability Hypothesis) lepiej tłumaczy decyzję o urodzeniu i wychowaniu dziecka, jako że modele wskazują na istotną statystycznie relację między dzietnością a stanem cywilnym, faktem zamieszkania w domu rodziców i statusem męża/partnera na rynku pracy.

Słowa kluczowe: zatrudnienie kobiet, determinanty dzietności, poziom płodności

Appendix

Table 2. Distribution of observations and first and second births in Poland – Labour Force Survey

Variable	Category	First child				Second child			
		N	PctN	Birth N	Birth Rate	N	PctN	Birth N	Birth Rate
1	2	3	4	5	6	7	8	9	10
Age at birth									
1	16–19 years	35 232	29.07	354	0.01	1 401	2.03	55	0.04
2	20–24 years	40 045	33.04	1 199	0.03	7 172	10.41	369	0.05
3	25–29 years	21 664	17.87	1 329	0.06	14 138	20.53	870	0.06
4	30–34 years	9 005	7.43	604	0.07	14 431	20.95	868	0.06
5	35–39 years	4 330	3.57	135	0.03	9 824	14.26	292	0.03
6	40–49 years	10 935	9.02	26	0	21 910	31.81	51	0
Age of first child									
1	0–2 years					19 905	28.90	858	0.04
2	3–4 years					4 323	6.28	371	0.09
3	5–6 years					6 441	9.35	531	0.08
4	7 years and above					38 207	55.47	745	0.02
Marital status									
.	Missing	10 178	8.40	347	0.03	7 528	10.93	186	0.02
1	Single	89 049	73.47	812	0.01	8 118	11.79	187	0.02
2	Formal, spouse labour active	15 609	12.88	2 224	0.14	42 495	61.70	1954	0.05
3	Formal, spouse labour inactive	1 425	1.18	66	0.05	2 985	4.33	65	0.02
4	Informal, partner labour active	2 522	2.08	159	0.06	1 461	2.12	68	0.05
5	Informal, partner labour inactive	282	0.23	5	0.02	133	0.19	5	0.04
6	Widow, divorced or in separation	2 146	1.77	34	0.02	6 156	8.94	40	0.01
Marital status × household status									
1	Married, husband labour active × × Living not in parents' house	12 259	10.11	1 498	0.12	36 316	52.73	1 556	0.04
2	Married, husband labour inactive × Living not in parents' house	1 271	1.05	26	0.02	2 643	3.84	47	0.02
3	Other	107 681	88.84	2 123	0.02	29 917	43.44	902	0.03
Education									
.	Missing	26	0.02	1	0.04	5	0.01	2	0.4
1	Primary and low-secondary	43 178	35.62	893	0.02	21 187	30.76	725	0.03
2	High-secondary and post-secondary	50 555	41.71	1 438	0.03	28 556	41.46	922	0.03
3	Tertiary	27 452	22.65	1 315	0.05	19 128	27.77	856	0.04

Table 2 – cont.

Variable	Category	First child				Second child			
		N	PctN	Birth N	Birth Rate	N	PctN	Birth N	Birth Rate
1	2	3	4	5	6	7	8	9	10
Degree of urbanisation									
1	Urban population above 5 ths.	68 314	56.36	1 975	0.03	41 053	59.60	1 283	0.03
2	Population below 5 ths.	52 897	43.64	1 672	0.03	27 823	40.40	1 222	0.04
Household status									
1	Living not in parents' house	29 029	23.95	1 916	0.07	52 324	75.97	1 832	0.04
2	Living in parents' house	92 182	76.05	1 731	0.02	16 552	24.03	673	0.04
Economic status									
.	Missing	12 408	10.24	141	0.01	2 295	3.33	59	0.03
1	Employed	37 282	30.76	1 922	0.05	37 404	54.31	1 248	0.03
2	Self-employed	4 345	3.58	181	0.04	6 809	9.89	218	0.03
3	Unemployed	8 064	6.65	313	0.04	6 857	9.96	140	0.02
4	In education	53 496	44.13	545	0.01	2 389	3.47	77	0.03
5	Inactive	5 616	4.63	545	0.1	13 122	19.05	763	0.06
Economic status × spouse/partner economic status									
1	Employed × labour active spouse/partner	12 011	9.91	1 517	0.13	25 014	36.32	1 089	0.04
2	Self-employed × labour active spouse/partner	1 767	1.46	143	0.08	5 155	7.48	193	0.04
3	Other	107 433	88.63	1 987	0.02	38 707	56.20	1 223	0.03
Years of service									
.	Missing	14 160	11.68	153	0.01	6 039	8.77	116	0.02
1	0 years	56 907	46.95	904	0.02	7 358	10.68	361	0.05
2	1–3 years	19 438	16.04	977	0.05	7 635	11.09	405	0.05
3	4–6 years	10 052	8.29	791	0.08	8 442	12.26	487	0.06
4	7–9 years	4 840	3.99	403	0.08	6 565	9.53	401	0.06
5	10 years and above	15 814	13.05	419	0.03	32 837	47.68	735	0.02
Total		12 1211	100.0	3 647	0.03	68 876	100.0	2 505	0.04

Source: own preparations based on pooled LFS data for period 2006–2010.

Observation defined as a person-quarter, observations after giving birth are removed from the risk-set.

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PUBLIC GOODS AND INTRINSIC LAND PRODUCTIVITY – DELIBERATIONS IN THE CONTEXT OF THE PARADIGM OF SUSTAINABLE AGRICULTURE[1]

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Abstract. The paper reviews the concept of public goods, indicating its various dimensions. The fundamental objective of the paper is conceptualizing public goods and answering a question whether a public goods delivered by agricultural land is valorized in land prices. The aim of the study was also to identify the mechanism that makes intrinsic land utility transformed into productivity in monetary units. A conducted research consists in deriving a land rent capitalized in land prices and estimating its share in land value in comparison with the share of lease fees in the different regions of Poland in years 2000–2009. In the authors opinion since accession of Poland to the UE a market has valorized intrinsic utilities of land, whereas the new role of capital and labour is distribution of those utilities in favour of consumers. Given the fact that there is a lack of Polish scientific studies on agricultural areas as a provider of public goods findings of foreign scientists were also used in the research. Since the beginning of human civilization, the land has been creating certain utilities which satisfy human needs. When the dangerous side effects of industrial agriculture have occurred intrinsic land utilities are being discovered anew. They have a nature of public goods and constitute a hard core of the sustainable agriculture paradigm. Despite irreversible accumulation of capital in the anthropogenic environment many new utilities of the land come into existence without additional capital and labour inputs. Since they are public goods, they are paid from taxes in great measure. This way an intrinsic land utility takes a form of a paid product and can be called "intrinsic productivity" of land.

Key words: public goods, intrinsic land productivity, sustainable agriculture

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INTRODUCTION

The paradigm of sustainable agriculture gives rise to the two theses which seem particularly inspiring [Jeżowski 2009]:

- Along with affluence of the society, a tendency to pay for recreating utilities of the natural resources grows. The question is why?
- Natural and social capital (in the meaning of public goods) may be substituted with physical capital only to a certain extent, and the degradation of natural and social capital cannot be compensated with the benefits of the physical capital.

Referring to the first thesis that a wealthy society is more prone to pay for recreating utilities of the natural resources, its quite probable justification is the evolution of the hierarchy of needs. It is mentioned by T. Borys, who writes that "the modern consumer is excessively influenced by the Maslov's pyramid of needs" [Borys 2009]. Possibly, it is not the consumer but the economists, market analysts, and marketing creators who attached to Maslov's hierarchy of needs so much that they treat it as an axiom of the modern market economy, and draw conclusions on the basis of it. For example, they limit the interpretation of utilities of natural and social resources solely to the category of higher order goods and the Engles' law. And what if in societies at a certain level of development the pyramid changes its shape towards a rectangle (or a trapezium)? Then, the needs former the lowest levels stop dominating in the importance hierarchy or in the order of satisfying them.

In other words, the whole vector of complementary needs from various levels of the Maslov's pyramid determines the quality of life and has to be satisfied simultaneously. If yes, the demand for products which are obligatory to consume means also a demand for the remaining components of the mentioned vector. It means that the consumer will voluntarily pay for the utilities of the natural resources. One question remains. When does such a change of hierarchy of needs occur and does it happen spontaneously or is a specific institutional stimulation needed? In our opinion, it is a spontaneous process but an institutional stimulation through education can increase its pace.

One of the conditions for the above process to translate into improvement of allocation of resources (in Pareto's understanding) is, however, a proper definition and enforcement of the property right to these resources. From the point of view of the sustainable agriculture paradigm, it mainly concerns the agricultural land resource. Assuming that the land factor provides new utilities as regards production of goods and services satisfying consumers' new needs, the benefits of the increase of resource productivity should fall to its owners, including, inter alia, the farmers. Only then is it possible to assure long-lasting development of agrarian structures (sustainable development). We understand the development of the structures as several simultaneous processes: first, concentration of land resources, but also in the meaning of consolidation i.e. an increase of internal coherence and homogeneity of the agricultural land. Second, it concerns intergenerational rehabilitation of the agricultural land resource, in order to hand down to the next generations renewable public goods and other utilities of land in a non-deteriorated condition. Third, it is indispensable to invest in the infrastructure enabling a proper use of well-being of the natural environment and rural areas by farmers and users from outside agriculture. All the above mentioned development paths require suitable financial resources. Allocation

of the land rent in agriculture should serve that purpose, and by "remunerating the land factor" we mean financing these processes from the land rent.

With regards to the last of the theses according to which natural and social capital (understood as so-called pure public goods, common and merit goods) can be substituted with physical capital only to a certain extent, an observation arises that in the conditions of the new paradigm, the land should create some utilities "intrinsically" i.e. without participation of capital and labour. Therefore, land cannot be treated according to the mainstream economy doctrine as a type of fixed assets. Moreover, it is impossible to adopt neoclassical microeconomic concepts to optimize its outlays. It also means that not in all conditions can the productivity of natural resources be increased through substitution for capital.

MATERIAL AND METHODS

The aim of the article is to answer the question if and how intrinsic land utility in sustainable agriculture model transforms into productivity in monetary units becoming a valorization of public goods. A deductive analysis of above problem has been supported with empirical research which consist in deriving a land rent value from land prices and comparing it with lease fees in the different regions of Poland. Authors formulates a hypothesis that the rise of the agricultural land prices in Poland after 2004 over-proportional than a dynamics of fees results from an attempt of land market at valorizing public goods.

RESULTS

The idea of public goods[2]

The theory of public choice is called the economics theory of politics. This relatively new field of economic sciences involves applying methodological tools and assumptions of standard economics to analyze people's behaviour in the activities of political character and in other areas of public sphere [Wilkin 2005]. Economics defines goods as means which are used to satisfy man's needs. A general definition of public goods concentrates on the two features: non-rivalry and non-excludability [Atkinson and Stiglitz 1980]. The theory was formulated in 1954 by an American economist and statistician, a Nobel Prize winner, lecturer at the Massachusetts Institute of Technology, Paul Anthony Samuelson [Samuelson 1954], who assigned them with the following properties while defining the goods: (a) no one is excluded from the benefits resulting from their use (non-excludability from consumption) means that goods public consumed by one individual do not eliminate the possibility of the same good being consumed by another one, the goods are desired by the society, while the market mechanism is unable to provide them. Typical cases

[2] Partly was used the paper: Brelik A., Matuszczak A., 2013. Issues of public goods in multifunctional development of rural areas. Economic Science for Rural Development 30, 1–5.

of rival consumption concern goods such as clothing or bread, whereas benefiting from a fireworks display will be of non-rival consumption nature. It is impossible to exclude it from consumption, since if someone is at a spot which gives a good view of the display, then a company organizing the display is not able to forbid him/her to admire the show. On the other hand, fireworks are not competitive consumption-wise, because watching them by one person does not deprive others of the possibility to watch the same show; (b) a rise in the number of users neither eliminates, nor decreases the possibility of a given good being used by all users (they are non-competitive consumption-wise). Whereas the property of certain goods is that they are available to everyone. We cannot prohibit others, in a simple manner and without a great degree of effort and means, to use those goods. Without a doubt, such goods include fresh air, music, lake water, as well as television.

According to Wilkin [2010]: "both in modern economies and in public life a search continues for ways of merging effectiveness of market mechanisms and social needs for delivering goods of public nature. Mixed goods, called merit goods, feature such characteristics". Merit goods give a start to complex processes of redistribution, which involve applying exceptional taxes. Infrastructure limiting the pollution of the natural environment is an example of a merit good of positive external effects.

The questions evolve around the economics of overcrowding, coming largely from Charles Tiebout's publication titled "Local public goods" and a pioneering work of James Buchanan "Club goods" [Tiebout 1956, Buchanan 1965]. Toll goods or club goods are typically of local range and they occur in a situation when a limited (selected) circle of users covers jointly, in the form of periodic fees, the costs of operation, and in return acquires the right to use the goods freely, while at the same time excluding all other potential users. Which in practice means, that club goods include goods that meet only one of the conditions presented by Samuelson. The so-called country clubs could serve as an example of such, along with closed sports-recreation centres, residential estate systems of day care for children, cable television, theatres. Toll goods, as opposed to private goods, for which one pays as well, are divisible. Many people can use them at the same time without any detriment to such a good. A theatrical performance or a television programme can simultaneously be watched by a large number of viewers. At the same time, it is easy to define which viewers are entitled to watch a performance – e.g. by checking the possession of entry tickets. Thorough research resulted in creating separate theoretical constructions for toll goods [Buchanan 1965, Cornes and Sandler 1986].

Additionally, a question arises of whether the provision of public goods at a local level produces the scale effects. The provision of public goods at a central level enables achieving the returns of scale, however it is frequently ineffective (on account of a varying demand of local communities for a given good). Locally provided public goods generating positive externalities require properly extensive borders of a territorial unit. In order to provide public goods effectively, a region incurring the costs needs to use all the external effects. In line with the definition of the World Bank[3], public goods generate shared benefits, whereas public evils generate shared costs. The spatial reach of such external effects determines whether a good is local, regional, national or global. One cannot automatically assume that the scope of reach is determined by goods provider. Local goods can be de-

[3] Website of the World Bank http://web.worldbank.org/.

livered by the state, while global goods/evils by a city or region. The definitions of public goods quoted above used currently by economists are not entirely consistent with the common understanding of a public good as a good available and destined for everyone and linked with a non-public institution. Public goods understood in this way are typically defined by economists as social goods. These are goods which ordinarily could be private goods, but for a variety of reasons, usually as a result of social policy conducted by the public authorities, they are available to every citizen and they are financed from the public funds (e.g. education or health care) [Baum and Śleszyński 2009].

Oates [1972] identifies the variation of society's preferences as a rational argument in favour of decentralisation. The idea is that the centralization and standardization of goods provision to the population, which is diversified in respect of preferences is not optimal from the point of effectiveness "the affluence level will always be higher if the level of consumption of local public good is determined by each territorial unit on an individual basis as opposed to the value being determined from above when external effects and no cost limits occur". A crucial question arises whether a market mechanism could also cope with public goods valorization through other goods' prices provided in a regular way? That would be the most efficient solution when a consumer (or producer) is eager to pay more for a specified product (or production factor) in exchange for some public goods delivery.

Valorization of public goods in land prices and lease fees[4]

In the peasant economy, a part of the utility attributed to the exclusive effect of the forces of nature was relatively big and partially expressed in the financial productivity of a farm (since it created a part of the product without the participation of outlays). Its significance started to decrease under the conditions of industrialization of agriculture and activation of the law of diminishing marginal utility. In the industrial agriculture, the intrinsic participation of land in the creation of utilities decreased in favour of capital and hired labour. Moreover, the intrinsic financial productivity of land declined to a considerable degree.

With time, however, productive functions of agricultural land, subject to the microeconomic optimization and its obligation to satisfy existential needs, became competitive towards each other. It gave rise to a need to search for a new concept of economic development, i.e. the sustainable development paradigm.

A question arises, to what extent the thesis about the occurrence of "intrinsic land utilities" in the context of the sustainable development paradigm is true. One of the premises of the development of this paradigm is the fact that the natural environment in highly developed countries became almost entirely anthropogenic. Under such conditions, the way of using natural resources has to change as well. It is forced by the new needs and priorities described above, i.e. a demand for an assurance concerning renewability of natural resources as well as pro-social and pro-environmental criteria of the resources allocation. They discover anew the land factor "utilities" which are marginal for the in-

[4] Partly there was used the paper: Czyżewski B., Majchrzak A., 2013. Samoistna produktywność ziemi a dobra publiczne w paradygmacie rolnictwa zrównoważonego. W: Determinanty rozwoju regionalnego w Polsce. Społeczeństwo, gospodarka, środowisko (Eds. K. Pająk, J. Polcyn). Wydawnictwo Adam Marszałek, Toruń, 271–287.

dustrial agriculture and give them the nature of public goods which should be paid for by the entire society. It cannot, however, be the same intrinsic utility of agricultural land as in the 18th century since, at least in the highly developed countries, the natural environment was diametrically changed by a man. Once again, a bigger and bigger part of the land utility comes into existence intrinsically, however, in the conditions of advanced and irreversible accumulation of capital in the well-being of natural resources. Therefore, it can be stated that in the sustainable agriculture many new utilities of the land come into existence intrinsically, i.e. without additional capital and labour outlays, (but not without their causal force in general), and in some cases without increasing the total amount of capital and labour outlays. Since they have the nature of public goods, they are paid from taxes in great measure (in the EU through the CAP programmes)[5], and this payment goes to the land users not being owner of the land resource which created them. Therefore, an intrinsic land utility takes a form of a paid product and can be called "intrinsic productivity" which increases the financial productivity of the production structure.

For example, extensification of cultivating, e.g. grasslands within the agriculture-environmental programmes, enables lowering capital as well as labour outlays, and the payment of the economic rent within the CAP. The rent is sometimes misinterpreted as compensation for a fall in land productivity. However, we need to take into consideration the fact that even if it scarcely compensates the lost productivity, as far as the value is concerned, it happens in the conditions of lower capital (current assets and depreciation) and labour costs. Therefore, the financial productivity of production factors (understood as the relation between a financial product and outlays) de facto grows. The increase can be attributed to the causal force of nature (land), since lower intensity of management activates its natural utilities regarded as natural goods. In the quoted example of extensive cultivation of grasslands, it will be e.g. bigger biodiversity, landscape and recreational values and more "ecological" material (hay).

It is a market mechanism that decides about a distribution of land rent among land owners and land holders, e.g. leaseholders. In the conditions of sustainable agriculture, if a leaseholder is the one who "takes care" about a land, the adequate part of land rent should be attributed to him since it is recognized by a market mechanism. That regularity is confirmed by the data in the Table 1.

In 2005 a significant change in valorisation process has clearly visible. In the preceding period 2000–2004 the lease fees and land rents shares (two last rows of Table 1) are almost similar. After accession to the UE market mechanism has realized that agricultural areas deliver also some public goods. This is expressed with a substatntial rise of land prices which doesn't influence on the lease fees. According to Table 1 the share of lease fees in a land value decreases. There is a question why?

As it was predicted above, a market doesn't attributed the hole land rents to the owner of agricultural area but the main part of it is theoretically assigned to leaseholders' (farmers) activities[6]. It stays in accordance with CAP regulations which allot direct payments on behalf of "land users" rather than the land owners. This is a reasonable solution since

[5] With the right level of social awareness these utilities can be paid through prices of products and services.

[6] Assuming that their net incomes correspond with the land rent value derived from land prices.

Table 1. The shares of the lease fee in the market price of 1 ha of utilized agricultural areas (UAA) in Poland (%) *vs.* the shares of land rent derived from land prices in 2000–2009

Regions (voivodships)	Avarege rate of change* (2000–2004)	Avarege rate of change (2005–2009)	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Average price of UAA in PLN per 1 ha of UAA	1.09	1.21	4786	5197	5042	5753	6634	8244	9290	12134	15388	17042
The shares of the land rent derived from the land prices in the price of 1 ha of uaa (%)**	0.88	0.98	11.79	10.68	7.32	5.78	6.92	5.23	5.26	5.5	6.09	6.13
Average lease fee of UAA in PLN per 1 ha of UAA	0.95	1.03	451	490	446	399	371	277	304	368	453	426
The shares of the lease fee in the market price of 1 ha of UAA (%)												
Dolnośląskie	1.02	0.76	11.14	11.48	10.17	8.16	11.92	5.78	4.56	3.91	3.70	3.05
Kujawsko-pomorskie	1.02	0.82	6.28	8.13	11.20	6.93	6.76	3.07	3.12	2.83	2.70	2.51
Lubelskie	0.90	0.88	9.55	12.44	16.73	7.66	6.15	3.77	3.64	3.62	3.96	3.21
Lubuskie	1.04	0.74	8.59	12.37	10.34	9.70	10.22	3.57	3.82	3.28	2.57	2.30
Łódzkie	1.05	0.84	5.38	6.77	8.43	7.70	6.42	2.81	3.00	3.15	2.88	2.61
Małopolskie	0.95	0.86	4.81	7.77	3.67	3.92	3.94	2.42	2.23	2.12	2.24	1.90
Mazowieckie	0.72	0.86	17.00	12.56	7.23	7.76	4.48	2.74	2.87	2.92	2.93	2.08
Opolskie	0.87	0.85	9.81	8.13	8.87	9.09	5.61	4.36	3.81	3.53	3.49	2.50
Podkarpackie	0.92	0.75	14.08	6.26	14.06	7.55	9.97	3.20	3.93	3.57	2.56	2.44
Podlaskie	0.68	0.85	23.85	13.09	6.46	7.00	4.96	3.48	3.08	2.95	2.98	2.21
Pomorskie	0.78	0.86	9.60	9.88	5.19	8.13	3.62	2.89	3.21	2.39	2.14	1.67
Śląskie	0.75	0.97	7.32	5.75	3.89	7.88	2.32	2.62	2.20	2.03	2.09	1.98
Świętokrzyskie	0.90	0.94	8.29	5.57	6.72	5.97	5.39	3.48	3.77	3.87	3.88	3.93
Warmińsko-mazurskie	0.95	0.88	5.22	7.00	10.21	6.49	4.22	4.41	3.27	2.84	2.49	2.24
Wielkopolskie	0.92	0.91	5.89	7.06	6.07	5.71	4.26	3.50	3.53	3.16	3.01	2.61
Zachodniopomorskie	1.01	0.79	8.22	19.10	17.99	10.78	8.57	3.17	3.10	2.79	2.87	2.66
POLAND	0.88	0.85	9.42	9.43	8.85	6.94	5.59	3.36	3.28	3.03	2.95	2.50

*a geometric mean of dynamic indexes (previous year = 1).

** it means a perpetual rent discounted in the present value of land (as a discount rate the long-term interest rate were taken – according to Eurostat data).

Source: Own estimations on the basis of: Eurostat 2000–2009, GUS 1997–2011, GUS 1996–2010a, GUS 1996–2010b.

a "land user" (not always being a land owner) has to fulfill the *Good Agricultural and Environmental Conditions* (GAECs) and bear essential outlays which entitle to receive subvension from CAP. Thus land rent is accumulated in agricultural area instead of being transferred to other sectors.

CONCLUSIONS

On the basis of the above deliberations, it is possible to formulate a necessary condition of the sustainable development in agriculture: capital, labour (own and hired) and the land factor utilities must be "fairly" paid for such development to occur. However, two questions arise: what does "fairly" mean and is it a sufficient condition? In our opinion, "fair" capital and labour cost in the capitalist system is determined by the market mechanism. It is not a problem in the case of capital and hired labour. However, the market does not value the own labour remuneration in individual farming. Therefore, its cost should be parity to the market rates in food economy[7]. As for the "fair" value of land rent, relatively the best mechanism should be the agricultural land market, as long as it meets basic conditions of informative efficiency. Is the above condition sufficient for the sustainable development? Yes, if potential chances for social development which are provided by fair remuneration of labour, are used by farmers and if the residual income (i.e. after paying capital and labour) attributed to the land rent is really "invested" in the well-being of agricultural land.

From the point of view of sustainable development, we can paraphrase the motto "social existence determines consciousness" and say that it is "prosperity that determines consciousness"[8] with time. Long-term prosperity enables development of the institutional sphere in which the above formulated necessary conditions will be sufficient. These processes are nothing new in the economics. They are described by e.g. Kuznets curves, which show that only after exceeding the critical point do the economic, social and environmental goals coincide. As far as the sustainable development theory is concerned, an issue whether the development requires a transformation of human nature, is often raised. Authors agree with H. Rogall that "ethics of sustainability should not strive to change a man" [2010][9] although many researchers of social processes underline the necessity of change of our political culture (in a broad sense), and propagate the ethics of responsibility. Wrong way. The process has to be grassrooted and evolutionary. The moment, when there appear benefits of cooperative behaviours of "homo oeconomicus" is replaced by "homo cooperativus". With time, economically successful societies develop social institutions (norms and values) which are oriented to thinking in terms of community and satisfying needs. It is a very well rational process. It appears that the societies concentrated solely on individual benefits lose profits resulting from lower transactional costs [Rogall 2010], and at a certain stage, building institutions of social cooperation becomes more profitable than incurring

[7] e.g. to the rates in agricultural enterprises according to the Polish Classification of Activity.
[8] Certainly, prosperity "costs money". It is developed within long-term processes of capital accumulation in the entire economy, and above all in activities outside agriculture. Their analysis, however, exceeds the issues of the hereby paper.
[9] Rogall H., 2010. Ekonomia zrównoważonego rozwoju. Teoria i praktyka. Zysk i S-ka, Warszawa.

these costs. Similar conclusions are supported by the theory of rational choice and game theories. In most cases of so-called decision dilemmas, cooperative solutions appear to be the most profitable (e.g. in "the prisoner's dilemma"). However, in order to make the right decisions, one needs to mature on the basis of gathered experiences (own or of others).

Is the Polish society at this stage of development? Probably not. However, the processes of integration with better developed countries stimulate mentality changes, and in our opinion, paradoxically, this "quality convergence" has a chance to catch up with the quantity convergence. Perhaps this way it will be possible to avoid seemingly inevitable delays in the development of the institutional sphere regarding the economic development of the country.

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DOBRA PUBLICZNE A SAMOISTNA PRODUKTYWNOŚĆ ZIEMI – ROZWAŻANIA WOKÓŁ PARADYGMATU ROLNICTWA ZRÓWNOWAŻONEGO

Streszczenie. Celem artykułu było przedstawienie koncepcji dóbr publicznych oraz odpowiedź na pytanie, czy dobra publiczne dostarczane przez użytkowników ziemi rolniczej są waloryzowane za pomocą jej wartości. Celem opracowania była również identyfikacja mechanizmu transformacji użyteczności ziemi w produktywność w wymiarze finansowym. Przeprowadzone badania zakładały oszacowanie rent gruntowych zdyskontowanych w cenach ziemi rolniczej, a następnie określenie ich relacji do wartości ziemi oraz do czynszu dzierżawnego w przekroju województw w Polsce w latach 2000–2009. W opinii autorów od momentu akcesji Polski do UE rynek waloryzuje w cenach samoistną użyteczność ziemi rolniczej, podczas gdy rolą kapitału i pracy jest jej dystrybucja między rolnictwem a konsumentem. W celu zweryfikowania celu badawczego wykorzystano zarówno literaturę polską, jak i zagraniczną. Od początków cywilizacji człowieka ziemia tworzy samoistnie pewne użyteczności, które zaspokajają jego potrzeby. Od kiedy pojawiły się niebezpieczne efekty uboczne rolnictwa industrialnego ta twórcza rola ziemi jest odkrywana na nowo. Jej użyteczności stają się dobrem publicznym, którego ochrona jest istotą paradygmatu rolnictwa zrównoważonego. Pomimo nieodwracalnej akumulacji kapitału w środowisku antropogenicznym, wiele użyteczności powstaje bez dodatkowych nakładów kapitału i pracy. Jako że są one dobrami publicznymi opłaca się je z podatków. W ten sposób samoistna użyteczność ziemi przybiera formę produktu spieniężonego i może być nazywana samoistną produktywnością.

Słowa kluczowe: dobra publiczne, samoistna produktywność ziemi, zrównoważone rolnictwo

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CONTEMPORARY THOUGHTS ON RESPONSIBILITIES DEVOTED TO ECONOMIC AND SOCIAL DEVELOPMENT BETWEEN PUBLIC AND PRIVATE SECTOR

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Abstract. Article deals with the problem of rural development from the perspective of service provision with an emphasis on core/basic services. It identifies roles of sectors in service delivery and conceptualizes devolution of responsibilities between them. Based on identified roles and responsibilties, article presents different forms of partnerships between sectors. Discussion leads to construction of typology table for services according to activity type, consumer contact, service market, profit orientation of a partner, service urgency and contract arrangements. The use of the table is demonstrated by practical examples of selected services.

Key words: partnership, countryside, social policy, development policy, services, service delivery

INTRODUCTION

The approach of the EU in community development asserts the principle of equity and convergence despite the fact that it is internally any homogenous unit. Financial resources devoted for its development aim at securing regional economic assimilation as well as improving the living standards in regions [Spellerberg et al. 2007]. In practice, member states may choose the strategy to fullfill these common goals. They may apply the regional or national strategy. From the concept of rural development it is clear that the aim is to secure comparable living standards for people living in the countryside to living standards of urban areas. At this situation, it is important to differentiate between needs that are universally defined standards independent from the place of living, and on the other hand, opportunities that are unique to every concrete location [OECD 2006].

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In the process of devolution of desired living standards we focus on involved actors. These interfere into the management and production of standards as well as to economic development. From the point of view of delivery mechanism, the relationships between providers are considered to be crucial in addition to delegated responsibilities towards set priorities. Efficiency and effectiveness of these relationships relate to their success. Our aim is to focus on the devolution of responsibilities and delivery mechanism of basic (core) services for people living in the countryside, as well as to contribute to ongoing debate on existing partnerships between actors in the countryside in the process of their delivery.

DEVELOPMENT APPROACH FOR QUALITY LIVING IN COUNTRYSIDE

Generally it holds that people living in the countryside are paying so-called economic and social costs related to quality of life [Williams et al. 1975]. The key issue remains to secure same access to core services and needs to rural as well as urban people [OECD 2010]. On the other hand, we can make the statement that the right for equal standards is to some extent reduced by the burden of personal decision for living in the countryside [OECD 2010]. Spellerberg et al. [2007] state that this disproportion between city and countryside may be mitigate by considering positive attributes of countryside (e.g. quality of environment, peaceful place for living, etc.).

For successfull community development we need to consider unique characteristics of living in the countryside in addition to generally hold laws and requirements. As Cavaye [2001] points, well-functioning local community has high potential to cope with changes. Local community consists of network of actors (local, extralocal) and most importantly of their internal (informal) connections. Through these, they dynamically affect each other what in community-led development consequently leads to synergic effects (community passion).

CONCEPT OF EQUITY AND EFFECTIVENESS IN COMMUNITY DEVELOPMENT

The debate about rural development policy, and community development in wider perspective, obtains the question of their equity and efficiency [OECD 2006]. The question of equity relates to social site of policy that should secure minimal and equal standards for all citizens. On the other hand, efficiency originates from the principle of competitiveness, and so, it reflects to what extent the local potential is able to secure and stimulate its further development (development policy). Rowe [2007] describes the principle of efficiency through the process of service delivery. According to him, those measures are efficient that are able to take the maximum of limited sources. The equity may be defined by provision of equal conditions for all citizens. OECD document [2010] presents both principles in wider regional and national context. The goal of equity principle is to reduce financial disparities among people and localities, most particularly there, where the responsibility lies on subnational organizations. Efficiency furtherly benefits from

agglomeration advantages and focuses on support of those localities that are even now relatively wealthy. Consequently, they can make higher profit of development activities more effectively than their "poorer" partners. The development of opportunities is unique to each and every locality while the general needs may be conceptualized flatly. The difference between them is based on the quality of its provision and the cost (e.g. economies of scale, suburbian advantages, etc.).

Needs as public goods

As a result of the decomposition of rural policy on its two essential components (social, development), we pay our attention particularly on its social part. In a sense of equality of needs and opportunities, the question of social needs of countryside becomes the crucial part of an European agenda in terms of rural development. In order to secure core public services, so-called social contracts are being made, by which the government (public sector) becomes the partner to its citiziens [OECD 2010]. The services are defined like statutory entitlements and the role of government is to secure the provision by overcome their underprovision. It also reflects the moral and objective mission of government.

We understand public services as public goods [Williams et al. 1975, Kodrzycki 1994], that are particularly sensitive to market imperfections or to its absence respectively. According to OECD [2010], the provision of public services in not exlusively tighted to one--site transaction that benefits individuals but it create so-called shared value for public as a whole. The character of this transaction involves the process of social interaction as an addition to provision and transfer. By this, the formal and informal tights are strenghten, and it enhances the trust as well as communication among community members (municipality representatives, citizens) [Cavaye 2001].

SERVICE MARKET

The process of public service provision depends on attributes of particular locality. Key factors are considered to be the municipality size, character of settlement, accessibility but more recently also soft factors representing the quality of human and social capital. We may not neglect the market environment that exists for the service in the location. On one hand, there is the demand for the service (need of citizens) that is according to Williams et al. [1975] based on viability of individuals and households. As a result of negative development in countryside (ageing, out-migration, lack of job opportunities), the economic base shrinks. The most negatively affected are municipalities through reduced tax income and as a consequence the provision of core public services for lower number of citizens brings additional cost [OECD 2010]. Not rarely it results in underprovision of public goods and the increased dependency of municipalities on governmental loans or regional equalisation policies.

The ongoing process of rural restruturing [Woods 2005, Marini and Mooney 2006] to different extent leaves an impact on particular service what is furtherly affected by its market type. Services may be provided on the basis of competitive markets or monopoly [Girth et al. 2012] . Basic comparison of these market types is shown in Table 1.

Table 1. Comparison of monopoly and competitive market in service provision

Specification	Market type		
	monopoly		competitive market
Size of competition	no competition	limited competition	number of competitors
Profit orientation of partners	no contracts	non-profit	for-profit
Partners		other municipalities, voluntary sector	private entities
Key word	social (public) value		profitability
Service regulator	local government (municipality)		market
Type of services	core/basic services		supplementary services
Welfare category affected	social welfare		economic welfare

Source: own composition.

Profitability and social (public) value become the most pronounced key terms in provision of services. Escalona-Orcao and Diez-Cornago [2007] connect the profitability with demand that should be located in a reasonable radius in order to secure that condition. For Kodrzycki [1994] and Girth et al. [2012] the key term is the cost saving. This may be achieved most effectively on competitive markets in contract arrangements. The same principle of taking the advantage of economies of scale holds for capital-intensive investments and programmes of infrastructure. In the case of provision of core services (e.g. social and health services), the practice of monopoly brings higher certainty for social welfare, especially for groups of most vulnerable citizens.

In order to be profitable on competitive markets, we need to consider size of competition, and so the number of participating bidders for provions of the service. Naturally, small markets are disadvanted because of high volatility in supply of potential competitors [Girth et al. 2012] as well as remote small villages (limited competition, remoteness) [Kodrzycki 1994]. Under the condition of being profitable in provision of certain service we need to consider: size of potential consumer market, presence of potential competition but also the locality. In the case that all these aspects are of negative nature and the service represents basic living standards of citizens, it is necessary to intervene. We may interpret this that it is the role of government (through local municipality) to secure provision of the service in question even for higher unit cost. Therefore, countries as required to regulate those services for which there is no competitive market, and additionally secure compliance with contract conditions and protect service users (consumers) [Torres and Pina 2002].

Service market providers

The realisation of activities related to provision of basic standards and enhancement of development opportunities in countryside is based on principle of interaction among participating partners from local or extralocal environment. These activities may be described as optional or mandatory [Haugen et al. 2012]. Optional activities are

characterised by time and space flexibility (leisure time activities, social activities), on the other hand, mandatory activities are more fixed either to time or place (work, school). With respect to activity type, we may identify the relationships' arrangements between partners and their intensity. As key actors we may consider local municipality, governmental bodies, EU, local entrepreneurs, extralocal investors, non-governmental sector (voluntary sector) and most importantly the local citizens. Figure 1 displayed the process of competence devolution among participating partners in provision of core services (mandatory activities, social policy) and enhancement of opportunities (optional activities, development policy) that runs in the countryside.

In the first case, we focus on needs of individuals and households. In the second case, our attention is paid on market and economic environment – opportunities. At the same time, we make the difference between preconditions for rural development (1) and security of long-term viability of countryside (2) [OECD 2010]. The position of citizens is becoming essential as they define the demand from the consumer point of view and supply as producers and economic units.

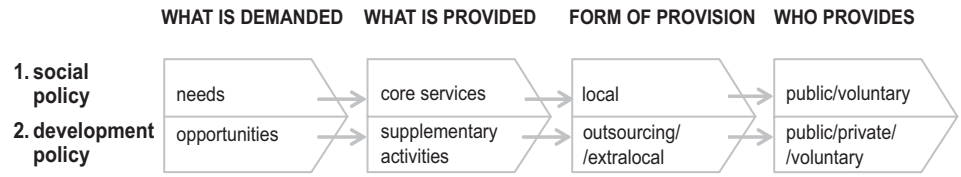

Fig. 1. Process of competence devolution in social and development policy

Source: own composition.

In next section, we focus on preconditions for rural development that are defined specifically by basic (core) services in the countryside, and so the area of our interest is social policy. The problem of development policy is tackled partially. We make use of the knowledge of Cavaye [2001], who points out that the process of involvement and partnership among participating members is important from the perspective of positive and effective development. Viable communities are at the same time dependent on organic (partnerships) and mediated development (centrally defined and managed policy).

DELIVERY MECHANISM OF SERVICES

As we previously mentioned, the process of basic service provision is mutually connected with the process of interaction between participating actors. This runs either on horizontal or vertical level. Williams et al. [1975] indicated weakening of horizontal co-operation in favor for the vertical one. As Hulst et al. [2009] point out, the vertical co-operation (between actors on different management level) generates advantages of better coordination of activities between independent actors and often overlapping jurisdiction of participating partners. At the same time, it enhances the use of economies of scale and the use of technological as well as financial know-how. Regional networks are getting the substantial position additionally to strategies of locally-led development [Cavaye 2001].

Traditional model of commaned and control [OECD 2011A] was founded on a hierarchical relationship government – provider. Gradually, this mechanism is overcome and the provision is oriented more on market-type arrangements that secure higher efficiency of allocated sources and higher satisfaction of clients. It prevents the situation when centrally managed policy contributes to bigger divergence in development. From the point of view of centrally managed policy making process, it would be difficult to explain the fact that different methods are used for the same service in countryside than in urban areas [OECD 2010]. It also helps to reinforce community cohesion and sense of community, when the knowledge of who provides the particular service is under the best interest of consumers in the locality [McVittie et al. 2007]. In order to understand effective service provision in countryside, we focus on relationships (discuss accountability and responsibility of actors) and limitations that exist in the process of their effective realization.

Accountability

As far as we consider public services as public goods, the public sector represents the role of their provider (benefit society at large). The result for public intervention is that market cannot guarantee them, respecticely, it cannot cover the whole area [Rowe 2007]. OECD document [2010] declares the role of public sector especially in those services that are highly nationally valuable and for which exists clear statutory responsibility (e.g. health care, education, fire, police). We may distinguish the first-contact services (also core service, e.g. social and health services) that represent standards of living in countryside. These are most commonly provided locally by municipality or by cooperation agreements between municipalities. The main benefit originated from this form is that it strenghtens the relationships between the municipality and its citizens. Services provided directly by municipality (as a representative of public sector in locality) reflects its position (essential mission) and practical mission (avoid potential scarce supply) [Kodrzycki 1994]. In other cases, these services can be either provided by private or public sector. By entering of public sector (on governmental level, or municipality level) into contractual partnership with private provider, the traditional forms of municipality management undergo internal restructuring [Mohr et al. 2010]. The drawback of contractual arrangement (either with other municipality, or other sector) is that it generates additional contract and monitoring cost [Kodrzycki 1994]. We may conclude that albeit the municipality is not the only and direct provider of a service, its role is to supervise or control. We cannot substract it from any decision making in provision of basic living standards in certain locality. Cavaye [2001] connects the question of accountability with the changing attention from tangible outcomes to their importance of community organisation and change of attitudes. From the development point of view, it is important for individuals and groups to have their head, and so the certain level of representation. Locally, this depends on leadership potential, usually connected with the municipality management.

Responsibility

Responsibility in service provision may be categorised according to different kinds of subjects to which it is devoted. For example, we may distinguish political, financial or

decisive responsibility. Provisional decision about what services will be provided to its citizens and how will be paid for it is under the responsibility of municipality. Production decisions are functionally and technically in the competence of private (and other) sectors [Kodrzycki 1994, Mohr et al. 2010]. Williams et al. [1975] adds into the debate of competence devolution that the dependancy of local municipality on provision of public services is on external institutions for technical and financial assitence. Additionally, local municipality is able to fine-tune broadly defined governmental policy and other programs according to local conditions (adjusting, decisive). However, we need to distiguish between competence (responsibility) devolution in provision of basic services and others. In the case of existing threats of underprovision of basic services, the weight of responsibility is transferred on public sector in full range, in other cases, the decisions on technical or distributional function may be delegated to other actors.

Limitations

Rural areas are usually described as lagged from the perspective of their equipment and accessibility. Not rarely they are being called as peripheral, what is not exclusively connect only with their location [Fuduric 2008]. They represent marginalized locations that to some extent lag behind the others. Regions on periphery are under the biggest threat of economic changes what is even more reinforced by the crisis of public finance [Spellerberg et al. 2007].

On the other hand, we may look at these drawbacks as the opportunity costs that are compensated by specific and unique rural attributes (social life, networking). The character of living in countryside represents the counterweight to homogenization that is the result of globalization and technological development [Spellerberg et al. 2007]. With respect to locality and character of link between the locality on higher levels, the localities are differently resistant to limitations and they also differ in a way of overcoming them. It is likely that less resistant units will more easily adapt to the process of urbanization. Categories of limits are represented by municipality size, changes in countryside (ageing, out-migration of young and economically active) and finally localition that is related to availabiity and accessibility of the location.

Municipality size is important for the cost site of service provision. The problem of small villages is their small consumer number but also the limited number of management capable representatives that would be able to negotiate contract conditions [Mohr et al. 2010]. Despite this, the form of contract arranegement is used quite often, especially for specific and specialized services. Kodrzycki [1994] states that if the price of service provision by public sector is higher than the price of private sector, it is advisable to enter into contract. The problem explains on example of small villages that are not able to enjoy economies of scale due to higher unit prices. As an effective example of contracts of small villages, Mohr et al. [2010] describes localities near to bigger cities, where is higher number of potential partners and so the bigger market.

Changes in countryside represent limits of service provision from the perspective of internal changes – endogeneous factors (demographic changes, reduction of young population, spatial change of economic performance, weak traffic networks, etc.) and external changes that represents exogenous factors (globalization, technological development,

cultural change, policy change). Population ageing is another significant factor of increasing demand for specific services, such as social, health and public services [Doheny and Milbourne 2012]. Furtherly, changes in countryside strongly relates to marginalization of most vulnerable population groups. Its magnitude is strongly dependent on location (close to urban areas – on periphery) and specifically on traffic accessibility.

Last category of limits is represented by localition and related availability and accessibility. According to OECD [2010], in provision of services is crucial not only the need for them but also the ability to receive them that is connected with accessibility. Unfortunately, the location is usually strongly influenced by disadvantages generated of peripheriality (character of relief, distance from regional or national centre, quality of road network, availability of public traffic). The magnitude of their importance is even higher in the case if the municipality is not able to effectively provide the service in place and insufficient family income is not able to cover expenses related to use of car that would otherwise help to increase flexibility. Escalona-Orcao and Diez-Cornago [2007] describe this by so-called penalization of higher cost of inaccessibility. Generally it holds, that accessibility is not attained so much through proximity but largely and increasingly through another key aspect – mobility. Mobility is then more related to individuals than structurally-led change. In this process, consumers are more concern about symbolic and qualitative value of provided service than its availability [Haugen et al. 2012].

FORMS OF RELATIONSHIPS BETWEEN PARTNERS AND CONTRACT ARRANGEMENTS

On the local level, there exist wide range of possibilities for partnership and cooperation between actors. They originate from natural devolution of competences and responsibilities. In the social policy that is out main concern, the dominance of municipality was identified. It posseses different functions (political, managerial, budgetary, monitoring, control), therefore we may say that its participation in any kind of partnership is considered to be inevitable. At the same time, we consider its mission and accountability. It is an elected body that represents in first place the interests of voters and secondly, it takes responsibility for provision of minimal standards that secure quality of life generally. Roles and position of municipality (public sector respectively) depends on social values, entrepreneurship and market capacity, non-governmental sector and also the spatial division of population. The fundamental role of public sector on governmental level is to secure availability of basic services. With respect to their categories (core, supplementary), it is up to municipalities, voluntary sector and private entities to furtherly participate in their provision and apply innovations as well as search for cost-effective methods of their provision [OECD 2010].

Figure 2 presents roles of municipality in the cycle of basic service provision in countryside either of core or supplementary nature. It also displays devolution of responsibilities from the perspective of municipality. Forms of partnerships defined below will be based on position of municipality as a representative of public sector in place with respect to participating partners and contractual relationship.

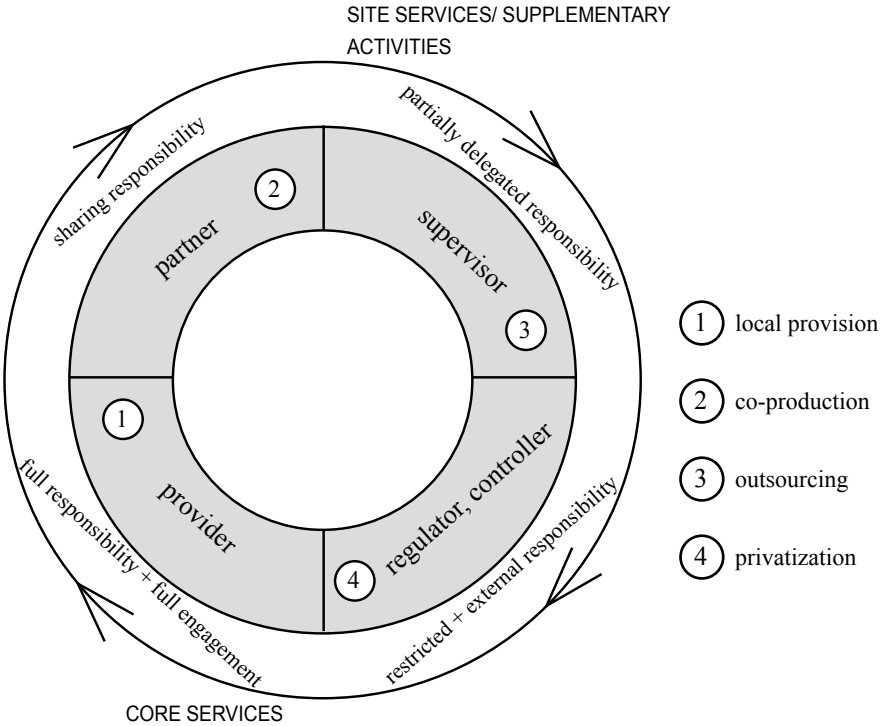

Fig. 2. Municipality roles in provision of services in countryside
Source: own composition.

Local provision

Service provision operated directly by municipality demands its full engagement and full responsibility. McVittie et al. [2007] point that the local provision of services by local people helps to create local networks and improve the quality of social capital. According to existing situation, municipality may enter into partnership with voluntary sector or neighbouring municipalities. These partnerships are characterized as non-profit and so they identify service types to which they are binded to. These services are classified like core services that may also be defined as public goods for which there is no market. At the same time, they are directly connected with needs and secure basic conditions of living. Their typical characteristic is the ability to be generalized.

Co-production

Co-production may be described like cooperation of public sector and partners that are either local or they participate in service provision in wider region (extralocal). OECD [2011A] defines different types of co-production according to level of input that is devoted to existing partnership (sporadic and distant, intermittent or short term, intensive and enduring or long term). For public sector in general (and municipality particularly), the

form of co-production originates considerable advantages, mostly economic ones. In the case that service provider (private entity, partnerships of more municipalities, etc.) operates on wider market, beneficiaries may enjoy economies of scale reflected in the price of service. Besides these, the chain effect of co-production enhances the innovative potential of existing relationships among partners. Partnerships generate new ideas, suggestions from users, community networks of families and friends [OECD 2011B]. On the other hand, sharing of responsibilities (their delegation) between partners lower direct costs of service provision. However, these are reduced by the share of monitoring and control costs that exist on the site of municipality responsible for service definition locally.

The classic example of co-production arrangements are multi-purpose, respectively single-purpose arrangements [Hulst et al. 2009]. Multi-purpose arrangements represent typical example of cost reduction strategy (initial, managing) when partners may share costs of different services or they may share the cost between each other in the case that multi-purpose arrangement operates on the level of several municipalities. The additional value of these arrangements is in boosting social networks and social interactions [OECD 2011B]. In practice (especially in case of more "sensitive" services such as core services) it may happen that multi-purpose arrangements are not able to optimally serve desired location with services, and so it is more advisable for this kind of services to use single--purpose arrangements.

Intergovernmental agreements

By fulfiling the mission of provision of services for citizens, municipality may enter into partnership with other (usually neighbouring) municipalities. In that case we talk about generation of intergovernmental agreements. This form of partnership is most effective for group of small villages that may enjoy benefits of different sources [Mohr et al. 2010]. As a result, they benefit from economies of scale (range of suppliers), scale and flexibility of extralocal cooperation. Minor drawback may be identified on project--related cooperation that no longer and no deeper develop partnership relations between participating municipalities in order to be more effective in future. Besides previously mentioned multi-purpose or single purpose arrangements [Hulst et al. 2009], this form of partnership may exist on basis of purchase or exchange of service from neighbouring municipality. The most common object of this kind of partnership are core services when it is necessary to avoid their underprovision or non-existence respectively.

Public – private projects

Conceptually, the form of co-production at this type of projects aims at provision of those services that are most important for community (for serucing basic living standards) and their absence would lead to lower quality of life. As it was mentioned previously, the role of public sector is to define in general terms the need (and service standards) and the provision may be delegated to other sectors (private, voluntary). Therefore, the public sector is able to provide economies of scale and advantages of market competition. More than form of co-production dominates in this type of partnership outsourcing that is characterised later. It complies services that are not of fundamental mission of municipality and offer to provider more space in decisions about their provision. In both cases (co-production and outsourcing), private partner is for-profit oriented.

Public – voluntary projects

Activities of voluntary sector are more preferable in cooperation with public sector and more trustful than for-profit oriented companies [Girth et al. 2012]. This is especially important for those services for which the accessibility, regularity and loyalty are of particular interest (core services). This is illustrated by the example when the private company is not able to fulfill its commitments what leads to additional costs for municipality (delay cost, cost of searching an alternative partner). On the contrary, the co-operation with voluntary sector helps to avoid that kind of situation. It is also preferable type of co-operation in the group of small villages with limited market and therefore choice of partners [Mohr et al. 2010].

Public – public coproduction

Specific type of co-production is partnership between municipality as a representative of public sector and its citizens (user of provided services) [OECD 2011A]. They may participate in design process or delivery of servic. The key issue in existance of this kind partnership is the transfer of attention from production inputs and outputs into outcomes in 1970s [OECD 2011A]. By characterising public services as public goods, these inevitably create the public value (and value for public). In this sense and for the reason of their public impact, regular and long-term public – public partnership together with participation of citizens are considered to be a willing method for how to achieve certain level of services and their provision (qualitative and quantitative).

Outsourcing

The main difference between co-production and outsourcing is that public sector usually applies outsourcing in the situation when it delegates or transfer decision making about those services and related activities that can be defined as supplementary or site. The most typical examples are leisure-time, cultural or social activities. At the same time, it helps to reduce the risk generated from potential underprovision of core services (that would be provided by municipality simultaneously with supplementary activities) and on the other hand, it helps to stimulate local market and competition. However, municipality does not give up its position in governance of this part of local development and holds its role as regulator (controller – privatization) or supervisor (contracting-out). As a supervisor, it oversees the fullfillment of contractual conditions – duration and subject of the contract. Reversely, privatization offers much more freedom for participating actors in service provision and public sector has very restricted and limited responsibility (depending on concrete service). This is the reason why we substract the privatization from outsourcing as an individual form of partnership.

As it was mentioned previously, this form of partnership is most commonly presented by public – private arrangements either in form of projects or contracts. Similarly to co-production, they reduce initial cost (cost efficiency) and improve flexibility of production as well as innovativeness of provided services [Hulst et al. 2009]. It is important to consider additional monitoring cost. We also need to precisely control the process of competence devolution from public to private sector in order to mitigate possible delay or even failure of service delivery [OECD 2010].

Privatization

Although we previously defined privatization as a form of outsourcing of supplementary services, it may be the option also for core services, especially in case of well-functioning market and regulatory mechanism. Especially favourable is this form of service delivery for small villages [Mohr et al. 2010]. They may benefit from contractual agreements with private providers of a regionally privatized service. They are able to effectivelly apply for-profit strategies and generate advantages of market. Therefore small villages located close to big markets and with good infrastructure may be the most favored. On the other hand, small villages located on periphery suffer from lack of potential bidders in the situation when they decide for external service provision.

Besides full-privatization, privatization may exist of different forms [Kodrzycki 1994] according to level of responsibility transfer from public to private sector (especially in case of core services):

1) municipality decides about amount of provided service – production is under the competence of private provider,
2) franchise – private sector provides service in geographic borders of municipality – municipality regulates the level of service and price,
3) municipality holds its in order to secure demand for service – individuals may choose their service providers.

Kodrzycki [1994] explains the advantages of private provision by highlighting cost site, higher quality and higher flexibility. However, it may also happen that private entity underrates demanded quality. Another problems connected to externalization of services are moral hazard and mis-specification of service requirements [Torres and Pina 2002]. Another risks originates from opening a space for corruption and weaker municipality control over core services (especially health and social ones). These are the reasons why other forms of partnerships are more preferable for them.

Broadband Internet

By technological and especially information development, the social welfare of countryside faces another challenge. The development of broadband Internet initiates the new era of service delivery. It can easily connect providers, regulate the competition and bring necessary services there where people live, no matter of distance [Gutierrez 2010]. However we need to be cautious about this non-direct provision. Therefore, it should be used mostly as a consultation or information mean.

TYPOLOGY TABLE OF SERVICES

For synthesis of information above, we develop typology table that helps us to describe individual provided services in countryside. It consists of information about: (a) activity type from the perspective of the body responsible for local development (municipality), (b) contact type between provider and consumer that divides the services into

categories core-supplementary, (c) service market that pre-defines potential partnerships, (d) profit orientation of partners, (e) service urgency – addition to division in (b) and (f) typical type of arragements in provided service group (Table 2).

Table 2. Typology table – theoretical background

Type of	Service group A	Service group B
– activities	mandatory	optional
– contact between service providers and consumers	first/direct contact	non-direct contact
– service market	monopoly	competitive market
– partnership with respect to profit	non-profit oriented partners	for-profit oriented partners
– service urgency	crisis-oriented	up-standard
– contract arrangements	local provision, intergovernmental agreements, public – voluntary projects	outsourcing, privatization

Source: own composition based on Williams et al. [1975], Mohr et al. [2010], Girth et al. [2012], Haugen et al. [2012].

As an example of use of this typology table, we compare health and leisure-time services offered locally (Table 3). First group represents standard and precondition of rural development. Its provision is tighly connected to quality of life in countryside (social welfare). In case of leisure-time services, these may be identified as supplementary,

Table 3. Typology table – practical example

Type of	Health services	Leisure-time services
– activities	mandatory – represent minimal standards	optional – represent supplementary activity
– contact between service providers and consumers	first/direct contact – usually provided at the ambulance, necessity of personal contact	non-direct – providers do not necessarily be personally presented during service provision
– service market	emergency services usually operates on monopoly basis	competitive markets may exist for different leisure-time services (sport facilities, cultural facilities, etc.)
– partnership with respect to profit	partnerships usually with non--profit oriented partners (other municipalities, voluntary sector)	for-profit oriented partners operating on a commercial basis
– service urgency	crisis-oriented – underprovision and absence may be crucial for community	up-standard of living, community may exist without these services
– contract arrangements	public-based contracts (intergovernmental, local provision, public – voluntary)	contracting out to private entities

Source: own composition based on Table 2.

that are not direct representatives of standards but they significantly contribute to long-term viability of rural areas. They may help to improve attractiveness of countryside and stimulate further economic development (associated activities, migration of young people, etc.).

CONCLUSIONS

For being able to secure viability of countryside, we need to ensure preconditions for rural development (core services) that help to avoid rural exodus (out-migration, ageing) and strengthen social welfare. This is subject to social policy. For the longterm preservance of this state, we need to add supplementary services that represents development policy and furtherly enhance economic welfare.

In the process of service provision, the role of municipality is very important. It may act as a provider, partner, supervisior, regulator/controller respectively. The profile of concrete services prescribes forms of partnerships that may arise for their provision. With respect to provision of core service and so the social policy realization, the responsibility is increasingly delegated to public sector (municipality) that may usually enter into partnership either with other municipalities or voluntary sector. In the case when the subject for provision are those services that are not necessary for minimal quality of life (or core services of well-functioning market), municipality may enter into contractual arrangements with private sector. They may share responsibilities, partially or fully delegate. In all cases, municipality leaves its space for monitoring and control, especially in core services in order to avoid their shortage or underprovision. At the same time, we need to consider limitationss of responsibility devolution related to internal and external environment. Roles of public or private sector in service provision need to be judged under the existing market conditions and other factors (municipality size, accessibility, changes in countryside).

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AKTUALNE UWAGI NA TEMAT ODPOWIEDZIALNOŚCI ZA EKONOMICZNY I SPOŁECZNY ROZWÓJ OBSZARÓW WIEJSKICH W PODZIALE NA SEKTOR PRYWATNY I PUBLICZNY

Streszczenie. Artykuł dotyczy zagadnienia rozwoju obszarów wiejskich z punktu widzenia dostarczania usług, ze szczególnym naciskiem na usługi podstawowe. Określono w nim rolę sektora publicznego i prywatnego w dostarczaniu usług oraz dokonano konceptualizacji odpowiedniego podziału odpowiedzialności pomiędzy sektorami. Na tej podstawie zaproponowano różne formy współpracy i partnerstwa pomiędzy sektorami, a następnie

przygotowano typologię usług według rodzaju aktywności, kontaktu z konsumentem, rynku usług, nastawienia oferenta na zysk, niezbędności danej usługi oraz sposobu kontraktowania. Tabele zilustrowano przykładami wybranych usług.

Słowa kluczowe: partnerstwo, obszary wiejskie, polityka społeczna, usługi, dostarczanie usług

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COOPERATION OF TOBACCO PRODUCERS' GROUPS AND TOBACCO PROCESSORS OPERATING IN POLAND: A STUDY OF CONTRACTS

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Abstract. The main goal of this paper is to present contractual relations between Polish tobacco producer's groups and their purchasers (contract seasons: 2010/2011, 2011/2012, 2012/2013). The hypothesis of the research is based on the statement: "horizontal (agricultural producers' groups) and vertical (contracts) integration in agriculture lowers farmers' income risk and reduces transaction costs, which strengthens farmers' position in the negotiation process with their purchasers". In verifying the hypothesis, the author conducted empirical research among Polish tobacco producers' groups. The data were collected in the period between January and May 2013. The theoretical background for the research is built on the new institutional economics, contract theory and transaction cost theory. Results provide the supposition that contracts and cooperation within producer's groups lower farmers' income risk, but in the case of contractual arrangements not so significantly. It is caused by following factors: contracts are signed for one season only; they do not fulfill all commitments in contracts and they do not provide financial sanctions, neither for farmers nor for purchasers/first processors. Existing contracts between the tobacco industry and tobacco producers' groups or tobacco growers can be categorised as production contracts in agriculture. Also individual farmer's transaction costs of contracts are lower due to cooperation than tobacco producer's groups. Therefore one can state that quasi-hierarchical structures in the tobacco sector improve efficiency of member's farms.

Key words: contracts, transaction costs, new institutional economics, vertical integration in the agribusiness, agricultural producers' groups, tobacco industry

INTRODUCTION

Traditonal agriculture used to be a self-sufficient sector, which resulted in farming not being integrated with other links of the food chain. Nowadays, with farming being part of

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agribusiness, it has become increasingly specialised and businesslike. Changes in international agricultural markets (e.g. biotechnology development, the significant role of multinational corporations in food industry) have influenced transformations in Polish agriculture towards establishing contractual relations between farmers and their purchasers/buyers.

Experiences of Polish farmers both during socialism as well as the economic and political transformation provide the supposition that vertical integration in Polish agriculture (contractual relations) differs significantly from these kinds of relations in the United States or European countries. Moreover, in the literature of the subject, one can find an emphasis placed on the necessity of conducting research covering institutional or historical differences between countries [Agrawal 2002, Allen and Lueck 2003, Hueth, Ligon and Dimitri 2007].

The main goal of the paper is to present contractual relations between Polish tobacco producers' groups (henceforth TPGs) and their purchasers (first processors) in the contract seasons: 2010/2011, 2011/2012, 2012/2013, as well as contracts between TPGs and their members/tobacco farmers[1]. The choice of this sector for the analysis was motivated by institutional regulations within Polish and European Union law in this area. They oblige Polish tobacco farmers to sell their crops (raw tobacco) under formal contracts. Moreover, if Polish tobacco farmers apply for financial support[2], they have to prove their contracts were signed through TPGs[3]. Consequently, they are the most integrated group of farmers in Poland. In 2010 there were 11,300 tobacco farms in Poland[4] [GUS 2011] and 10,878 tobacco farmers were members of TPGs (in July 2013) [http://ksow.pl/grupy-producentow-rolnych/warto-wiedziec.html]. That means almost 96% of Polish tobacco farmers are members of TPGs[5].

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[2] There are two types of financial support for tobacco farmers (both are supported by Polish budget). The first form is known as coupled complementary national direct payment to the raw tobacco sector (it is classed as Complementary National Direct Payments) [http://www.minrol.gov.pl/pol/Wsparcie-rolnictwa-i-rybolowstwa/Platnosci-bezposrednie/Platnosci-bezposrednie-w-2012-roku/Platnosc-niezwiazana-do-tytoniu]. The second kind of payment is specific support to improve the quality of tobacco introduced for years 2012 and 2013 [http://www.minrol.gov.pl/pol/Wsparcie-rolnictwa-i-rybolowstwa/Platnosci-bezposrednie/Platnosci-bezposrednie-w-2012-roku/Platnosc-do-surowca-tytoniowego-wysokiej-jakosci].

[3] For European Union and Polish regulations concerning raw tobacco market see: [Council Regulations (EC), No 1782/2003; Council Regulations (EC), No 864/2004; Council Regulations (EC), No 1234/2007; Council Regulations (EC), No 1698/2007; Dz.U. z 2003 roku Nr 223, poz. 2221; Dz.U. z 2012 roku poz. 276; Dz.U. z 2012 roku poz. 274; Dz.U. z 2012 roku Nr 0, poz. 1456; Dz.U. z 2009 roku Nr 3, poz. 11].

[4] The number of tobacco farms lowered by 16.3% between 2002 and 2010.

[5] In 2012 Poland was the 7th largest importer of unmanufactured tobacco and tobacco refuse globally (HS code: 2401), mainly from Brazil (the Brazilian share was 30%), the United States (8.8%) and Germany (7.8%). In 2012 Poland was also the 3rd largest global exporter of cigars, cheroots and cigarettes (HS code: 2402), mainly to France (the share of Polish export was 23.3%), Italy (17%) and Germany (10.2%) [http://www.trademap.org].

MATERIAL AND METHODS

A contract (an agreement) in the agricultural sector (or in a broad sense in agribusiness) is signed by producers/farmers (agents) and processors (principals) when both parties can achieve profits[6]. According to Bogetof and Olesen [2004], a contract in agriculture should be signed (from the economic point of view) when the main aim is to maximize integrated profit[7]. These authors also indicate three objectives of each contract in agriculture: coordination[8], motivation[9] and transaction costs[10].

What is more, one can identify four main forms of transaction coordination in agribusiness: spot market, marketing contracts, production contracts and full vertical integration. Focusing only on contract integration, the first type of contract contains such elements as: price[11], quantity and term of delivery. In some cases, marketing contracts can include instructions related to the quality of outputs, cultivation methods or chemicals used by farmers. The most important attribute of these types of contracts is that farmers still keep full control over management process in their own farms. In production contracts, the following elements are also defined/included: share of obligations between parties, price, quantity, term of delivery and services from the processor[12]. One can thus indicate two types of production contracts in agriculture: production-management contracts[13] and resource-providing contracts[14] [Boland et al. 2002, MacDonald et al. 2004, Malchar-Michalska 2012].

In Figure 1, the scheme of the contractual relations between tobacco farmers (members of TPGs), tobacco producer's groups and their first processors is presented. One can claim that these organizations play the role of middlemen who coordinate transactions on

[6] About contracts theory in Stankiewicz [2012], Brousseau and Glachant [2004].

[7] For these authors it means that profits appear for farmers as well as processors. The first-best contract is the (Pareto-efficient contract) agreement resulting in the maximum integrated profit. Authors indicate that contracts coordinate production and also motivate both parties to make decisions leading to integrated profit. In their opinion, there is a conflict between coordination and motivation (e.g. prices play a dual role) which can be resolved by choosing the second-best solution.

[8] A farmer produces and supplies accurate quantity and quality of agricultural outputs, at the right place and time. A processor receives goods which are relevant to its expectations.

[9] To establish incentives or interests which should encourage all parties of a contract to undertake activities resulting in the integrated profit (due to individual profits).

[10] They help to limit transaction costs related to planning or monitoring. Definition of transaction costs cf. Williamson [1998].

[11] The following types of prices exist: flat/fixed price and base price, the latter being reliant on the spot or futures market, it can also be increased/decreased depending on the quality of agricultural outputs or who covers the costs of transportation or warehouses.

[12] Contracts are always signed before the beginning of the production season in farming (marketing contracts can be signed any time).

[13] Processors involved in the farming management system; farmers are usually responsible for deliveries of most agricultural inputs.

[14] These contracts have a high level of vertical coordination by processors. Farmers play the role of suppliers of agrarian land and workforce. Processors provide agricultural inputs and also monitor production or cultivation system in farms.

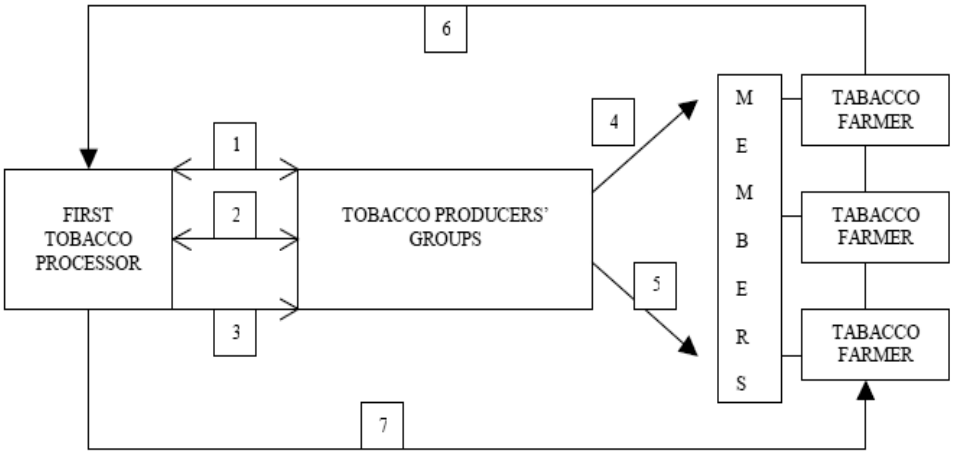

Fig. 1. The contractual scheme in tobacco sector

Source: own study.

the raw tobacco market[15]. That is why it is necessary to conduct research covering how they operate on that market and what impact they may have on their members. Taking into account the above-mentioned attributes of the raw tobacco market in Poland, the primary goal of the research was to verify the main hypothesis: horizontal (agricultural producers' groups) and vertical (contracts) integration in agriculture lowers farmers' income risk and reduces transaction costs, which strengthens farmers' position in the negotiation process with their purchasers. The author embarked upon an explanation for the following research questions:

- What types of contracts exist between TPGs and their purchasers? Are they marketing or production contracts?
- Are quasi-hierarchic modes of organisation a suitable form for transaction coordination in that sector?
- Do contracts help stabilize raw tobacco prices? Do they lower farmers's income risk?
- What kinds of transaction costs appear under contractual relations (for tobacco farmers and TPGs)?

There is a significant lack of data relating to agricultural TPGs in Poland. That was the main reason why the author decided to conduct empirical research among these entities, which are formally registered by Polish institutions. There were 11 registered TPGs in the end of 2012, which served as the statistical population. For the collection of empirical data, the survey method was applied. The questionnaire contained 25 questions and included 153 variables. The research was conducted between January and May 2013

[15] TPGs are an example of hybrid organisations (like other agricultural producers' groups in Poland) [see: Ménard 2006, Malchar-Michalska 2011].

among 4 tobacco producer's groups. The empirical research related to tobacco contracts[16] for three seasons: 2010/2011, 2011/2012 and 2012/2013[17]. Answers in the survey were given by managers of TPGs[18].

Tobacco groups participating in the survey were established between 2003 (three of them) and 2004. By the end of 2012 they associated 4,781 members (tobacco growers which were around 44% of all tobacco farmers who were members of tobacco groups in Poland). 5,241 hectares were cultivated by all members of these TPGs, which means that one farmer cultivated in average around 1.3 hectares of tobacco by the end of 2012. All these groups were created on the basis of former tobacco associations/federations.

RESULTS AND DISCUSSION

The primary buyers of raw tobacco from TPGs are shown in Table 1. During tobacco seasons 2010/2011, 2011/2012 and 2012/2013, almost 100% of sales were made to first processors (henceforth FPs)[19] who TPGs had signed contracts with[20]. Only one examined

[16] The Polish civil code contains provisions on contractual relations in agriculture (articles 613––626) [http://kodeks-cywilny.org]. However, it should be emphasized that the paper's goal is not to compare tobacco contracts to regulations in the civil code. In this case tobacco contracts are treated as form of market relations and as a precise example of inter-firm contracts/agreements.

[17] The tobacco marketing season refers to the period between September and March of the following year when first processors buy contracted raw tobacco from growers. The growing and harvest tobacco/production season covers the period from March to September. Contracts with first processors are usually signed in February or March, before the production season begins. The author uses the term 'tobacco season' to describe the period under the duration of the contracts.

[18] The author invited all tobbaco groups which operated in the beginning of 2013, but only four of them agreed to take part in the survey.

[19] The first processor is a company approved and registered by the Agricultural Market Agency (AMA; the Agency for Restructuring and Modernisation of Agriculture is the paying agency; ARMA), which buys raw tobacco from farmers. If a tobacco farmer wants to get specific support to improve the quality of tobacco, they should have a contract with FPs and farmers should also deliver to FPs raw tobacco classed as high quality (most of FPs in Poland sign contracts with TPGs, they do not negotiate with individual tobacco growers). In the registry of FPs for 2012/2013 there were 10 companies: Philip Morris Polska Tobacco Sp. z o.o., Universal Leaf Tobacco Poland Sp. z o.o., FTK Sp. z o.o., PRAXIS Sp. z o.o., LUXOR Sp. z o.o, AGROSAB Sp. z o.o., LUXTAB Sp. z.o.o., Nikos Gleoudis KAVEX S.A., Cesarsko-Królewskie Laboratorium Tytoniowe Sp. z o.o., Łukowa Tabacco Company Sp. Cywilna Michał Hyz, Mieczysław Pękala. In 2012, a productivity capacity of FPs within the scope of primary raw tobacco processing was 87,720 tons (according to the AMA). Philip Morris, Universal and FTK could process 68% of the total sum indicated by the AMA. For the season 2013/2014, AMA approved 14 companies as FPs (AMA added to the previous registry following companies: Tobaccoland Piotr Perzanowski, Burley Tobacco Trading Poland Sp. z o.o., Krzysztof Knap „AGRO", TOBACCOLEAF – ZEN Zenon Pękalski). The productivity capacity of FPs for 2013/2014 is 91,740 tons of raw tobacco, of which Philip Morris, Universal and FTK have a share of 65%.

[20] Between 2010 and 2012 there were different fiscal regulations (excise tax on tobacco) related to tobacco selling than in 2013. That is why the author indicated in the survey so many potential buyers of raw tobacco from TPGs. In the beginning of 2013 many of them disappeared from the Polish market.

entity indicated that around 2–3% of members' harvest was sold for pharmaceutical purposes (only in 2010/2011 and 2011/2012 seasons). In all three analysed seasons, TPGs cooperated with the same FPs. Each group had signed contracts with three or four FPs for one tobacco season[21]. It should be emphasized that in each tobacco season all groups had their contracts with Philip Morris. Three of them also had agreements with Unilever and LUXOR. TPGs had also signed contracts with FTK, AGROSAB and PRAXIS.

Moreover, Philip Morris was the largest buyer of raw tobacco for all TPGs. All first processors contracted from these four TPGs to supply 16,633 tons of raw tobacco for the season 2012/2013. The share of all contracted supplies to Philip Morris were around 60%[22]. It should be added that from season to season groups signed contracts for smaller and smaller quantities of supplies, and the decrease in all four TPGs was around 20% between 2010/2011 and 2012/2013[23].

Table 1. Main buyers of raw tobacco from TPGs in 2010–2013 (the number of answers)

Buyers	Share in selling (%)					
	0	0–25	25–50	50–75	75–100	100
First processors	0	0	0	0	1	3
Tobacco warehouses	4	0	0	0	0	0
Sales via the Internet	4	0	0	0	0	0
Sales to tobacco shops	4	0	0	0	0	0
Sales to individual buyers for pharmaceutical using	3	1	0	0	0	0
Sales to individual buyers for garden using	4	0	0	0	0	0
Sales to individual buyers for raising doves using	4	0	0	0	0	0
Sales to individual buyers for other using	4	0	0	0	0	0

Source: own study.

In Table 2, tasks performed by TPGs are enumerated. Analysing them, one can claim that in most cases TPGs assume the role of marketing groups. They focus on actions like: seeking raw tobacco buyers, running negotiations with buyers, monitoring payments/settlements under contracts between FPs and tobacco farmers[24], collective buying of agricultural inputs[25]. Members of these organisations can also reach for help with documentation related to direct payments, coupled complementary national direct payments to the

[21] In statutes of all TPGs there were regulations that members had to sell raw tobacco only through the group. Between seasons 2010–2013 none of these groups were selling raw tobacco from non-member farmers.

[22] It seems that Philip Morris is able to have the biggest impact on the Polish tobacco market (especially on prices paid to farmers under contracts). One can say that the market of tobacco processors in Poland is an oligopoly where Philip Morris is the leader. However, more thorough research should be done to prove this thesis.

[23] The quantity of delivery in contracts can be diffrent from the real quantity of purchases (usually they are lower than the contracted quantity of tobacco).

[24] FPs pay for delivery to TPGs and then that group settles the payment to farmers.

[25] The range of agricultural inputs is not wide. TPGs offer postponed payments for collective buying.

Table 2. Main tasks of tobacco agricultural producer's groups in Poland (number of answers)

Tasks	Number of answers (survey sample = 4)	
	YES	NO
Collective storage of tobacco leaves	0	4
Collective curing of tobacco leaves	0	4
Collective cutting of tobacco leaves	0	4
Monitoring of tobacco quality	0	4
Helping to employ workers for tobacco farming	0	4
The settlement of payments between first processor and contract leaf growers	4	0
Financial support for members e.g. delaying invoice payment	3	1
Helping with formal cases/actions for tobacco farmers – without any payment e.g. preparing applications for national direct payment to raw tobacco	4	0
Collective buying, e.g. agricultural inputs (the price of buying by TPG = the price of selling for members)	4	0
Organizing workshops for tobacco farmers	4	0
Collective action to hire vehicles to transport tobacco leaves or other farm machinery	1	3
Helping to lease agricultural land	0	4
Collective insurance of tobacco harvest	0	4
Helping with individual insurance for members (home insurance, harvest insurance)	2	2

Source: own study.

raw tobacco sector, specific support to improve the quality of tobacco. They also would arrange workshops for members and try to inform them on a regular basis about the situation on the tobacco market or changes in regulations covering this sector. Moreover, leaders/representatives of TPGs were lobbying against unfavourable changes in tobacco regulations, especially those related to subsidies to raw tobacco production.

Collective storage, curing or cutting tobacco leaves (an initial stage of raw tobacco processing) were not performed by any TPGs. They did not own warehouses or transportation facilities and they did not provide any logistic services/operations for their members[26]. Neither of these entities offer/arrange collective crop insurance for tobacco farmers. Only two TPGs arranged meetings with insurance sale agents who offered individual crop, home and life insurance[27]. They did not provide any services related to the recruitment process or legal advice on how to lease or buy agricultural land.

[26] All TPGs got the financial support to set up agricultural producer's groups (according to domestic law about agricultural producer's groups from 2000 [Dz.U. z 2000 roku nr 88, poz. 983]). All spent these financial resources on administrative actions (e.g. computers, office equipment).

[27] However, insurance agents presented the same offers which were available on the market. The biggest advantage for farmers was the reduction of costs related to seeking out insurance (costs of information). On the other hand, farmers were not sure whether these offers were the best option from all solutions available on the market.

All tobacco groups which took part in the survey had contracts with first processors during tobacco seasons 2010/2011, 2011/2012 and 2012/2013. What is the most important issue, despite the fact that these groups had contracts each time with the same processors, is that agreements were signed only for one season[28]. All tobacco contracts had the following terms: quantity of raw tobacco delivery, fixed prices for 1 kg of raw tobacco in PLN (contracts contained a wide range of fixed prices). Prices differed in the variety of tobacco (Burley or Virginia tobacco and others), class, stalk position, ripening of tobacco leaves, leaf structure and colour of tobacco, mechanical damages of leaves and disease damages of tobacco[29]. It is also required that raw tobacco should be delivered in bales to delivery stations. The contracts also contained a general date of delivery, which was indicated in the period between September to March. Buyers were supposed/obliged to pay for their purchase 30 days after delivery. All contracts also contained instructions covering chemicals allowed to be used by farmers[30] (see Table 3).

Another interesting fact is that the largest first processors such, as Philip Morris or Universal, were also offering tobacco seeds for free under tobacco contracts (both companies recommend using them)[31]. These two processors also legally obligated farmers to open their cultivation lands to corporate controllers. This means that controllers can visit tobacco farms at any time without prior notification. They checked whether farmers were following all contractual instructions. The result is that tobacco farmers under contracts need to share or even lose some attributes of their property rights to land and management of tobacco growing. One can even label these situations an example of "a controlled freedom of tobacco farmers". Such instructions/legal conditions of tobacco contracts allow to categorise them as production contracts.

Furthermore, contracts with Philip Morris (also with Universal company) contained regulations related to the necessity of the introduction of environmentally friendly methods of farming and good agricultural practices (GAP). Under GAP farmers were obliged to use non-GMO tobacco seeds, not to employ children on tobacco farms, to employ workers only according to legal standards or/and to protect workers against green tobacco

[28] Respondents indicated that in previous decades they did not have long-term contracts (for more than one season).

[29] Each farmer got an attachment to their contract where fixed prices for each category of delivered tobacco leaves was set (farmers knew the price before they started the cultivation process). For season 2012/2013 higher prices were offered for Virginia tobacco. Moreover, respondents said that farmers got lower prices for raw tobacco than in season 2011/2012, which could be caused by the introduction of additional tobacco payments by the Polish government (specific support to improve the quality of tobacco). In the author's opinion that support is questionable. The impact of quality payments on the raw tobacco market should be researched further, including who received profit: farmers or tobacco companies.

[30] Tobacco contracts had a registry of recommended pesticides (without any trademark) where also active ingredients are enumerated and periods when farmer can use them. Each processor usually sets different recommendations, which is why sometimes certain problems appear, especially for farmers who have contracts with more than one processor.

[31] High quality tobacco seeds were usually not delivered for free.

Table 3. Elements of tobacco contracts (number of answers)

Features of Tobacco Contracts	Number of answers (survey sample = 4)	
	YES	NO
Fixed prices (prices depend on the quality and tobacco type)	4	0
Quantity of the purchase/delivery	4	0
Date of delivery (from September to March)	4	0
Terms of payments (30 days from the buyers' acceptance of products)	4	0
Specific tobacco types (Virginia or Burley tobacco)	4	0
Quality of raw tobacco delivered to the first processor	4	0
Maximum residual for chemicals in raw tobacco	4	0
Maximum level of moisture content in raw tobacco	4	0
Obligation to use tobacco seeds delivered by the first processor	3	1
Obligation to use specific chemicals	4	0
Obligation to use specific methods of tobacco cultivations by farmers	3	1
Fines for delivery not on time or poor quality of tobacco	1	3
Access for corporate representatives to tobacco farms in order to check conditions set in tobacco contracts	4	0
Obligation for environmental protection by tobacco farmers	4	0
Obligation to introduce good practices in tobacco farming (mainly Philip Morris and Universal)	4	0

Source: own study.

sickness [see: www.pmi.com]. These processors also required from farmers to not overuse chemicals/pesticides during tobacco farming[32].

It should be emphasized that most contracts did not include any financial sanctions for farmers (e.g. for delivery of polluted tobacco by illicit chemicals[33]) nor for processors (e.g. processor did not buy all quantities of raw tobacco indicated in the contract). In the author's opinion the lack of these kinds of regulations resulted in two important functions/objectives of contracts: risk-sharing and the reduction of risk (especially for farmers) were not fulfilled in an optimal way. Farmers, despite having contracts usually with more than one processor, still take a significantly bigger risk than processors. In the opinions of respondents, the highest risk was related to the quantity of purchases by processors (buyers bought smaller amounts of raw tobacco)[34]. It should be noted that

[32] This is an official global policy of the world largest tobacco companies (a social responsibility strategy). In that way tobacco companies want to improve their image.

[33] In case of natural disasters, farmer's responsibility for a lack of delivery is excluded.

[34] Between 2010 and 2012 all of these groups accused processors of breaking rules under contracts (and vice versa). Only one farmer filed a lawsuit against a processor. Respondents said that a refuse of purchase from the farmer or not signing a contract for next season are the most common sanctions used by processors (for example when a controller detects banned pesticides on the tobacco farm).

TPGs were not supported by legal advisers when running contract negotiations with tobacco processors.

Farmers were also formally obliged to provide other additional services under contracts (especially with Phillip Morris and Universal companies; see Table 4). In return, tobacco producers got free help from agronoms during the tobacco growing period. Processors organised workshops for farmers where highly qualified experts presented new methods of tobacco farming. They also provided protective clothes to be used during work on farms. Processors, however, did not provide any financial support/services for farmers under contract such as loans. Only in the case of one group did the possibility to get a pre-payment from the processor appear.

Table 4. Other services delivered to contract leaf growers (number of answers)

Services	Number of answers (survey sample = 4)	
	YES	NO
Free educational trainings for tobacco farmers (methods of tobacco cultivations)	4	0
Free materials for tobacco growers	4	0
Free tobacco seeds	4	0
Free help from agronoms	4	0
Sale of chemicals for tobacco farmers	4	0
Financial support for tobacco farmers, e.g. loans	0	4
Financial support for tobacco farmers, e.g. pre-payment for delivery	1	3

Source: own study.

One of the main aims of setting up a TPG is the reduction of individual farmers' transaction costs related to contracts with processors. Table 5 shows transaction costs (TCs) identified due to the survey and covering contractual relations between tobacco growers, producers' groups and first processors. Analysing them, even without any attempt to measure them, one can claim that individual TCs were reduced thanks to membership in TPGs. Farmers paid lower costs of contract negotiations, however these costs were included in membership fees (indirect costs)[35]. Farmers also covered the costs of broken/unfulfilled conditions of contracts. In the author's opinion some of them could have been undertaken by TPGs. It should be also emphasised that contracts with tobacco farmers caused the appearance of transaction costs, which would probably be higher if

[35] Costs related to transportation or tobacco storage were not reduced, which was caused by the fact that these groups acted only as marketing organisations. All costs related to farms' investments in specific asset, transportation delivery locations, introduction of good agricultural practices in tobacco farming etc. were paid individually.

Table 5. The identification of transaction costs related to raw tobacco contracts

CONTRACT LEAF GROWERS	TOBACCO AGRICULTURE PRODUCER GROUPS	"FIRST PROCESSOR"
– Membership fee in tobacco agricultural producers' group, – Costs relating to adoption of good practises in agriculture (e.g. Philip Morris – the Programme of Good Agricultural Practise), – Storage if the "first processor" does not buy raw tobacco	– Contract negotiations with "first processors" – ex ante costs, – Realization/execution of contracts (e.g. payments between first processor and tobacco farmers), – Re-negotiation of contracts or costs of legal services – ex post costs, – Costs related to information seeking on tobacco market, changes in Polish or European regulations	– Tobacco contract negotiations, – Tobacco seeds (distributed for free among farmers), – Salaries of agronoms who cooperate with tobacco farmers, – Monitoring costs of tobacco cultivation, – Costs related to arrange delivery points, – Late delivery fees or other problems with contract leaf growers, – Introduction or monitoring of good practises in agriculture, – Costs related to workshops, brochures, etc. for contract leaf growers

Source: own study.

they were contracts to be negotiated with individual farmers. One can say that thanks to contracts both parties are able to lower transaction costs and risks[36], which suggests that an integrated profit may be achieved.

CONCLUSIONS

Results of the empirical survey can be interpreted as follows:

– Existing contracts between the tobacco industry and Polish tobacco TPGs or tobacco growers can be categorised as production contracts in agriculture. Contracts with tobacco farmers include standard provisions, such as: price, quantity, quality, type of tobacco and also regulations related to methods of cultivation, tobacco seeds and chemicals requirements, monitoring of the cultivation system in farms, the safety and health of workers/farmers on tobacco farms, employment of children or the access to farms for corporate consultants;

[36] A further study on risk sharing between all parties of contracts should be conducted. Preliminary results show that farmers still take more risk than their processors.

– The income risk of TPGs members (tobacco farmers) was not significantly lowered despite the fact that tobacco TPGs signed contracts with their purchasers. This unfavourable situation for tobacco growers is caused by the following factors: contracts are signed for one season only; they do not enforce all commitments in contracts and they do not provide financial sanctions, neither for farmers nor for tobacco companies;
– The membership of tobacco farmers in TPGs reduces individual transaction costs of contracts. Therefore, one can state that quasi-hierarchical structures in the tobacco sector improve efficiency of the member's farms;
– Tobacco producer's groups function as marketing groups, which is the simplest form of horizontal integration despite the fact that tobacco farmers are the most integrated group in Polish agriculture. This also means that they do not enter into the next stage of agribusiness and do not become tobacco manufacturers[37];
– The negotiation power of tobacco farmers was improved by strong cooperation between TPGs in Poland. Certain factors can be identified which have a strong negative impact on negotiation results. These are: the oversupply of tobacco leaves in Poland, imports of tobacco leaves, an oligopolistic structure of tobacco industry in Poland[38], domestic and European regulations related to the tobacco trade.

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[37] Due to very high costs of entry into the tobacco industry and due to the structure of this sector which is divided between few global players (global companies), it is unlikely that tobacco producer's groups can set up their own companies. In the future these entities/groups can try to integrate their own resources for common tasks like transportation or storing. That is why TPGs remain marketing groups. Considering possible directions of vertical integration in this sector they may lead to reverse vertical integration where tobacco companies take over the function of cultivation of raw tobacco.

[38] As well as in other parts of the world. In 2010 the three leading global tobacco companies were: Philip Morris International (market share outside the United States was 16%; without Chinese market – 28%), China National Tobacco Corporation and Japan Tobacco [http://www.reportlinker.com].

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WSPÓŁPRACA GRUP PRODUCENTÓW TYTONIU Z PRZETWÓRCAMI TYTONIOWYMI W POLSCE. PRZYKŁAD KONTRAKTOWANIA

Streszczenie. Głównym celem artykułu jest analiza procesu kontraktacji wśród grup producentów tytoniu w Polsce w sezonach 2010/2011, 2011/2012 i 2012/2013. Przyjęta hipoteza brzmi integracja pozioma (grupy producenckie) oraz pionowa (kontraktacja) przyczyniają się do zmniejszenie ryzyka i kosztów transakcyjnych oraz wzmocnienia pozycji negocjacyjnej polskich plantatorów tytoniu. Dla jej weryfikacji przeprowadzono między styczniem i majem 2013 roku badania ankietowe wśród czterech grup producentów tytoniu w Polsce. Tło teoretyczne dla przeprowadzonych badań stanowiła nowa ekonomia instytucjonalna. Wyniki empiryczne pozwalają wnioskować, że dzięki kontraktacji zmniejsza się ryzyko dochodowe plantatorów (członków grup producenckich), choć w przypadku kontraktów z pierwszymi przetwórcami nie tak znacząco. Jest to spowodowane m.in. tym, że kontrakty zawierane są tylko na jeden sezon produkcyjny, a także brakiem egzekwowania wszystkich postanowień zawartych w umowach oraz brakiem sankcji finansowych zarówno dla odbiorców/pierwszych przetwórców, jak i rolników. Umowy kontraktacji między przemysłem tytoniowym a rolnikami mogą być zakwalifikowane jako kontrakty produkcyjne. Ponadto indywidualne koszty transakcyjne plantatorów tytoniu ulegają zmniejszeniu dzięki kooperacji w ramach grup producenckich. Dlatego można stwierdzić, że te quasi-hierarchiczne struktury w sektorze tytoniowym poprawiają efektywność członkowskich gospodarstw rolnych.

Słowa kluczowe: kontrakty, koszty transakcyjne, nowa ekonomia instytucjonalna, integracja pionowa w agrobiznesie, grupy producentów rolnych, przetwórcy tytoniu

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STATE AND PROSPECTS OF MILK PROCESSING BRANCH IN LVIV REGION OF UKRAINE[1]

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Abstract. The results of milk processing branch in Lviv region of Ukraine under conditions of market and competitiveness are presented. The role of region's milk processing branch as well as the milk processing enterprises quantity dynamic and milk and dairy products production and consumption dynamic in region and its factors are shown. The regional products and producers milk and dairy products market structure as well as exporting-importing and innovative activity in milk processing branch are analyzed. The structure of milk processing enterprises raw materials base and possible perspective of regional milk processing branch are given.

Key words: milk, processing, production, consumption, market, Lviv region of Ukraine

INTRODUCTION

Milk is a unique product which has not been yet in the word synthesized in the production process. None other food product can compete with it by the composition [Savytska 1999]. Man gets 40% of energy and protein supply from milk and dairy products [Dobrianskyi, Talko and Ivanov 2004]. American scientist K. Ekls wrote: "Milk can transform any product, but there is no such a product which is able to transform milk" [Kolot and Korovnikov 2004].

Taking into account the fact that dairy products are among the principal ones as food and additional component in production of different food products, dairy industry is traditionally considered one of the leading in the structure of food industry of Ukraine. Under modern conditions of market and competition relations, development of the branch has got many peculiarities and problems. To achieve the aim of the research it was necessary

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to study dynamics formation of milk processing branch in the region within the frame of general state tendencies, revealing of regional peculiarities of the process as well as its resource and investment supply, peculiarities of formation of raw materials base in the given region. Dynamics of export and import transactions of products in milk processing branch and level of innovation and efficiency of the branch have been analyzed in the region.

Great importance of milk processing development, its intensive supply for increase of population's well-being make research of different aspects of the problem a significant and vital one. That's why it attracts attention of many researches in different countries. Thus, according to Baran [2013], integration with the European Union and ongoing liberalization of international trade has been gradually leading to globalization of the diary market and expansion of the competition area. Speaking about the role of investments in the development of the branch and raw materials base Wysokiński, Dziwulski and Jarzębowski mentioned that investment activity of milk farms depends on the scale of production. Quality of the product is also of great importance. In accordance with Kowalska [2011], fine quality of food products and the process of production are the main requirements of the customers. Nowadays improvement of innovation base is one of the principle factors of the branch development: "Innovations positively affect company's activities in many ways… Innovations contributed to an increase in sales and share of current business activity or they enabled entry into new market segments or they contributed to an increased flexibility of production processes…" [Zalewski and Goralski 2011]. According to Cieslewich [2008], the development of innovative activities is considered as a basic factor of the improvement in competitiveness of food industry.

Analysis of data of the presented sources grounds a hypothesis that enterprises of milk processing branch in Lviv region will continue their further development, first of all by means of their domestic competitive capacity and extension of products assortment, basing on increase of its innovative level and because of increasing attraction of foreign investment into equipment and technology.

MATERIAL AND METHODS

Principal methods having been used in the research are monographic (used in study and characterizing of separate milk processing enterprises), economic and statistical (for calculation of indicators of development dynamics of certain phenomena and processes and influence of the corresponding factors on them), peer review and scientific forecast (for forecasting the possible prospects of the branch development). Graphic method is used for better presentation of the received results of the research. Data of statistic directories, yearbooks as well as materials of the very milk processing enterprises of the region were used for the investigation. Research has been made basing on the statistics from milk processing enterprises in Ukraine paying specific attention to Lviv region as one traditionally specifying in milk production because of favorable conditions for the development of the industry. According to Zhelezniak [2007], Lviv region stands out of other administrative regions for "highly favorable conditions for further development of milk processing enterprises and is situated in the area of high competitive potential".

Resulting from the fact that time saving is a criterion of production efficiency, achievement of the highest results at the lowest expenditure of public labor [Kantsevych 2010], determination of production efficiency can be calculated using formula of calculation of functional efficiency (E_f) of production proposed by Priadko [2003] and which is developed and fulfilled in ternary system coefficient of production:

$$E_f \left\{ \begin{array}{l} = \dfrac{Q}{Z \times L} \\ = \dfrac{Q}{m_c} \\ = \dfrac{Q}{a \times F} \end{array} \right.$$

where: Q – total amount of production;
Z – salary of one worker;
L – number of workers at production sector;
a – specific coefficient of depreciation loss;
F – average cost of basic production assets per year;
R – amount of other expenses;
m_c – material costs.

He also proposes to calculate coefficient of integral efficiency (E_i) basing on functional efficiency:

$$E_i = \frac{Q}{Z \times L + m_c + a \times F + R}$$

To investigate impact of separate factors on the efficiency of milk processing enterprises of Lviv region we use linear multiple regression. Regression model describes real existing phenomena of correlation relations. According to their characteristics, correlation relations are quite complex and different ones. Taking into account great number of the factors, it is impossible to determine and follow all of the relations. Practically, linear models are mostly used. Such approach has a hint of convention, because it has similar character of relations with all factors. But application of too complex functions causes increase of parameters number and thus, decreases calculation accuracy and complicates results interpretation.

To make the calculation more convenient and simple all variable models (dependent and independent) are used in logarithms. Consequently, it allows minimization of mistake at calculation, because of great number of factor variables. It does not mean change of economic methods of investigation to mathematic ones, but improvement of mathematic apparatus and extension of mathematic base of economic methods [Vantukh 2006].

RESULTS

During the Soviet period formation of Ukrainian milk processing branch by means of initial accumulation of current assets required for its further development improved branch structure of food industry. Most of milk processing enterprises had established their production capacity till 90s of the 20th century. Focus on the great raw materials base, consumption demand provided by plan indicators and good income of population, potential markets in Soviet republics were the peculiarities of the process. After Ukraine had got its independence, existing production and branch relations were broken. That's why production capacity of milk processing enterprises at the end of 80s – beginning of 90s was not fully used. Considering outdated technologies and non-effective macroeconomic state policy, private capital bypassed dairy industry, resulting in terrible condition of its enterprises which got even worse during the period of reforms of property in agrarian sector.

Vital stage of crucial technological changes in the development of milk processing enterprises started after 1996 when joint-stock companies (JSK) had been established on the base of the existing enterprises. Choice of such a kind of property caused increase interest of workers in milk processing enterprises et the results of their job.

In the period of transformation processes land and property of Lviv region was greatly divided into shares preventing effective development of AIC enterprises, including ones of dairy industry. But border location, many health resorts, recreational and natural resources, tourism potential of the region, increase of population income, made positive impact on functioning of milk processing enterprises. The factors favored broadening of milk and dairy products demand and also caused raise of market competition. As a result, number of milk processing enterprises in Lviv region decreased from 38 in 2000 to 17 in 2011, but total amount of their products sale increased almost 8 times in the same period.

In 2012 only 10 milk processing enterprises carried their activity in Lviv region. In January-February 2012 they bought 103.5 thousand tons of milk that is by 4.6% more in comparison to corresponding period of the previous year.

Lately dairy products market in Ukraine developed in the direction of its broadening. Similar tendencies were also specific for Lviv region where one could see direct dependence between decrease of number of enterprises and increase of production value and, correspondently, sale of dairy products (Fig. 1).

The biggest part of regional market of dairy products (almost 43%) was occupied by enterprises producing large assortment of dairy products of high quality and sell it at high price (JSC "Lviv city milk plant", Closed company "Halychyna", Affiliate of JSK "Prometei", "Lviv milk factory"). The mentioned enterprises are principal competitors at local market but company "Halychyna" is a leader among them. Its share at the market of dairy products makes 36.7% and continue to raise. Nowadays the company "Halychyna" is one of the leading supplier of dairy products not only in Lviv region but also other Western regions of Ukraine as well as one of the principal producers of dairy products in Ukraine because of large assortment (casein, dry defatted milk, butter, cheese, milk, kefir, sour cream, yogurt) and new products (buttermilk, desserts, four kinds of energy drinks "12 vitamins", fruit yogurts, including ones of children).

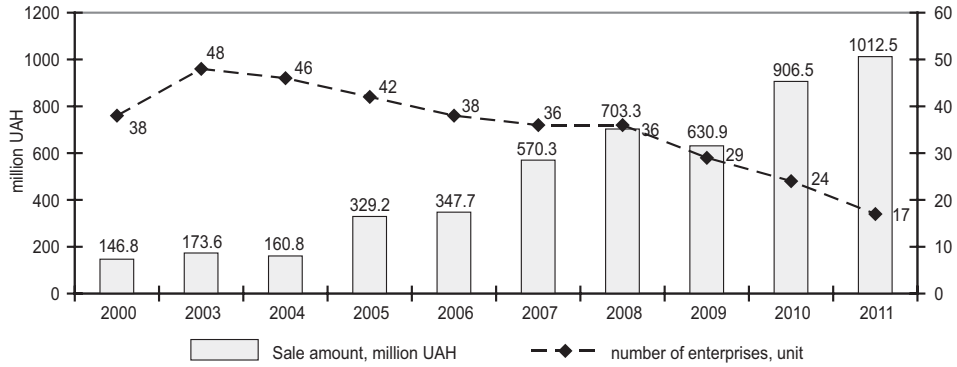

Fig. 1. Dynamics of number of milk processing enterprises in Lviv region and amount of dairy products sold by them

Source: Office of Statistics in Lviv region.

Nearly 17% of the market is occupied by smaller local enterprises, which produce both milk products and cheese of not high quality and sell it at moderate price. They are JSC "Komarno cheese plant", JSC "Zhydachiv cheese plant", JSC "Rava-Ruska butter plant", JSC "Milk plant of Sambir". Milk processing enterprises specifying in cheese production, e.g. JSC "Busk milk plant", locally is close to milk processing enterprises. Their principal product is milk and cheese and they occupy nearly 1% of the market. Milk processing enterprises specializing in dry dairy products occupy nearly 3% of the market. Special attention should be paid to activity of JSC "Brody plant of dry defatted milk" occupying 2.3% of dairy product market in Lviv region (Table 1).

Rate of growth of dairy products sale indexes in the region does not have distinct tendencies, but fluctuates from increase to decrease. Deposit of milk processing enterprises into the development of food industry of Lviv region also is not clear one – during the investigated period it fluctuated between 11–15% (Table 2).

During the last years one could witness a tendency of sufficient increase of production amount of milk and dairy products both in the whole country and in Lviv region. In particular, amount of dairy products has considerably increased, i.e. kefir and yogurts, but growth of sour cream and milk production is not so great one (Table 3).

In contrast to the described situation production of cream butter has decreased because of appearance of substitutes of plant oils at domestic market. Similar tendency characterizes cheese products and can be explained by increase of level of self-provision of population with products of animal origin because of transfer of greater share of milk production in the sector of individual farms.

Production of dairy products – is the very economic activity that dynamically develops and is opened for assortment broadening and development of innovative dairy products providing main increase at the market. Diversification level and financial capacity of dairy industry enterprises, their partnership relations and some other factors should provide functional integrity. Positive rate of dairy industry increase does not correspond to comparatively low rate of population solvency causing sale problems and decrease of demand on dairy products and its change in separate segments of the market – consumer,

Table 1. Milk processing enterprises of dairy industry in Lviv region in 2011

Enterprises	Products
JSC "Milk plant of Sambir"	butter; cheese; whole milk products
JSC "Lviv city milk plant"	whole milk products; defatted products; butter; cheese; casein
JSC "Brody plant of dry defatted milk"	dry defatted milk; animal butter; milk 2.5%; sour cream 20%; cheese 95%, defatted cheese; kefir; ice cream; defatted products
JSC "Drohobych milk plant"	whole milk products; animal butter; fat cheese
JSC "Rava-Ruska butter plant"	whole milk; butter; cheese
Joint Ukrainian-German enterprise "Skomekc"	liquid processed milk; cream butter fat up to 85%; dairy products; casein and caseinates
JSC "Komarno cheese plant"	cheese in assortment; butter
Private closed company "Halychyna"	liquid processed milk; dry milk and cream; cream butter fat up to 85%; dairy products; spreads and fat mixtures
Affiliate of JSK "Prometei", "Lviv milk factory"	products of whole milk, defatted
Turka cheese plant	whole milk; butter
JSC "Yavoriv milk plant"	whole milk; animal butter
JSC "Mykolaiv milk plant "	whole milk; animal butter
JSC "Busk milk plant"	whole milk; cheese; animal butter
JSC "Zoloviv cheese plant"	production of dairy products
JSC "Horodok milk plant"	whole milk; butter; cheese
Join Venture (Ukrainian-German) "Svitanok"	dairy products
JSC "Zhydachiv cheese plant"	animal butter; dairy products; cheese

Source: Department of Statistics in Lviv region.

Table 2. Sale amount and indexes of industrial products at the enterprises of dairy products and ice cream in 2005–2011

Indicator	Year						
	2005	2006	2007	2008	2009	2010	2011
Amount of sold dairy products (million UAH)	329.2	374.7	570.3	703.3	630.9	906.5	1 012.5
Share of milk processing enterprises in food industry (%)	13.2	13.6	15.5	14.2	11.1	13.3	11.2
Indexes of dairy products sale	112.5	131.8	152.2	123.3	89.7	143.7	111.7

Source: Department of Statistics in Lviv region.

in most cases, is focused at cheaper products. It causes structural changes of supply at the market of milk and dairy products, i.e. decrease of amount of cheese production and practically does not change amount of butter production, at the same time increasing production of whole milk – liquid processed milk and dairy products (Table 4).

Level of satisfaction of population needs of dairy products is still very low in Lviv region (Table 5).

Table 3. Production of dairy products according to types of milk processing enterprises of Lviv region (ton)

Kind of product	Year										Rate of changes
	1990	1995	2000	2005	2006	2007	2008	2009	2010	2011	
Liquid processed milk	…	…	…	26 268	34 138	31 744	31 226	27 703	21 427	30 771	117.1
Cream fat more than 8%	1 700	300	0	788	634	554	226	98	63	…	–
Dry milk and cream	…	…	…	2 716	2 800	3 625	1 829	…	2 345	1 994	73.4
Cream butter fat up to 85%	…	…	…	5 555	5 085	2 301	2 340	2 477	3 158	2 422	43.6
including sweet cream butter	…	…	…	5 543	5 085	2 301	2 340	2 477	3 158	2 422	43.7
Fat cheese	5 000	1 400	1 200	3 926	2 854	2 442	1 221	832	589	365	9.3
including											
cheese	….	1 000	1 000	3 648	2 558	2 133	974	707	…	…	–
brine cheese	…	…	…	269	281	301	247	…	…	…	–
Fresh cheese non-fermented and cottage cheese	…	…	…	1 818	2 080	2 580	2 628	1 561	896	550	30.3
including											
sour cheese defatted	…	…	…	75	…	…	295	310	…	…	–
sour cheese fat	6 900	1 000	500	701	933	1 297	1 399	730	733	407	58.1
Dairy products	13 600	3 700	2 400	24 952	36 694	50 318	62 833	55 120	54 839	51 761	207.4
including											
kefir non-flavored, without fruits, nuts, cocoa and other fillings	…	…	…	8 147	12 909	17 319	23 519	24 017	22 627	22 336	274.2
Sour cream non-flavored, without fruits, nuts, cocoa and other fillings	34 100	57 00	2 800	11 505	14 071	17 107	19 563	17 759	17 400	13 742	119.4
Yogurt flavored or with fruits, nuts, cocoa or other fillings	…	…	…	4 407	8 556	13 274	15 347	11 634	11 495	13 435	304.8
Butter, drink of buttermilk	…	…	…	292	91	…	…	…	…	…	–
Ice cream and food ice	…	…	…	6 769	8 171	9 239	…	…	…	…	–
including											
ice cream of cream	10 100	3 800	6 200	1 299	1 302	…	…	…	…	…	–
sundae	…	…	…	4 569	5 262	5 404	…	…	…	…	–
spreads and fat mixtures	…	…	…	26	161	8 660	6 564	3 317	3 617	…	–
casein	…	…	…	400	226	259	205	…	41	…	–

Source: Department of Statistics in Lviv region.

Table 4. Production of main groups of dairy products per person in Lviv region in 2003–2011 (kg)

Kind of product	Year									Deviation (+/-)
	2003	2004	2005	2006	2007	2008	2009	2010	2011	
Liquid processed milk	5.5	7.5	10.2	13.3	12.4	12.2	10.9	8.5	12.2	6.7
Cream butter	0.7	1.6	2.2	2.0	0.9	0.9	1.0	1.3	0.9	0.2
Fresh cheese non-fermented and cottage cheese	0.4	0.6	0.7	0.8	1.0	1.0	0.6	0.4	0.2	–0.2
Fat cheese	1.0	1.4	1.5	1.1	1.0	0.5	0.3	0.2	0.1	–0.9
Dairy products	4.6	6.5	9.7	14.3	19.6	24.6	21.8	21.7	20.5	15.9

Source: Department of Statistics in Lviv region.

Table 5. Dynamics of production and consumption of milk and dairy products per person in Lviv region in 1990–2011

Indicator	Period																	Rate of changes
	1990–1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
Production of milk and dairy products per person (kg)	352.90	341.10	359.60	372.30	376.60	380.80	389.60	405.50	384.00	369.80	360.2	346.80	317.20	286.10	254.20	248.10	261.40	74.1
Consumption of milk and dairy products per person (kg)	300.40	262.80	255.20	216.00	273.00	274.10	261.80	278.80	268.80	265.3	258.30	265.00	250.50	233.90	218.20	210.50	207.60	69.1
Production per person (%)	85.10	77.00	70.90	58.00	72.50	71.90	67.20	68.70	70.00	71.7	71.70	76.40	78.90	81.70	85.80	84.80	79.40	93.3
Rational norm of consumption – 380 kg (%)	79.05	69.16	67.16	56.84	71.84	72.13	68.89	73.37	70.74	69.82	67.97	69.74	65.92	61.55	57.42	55.39	54.63	69.1

Source: Department of Statistics in Lviv region.

Considering the integration of milk processing enterprises and milk processing complex in general, it is advisable to make calculation of indicator of integral efficiency of milk processing enterprises of Lviv region and its dependence on corresponding factors [Priadko 2003] – Table 6.

Table 6. Dependence of integral efficiency of milk processing enterprises of Lviv region on its separate factors in 2005–2011

Year	Integral efficiency Efficient variable y	Level of raw milk venality Factor variable x_1	Index of supply change Factor variable x_2	Grants from accumulated fund of VAT. Factor variable x_3	Index of demand change Factor variable x_4	Cow productivity Factor variable x_5
2005	108.0	51.1	94.4	1 037.8	97.4	3 587.0
2006	85.0	44.8	96.3	974.9	102.6	3 821.0
2007	121.0	60.0	91.5	1 607.0	94.5	3 816.0
2008	138.0	61.2	90.2	1 750.6	93.4	3 837.0
2009	93.0	61.1	88.8	1 668.9	93.3	3 873.0
2010	93.0	42.6	97.6	2 780.4	96.5	3 861.0
2011	85.0	41.4	105.4	3 200.0	98.6	3 927.0

Source: Author's own work.

Coefficients receive in the carried calculations determine the elasticity of integral efficiency to a certain factor. Econometric model of the dependency get the following form:

$$y = -3{,}733.51 + 26.90x_1 - 38.12x_2 + 0.44x_3 + 103.01x_4 - 1.23x_5$$

According to the given production function one can make the following conclusions:

- growth of the level of raw milk venality per one standard unit increases indicator of integral efficiency by 26.90 standard unit, because it will favor stow capacities of milk processing enterprises;
- change of supply index per one standard unit decreases indicator of integral efficiency by 38.12 standard unit, because its fluctuation during the investigated period has moved to the decrease, moreover, the given coefficient reflexes market reaction to surplus of dairy products; limitation of storing period is the only negative point;
- increase of grants from accumulated fund of VAT per one standard unit rises indicator of integral efficiency by 0.44 standard unit; the miserable impact proves the necessity of scientific disputes on usefulness of granting of certain kinds of agricultural products or finding any alternatives;

- growth of demand for dairy products per one standard unit increases indicator of integral efficiency by 103.01 standard unit. Thus, we make conclusion that increase on solvent demand is the principal force, which is able to move milk processing branch forward. Special attention should be paid to social problem of society development, favoring family formation, birth. Because the very young families make the base of demand for dairy products;
- growth of cow productivity per one standard unit decreases the integral efficiency by 1.23.

But increase of indicators of the all mentioned factors in total per one standard unit will cause fall of indicator of integral efficiency by 3,733.51 without considering other factors of impact.

Efficiency of milk processing enterprises activity depends not only on production of qualitative and modern dairy products, but also on ability to sell it. That's why now milk processing enterprises actively work in the direction of development and practical fulfillment of marketing strategies and price being its important element.

Estimation of the share of milk processing enterprises of Lviv region in production of domestic dairy products fluctuated during the investigated period in frame of 1–11%, depending on kind of product and determined their contribution to satisfaction of solvent demand at domestic market (Table 7).

Table 7. Share of Lviv region in production of certain kinds of dairy products in Ukraine in 2005–2011 (%)

Kind of product	Year							Deviation (+/-)
	2005	2006	2007	2008	2009	2010	2011	
Liquid processed milk	3.0	4.2	3.7	3.9	3.6	2.7	3.5	0.5
Fresh cheese non-fermented and cottage cheese	2.2	2.2	2.8	2.9	1.8	1.1	0.7	–1.5
Dairy products	5.0	7.0	9.5	11.8	11.2	11.4	10.9	5.9

Source: Department of Statistics in Lviv region.

Modern level of foreign investments into dairy industry correspond neither international investment abilities nor increasing needs of the branch because of too high risks, most of which are political ones. Thus, milk processing enterprises of Lviv region largely direct attracted capital at development of innovative kinds of dairy production while number of new introduced European technological processes of milk processing deepening is still small one. The only producer of dairy products having made such modernization is closed company "Halychyna". Technological equipment of the company is foreign one and bought in Poland, Holland and Switzerland.

The enterprise has doubled its production capacity as a result of the renovation and broadening of fixed assets. Before the reconstruction production capacity of the closed company "Halychyna", which is located at Radekhiv milk plant, allowed processing

of 300 tons of milk a day, but after reconstruction it increased up to 400 tons. Nowadays Radekhiv milk plant is able to produce nearly 200 tons of dairy products a day (Table 8).

Table 8. Introduction of technological processes and development of new kinds of products at enterprises producing dairy products and ice cream (units)

Kind of action	Year						
	2005	2006	2007	2008	2009	2010	2011
Introduction of new technological processes	–	–	2	–	–	–	–
among them of small wastes	–	–	2	–	–	–	–
Developed production of innovative kinds of products	–	–	12	4	5	5	8
Bought new technologies	–	–	–	–	–	–	–

Source: Department of Statistics in Lviv region.

Crucial technological reconstruction of equipment by plants-leaders of dairy industry happened in 1997–2000. Thus, we can affirm that after crisis of 1998 milk processing industry started a period of renovation and growth of production because of intensification of production processes. But the process happened at very low rate because of inaccessibility of new fixed assets caused by decrease of amount of attracted investment into fixed capital of the branch and strengthening of competition at local market of dairy products.

Existing level of technical supply of milk processing enterprises is adequate for production growth, while increase of the level of existing production capacity use is inadvisable because they considerably cover present potential of agriculture as to supply of raw milk. Such situation at raw material market results from irrational policy of processing enterprises of agro industrial complex during the period of property reformation. Being in power they deliberately lowered purchasing prices. As a result farmers considerably decreased amount of the agricultural products production and consequently it caused cutback of animal products at processing enterprises of AIC resulting in decrease of use of production capacity of the enterprises.

Taking into account the fact that effective development of milk processing industry depends on the state of milk animal breeding and after study of the indicators of the latest efficiency, one can understand the reason of inadequate level of use of production capacity of milk processing enterprises and strengthening of competition between them for raw material base. Raw materials i.e. its lack and low quality are the reason of both problems because during the researched period amount of raw milk production cut down by 30% in general and at separate categories of farms. The same situation concerns number of cow heads and their milk yield, i.e. number of herd of milking cows cut down by 30–35% whereas their yield averagely increased by 10–20%.

Making characteristics of existing redistribution according to amount of raw milk supply between different categories of farms, one can determine that peasants' farms were principal suppliers of milk processing enterprises during the investigated period. But dynamics of the share of small-scale sector proved decrease of amount of milk supplied by population farms by 21% in 2011 comparing to indicators of 2005, making 64% in general. In contrast, agricultural enterprises and other farming structures such as provision organizations and other intermediaries took back their position at the market. Such tendency could be explained by changes in the structure of rural population, where number of young people shortened every year, but number of older people increased. Thus, nowadays average age of rural population carrying private farming activity makes 55–62 years.

Imbalance between rates of increase of salary and price on milk and dairy products, taking important part in population meal ration, caused decrease of its share in consumption structure from 300.4 kg in 1990–1995 to 207.6 in 2011 making 54.63% of rational norm of consumption.

Filling of domestic market by domestic producers and small amount of import made positive influence on amount of milk and dairy products export. But prevalence of dairy products export over its import causes dependence of domestic milk processing enterprises on conjuncture of world market.

Analysis of the amount of foreign trade by separate milk products showed sufficient growth of cheese import and fall of its export. Besides, milk processing enterprises of Lviv region stopped export of cream butter and shortened export of milk and dairy products in 2011 comparing to 2005. In general export prevailed import of mentioned categories in 2011 (Table 9).

Table 9. Amount of foreign trade by certain kinds of dairy products in Lviv region in 2005–2011

Kind of product	Year							Rate of changes
	2005	2006	2007	2008	2009	2010	2011	
Import of certain kinds of dairy products (ton)								
Milk and dairy products	234.7	1 343.4	102.3	672.4	8.8	241.3	78.4	33.4
Cheese	3.5	10.1	0.5	47.0	35.5	91.3	137.9	394.0
Export of certain kinds of dairy products (ton)								
Milk and dairy products	404.0	272.0	223.0	65.5	28.0	32.0	352.0	87.1
Cream butter	120.0	58.8	23.7	47.5	0.5	–	–	–
Cheese	156.0	9.2	6.0	47.9	8.5	8.2	5.2	3.3

Source: Department of Statistics in Lviv region.

But attention should be paid to the fact that rate of its changes has been greatly slowed down proving certain difficulties in the development of milk processing enterprises of Lviv region. Problems of the enterprises of dairy industry are largely connected with underutilization of production capacity and worse qualitative parameters of dairy products in comparison to its foreign analogues.

CONCLUSIONS

During the investigated period structure of milk production in Ukraine and in Lviv region in particular, dynamically changed in the direction of increase of share of individual farms till 2007, afterwards one could witness tendency to revival the position of agricultural enterprises. Such situation gradually made positive impact on state of milk processing enterprises supplying them with raw materials. But even nowadays in Lviv region more than 90% of milk is produced on private farms, but large milk processing enterprises, mostly in the form of joint-stock companies spent large cost for raw materials transportation from far (even more than 500 km) territories, where milk is mostly produced by large agricultural enterprises and is better quality.

Milk market in Lviv region is formed under the influence of specific peculiarities of the region, main of them is border location, deep historical traditions of dairy industry, presence of great number of spa resorts, natural and recreation resources, great tourism potential. The factors have resulted in strengthening of competition and gradual decrease of the number of milk processing enterprises while their production increases at high rate.

During the last 20 years the highest rate of production characterizes such dairy products as kefir and yogurts, but rate of production increase of sour cream and milk is slower one. Production of cream butter and cheese products has double decreased. It is connected with the appearance of surrogates of vegetable oils at the market because the largest part of milk raw material production is concentrated at individual private farms.

Level of consumer satisfaction with dairy products in Lviv region is still very low one – from 80% in average in 1990–1995 it has decreased to 55% in 2011. In the region balance of foreign trade by dairy products of domestic production in general is positive one, but of certain kinds of products (such as cheese) as a result of negative tendencies in its production.

Milk processing enterprises of Lviv region suffer from the main problems such a as lack of qualitative milk raw materials, deficiency of investment and thus, slow rate of production innovation and low tempo of its increase. The consequences of the problems reveal in lower quality of products in comparison to foreign analogues.

Existing tendencies allow making forecast that in the nearest future share of dairy products produced by Lviv milk processing enterprises will increase by 15% at Ukrainian market. Share of liquid processed milk will stay on 3%; fresh and cottage cheese will continue to decrease because of strong competition. In the nearest future one will witness concentration of production of certain kinds of dairy products particularly in Lviv region.

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STAN I PERSPEKTYWY BRANŻY PRZETWÓRSTWA MLEKA W REGIONIE LWOWSKIM UKRAINY

Streszczenie. W artykule przedstawiono rezultaty badań nad stanem mleczarstwa w regionie lwowskim na Ukrainie w warunkach gospodarki rynkowo-konkurencyjnej. Pokazano zarówno rolę mleczarstwa w regionie, jak i dynamikę zmian ilościowych w liczbie przedsiębiorstw mleczarskich, a także dynamikę kształtowania się wielkości produkcji i konsumpcji mleka i wyrobów mlecznych w regionie oraz czynniki kształtujące zmiany. Analizowano regionalną produktową i producencką strukturę rynku mleka i wyrobów mlecznych według produkcji i producentów, a także działalność eksportowo-importową i innowacyjną w branży mleczarstwa. Podano strukturę bazy surowcowej przedsiębiorstw mleczarskich i możliwe perspektywy mleczarstwa regionu.

Słowa kluczowe: mleko, przetwórstwo, przedsiębiorstwo, produkcja, konsumpcja, rynek, region lwowski Ukrainy

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IMPACT OF THE ECONOMIC SIZE OF FARMS ON THE RANGE OF SUPPORT FROM THE EUROPEAN UNION COMMON AGRICULTURAL POLICY MEASURES

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Abstract. The purpose of this paper is an attempt to present the impact of the economic size of farms on the range of support measures of the European Union Common Agricultural Policy. Detailed analyzes were conducted on the example of direct payments and payments for areas with unfavourable farming conditions (LFA). Their amount was considered in relation to farm income. The analysis covered the year 2011. In relation to the total amount of the analyzed farms, CAP support the EU in 2011 was 43.7% of farm income. The basic elements of support from the EU CAP payments were direct payments and payments for less favoured areas. They created respectively 74.3% and 9.9% of the total support. The increasing impact of these measures on income is observed year by year.

Key words: level of support, the EU CAP measures, direct payments to agricultural land, LFA payments

INTRODUCTION

Polish accession to the European Union was accompanied both by significant economic and social changes regarding the conditions of production and agri-food trade, as well as new functioning patterns for institutions related to agriculture and rural areas. Changes concerned mainly the forms of support for agriculture due to setting the financial measures of Common Agricultural Policy (CAP) in Poland [Wieliczko 2012].

As a result of Polish accession to the European Union, the factors influencing the farmers' income have changed. Previous traditional factors such as physical sizes of production, outlays, agricultural prices' relations, became accompanied and supplemented by direct payments, payments for participants of agri-environmental programs as well as restructuring and modernizing programs [Kowalski 2011]. The role of these transfers in

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creating the incomes of farmers has exceedingly increased. It can be proved by the role of state intervention in supporting the particular branches of economy [Milewski 2005].

State intervention is especially significant in these parts of economy which are very exposed to the weaknesses of market mechanism. It distorts the information flow and leads to the incorrect allocation of resources from the macroeconomic point of view. Between these unreliabilities we can enumerate i.e.: transaction costs, external effects, partial market for public goods and lack of properly defined ownership rights. These lead to the rigid prices, labour costs, demand and supply within the food economy. The role of economic institutions is to correct these unreliabilities. Such activity is complimentary to the market mechanism [Czyżewski 2013].

Realizing programs of support for agriculture and rural development, Agency for Restructuring and Modernizing of Agriculture (ARMA), since the beginning of its functioning (1994) until 2011 has transferred to the beneficiaries the total amount of more than 154 billion PLN. Of this amount, 76 billion PLN was devoted to the measures of direct support. Only in 2011 ARMA paid 25.7 billion PLN and it means that the increase at the level of 25.3% was noted in comparison to the previous year [Informacja z realizacji zadań... 2012 and 2013].

MATERIAL AND METHODS

The objective of the presented paper is to present the influence of farms' economic size on the range of support with EU Common Agricultural Policy. The research material was based on the farms which kept the agricultural accountancy to cover the needs of Institute of Agricultural and Food Economics (IAFE). An analysis was concentrated on the year 2011. At the moment of preparing this work these data were the latest.

The basic economic category defined for the need of research process, was the level of farm income. The calculations were obtained using the method used within the European Farm Accountancy Data Network (FADN). It functions on the basis of Community Typology of Agricultural Holdings (CTAH). It is an unified system of farms classification within EU according to their economic size and agricultural type [Goraj and Mańko 2009]. The principles of farm classification were defined in details and first time formally implemented on the basis of Commission Decision no 78/463/EEC of April 7, 1978.

Until 2009 the CTAH method was based on the concept of Standard Gross Margin (SGM). For the classification of farms, European Size Unit (ESU) was used to express their economic size. ESU was an equivalent of Standard Gross Margin at the level of 1,200 EUR. Next year was crucial for the typology of farms because of the conditions that appeared within agriculture. One of these changes in the typology was the implementation of term of Standard Output (SO) instead of Standard Gross Margin [Współczynniki Standardowej... 2012]. The law regulation that implemented current CTAH was Commission Regulation no 1242/2008 of 8 December 2008 [Commission Regulation... 2008].

The unfavourable situation of farmers on the agricultural markets of European Union resulted in the verification of CTAH. The collected FADN data from the period 1989–2006 has shown the significant increase in the production costs per agricultural production unit value. The crucial cause of such problem was the pace of prices increase which was faster

for agricultural means of production than for agricultural products. This increase was also influenced by the modification of direct payments system, which has begun in 1993. Ceasing the direct subsidizing of prices and production (coupled) and transformation into the subsidizing without the reference to production (decoupled) caused the situation where the values of SGM indexes in several countries for particular products were negative. Because of that the SGM parameters were replaced by the SO parameters whose value cannot be placed beyond zero no matter what the condition is.

Economic size of farms is calculated basing on the sum of standard output gained from all the agricultural activities carried in particular farm and is expressed directly in euro. In order to count their values in the national currencies of EU Member States remaining outside the monetary and currency union, the official euro exchange rate published by the Eurostat for the reference year is used. Concerning the SO "2007", 1 EUR was equivalent to 3.90916 PLN. The area of observation of Polish FADN includes the farms of the minimum economic size of 4,000 EUR. They produce ca. 90% of Standard Production of Poland. The farms which are economically weaker are not included into the area of Polish FADN observation [Goraj and Osuch 2011].

The amount of farm support using EU sources has been analysed within this paper according to the farm size. The detailed analysis was devoted to the direct payments and payments for less favoured areas. Their area was analysed in relation to the farm income. The particular amounts were analysed in relation per 1 farm. The range of diversity was presented using percentage values.

RESULTS

The average farm area in 2011 was 19.3 ha of agricultural land. The analysed farms were diversified by the economic size. Within the research sample of Polish FADN of 11,082 farms small farms of economic size between 8 and 25 thousands EUR were dominating [Wyniki Standardowe... 2012]. Their share was at the level of 38.1%. Similarly numerous group was representing the medium small farms at the economic size between 25 and 50 EUR (27.7%). The medium big farms (50–100 thousand EUR) and very small (up to 8 thousand EUR) share was at the level of 15.9% and 10%. Relatively lowest share was gained by the big and very big farms (above 100 thousand EUR). These were both individual and with the legal status. Their share was at the level of 8.3% of general research population of Polish FADN. In relation to the investigated farms, there was a visible interdependence. Parallel to the increase of economic size of farm, the area of the agricultural land was increasing. The farms of economic size beyond 8 thousand EUR used on average 8.7 ha of agricultural land. In the group of farms at the economic size between 50 and 100 thousand EUR their area was on average 54.4 ha. The area of agricultural land is a traditional measure of farms' size, generally accepted within the literature [Zegar 2004]. It remains the basic criteria of its economic strength. The area of agricultural land determines creation of basic production and economic relations which is reflected by the income received by farm.

The division of groups carried out basing on the economic size let show the scope of diversification of income situation within analysed farms (Fig. 1).

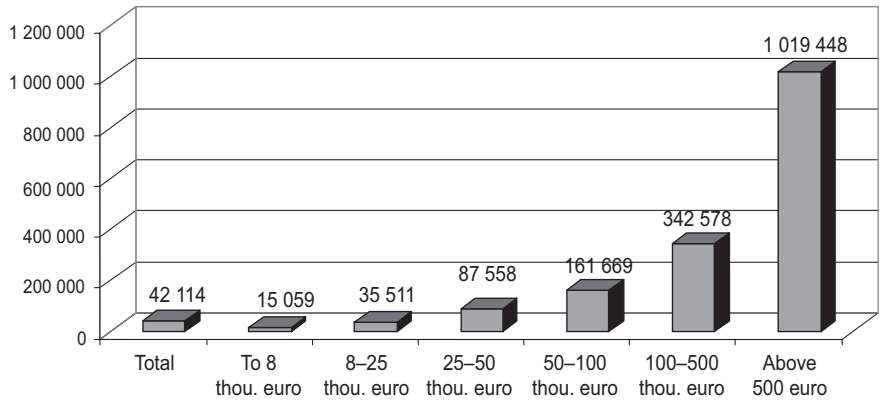

Fig. 1. The level of agricultural income by economic size in 2011 (PLN)

Source: Own calculation based on IAFE data.

The level of income from the farming activity in farms keeping the farm accountancy for the needs of IAFE in 2011 was on average at the level of 42,114 PLN which was 2,182 PLN per 1 hectare of agricultural land. In smallest farms within FADN (beyond 8 thousand EUR) that amount was at the level of 15,059 PLN, while in the bigger farms (50–100 thousand EUR) it was at the level of 161,669 PLN. As it was expected, the highest level of income has been characterising the biggest farms (above 500 thousand EUR).

The amount of direct payments within farms keeping the farm accountancy for the IAFE in 2011 was on average at the level of 13,683 PLN which was 708 PLN per 1 hectare of agricultural land. The share of such payments in total amount of CAP measures transferred to these farms was at the level of 74.3%. For comparison, in 2010 this share was at the level of 69.6%. The factor differing the amount of direct payments for analysed farms was the economic size of these farms (see Table 1).

Table 1. The size of the EU CAP support measures by the economic size of farms in 2011

Specification	The economic size of farms						
	Total	to 8 ESU	8–25 ESU	25–50 ESU	50–100 ESU	100–500 ESU	above 500 ESU
	In PLN per 1 farm						
Direct payments to agricultural land	13 683	6 151	11 319	22 764	38 669	97 948	697 594
LFA payments	1 828	1 044	1 805	2 860	3 991	5 489	11 158
Agri-environmental payments	1 721	922	1 720	2 910	5 615	11 705	32 229
Other subsidies to rural development	1 176	789	1 484	1 413	1 509	715	143
Total amount paid out in the framework of the EU CAP	18 408	8 906	16 328	29 947	49 784	115 857	741 124

Source: Own calculation based on IAFE data.

The amount from the direct payments transferred to farms below 8 thousand EUR was on average 6,151 PLN. Parallel to the increase of economic size of farms the amount of direct payments was also increasing. Within the group of farms of 50–100 thousand EUR economic size, the amount of direct payments was at the level of 38,669 PLN, while within the group of biggest farms (above 500 thousand EUR) – it was 697,594 PLN. This difference was resulted by the economic diversity of the agricultural land area.

Among the measures of Common Agricultural Policy, the support for agricultural activity on the less favoured area (LFA payments) has also a significant influence on the situation of farms. Its aim is to support the farms keeping their production on areas where agricultural activity finds problems because of the unfavourable natural conditions. LFA payments' role is to avoid both depopulation and losing agricultural character of rural areas [Hunek 2005].

LFA areas cover 53% of Polish agricultural land [Kutkowska 2006]. The system of LFA payments has been tied to the system of direct payments. In 2011 in Poland farmers made 728.2 thousand of applications for LFA payments concerning the total area of 7.12 mln ha. In 2012 the number of applications was 730.3 thousands [Informacja z realizacji... 2013].

The amount of LFA payments within farms keeping the accountancy for IAFE in 2011 was on average at the level of 1,827 PLN. Similar to the previous results, the economic size was the differing factor to this amount.

In smallest farms (up to 8 thousands EUR) the average LFA payment was at the level of 932 PLN. Parallel to the increase of economic size, the amount of LFA payment was also increasing. In farms of the economic size between 50 and 100 thousands EUR, the LFA payments were on average at the level of 5,615 PLN.

Besides the direct payment and LFA payment, the analysed farms were also granted with the agri-environmental payments and rural development payments. The amounts from these sources in 2011 were respectively at the level of 1,721 and 1,176 PLN. The highest amounts of agri-environmental payments were gained by the farms of the economic size above the 500 thousand EUR: 32,229 PLN. Concerning the rural development payments, the highest amount of money was addressed to the small farms of the economic size at the level of 8–25 thousand EUR. The average payment was at the level of 1,484 PLN per 1 farm. The significant share of the investments payment was also noted [Wysokiński, Dziwulski and Jarzębowski 2013]. The average payment in 2011 was at the level of 949 PLN.

The money transferred via the CAP mechanisms are not neutral to the level of incomes from the agricultural production [Lorencowicz and Cupiał 2013]. In relation to the analysed farms, the total amount of CAP support created 43.7% of agricultural profit. In 2010, this relation was at the level of 40.4% [Wyniki standardowe... 2011]. These results prove the thesis that current and long-term influence of the European funds to the economic and social situation of Polish agriculture, agricultural markets and rural areas is leading and crucial for the further development of agricultural sector in Poland [Czyżewski and Henisz-Matuszczak 2008].

Among the different forms of support, the most important influence on the income situation of farmers was noted by the direct payments and LFA payments (see Fig. 2)

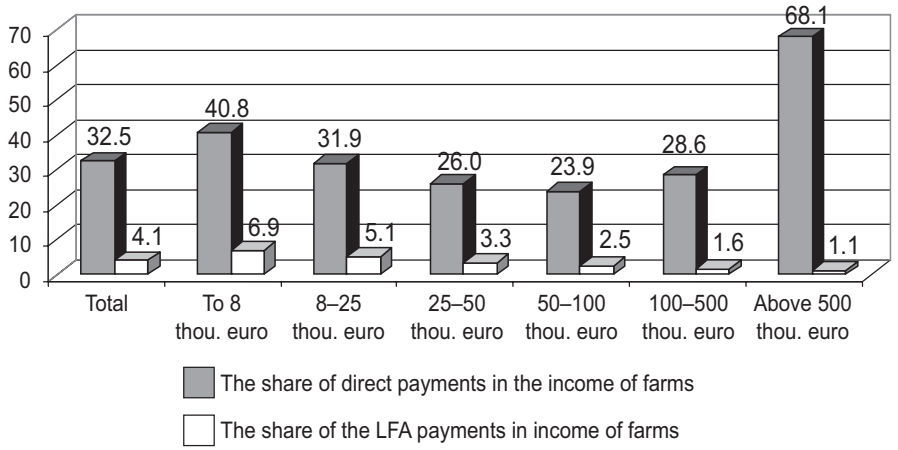

Fig. 2. The share of direct payments and payments in the LFA farm income from farming by economic size in 2011 (%)

Source: Own calculation based on data IAFE.

The widest influence of direct payments on the agricultural incomes was noted for farms above the 500 thousand EUR economic size. These payments were covering 68.1% of agricultural incomes. These farms were mostly cereal production oriented. In smallest farms (up to 8 thousands EUR economic size) the direct payments covered 40.8% of incomes. In farms between 8 and 25 thousand EUR this share was at the level of 31.9% and in farms between 50 and 100 thousand EUR economic size it was at the level of 23.9%.

The most significant share of LFA payments was noted for the smallest farms (up to 8 thousand EUR). The weakest influence of LFA payments on economic results was noted for the biggest farms (above 500 thousand EUR).

CONCLUSIONS

Summarizing the hitherto considerations, it can be stated that parallel to the accession to the European Union Polish agriculture has gained the significant support from the Common Agricultural Policy measures. It directly influences the farm incomes. In the analysed farms the average amount of support in 2011 was at the level of 18,408 PLN which was 43.7% of agricultural income. What is more, the influence of these resources on the income is increasing year by year. In 2010 this relation for FADN farms was at the level of 40.4%.

The basic elements of EU CAP suport were direct payments and LFA payments which created respectively 74.3% and 9.9% of total received support. The factor differing the amount of money transferred within the EU CAP measures was the area of agricultural land. Relating to the analysed farms, parallel to the increase of agricultural area, the amount of support (both direct payments and LFA payments) was also increasing.

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WPŁYW WIELKOŚCI EKONOMICZNEJ GOSPODARSTWA NA ZAKRES WSPARCIA ŚRODKAMI WSPÓLNEJ POLITYKI ROLNEJ UNII EUROPEJSKIEJ

Streszczenie. Celem niniejszego opracowania jest próba ukazania wpływu wielkości ekonomicznej gospodarstwa na zakres wsparcia środkami Wspólnej Polityki Rolnej UE. Szczegółowej analizie poddano płatności bezpośrednie i płatności dla obszarów o niekorzystnych warunkach gospodarowania (ONW). Ich wielkość rozpatrywano w relacji do dochodu z gospodarstwa rolniczego. Analizą objęto 2011 rok. W odniesieniu do analizowanych gospodarstw ogólna kwota wsparcia w ramach WPR UE w 2011 roku stanowiła 43,7% dochodu z gospodarstwa rolniczego. Podstawowymi elementami wsparcia ze środków WPR UE były płatności realizowane w ramach dopłat bezpośrednich i płatności dla obszarów o niekorzystnych warunkach gospodarowania. Stanowiły one odpowiednio 74,3% i 9,9% ogólnego wsparcia. Z roku na rok obserwuje się zwiększanie oddziaływania tych środków na dochody.

Słowa kluczowe: poziom wsparcia, środki WPR EU, płatności bezpośrednie do gruntów rolnych, płatności z tytułu ONW

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COMPREHENSIVE OVERVIEW OF THE POLISH-UKRAINIAN CROSS-BORDER COOPERATION

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Abstract. The article is dedicated to the comprehensive analysis of the cross-border cooperation between Polish and Ukrainian border regions, which are involved in euroregions, established on their basis. The analysis covers theoretical aspects, financial issues of the cross-border collaboration, as well as socio-economic aspects research of the investigated territories development. Authors' aim is to compare the principles and tendencies of territories development within cross-border Polish-Ukrainian regions in order to provide a comprehensive vision of the cross-border cooperation between Ukraine and Poland within Carpathian Euroregion and Euroregion Bug.

Key words: euroregions, cross-border cooperation projects, socio-economic analysis, Poland, Ukraine

INTRODUCTION

Interstate relations between Ukraine and Poland have very long and rich history, and have been developing on the local, regional and state levels. New era of them has started in year 1991 after Polish Republic was the first to recognize Ukrainian independence. But in terms of interregional cooperation the connection was officially set up in 1992, when Agreements on Friendly Relations and Cooperation[1] (May 5) and on Border Inspection

[1] Agreement between Ukraine and the Republic of Poland on Friendly Relations and Cooperation ratified by the law of Ukraine, No 2611-XII (2611–2612). Ratification date – 17.09.1992. Source: http://zakon4.rada.gov.ua/laws/show/616_172.

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Posts[2] (May 18) were signed, touching borderline issues. In 1993 the interstate relations were enforced, when the parliaments of both countries signed Agreement on Legal Regime of the Ukrainian-Polish State Border and Mutual Help in Border Issues[3] (January 1), and an Agreement about Interregional Cooperation[4] (May 24). Later on the legal basis started its development more actively and now includes around 40 legislative documents covering the border issues.

Ukraine and Poland, possessing their specifically advantageous geopolitical and geoeconomical potential, could have established a strong cross-border territory, benefiting both from the EU side and from being close to CIS markets. Thus, through creating euroregions the cross-border cooperation has become a key point for Ukrainian policy within its eurointegration strategy [Wspólna polsko-ukraińska… 2005]: 42% of experts surveyed consider euroregions to be the helping factor for the Ukrainian strategy to join the EU [Scharba 2009] and for the EU this kind of cooperation is an important element within the policy of strengthening its eastern borders. The boundary territories have always been peripheral, least-developed and characterized by inefficient farming, weakly-developed industry or infrastructure, irrational exploitation of natural resources, low investment rate, high levels of poverty and unemployment, and – as a result – active inter-regional migration of people.

At the present moment Poland is involved in several kinds of cross-border accords such as unions, associations, etc. and 16 basic euroregions[5]. Ukraine is involved in 10 euroregions[6] and two of them include Polish territories: Carpathian Euroregion (1993, Lvivska and Zakarpatska regions (Ukraine), Podkarpackie Voivodship (Poland)) and Bug (1995, Volynska region and 2 districts of Lvivska region (Ukraine), Lubelskie Voivodship (Poland). Those euroregions have certain achievements in cultural, economic, environmental, educational and other spheres. Even more, Carpathian euroregion is considered to be the most successful one, being the first which included Ukrainian border regions in cross-border cooperation on the officially recognized level.

It has been already a long time for the Polish-Ukrainian cross-border cooperation development within euroregions, and it shows practically valuable effectiveness of their existence, as well as the necessity to explore the experience obtained by those border regions. That's why the article is dedicated to the research of the present state and tendencies of the cross-border cooperation processes within euroregion structures, created between Poland and Ukraine, mainly focusing on the theoretical and financial cross-border collab-

[2] Agreement between Government of Ukraine and Government of Polish Republic on Border Inspection Posts, No 616_004 from 25.03.1993. Source: http://zakon4.rada.gov.ua/laws/show/616_004.

[3] Agreement on Legal Regime of the Ukrainian-Polish State Border and Mutual Help in Border Issues, No 616_208. Ratification date – 14.07.1993. Source: http://zakon4.rada.gov.ua/laws/show/616_208.

[4] Agreement about Interregional Cooperation, No 616_171 from 27.10.1993. Source: http://zakon4.rada.gov.ua/laws/show/616_171.

[5] Nysa, Carpathian, Sprewa-Nysa-Bóbr, Pro Europa Viadrina, Tatry, Bug, Pomerania, Glacensis, Niemen, Pradziad, Bałtyk, Śląsk Cieszyński, Silesia, Beskidy, Puszcza Białowieska, Euroregion Łyna-Ława.

[6] Bug, Black Sea Euroregion, Carpathian, Donbas, Dnister, Dnipro, Lower Danube, Upper Prut, Slobozhanshchyna, and Yaroslavna.

oration issues, as well as socio-economic aspects analysis of the territories involved. The task is to enlighten the general picture of cross-border cooperation of Ukraine and Poland, covering the issues of legal background, problems in financing the cross-border cooperation activities and current socio-economic indices, taken for the period of 2008–2011, problem key points and potentially strong sides to be developed in the future.

MATERIAL AND METHODS

Analyses, carried out in the paper, cover the period of 2008–2011, which became the very important time in the development of cooperation of both countries: Ukraine had received a push by the political Orange revolution and Poland has entered the EU. Research period and selection of indices were also determined by the availability of data from Polish and Ukrainian sides. Two Euroregions including Polish and Ukrainian territories: Carpathian Euroregion (1993) and Bug Euroregion (1995) are an object of complex investigation.

The data about the socio-economic aspects, theoretical and financial issues of the cross-border cooperation between Polish and Ukrainian border regions were taken from the official sources of the EU (CBC and ENPI program web-sites), of Poland (Central and Regional Statistical Offices) and Ukrainian ones (Main Statistical Department, relevant central state authorities – Ministry of Foreign Affairs of Ukraine, Supreme Council of Ukraine), etc.

The descriptive and comparative methods were used in the research, as well as the simple statistical method in order to analyse the problem from the economic point of view.

The article starts with the presentation of the basic theoretical aspects of the cross-border cooperation between Polish Republic and Ukraine and such form of cross-border cooperation development as euroregions is characterized. Later the main principles and problems of the cross-border collaboration involving Ukrainian and Polish border regions are enlightened. In the last part, the evaluation of socio-economic aspects of the cross-border cooperation between Poland and Ukraine within the Carpathian Euroregion and Bug Euroregion is done; finalizing and applicable conclusions are offered.

RESULTS AND DISCUSSION

Administrative-political determinants of the Ukrainian-Polish Cross-border Cooperation

There are no doubts about the need in further development and support of the cross-border cooperation programs and all kinds of cross-border collaboration forms (euroregions, cross-border agreements, bilateral agreements between regions and voivodships, partner agreements between city and village councils, focus groups, etc.). Mostly because the number of the spheres affected is quite wide as well as the range of the beneficiaries: local governments at all levels, entities and agencies nominated or created by the state

governors/local governments to provide public services, non-governmental non-profit organizations, chambers: economic, trade and crafts, universities, institutions conducting public education activities and research, cultural institutions, churches and religious associations, etc.[7].

Along with the euroregions Ukraine and Poland were involved into several new forms of cross-border cooperation, such as: "European Groupings of Territorial Cooperation", "Cross-border Partnerships", "Cross-border Clusters", "Cross-border Industrial Zones", "Cross-border Innovative Projects", etc. Thus, there was a Euroregion "Black sea" established as the European grouping of territorial cooperation with the participation of Odessa region of Ukraine. At the moment Ukrainian-Polish touristic and recreational cluster is being formed. Several relevant projects have been applied for receiving additional financing within the Cross-border Cooperation Program "Poland-Belarus-Ukraine" (2007––2013)[8]. There was also launched a "Lublin Ecoenergetic Cluster", becoming a cross-border one through involving Ukrainian partners – "Centre For Alternative and Renewal Energy Sources" and a subdivision of the joint enterprise "LLC ComEcoLviv" [Mikula and Matvyeyev 2011].

Poland has eastern neighbours which possess a great geopolitical and economic potential forming a promising business opportunity. They have historically tight relations with other Eastern countries and big territories offering capacious markets of consumers and people ready to travel for spending money abroad [Borko 2002]. More of that, border regions of all the post-USSR countries, bordering on Poland (these are: Ukraine, Russia and Belorussia) have always been peripheral, least-developed. They have insufficient agriculture development, under-developed industry and infrastructure, low investment rates, high levels of poverty and inter-regional migration of people because of enormously high rates of unemployment[9]. Thus, we may stress on the differences of the nature of the borderline role and understanding in Eastern Europe [Kennard 2004]. While the EU has been working over eliminating the physical and fiscal sense of borders for around 20 years already, for most Eastern European countries borders has always been in need for protection and as political instruments in order to influence the neighbour first of all economically. From the other hand borderline infrastructure has never been renovated properly and sometimes, as it is in case of Ukrainian-Russian political relations, had been made a physical/bureaucratic obstacle for cross-border communication of the average boundary regions' citizens.

The most productive cross-border cooperation on the eastern border of Poland, being the longest one belonging to one EU country, refers to Ukraine. The start of this process was given in 1995 by the establishment of the first in Eastern Europe euroregion named Bug. The comparison of the bilateral cross-border relations between Poland and Ukraine and between Poland and Belorussia or Russia shows much lower dynamics within the second ones. This may be explained not in the least expand by the political and legal

[7] http://www.interreg.gov.pl/20072013/EWT/transgraniczne.

[8] The Cross-border Cooperation Programme Poland-Belarus-Ukraine 2007-2013, under the European Neighbourhood and Partnership Instrument (ENPI). Source: http://www.pl-by-ua.eu/en,3,24 or http://www.cpe.gov.pl/pliki/127-pl-by-ua-eng-5b1-5d.pdf.

[9] Border Regions – http://exborealux.isd-network.org/border-regions.

difficulties between these countries. The other issue is that part from cooperation on the governmental or regional level, most cross-border activities are introduced and organized by local authorities[10].

At the moment Ukraine has the most developed interregional net of cooperation namely with its western neighbour – Polish Republic. Practically all regions of Ukraine and voivodships of Poland had established the agreements on cooperation – absolutely all 16 Polish voivodships have a partner region on Ukrainian territory. The biggest numbers of Ukrainian partners have Podkarpackie, Lublińskie, Łódzkie, Sielskie and Mazowieckie voivodships. As for Ukrainian side, the most active were Lvivska, Odeska, Ivano-Frankivska, Vinnytska and Volynska regions. And, should be noted, this process has a tendency to grow.

The legal basis of Polish-Ukrainian cooperation is built not only on the micro level. There are also international legal acts (e.g. Declaration on Regionalism in Europe, Nordic Agreement on cross-border cooperation between municipalities, the European Outline Convention on Trans frontier Cooperation between Territorial Communities or Authorities, the European Charter of Borderline and Cross-border Regions), inter-state bilateral agreements (examples were mentioned above), and national legislative acts covering the border issues[11].

As for the institutional component of the cross-border cooperation provision in Ukraine and Poland, we should mention two different levels: central state bodies and bilateral bodies. Thus, the following state structures work with the cross-border issues in Ukraine[12]: Ministry of Foreign Affairs, Ministry of Economic Development and Trade and Ministry of the Regional Development, Building and Utilities. From the Polish side we can name the following: Ministry of Interior, Ministry of the Regional Development and Ministry of Foreign Affairs.

Within the intergovernmental level there has been established an Ukrainian-Polish Intergovernmental Coordination Council, which is empowered to take decisions concerning the key interregional cooperation issues, it also defines the general directions and main principles of their development, offers recommendations to the relevant state bodies of Ukraine and Poland, elaborates mutual activity plans. There are also several commissions created within the Council, working with the border posts, border infrastructure, territory planning, cross-border cooperation issues[13]. Within the State Program of Cross-border Cooperation Development of Ukraine for the period of 2011–2015[14] a Joint

[10] Border Regions – http://exborealux.isd-network.org/border-regions.

[11] The law of Ukraine ‘‘On Cross-Border Cooperation” No 1861-IV from 24.06.2004, Law of Ukraine ‘‘On local self-government in Ukraine” No 280/97-DH from 21.05.1997, Law of Ukraine ‘‘On Local State Administrations” No 586-XIV from 09.04.1999, Law of Poland “On Municipality’s Self-government” Journal of Laws Year 2001 No 142 item.1591, Law of Poland “On Poviat’s Self-government” Journal of Laws Year from 2001 No 142 item 1592, Law of Poland “On Voivodship’s Self-government” Journal of Laws Year 2001 No 142 item 1590, etc.

[12] http://poland.mfa.gov.ua/ua/ukraine-pl/regions.

[13] http://poland.mfa.gov.ua/ua/ukraine-pl/regions.

[14] Cabinet of Ministers Decree on Approval of the the State Program of Crossborder Cooperation development for the period of 2011-2015, # 1088-2010-п from December 1, 2010. Source: http://zakon4.rada.gov.ua/laws/show/1088-2010-%D0%BF.

Commission for the Cross-border Cooperation Support was created for preparing decisions and recommendations concerning the state budget support of the approved cross-border cooperation projects[15].

Financial issues of the cross-border cooperation between Poland and Ukraine

Theoretically, according to the Law of Ukraine "About the Cross-border Cooperation", the size of the state budget financing directed for the state support of the cross-border cooperation is defined yearly within the Law of Ukraine "About the State Budget of Ukraine". This should be done for the certain period in accordance with the state cross--border cooperation programs, which are annually listed by the Ministry of Economic Development and confirmed by the Cabinet of Ministers (the government). However, it should be noted, that since the year 2004 till 2012 there were no financing foreseen in these law [Mikula and Zasadko 2012]. Some officials explain it with an inappropriate fulfilment of requirements in terms of financial maintenance or central authorities' experts didn't assume that those projects contained some cross-border element.

Financing of the bigger infrastructural projects involving Ukrainian border territories is received in form of the technical support coming from EU under the ENPI cross-border, inter-regional and regional programs. In recent years financial support of the cross-border cooperation projects has been maintained through the following programs: INTEREG, PHARE CBC, TACIS CBC, PHARE CREDO, MEDA, CARDS, LACE [Bil 2008], as well as civil cross-border initiatives may receive grant support from such international foundations as: Soros, Eurasia, Rockefeller, Charles Stewart-Mott, etc. There is also a financial assistance to Ukraine from the EU countries: it is provided by Sweden, the United Kingdom, Denmark, Germany, the Netherlands, the Slovak Republic and Poland. Poland supports Ukraine approximately with EUR 3–4 million per annum, in the areas of public administration reform, support for local government and economic reforms[16].

At the moment collaboration of Ukraine and Poland on cross-border issues benefits from the following CBC program within the European Neighbourhood and Partnership Instrument (ENPI)[17]: "Poland-Belarus-Ukraine"[5], total sum of which for the whole program in 2007–2013 is EUR 202,959 million, EUR 186,201 million of which is provided by the EC and the rest is provided by the projects participants' co-financing (which is, according to the program rules, 10% of the amount granted). The priority areas of financial support flows are: competitiveness of the border area, the life quality, networking and people-to--people collaboration. Thus, in 2009 environment improvement areas had a total funding of EUR 133.1 million or 37% of the total funding for the cross-border cooperation.

[15] The Cross-border Cooperation Programme Poland-Belarus-Ukraine 2007-2013, under the European Neighbourhood and Partnership Instrument (ENPI). Source: http://www.pl-by-ua.eu/en,3,24 or http://www.cpe.gov.pl/pliki/127-pl-by-ua-eng-5b1-5d.pdf.

[16] European Neighbourhood And Partnership Instrument – Ukraine: Country Strategy Paper (2007––2013).

[17] http://www.pl-by-ua.eu/en,3 The European Neighbourhood an Partnership Instrument (ENPI) or European Neighbourhood And Partnership Instrument – Ukraine: Country Strategy Paper (2007––2013).

Cooperation in the area of cultural and artistic projects had funding amounting to EUR 76.8 million that amounts 21% in total funding. It is worth to admit, that only 58.7% of the previous similar program funding, that was planned for the period of 2004–2006 were used (EUR 50,425.1 thousand). It may be explained by the lack of knowledge of the potential beneficiaries about the financial possibilities for their activities support, as well as by the low level of skills concerning meeting the program requirements of the application process. Still, almost 50% of the amount of money used, were directed for the border infrastructure improvement, 28.9% – for the cultural cooperation and 20.4% for environmental issues[18].

The Cross-border Cooperation Program Poland-Belarus-Ukraine 2007–2013[5] is not implemented smoothly mostly because of different levels of financial provision of Polish and Ukrainian sides and thus – much more active participation of the Polish side. This may be demonstrated by the fact that, for example, in the result of the first selection of the cross-border projects for the program financing, 18 of them were prepared by the Polish applicants and only 2 by Ukrainian[19]. There are several factors explaining such an unfavourable position of the Ukrainian participants, defined by the Ukrainian scientists-practitioners [Mikula and Zasadko 2012]:

- The biggest financial problem is connected with the system of money transfer within the program granting: this is usually made as a reimbursement of the project expenses. Bearing in mind that most cross-border initiatives in Ukraine are introduced by state bodies or institutions, which are financed within the state budget limits, one may assume that the mentioned money reimbursement mechanism is not applicable for Ukrainian realities;
- There is no possibility to involve private investors in the program projects because the rules set up by the Joint Technical Program Secretariat prohibit the profit organizations to apply or be the partners within such cross-border projects. This issue is worsened by the lack of knowledge/skills or even desire of the Ukrainian potential activists for the project implementation, financial management or for fundraising search and partners network development;
- There is no mechanism for financing the cross-border activities through bank loans in Ukraine[20] and until 2012 not all the city councils have been allowed to get foreign loans for infrastructure development projects from the international financial institutions. According to the Budget Code of Ukraine[21] the size and conditions of such loans should be confirmed by the Ministry of Finance of Ukraine, which is, by the way, doesn't bear any financial obligations in this case. Of course, it means one more "circle of bureaucracy";

[18] Border Regions – http://exborealux.isd-network.org/border-regions.

[19] The Crossborderer (інформаційний бюлетень) 1/2011. Source: http://pl-by-ua.eu/upload/pl/The%20Crossborderer%20No%201_2011.pdf.

[20] It should be noted that in Poland the banks offer loans for the individuals and organizations which apply for receiving the International and European granting that demands their own input. Of course, this is almost a 99% guaranteed loan for the bank, but still it's a good solution for increasing the number of crossborder projects applicants on the Polish territory.

[21] Budget Code of Ukraine, No 2456-VI from 08.07.2010. Source: http://zakon2.rada.gov.ua/laws/show/2456-17.

- The other sensitive point is losses caused by the exchange rate changes of euro, which is the currency of grant tranches and differences in fiscal EU and Ukrainian systems, that influences the mobility of the project transfers coming to the Ukrainian side. That's why in most cases project partners declare the Polish side to be main beneficiary and Ukrainian partners could only monitor or be involved in the project direct implementation [Borshch 2012];
- There is no complex and effective monitoring system for the projects being implemented on the territories of the participating countries, there is only general Program monitoring system which doesn't allow enlightening local weak point and problems to be eliminated within the Program adopted for the next period. This is enforced by the absence of the cross-border statistical information from the Ukrainian side what makes impossible to analyze the state of cross-border cooperation with Poland, work out any strategy or define the possible spheres needing the improvement.

Socio-economic aspects of the cross-border cooperation involving Polish and Ukrainian border regions

The Ukraine-Poland border area is about 100,000 square kilometres of land area and of 9 million inhabitants who live here. The borders are very complex and unique in geographical, historical and political terms. First, most of them are located in an area of Europe that is considered by many to be the geographical center of the continent. One of these regions, Zakarpatska, is the only region on the new eastern border of the EU that has borders with four EU states. The location of these territories has always given them some advantages in terms of the development of a variety of forms of cross-border communication (such as trade, technical and technological exchange, and cultural cooperation) [Powęska 2011]. These border regions have a very complicated geopolitical history. Additionally, should be pointed out that these lands have always been peripheral, least-developed areas characterized by inefficient, subsistence farming, under-developed industry and infrastructure, excessive exploitation of natural resources (particularly overharvesting of forests), low investment, high overall levels of poverty, high inter-regional migration of people, and high rates of unemployment[22].

The Polish-Ukrainian borderland comprises Lubelskie and Podkarpackie voivodships as well as Lvivska, Volynska and Zakarpatska regions (Table 1). They occupies 97,770 square km of area, of which the majority is in the Ukrainian part (over 56%). The voivodships bordering on Ukraine occupies 13.8% of Poland's area, and the mentioned regions constitute 9.1% of Ukraine's total area. The number of Ukraine's population is higher than Poland's. In 2008 the discussed Polish-Ukrainian borderland area is inhabited by more than 8.7 millions of population, of which 51% lived on the rural areas and 55% reside in the Ukrainian part. During research period, due to demographic changes this different decreased. An analysis of migration in the Polish-Ukrainian borderland in 2008 showed a negative net migration in all its regions except Volynska region. During next years a tendency change and only in Podkarpackie and Zakarpatska regions could

[22] Border Regions, http://exborealux.isd-network.org/border-regions.

Table 1. Main characteristic of the Polish-Ukrainian borderland

Description		Poland			Ukraine	
Territory (thousand sq. km)		42.97			54.80	
Part of the country (%)		13.80			9.10	
Voivodship/oblast		Lubelskie	Podkarpackie	Lvivska	Volynska	Zakarpatska
Population (thousand)	2008	2 161.83	1 784.57	2 552.90	1 036.20	1 243.40
	2011	2 171.86	2 128.69	2 541.73	1 038.55	1 250.52
Part of the state population (%)	2008	5.67	4.68	5.53	2.25	2.69
	2011	5.70	5.58	5.51	2.25	2.71
Percentage of population living in urban areas (%)	2008	46.50	40.90	60.61	51.41	37.15
	2011	46.47	41.37	60.81	51.90	37.20
International migration (people)	2008	–315.00	–772.00	–33.00	49.00	–357.00
	2011	–176.00	35.00	38.00	196.00	–70.00

Source: Central Statistical Office GUS – Poland and Main Statistical Department – Ukraine.

be observed negative net migration. In Lubelskie and Podkarpackie voivodships most on population lives on rural areas (56%). On the Ukrainian side 51% of inhabitants are the urban population and only in Zakarpatska region majority of habitant lives on rural areas (63%).

The number of economically active population in the Polish-Ukrainian borderland area equalled, in 2011, 4,106.30 thousand people, of which 50.8% came from the Ukrainian part and 49.2% form Polish part (Table 2). The higher unemployment registered level was observed in the Podkarpackie Voivodship (146.21 thousand of people) and the lowest in the Volynska region (12.7 thousand of people). When analysing the

Table 2. Labour market of the Polish-Ukrainian borderland

Voivodship/Oblast		Lubelskie	Podkarpackie	Lvivska	Volynska	Zakarpatska
Economically active population (thous. persons)	2008	1 080.00	951.00	1 087.20	441.40	553.20
	2011	1 080.00	941.00	1 104.20	440.40	540.70
Unemployment registered level (thous. persons)	2008	101.56	115.57	32.80	17.90	18.10
	2011	122.44	146.21	26.80	12.70	14.10
Registered unemployment rate (%)	2008	11.20	13.00	3.00	4.10	3.30
	2011	13.20	15.50	2.40	2.90	2.60
Share of the registered unemployed persons in the population in the working age (%)	2008	7.50	8.70	2.10	2.90	2.40
	2011	8.90	10.70	1.70	2.10	1.90

Source: Central Statistical Office GUS – Poland and Main Statistical Department – Ukraine.

registered unemployment rate and the share of the registered unemployed persons in the population in the working age, it is advised to focus on relatively higher levels of those indicators the rates of the respective countries. The higher rates was noticed in the Podkarpackie Voivodship and the lowest in Lvivska region.

Volynska region is inhabited by 2.26% (for 2011) of population of Ukraine and produces 1.34% of Ukrainian GDP. Gross domestic product per capita is less than average in Ukraine for 41%. In 2011 Volyn region took the 12th place in the competitiveness rates among other Ukrainian regions. Zakarpatska region is on the 17th place for population volume and on the 23rd for GDP production volume[23], which is 1.4%. Gross domestic product per capita is 59% from the average index in Ukraine. The region takes the 18th place in the competitiveness rates among other Ukrainian regions. Lviv region is 5th among other Ukrainian regions in terms of population volume and the 9th for the GDP volume, which is 3.9%. Gross regional product per capita is 82% from the average index in Ukraine. In the same time Lubelskie Voivodship is inhabited by 5.64% of population of Poland and produces 3.81% of Polish GDP. Podkarpackie Voivodship is on the 8th place in for population volume and on the 12th for GDP production volume[24], which is 3.7%. In both voivodships gross domestic product per capita is over 67% of than average in Poland (Fig. 1).

The whole The Polish-Ukrainian borderland was characterized by lower average wages and salaries than the average of the respective countries. The average wages and salaries varied from 75.8% in Volyn region up to 89.85% in Lubelskie Voivodship. Also it can be noticed that the average wages and salaries in Ukraine are 3 times lower than on Polish side.

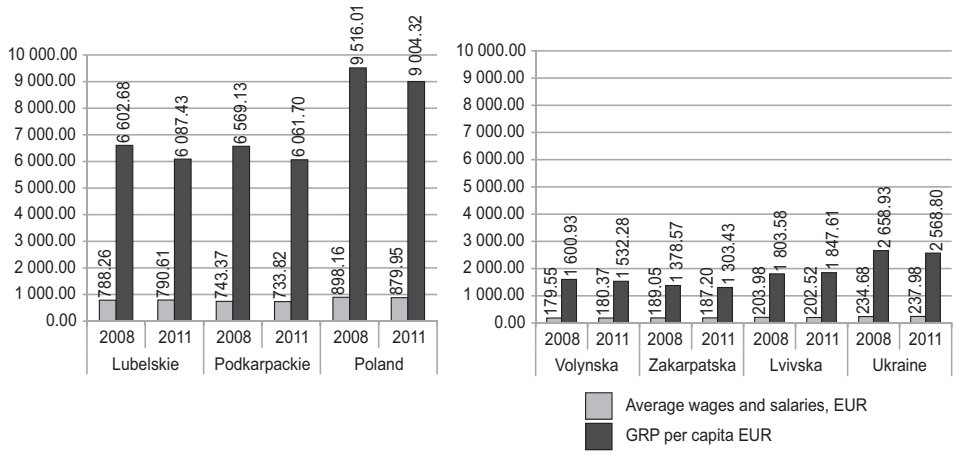

Fig. 1. Economic indicators of the Polish-Ukrainian borderland

Source: Central Statistical Office GUS – Poland and Main Statistical Department – Ukraine.

[23] Within 25 regions in Ukraine.

[24] Within 16 voivodships in Poland.

The Lubelskie and Podkarpackie voivodships of Poland bordering on Ukraine occupy 13.8% of Poland's area, and the regions, comprising the Polish-Ukrainian borderland (Lviv, Volyn and Zakarpattia regions), constitute 9.10% of Ukraine's total area. The majority of the Polish and Ukrainian administrative units' territories involved in cross-border cooperation between these two countries is in the Ukrainian part (over 56%). The mentioned area is inhabited by 9 million of population, of which 55% live on the Ukrainian part of cross-border territory [Polish-Slovakian-Ukrainian Borderland Rzeszów 2009]. Even first-glance analysis of economic interest of the researched countries shows a great potential in mutual investments (Table 3). Thus we can see, that Ukrainian investors work more eagerly with their Russian partners (Russia is the biggest geographical neighbour of Ukraine).

Table 3. Direct international investment between Poland and Ukraine

Volume of direct investment	As of 01.01.2009		As of 31.12.2011	
	mln USD	in % to the total	mln USD	in % to the total
Poland → Ukraine	694.7	1.9	875.5	1.8
Ukraine → Poland	46.9	0.8	48.2	0.7

Sources: http://ukrstat.org/en/operativ/operativ2008/zd/izu/izu_e/izu1208_e.htm, http://ukrstat.org/en/operativ/operativ2011/zd/izu/izu_e/izu0411_e.htm.

The main barrier of trade with Ukraine is too limited and underdeveloped border's infrastructure. Insufficient number of border crossings is in efficiently in handle border traffic. The current system of trade, which is dominated by low-value and frequent shopping in the regions along the border, cause a long queue which may discourage further purchases and cooperation [Boiko and Gazizullin 2011, Powęska 2011].

CONCLUSIONS

As a conclusion to the research material presented authors may point out several crucial differences in the cross-border cooperation development on Polish and Ukrainian territories, involved in the same cross-border accords:

- Both partner sides have different background conditions for the participating in the joint cross-border projects within The Cross-border Cooperation Program Poland-Belarus-Ukraine 2007–2013: starting from the awareness of the cross-border cooperation possibilities, program financing opportunities, the ability to prepare the project application and finishing with the chances to draw additional financial support for fulfilment of the "10% of own contribution" Program requirement;
- Socio-economic: Polish and Ukrainian territories, involved in the cross-border collaboration initially had different levels of socio-economic development, as well as they are benefiting from this collaboration differently now. Quite low level of socio-economic development of the territories involved in the cross-border cooperation from the Ukrainian side comparing to the Polish territories as well as to the general national level inside Ukraine;

- Central state authorities of Ukraine underestimate the cross-border cooperation potential for the regional development and citizens' life level improvement, having the limited strategic vision of the tasks and perspectives of the cross-border cooperation development at the state and regional levels;
- Local authorities in Ukraine should have the same level of freedom in implementing international projects and involving external co-financing as they do in Poland; Polish experience of bank loans for international projects co-financing would have been helpful;
- There is a lack of experience (will) of cross-border regions development as well as in mutual planning of the cross-border activities by the central and local state authorities of Ukraine;
- Low level of Ukrainian civil society actors involvement in cross-border cooperation activities development, as well as private business sector actors – in sponsoring and investment of cross-border events/projects;
- Defects in the legal system concerning cross-border cooperation aspects, sensible difference in legislative provisions between Polish and Ukrainian legislation – "centralized" approach of the Ukrainian side to the legislative provision, which causes fast obsolescence of it, and "face-the-problem" approach of the Polish side. The officially prescribed rights of the local authorities in Ukraine limit their opportunities to work for their territories benefits;
- The Ukrainian partners of the cross-border cooperation projects within The Cross--border Cooperation Program Poland-Belarus-Ukraine 2007–2013 suffer from being outside the euro-zone as well as from the insufficient system of monitoring and project evaluation within the Program. Still, Ukrainian side badly needs introducing of the cross-border statistics on its borders in order to become more transparent and opened for the research and analysis.

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KOMPLEKSOWY PRZEGLĄD POLSKO-UKRAIŃSKIEJ WSPÓŁPRACY TRANSGRANICZNEJ

Streszczenie. W artykule przedstawiono wyniki szczegółowej analizy i oceny transgranicznej współpracy regionów przygranicznych Polski i Ukrainy, w którą zaangażowane są euroregiony. Analiza obejmuje zarówno aspekty teoretyczne, kwestie finansowe współpracy transgranicznej, jak i aspekty społeczno-ekonomiczne rozwoju badanego terytorium. Celem autorów jest porównywanie zasad i tendencji rozwoju terytoriów

w polsko-ukraińskich regionach transgranicznych w celu zapewnienia całościowej wizji współpracy transgranicznej między Ukrainą i Polską w ramach Euroregionu Karpackiego i Euroregionu Bug.

Słowa kluczowe: euroregiony, projekty współpracy transgranicznej, analiza społeczno-ekonomiczna, Polska, Ukraina

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LEASE OF AGRICULTURAL LAND AS AN INSTRUMENT OF STRUCTURAL CHANGES IN AGRICULTURE IN THE CONTEXT OF THE THEORY OF INSTITUTIONAL ECONOMICS

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Abstract. The paper analyzes legal regulations and statistical data on a lease and assesses their influence on structural changes in agriculture. Next, it presents the issue of lease in the context of the theory of institutional economics (in the framework of old and new institutional economics). The research has proved that a lease is an effective instrument of structural changes in the Polish village helping not only to create and enlarge the new farms but also to modernizing the existing ones. Currently, a lessee of agricultural land is an entity which, in order to run an effective business activity, has to conclude various agreements, file applications, invest. The development of a lease is part of a theory which promotes the image of an entrepreneurial person, entangled in social and institutional relationships, who enters into various agreements.

Key words: lease, agricultural land, agrarian structure, new theories of institutional economics, Common Agricultural Policy

INTRODUCTION

A lease is a legal institution of a centuries-old tradition. In Poland, it is a popular legal title to organize and enlarge both family farms and corporate farms. A lease has become so popular due to the fact that it does not entail such large costs, which, for instance, those incurred by purchasing agricultural land. A lessee can invest his/her income in other production means or in the development of a farm. In recent years diverse structural changes have been noticed in Poland. The surface area of agricultural farms is bigger and bigger and there are more and more farms whose production is intended for sale, namely commercial farms. These units are more and more modern and the agricultural producers have

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to pay attention to the protection of the environment. Moreover, since Poland joined the European Union and started being covered by the Common Agricultural Policy (CAP), the principles of running an agricultural activity have changed. Only a stable activity makes it possible to effectively use financial aid. A lease has contributed to the development of many modern agricultural farms. It was also a lease that helped many young farmers to be granted the European aid [Suchoń 2012].

In recent years, numerous laws on lease have been amended, for instance, the Act of 19 October 1991 on Managing Agricultural Property of the State Treasury[1] and the Act on 11 April 2003 on Formation of Agricultural System[2] and other regulations. New executive orders on the European funding, including the issue of leased land have been passed. It is, therefore, important to review legal aspects of lease in a modern way with the needs of current economic reality taken into consideration.

It is worth indicating that a lease is a popular legal title of land possession, which has been used in Western Europe for many years. What is more, the development of lease is a concern of an institutional theory of economics, which promotes the image of an entrepreneurial person, entangled in social and institutional connections, who makes various agreements[3] – while institutions constitute a certain type of social structure, create the conditions to develop or limit a business activity, including an agricultural activity and the protection of public goods.

The main purpose of this article is to make an attempt to determine if legal regulations on lease encourage the application of that institution as an instrument of structural changes in agriculture or if these regulations make it difficult to do so as well as whether they include social and economic changes in the village. A complementary purpose of the article is to present the statistical data illustrating the impact of lease on structural changes as well as to indicate some connections between the evolution of the lease of agricultural land and the changes taking place in the institutional theory of economics.

The basic research method is the review of legal texts and the literature on lease of agricultural land and theories of economics.

DIRECTIONS OF CHANGES IN LEGAL REGULATIONS ON LEASE OF AGRICULTURAL LAND

On Polish lands the lease of agricultural land started to be used more often in the 19th century as a result of the reforms connected mainly with abolishing serfdom and granting property rights to peasants [Stelmachowski and Zdziennicki 1987]. After the World War II, until the Civil Code was adopted in 1964, the lease of agricultural land was regulated by the Polish Code of Obligations. While preparing the Civil Code, the legislator assumed, based on popular in those times idea of liquidating individual agriculture by

[1] Consolidated text, Journal of Laws of 2012, Item 1187, as amended.
[2] Consolidated text, Journal of Laws of 2012, Item 803, as amended.
[3] A person making different types of agreements, filing applications, etc. is accurately called by Lissowska homo contractor [2004]. Such a description is ideal for a farmer (agricultural entrepreneur) – lessee.

means of collectivization or creating state companies of agricultural economy, that a lease is not an instrument impacting the right usage of agricultural land and the improvement of an agrarian structure in the country [Pańko 1975]. That is why so few provisions of the Civil Code of 23 April 1964[4] relate directly to the lease of agricultural land. In spite of that situation, the lease, both a private one as well as the one from the National Land Fund, was popular in agricultural relationships. Political changes in Poland, which started at the beginning of the 1990s, resulted in substantial changes in legal regulations. A particular importance is given to, among other things, the changes made to the regulations on lease included in the Civil Code under the Act of 28 July 1990[5] [Suchoń 2006].

A very significant legal act regarding the development of lease of agricultural land in Poland was, undoubtedly, the Act of 19 October 1991 on Managing Agricultural Property of the State Treasury and on Changing Some Acts. Under that Act, as of 1 January 1992, the Agricultural Property Agency of the State Treasury started its activity. The main task of the Agency was to take over all state agricultural property to the Agricultural Property Reserve of the State Treasury and to manage that Reserve in compliance with the principles laid down in the aforementioned act and its executive orders [Zieliński 1993].

For many years, lease was the main form of managing property from the Agricultural Property Reserve of the State Treasury – Tables 1 and 3 [Zawojska 2004]. The reason for a relatively small sales was, among other things, the ban on selling the property from the Agricultural Property Reserve of the State Treasury which was subject to claims made by the former owners. Moreover, in the 1990s, due to the economic situation, there were not many entities interested in buying the land although the land prices were low. By the end of December 2010, the Agricultural Property Agency took over the properties of a surface area amounting to over 4.7 million ha, 1.54 million ha of which was leased [ANR 2011].

Table 1. Leased land of the Agricultural Property Reserve of the State Treasury

Year	Surface area of land of Agricultural Property Reserve of the State Treasury (ha)
1994	1 950 450
1995	2 744 790
1996	2 928 082
1998	2 810 455
2002	2 407 000
2003	2 341 551
2006	1 905 607
2009	1 685 860
2010	1 586 816
2011	1 461 400
2012	1 319 107

Source: based on the APA reports.

[4] Original text, Journal of Laws, No, 16, Item 93.
[5] Journal of Laws, No. 55, Item 321.

The regulations on lease were included in Chapter 8 of the Act of 19 October 1991 – Lease and Tenancy and the regulations issued under that Act. In the matters not regulated in the aforementioned laws, the provisions on lease included in the Civil Code apply. The credit should be given to a statement that once the Act on 19 October 1991 came into force, a new model of lease, as an active instrument of the reorganization and indirect privatization of state land, has been introduced [Prutis 1998]. Before 1992, the lease of agricultural land was based mainly on leasing lands in order to enlarge the surface of already existing agricultural farms. After the Agricultural Property Reserve of the State Treasury started its activity, the lease of agricultural land has often been the main title to organize independent agricultural farms. In the first phase of privatization, at the beginning of the 1990s, it was necessary to pass the state property to private entities in order to ensure the continuity of production. The aforementioned state legal person, then, leased out large areas of agricultural land. There were no surface area limits, which contributed to the set up of many large farms [Lichorowicz 2003]. In the following years, due to the change in the state policy on agriculture and making family farms the basis for the agricultural system, the Agricultural Property Agency started to support the development mainly of those farms. Nevertheless, for example in 2010, the biggest leased surface area covered the farms amounting to more than 100 ha (Table 2).

Table 2. Leased land of the Agricultural Property Reserve of the State Treasury according to selected area groups

Area group	Surface area of land of Agricultural Property Reserve of the State Treasury (ha)
2–4.99	46 303
20–49.99	167 983
100–299.99	271 897
300–499.9	270 393
500–999.9	234 821
1 000 and more	276 522

Source: APA report of 2010.

General statistical data for all land in Poland point out, however, that an average surface area is becoming bigger and bigger, which has been contributed by lease. For instance, in recent years the number of farms bigger that 50 ha has increased by 34% [Agricultural census 2010].

From the legal perspective, an important development was that the Act of 11 April 2003 on Formation of Agricultural System came into force. The Act introduced a definition of a family farm and individual farmer. A lessee also falls into the category of an individual farmer provided he or she runs a family farm and meets some other conditions. Since that Act came into force, the Agricultural Property Agency has been promoting mainly the development of family farms. This has manifested itself, for instance, in organizing limited tenders for the property lease or for the sale from the Agricultural Property Reserve of the State Treasury as only individual farmers can participate in such tenders. Since the legal regulations of 2003 have been amended,

however, little chance of making new lease agreements from the Agricultural Property Reserve of the State Treasury is given to a large-scale lessees.

There are also some limitations regarding the purchase of land from the Agricultural Property Reserve of the State Treasury. Significant changes regarding the lease of state land were made under the amendment of the Act of 16 September 2011 on Managing Agricultural Property of the State Treasury. Since that Act came into force, a lease as a tool of managing state agricultural land is less and less stable for a lessee. This results, among other things, from the procedure specifying that the Agricultural Property Agency, within 6 months from the date the amendment comes into force, will provide the lessees, in the form of a written notice, with a proposal of making changes to that agreement that 30% of the surface area of agricultural land which are the object of lease should be excluded from the lease. The procedure was not applied to the lease agreements if the total surface area of agricultural land from the Agricultural Property Reserve of the State Treasury held on lease by a given lessee on the day the amendment came into force, having made the exclusion, did not exceed 300 ha. Moreover, the Agricultural Property Agency relatively rarely organizes tenders for lease, makes new agreements or agrees to prolong lease. The province of Wielkopolska can serve as an example. This is an agricultural region, where lease has helped to set up many modern corporate farms and to extend some family farms (Table 3). For many years now the Agricultural

Table 3. Leased land in an area branch in Poznań (Piła branch exluded) in given years

Year	Leased land in total (ha)	Land returned to the reserve (ha)	Leased land without the returned land (ha)	Number of contracts made in a given year	Total number of made contracts at the end of the year
1992	14 191	0	14 191	22	22
1993	116 533	0	116 533	2 082	2 104
1994	174 971	4 693	170 278	1 432	3 536
1997	228 704	32 414	196 290	249	5 319
1999	234 529	48 096	186 433	279	4 470 (reform of the state, 2 017 contacts have been passed to other departments, 598 were obtained)
2000	266 451	65 652	200 799	226	4 696
2003	283 266	100 772	182 494	301	5 415
2004	290 419	109 822	180 597	331	5 746
2008	302 911	140 925	161 986	133	6 431
2009	305 224	145 436	159 788	93	6 524
2010	306 262	149 718	156 544	63	6 587
2011	*	*	150 818	35**	4 631**
2012	*	*	139 270	57**	4 307**

*Data not available.

**Without the contracts covering, among other things, the land under the buildings.

Source: based on data from the area branch in Poznań and the APA reports.

Property Agency has been mainly selling agricultural land (Table 4).The land is usually purchased by its lessees. These entities usually want to purchase the leased property but high prices and legal procedures often make it difficult [Suchoń 2006].

Table 4. Sold land of Agricultural Property Reserve of the State Treasury in given years

Year	Land sold from the Reserve (ha)
2007	103 667
2008	78 215
2009	102 423
2010	96 506
2011	125 134
2012	132 184
Total	2 336 015

Source: based on the APA reports.

Although the Civil Code does not provide the lessee with appropriate stability of farming the leased land, bigger and bigger interest in the lease of private agricultural land in the rural areas should be noted. The findings of economic research show that in the last ten years there has been a noticeable increase in the amount of private land lease. In 2000, one in eight farms consisted not only of their own land but also of leased one while in 2005 such a situation refered only to one in five farms. About 20% of farmers farm both on own and on leased land [Sikorska 2012]. The parties to an agreement for the lease of private land can freely decide on the terms of a lease agreement as most provisions on lease are not mandatory. As practice shows, however, leaving the parties the freedom to decide about the lease terms has usually a negative influence on the position of a lessee. The parties fail to include in the agreement many important issues. Moreover, the agreements are often made orally for an indefinite period of time, which does not guarantee the appropriate stability of lease.

After the Polish accession to the European Union, the principles of running an agricultural activity, also on leased land, have changed. The European funds, which were used not only by agricultural producers but also by other entities operating in rural areas, contributed to the modernization and structural changes in agriculture. It often happens, however, that the EU funds are granted provided that the agricultural activity has been run for at least 5 years. It is, thus, justified, to raise a question about the principles of granting financial aid for an agricultural activity run on the leased agricultural land. Having analyzed the regulations, it should be stated that the lessees can, admittedly, use a wide range of EU funds but they have to meet numerous requirements concerning the protection of the environment, keeping public health, well-being of animals, plant health, etc. Pursuant to the Article 7(6) of the Act of 26 of January 2007 on Payments within Direct Support Schemes[6], if an agricultural plot is held in independent and dependent possession, the area payments can be granted to an independent possessor. It means that it is the lessee of

[6] Consolidated text, Journal of Laws of 2008 No. 170, Item 1051, as amended.

agricultural land, actually farming these land, and not a lessor who is entitled to the payments within direct support schemes. At the same time, in order to be granted a uniform area payments and other payments defined in the legal act in question, it is necessary to meet numerous requirements, for example, all farmlands have to be maintained according to the principles within the whole calendar year in which the payment application was submitted. Lessees, although they are only dependent possessors, are entitled to use direct payments, payments for less favoured areas, agri-environment payments, for the modernization of agricultural land [Suchoń 2012]. It goes without saying that European funds constitute additional, highly important income for lessees but they also entail some limitations and changes to the run activity. This refers mainly to agri-environment programmes (e.g. ecological agriculture). Depending on a programme, a lessee gets either an administrative decision about being granted the European funds or he signs an agreement with the Agency for Restructuring and Modernisation of Agriculture.

One of the basic problems of Polish agriculture concerns too small and not modern farms. These problems require the change of an agrarian structure, which can be achieved by the European funds designed for, for example, agricultural producers starting to run an agricultural farm. The principles of granting the funds were laid down in the regulation of the Minister of Agriculture and Rural Development of 17 October 2007 on Detailed Conditions and Procedures for Granting Financial Aid under the Measure "Helping young farmers to set up in business" under the Rural Development Plan for 2007–2013. To be granted a bonus, currently amounting to 75 thousand PLN, it essential to meet a number of requirements e.g. of a minimum surface area of an agricultural farm. To calculate it, a surface area of usable agricultural land constituting the object of the following should be added: ownership; perpetual usufruct; lease from the Agricultural Property Reserve of the State Treasury or from local government units if a lease agreement has been made for an indefinite period of time or for the period of at least 5 years but not shorter than 5 years after the aid was paid; lease from entities different that the ones mentioned above, if the lease agreement has been made: a) in the form of a notarial deed or if the agreement has a certified date and b) for the period of at least 10 years. Including lease in the minimum surface area of usable agricultural land got a positive reaction from agricultural producers who start running an agricultural activity.

A lessee whose farm includes the surface area of agricultural land exceeding 1 adjusted hectare or a special section of agricultural production is by law insured in the Farmers' Social Security Fund (KRUS). They can also use KRUS insurance upon request provided that the statutory conditions have been met. Additionally, the lessee can apply for a refund of excise tax included in the price of diesel used in agricultural production and can use some agricultural tax reliefs, provided he or she is an agricultural tax payer.

LEASE OF AGRICULTURAL LAND IN THE EU COUNTRIES

An important role for the development of the lease of agricultural land in Western Europe was played by the European Economic Community (EEC), which established common agricultural policy for all the Member States [Jurcewicz, Kozłowska and Tomkiewicz 1995]. One of the most significant documents specifying the principles of the

EEC towards agricultural lease was so called Mansholt Plan of 1968 [Lichorowicz 1996]. The document included an express recommendation that the Member States should introduce such legal means and institutions which would contribute to the improvement and streamlining of their agrarian structure as well as would remove legal obstacles to running rational agricultural economy on the farmed land by direct agricultural producers. The Mansholt Plan pays a lot of attention to agricultural leases, recommending that they should be transformed so that the lessee's rights are protected and the lessee can purchase the leased land [Lichorowicz 1986].

The European Union has not issued any legal acts regulating in a general way of agricultural land lease. Pursuant to the Article 222 of the Treaty of Rome, that issue is regulated by internal legal regulations of the Member States [Lichorowicz and Czechowski 1996]. The lease, however, has often been used by the European legislator as an instrument of concentration of agricultural land aiming at speeding up the process of generation changes in agriculture and making it easier for young farmers to start an agricultural activity. This can be exemplified by the Council Directive No. 160/72[7]. In such countries as France or the Netherlands there is a protectionist model, giving an agricultural lease a special status, which ex lege has to be complied with by both a lessee and lessor. There are also, on the other hand, liberal systems, which allow the parties to a lease agreement to decide on most of the content of the lease agreement and interfere into a lease agreement only to a small extent by means of mandatory provisions of law. Liberal regulations are used by, for instance, Greece, Turkey, Luxembourg and the Great Britain. There are also, however, the legal systems which fall into the category between a protectionist and liberal system [Winkler 1997].

France is an example of the country where a lease is more and more popular and where we can observe its dynamic development – from 1963 when 48.5% of land was leased, through 2003 (63%), to 2007 when there was 74.1% of leased land and in 2009 more than 84% [Winkler 2011]. Legal regulations on lease of agricultural land have been continuously changing, taking into account the needs resulting from the practical application of the regulations. The change does not go, however, into a liberal direction, as in England or Wales. A French legislator tries to adopt the regulations allowing to keep balance between the rights of a lessee and lessor. The regulations on lease are included in the French Civil Code, French Agricultural Code and specific acts. Attention should be given to the introduction of ecological lease to the French legal system (beneficial from the perspective of the protection of the environment). Pursuant to the Article L 411 – 27 of the Agricultural Code, the ecological lease is a type of lease where a dependent possessor commits himself to take actions aiming at maintaining water resources, biological diversity, landscape and the quality of produce, soil and air, preventing natural threats and fighting erosion.

The requirements for fulfilling the agricultural practices focused on the protection of the environment, namely the protection of public goods, can be included in an agreement or inserted as an additional provision while carrying out the agreement. The agreements are made by a lessor, who is a legal person of public law, for instance, the Society for

[7] Official Journal of the EC, L 96, p. 9.

Environmental Protection. Such an agreement can also relate to the land plots situated in the protected or ecologically valuable regions [Winkler 2011].

Due to the German reunification, the role of a lease in Germany in the 1990s also increased dramatically, especially in Eastern lands. It was a significant instrument while taking actions directed at improving the agrarian infrastructure in order to make it more similar to the conditions in the Western part of Germany [Suchoń 2013]. The lease of agricultural land played an important role in the transformation of the political system not only in Germany but also in some of the former Communist bloc countries in the 1990s. For example, in the Czech Republic, Slovakia and Hungary a lease was, and in some countries it still is, a common form of privatization of state-owned agricultural property [Swinnen, Buckwell and Mathijs 1997]. In Slovakia, for instance, the share of leased land in 2009 amounted to 96%. In general, the share of rented land in the EU-15 has been fluctuating around an upward trend, rising from about 50% in 1999 to 53.5% in 2009. [European Commission 2013].

Table 5. Share of leased land as a percentage of the total agriculture land in 2007 and 2009

Country	Share of leased land as a % of the total agriculture land (2007)	Share of leased land as a % of the total agriculture land (2009)
Belgium	67	74.0
Czech Republic	83	85.6
Bulgaria	79	88.9
Germany	62	69.6
France	74	84.7
Slovakia	89	96.1
Sweden	39	52.9
United Kingdom	32	43.1

Source: Eurostat after Ciaian et al. [2011], DG AGRI EU-FADN.

NEW THEORIES OF ECONOMICS AND LEASE OF AGRICULTURAL LAND

As the regulations concerning the lease of agricultural land evolved, the definitions of institutions in the theory of economics changed in a similar way. Such a reference makes it possible to analyze lease as part of the institutional economics.

T. Veblen, within so-called traditional institutional economics created in the 1930s, defined institutions as "prevalent habits of thought with respect to particular relations and particular functions of the individual and of the community" [Veblen 1971, p. 171]. A further analysis makes it possible to state that the Veblen's institutions are created when mentioned habits grow in strength and become**s** common for a given society or a group (takes a form of a socio-economical institution). The criterion of a "dominating type of behaviours" in the above-mentioned definition makes it possible to distinguish a large group of social institutions of a mainly informal character (instincts and habits). The second father of institutional economics, John R. Commons, believes that formal institutions established in a more top-down way are the most important. Commons indicates the

significance of collective actions in running a business activity as they create reasons for creating not only customary norms but also laws. Collective actions are connected with the operation of companies, state administration, societies, trade unions. Cooperation between these entities, for instance through contacts and transaction or organizational connections, requires clear legal rules [Staniek 2013].

It is necessary, at this point, to also refer to the most common and colloquial understanding of an institution as an entity taking part in an economic process – so-called economic institution (the category includes enterprises, governmental agencies, trade unions, universities and offices). The reference books refer to economic institutions as to "customary ways of regulating life processes of society with reference to the material environment" [Stankiewicz 2000] or as "any correlated behaviour of agents[8], repeating under the same or similar circumstances" [Dopfer 1991].

Traditionally defined institutions are called institutional background. Institutional background of agriculture constitutes a collection of diverse institutions supporting market processes (supporting institutions). The reference books divide them on [Czyżewski and Matuszczak 2008]:

– "norms", namely the legislations specifying the principles of functioning of the economy or of making contracts;
– "markets", which include the following markets: financial, labour as well as goods and services defined as infrastructure enabling connections with these markets and increasing the mobility of production factors which are the object of transactions made there;
– "organisations": this category refers mainly to public institutions carrying out an agrarian policy (agencies[9]), organisations supporting the export of agri-food products, Centres of Agricultural Consultancy as well as Agricultural Chambers and trade unions of farmers.

Within so-called new institutionalism, which is a collective name for a modern institutional trend which has been developing since the 1970s, it is possible to distinguish two main trends: neoinstitutionalism and new institutional economics (NIE)[10]. Not going into details about the differences and similarities of the methodological apparatus of both stains, it should be stated, based on the analyses, that the representation of institutions presented in the new institutional economics is much more useful. According to NIE, the

[8] The notion of "agent" refers to a person carrying out tasks entrusted them by another person under a contract entailing delegation of rights. The presence of the contracts give the aforementioned relationship an economic character as the essence of the relationship is the allocation of resources. The analysis of complex relationships between the parties to the contract called a principal and agent constitutes the subject of study of so-called an agency theory (relationships of agency). The agency theory is an important part of analysing the social and economic processes (an analysis of mechanisms in the allocation of resources) within new institutional economic.

[9] In the process of promoting a lease a very important role is attributed to the Agricultural Property Agency, which replaced the Agricultural Property Agency of the State Treasury.

[10] This classification can be, however, perceived as debatable due to a big conceptual chaos in the literature on the subject (there is also a classification where new institutional economic is divided into neoinstitutionalism and new institutionalism).

institutions consist of formal and informal rules together with enforcement mechanisms[11]. They aim at controlling individual decisions of entities and, at the same time, limiting uncertainty connected with a business activity. In that perspective, the institutions decide who takes decisions, which actions are allowed, which procedures are to be implemented, which information to provide and, finally, what a given entity gets thanks to the activity. Therefore, the institutions ensure a suitable structure of stimuli to take allocation decisions [North 1994b, Czyżewski and Matuszczak 2008].

The subject of research of both above-mentioned trends distinguished within new institutionalism is the dependence of economic results on institutional conditions of behaviours and institutional background. There is, however, a different approach to the social and economic development and the perspective of an individual. The NIE indicates an evolutionary character of the social and economic development, neoinstitutionalism emphasises the need to build models similar to neoclassical or Keynesian models. Neoinstitutionalism perceives units mainly as entrepreneurs who find their own interest the most important whereas NIE treats units as entities which combine individual interests with (common) interests of communities (groups, societies). References to public interest can be visible in the mentioned "production" by farmers-lessees (as part of agri-environment schemes) of so-called positive external effects. The aforementioned system of French ecological lease constitutes also an example of the usefulness of institutional perspective, in particular of public goods theories[12].

New institutional economics directs attention to market failures, including the problem of the unreliability of the market in providing public goods (market mechanism fails to reveal consumers' preferences towards these goods and particular entities cannot participate in providing public goods since the total supply of these goods is created independently on the individual decisions of consumers). The unreliability of the market constitutes the reason for the state to provide public goods[13]. That is why, it can be stated that NIE calls for the interference of state institutions and their influence on generating public goods[14].

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[11] Main theories of the new institutional economics (a theory of a public choice, a theory of property rights, a theory of transactional costs or an agency theory) show the relationships between the functioning of traditional markets of goods and resources and extra-economic areas of social life. They analyze political and social phenomena in an economic aspect.

[12] A public good theory is one of the elements of a broader theory of public choice (public choice theory is also known as the economic theory of politics), which consists of economic theory of democracy, theory of groups of interest, common goods theory or an analysis of the rent purchasing mechanisms. All these theories are part of a trend of new institutional economics [Wilkin 2005].

[13] According to one of the most common NIE theories, namely the theory of a public choice (economic theory of state by J.M. Buchanan) the state plays a double role in the economy: it guarantees that the constitutional priniciples are obeyed and ensures the production of public goods. The aim of correct "game rules" (constitution) is to limit the losses resulting from the operation of state bureaucracy so, in general, to economize a public sphere. The constitution describes: property rights, the way to exercise them, the boundaries of public and private sphere and the principles of providing pubic goods.

[14] In the case of external effects, they can be removed or strengthened by means of establishing taxes and subsidies. This can be achieved based on Coase's theorem (positive external effects) or Pigou tax (negative external effects).

To sum up, it is currently not possible to talk about one, coherent theory of institutional economics. What is common for all existing trends is the same credit given to the role of institutions in a social process of managing. The definitions and usage of "institution", however, are different [Zawojska 2004, Staniek 2013]. D. North, author of a commonly known definition, defines the institution as: "the rules of the game in society or, more formally, humanly devised constrains that shape human interaction. In consequence they structure incentives in human exchange, whether political, social or economic" [North 1994]. The aforementioned definition, in economic life, can refer to a lease as a formalized civil law institution, namely institution-norm. Within the theory of institutional economics, the institutions constitute a certain type of a social structure, create the conditions for development of or restrictions on an agricultural activity. The aforementioned analysis of the activity of the Agricultural Property Agency as an institution-organisation indicates that in its last period it creates conditions for the development of family farms and generates restrictions on the development and running of an agricultural activity on large-scale farms.

Among all the NIE issues we cannot overlook the discussion on the nature and forms of the contracts made by and between the participants of a social and economic life. Every process of exchange and performing a transaction entails the need to reach an agreement between the parties, to decide on mutual rights and obligations, namely to make a contract (Latin expression *contractus* means a contract, a deal between the parties defining the terms and conditions as well as deadlines and time limits).

With regard to the discussion presented in the article it is advisable to present the basic differences between land purchase agreements and land lease agreements in connection with the economic contract theory. It is necessary to refer to its definition based on a historical process of making exchange contracts. That classification comprises two basic types of contracts: historically earlier sales contract and later lease contract.

The content of a sales contract is generalized by Stankiewicz [2012, p. 108] in the statement that "a sales contract is an agreement between individuals who are equally neutral towards each other, defining a range of tasks that are to be completed in the future in the course of carrying out the contract". A neutral character of the above definition means there are no reporting relationships between the business partners, they are equal before the law and a code of conduct relating to the exchange. The element of time, however, makes it possible to distinguish the relationships of the parties in a purchasing and selling action and the obligations of the parties going far into the future. The same author defines the concept of a lease contract as "an agreement between an individual neutral towards the risk and an individual who is against risk, defining a set of tasks which can be completed in the future in the course of performing the agreement". The above definition covers also an issue of neutrality of the parties. From that perspective the parties differ in terms of their attitude to taken risk; one has a hostile attitude or he/she is simply afraid of risk, so he/she tries to hand over to a business partner, who is indifferent, neutral towards risk, the right of control over his/her actions. That situation entails different types of reporting relationship, a principal-agent situation, even if the right to control has been handed over by a business partner voluntarily.

As part of a lease contract it is possible to distinguish the next two types of contracts: a contract of lease of a physical object and a contract of renting a private property.

According to the former, a lessee gets, for a fixed period of time, not only the right to use the object but also to get income. In the case of the latter – only the right to use [Stankiewicz 2012, p. 108].

CONCLUSIONS

The research presented in the article together with the statistical data have confirmed that lease is an effective instrument of structural changes in Polish village. It helps both to enlarge and create new farms and to improve the existing units owing to, for instance, the European funds used by the lessees. To briefly sum up, it should be stated that, on the one hand, the Polish legislator tries to take into account that a lease is an effective instrument of structural changes in agriculture, which has been used for many years (even centuries) not only in Europe but also all over the world. It is reflected in changes in regulations after the political transformation and it mainly refers to managing state properties. After the Polish accession to the European Union, lessees can use, usually under the same rules as owners, the European funds. The regulations on the Common Agricultural Policy, in principle, does not subject granting the EU funds to the form of holding land. As a result, in the countries of the "old" European Union, such as France, the Netherlands, Great Britain or Germany, a lease is a very popular title to enlarge agricultural farms.

On the other hand, the problems the agricultural producers have result from the regulations on the form of a lease agreement. Some obstacles to the development of farms result from short time leases, lack of automatic lease extension, oral agreements or written ones but without a certified date. Moreover, it goes without saying that the regulations make it easier for family farms to develop. Only the lessees of such farms have the right of pre-emption. There are, however, important legal barriers that have to be faced by large farms.

These times, a lessee of agricultural land is an entity who, in order to run an effective agricultural activity, has to make different types of contract, file applications, invest. The development of lease is part of new theories of economics. The carried out research has confirmed that a lease is more and more influenced by more and more diverse range of legal acts. Lease is a civil law institution but the changes in agriculture made it evolve in a significant way. Freedom of making contracts with reference to state lease and lease from local government units was to some extent limited. That situation can be exemplified by a bidding mode of making contracts, duration of a lease contract or its extension, the rules for reducing the rent, etc. Moreover, the performance of lease is influenced by bigger and bigger number of administrative acts referring mainly to the principles for protecting agricultural land, protecting water and other elements of the environment. The lessee has to take care, to greatest extent, of public property, namely he has to meet the requirements regarding the environmental protection, which results from the EU regulations and principles. That trend starts to impact also civil law regulations relating to the forms of holding the land, for instance so-called ecological lease introduced to the French system. The ecological lease is part of sustainable development of agriculture and rural areas as well as of new economical theories – e.g. public goods theory. As for lease,

the theory of neoinstitutionalism presenting individuals, e.g. lessees, as entrepreneurs for whom own interests are the most important is less and less popular. More and more significance, however, has been given to new institutional economics, painting the lessee as an entity combining individual interests with public interests regarding the protection of public (environmental) goods.

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DZIERŻAWA GRUNTÓW ROLNYCH JAKO INSTRUMENT ZMIAN STRUKTURALNYCH W ROLNICTWIE W KONTEKŚCIE TEORII EKONOMII INSTYTUCJONALNEJ

Streszczenie. W ramach artykułu przeprowadzono analizę regulacji prawnych dotyczących dzierżawy i danych statystycznych oraz dokonano oceny ich wpływu na zmiany strukturalne w rolnictwie. W dalszej kolejności rozważania koncentrowały się na przedstawieniu zagadnienia dzierżawy w aspekcie teorii ekonomii instytucjonalnej (definicja instytucji w ramach starej i nowej ekonomii instytucjonalnej). Badania wykazały, że dzierżawa jest efektywnym instrumentem zmian strukturalnych na polskiej wsi, przyczyniając się nie tylko do powiększania i tworzenia nowych gospodarstw, ale także modernizacji istniejących. W obecnych czasach dzierżawca gruntów rolnych to podmiot, który aby prowadzić efektywną działalność rolniczą musi zawierać różnego rodzaju umowy, składać wnioski, inwestować. Poza tym w coraz większym zakresie musi dbać o dobra publiczne, czyli zachowanie wymogów w zakresie ochrony środowiska. Rozwój dzierżawy wpisuje się w nowe teorie ekonomii oraz w zrównoważony rozwój rolnictwa i obszarów wiejskich.

Słowa kluczowe: dzierżawa, grunty rolne, struktura agrarna, nowe teorie ekonomii instytucjonalnej, wspólna polityka rolna

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CHOSEN FACTORS INFLUENCING COOPETITION IN WESTERN POLAND IN THE 2009–2011 PERIOD

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Abstract. Analysing the literature dealing with coopetition on both national and international levels, one cannot help but notice that this notion has recently become increasingly more popular. The same cannot be said however, of the notion of coopetition from a practical point of view. Apprehension related to coopetition have to do with the so-called limited confidence principle, applied by Polish entrepreneurs to other commercial entities. This principle has worked out well up until recently. However, the ongoing globalisation and increasing pace of technological progress are forcing, especially small- and medium-sized enterprises, to pay closer attention to quite a different strategy of "sleeping with the enemy". The empirical part of the article indicates, how the chosen factors influence establishing coopetition. The list of factors include: PKD (Polska Klasyfikacja Działalności – Polish Classification of Economic Activities) section, where the company customers come from, the distance from other delivery network participants, relations with those participants and technological class applicable to the company's technological process.

Key words: innovative cooperation, coopetition, competition

INTRODUCTION

Coopetition became a research topic relatively late, in the second half of the 1990s. Pioneering work had been done by Brandenburger and Nalebuff. However, R. Noord, a CEO of Novell, was the first one to use the very term in 1990 [Peng T.-J.A. et al. 2011, p. 532].

Analysing literature, one can encounter a definition, according to which a coopetition is a situation of simultaneous competition and cooperation between at least two companies [Lado, Boyd and Hanlon 1997, pp. 110–141; Gimeno 2004, pp. 820–842; Madhavan, Gnyawali and He 2004, pp. 918–927; Luo 2007, pp. 129–144; Chen 2008, pp.

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288–304; Kim and Parkhe 2009, pp. 363–376; Peng and Bourne 2009, pp. 377–400]. The notion of competition has been tackled also by Bengtsson and Kock [2000, pp. 411–426], Luo, Rindfleisch and Tse [2007, pp. 73–83], Ritala and Hurmelinna-Laukkanen [2009, pp. 819–828]. According to their interpretation, coopetition denotes a situation, when a company decides to cooperate with its competitor on a market different to this where the competition originally took place. In this approach, coopetition can be viewed as an aggressive strategy of "sleeping with the enemy" [Quint 1997, pp. 7–8].

Economic sciences give many reasons to closely examine the notion of coopetition. The most important one includes increasing technological advancement of products and ongoing globalisation processes. The above reasons are of great importance especially to small- and medium-sized enterprises – SMEs [Coy 2006, pp. 96–97].

There are many obstacles that have to be tackled by SMEs, including high costs and risks related to research and development or lack of funds for long-range innovative actions [Gomes-Casseres 1997, pp. 33–44; BarNir and Smith 2002, pp. 219–232]. Some researchers even claim that coopetition between SMEs is crucial for the survival of this business segment [Merrifield 2007, pp. 10–14]. It is also important that SMEs involve in coopetition much easier than bigger companies, since the former are more flexible and less restrained by formalised structures, procedures and policies [Gnyawali and Park 2009, pp. 308–330]. The research conducted by Harbisona and Pekar showed that in highly developed countries, more than a half of relations between companies occurs within one sector or between competitors [Harbison and Pekar 1998]. This is caused by the fact that the competing companies are often faced with similar challenges and threats. since they share their environments. Owing to this similarity, when a cooperation is established, the formerly competitive enterprises can now more successfully compete with bigger companies that try to eliminate them from the market. In such cases, a cooperation between erstwhile competitors can contribute to: a) increased production and lower unit cost as a result of the scale effect, b) distribution of risk on a larger number of enterprises, c) more effective use of complementary resources, d) relative easiness in entering new markets, e) relative easiness in accessing external resources [Chen 1996, pp. 100–134].

It should be noted that the research conducted by Carayannis and Alexander [1999, pp. 197–210] indicates that the benefits of establishing cooperation between competitors are especially evident for companies: a) in sectors relying on the most up-to-date-knowledge, b) using interdisciplinary technologies, c) manufacturing short-life cycle products. In such companies, entering a coopetition is related to an increase in technological potential and brings additional benefits stemming from the common use of complementary resources, that previously were accessible to only one of the coopetition parties. An obvious condition under which a company allows others to use resources that were at its sole disposal, is the possibility of gaining additional benefits when compared to the situation where this company continues to use the resource on its own [Quintana-García and Benavides-Velasco 2004, pp. 927–938].

The regions of Western Poland are characterised by a various degree of economic development. Lower Silesia Voivodeship is one of most developed regions of Poland. West Pomeranian Voivodeship is often described as an „average" region in terms of economic development. Lubuskie Voivodeship is in turn ranked as one of the least developed regions. In this context, the aim of this article is an attempt to identify the determinant

factors stimulating or impeding coopetition between industrial companies in diverse circumstances found in Western Poland.

MATERIAL AND METHODS

The methodological part of an analysis uses econometric modelling. Econometric analysis involves the following stages:

1) choice of dependent variable (y) and candidate independent variables (x_1, x_2, ..., x_k),
2) collecting empirical material,
3) the choice of those independent variables that influence the dependent variable in a significant way,
4) the choice of mathematical model, describing the relations among variables,
5) estimation of model parameters, that is substituting indefinite parameters with specific numerical value, set on the basis of empirical data,
6) model verification using hypotheses and statistical testing.

As it was mentioned, the first phase involved the choice of dependent variable and candidate independent variables. The dependent variable was set to denote the fact of innovative cooperation with a competitor, however the candidate independent variable list was very long and included parameters relating to the company or relating to the company's innovative activity further divided into investment and implementation activities.

The chosen dependent and independent variables were binary, meaning that their values were either 0 or 1. In the case of the dependent variable this meant that either the coopetition took place (then the value of the variable is 1), or it did not (in such case the value was 0).

In the case of independent variables, for each of the companies 42 variables were taken into account in total, divided into four groups:

1) variables related to the customer PKD sector (14 variables),
2) variables related to the distance from: the competitor, supplier and customer (12 variables),
3) variables related to relations with competitors, suppliers and customers (12 variables),
4) variables related to technological classes used by the company (technologies: high, mid-high, mid-low, low).

The fact that both dependent and independent variables are dichotomous means that the most popular tools in econometric modelling, such as multiple regression, cannot be used. In order to obtain a model where the dependent variables are binary (0, 1) one has to use either logit or probit regression. In the logit regression the expected values of dependent variable have to be contained in a segment between 0 to 1, which is obtained by the means of logit transformation. In the probit regression the dependent variable can be thought of as a result of a hidden variable with normal distribution, which takes on values from minus to plus infinity [Zeliaś, Pawełek and Wanat 2009; http://www.statsoft.pl].

In either logit or probit models, in which a dependent variable takes on binary values, the expected value of dependent variable is interpreted as the probability of a given event under conditions specified using independent variables. The probit modelling used in our

work has its roots in classical probability calculus, formed at the beginning of the nineteenth century by P. Laplace.

Parameter estimation during model creation has been done using the maximum likelihood method. The basic assumptions for the method are related to a likelihood function. It is applied to models with additive random component, assuming the component has a normal distribution [Welfe 2003, p. 76].

The calculations presented in this article have been performed using Statistica suite. For one dependent variable 42 probit models had been created, and only 11 of them were statistically significant. These are presented and described in detail later in the article.

Since the models used had taken into account only one factor, to interpret the analysed interrelations the structural representation of models was chosen. The sign accompanying a parameter is of key importance. The plus sign indicates that the probability of establishing cooperation by a given enterprise is higher than in all the other groups taken together. The minus sign indicates that the probability of establishing innovative cooperation with a given enterprise is lower than in all the other groups taken together. The undertaken research is of statistical nature and deals with a period of three years, which is consistent with methodological standards described in the Oslo Manual[1] [2008].

RESULTS

Influence of the customer PKD section on establishing coopetition in Western Poland

The data in Table 1 indicate that the companies with customers coming from the K section of PKD (finance and insurance) have the highest probability of establishing coopetition. In such cases probability of coopetition equals 0.19 and is almost two and a half times higher than in the case of companies with customers located in other PKD sectors.

Table 1. An influence of the customer PKD section on establishing coopetition in Western Poland in 2009–2011 period

PKD Section	Parameter	S	T	$P > \|z\|$	P_1	P_2	χ^2	P
D – energy production and supply	–0.60	0.30	–1.99	0.05	0.02	0.08	5.02	0.03
G – retail and wholesale trade	+0.29	0.13	2.23	0.03	0.10	0.06	4.98	0.03
H – transportation and storage	+0.52	0.15	3.43	0.00	0.15	0.06	11.15	0.00
K – finance and insurance	+0.57	0.29	1.98	0.05	0.19	0.07	3.62	0.06

S – standard error, T – Student's T-statistic for the parameter, $P > |z|$ – the probability of parameter non-significance, P_1 – the probability of an event in a given group of companies, P_2 – the probability of an event in the remaining groups of companies, χ^2 – chi-squared test, P – the probability of model non-significance.

Source: Compiled on the basis of own research.

[1] The rules pertaining to innovation-related data collection and interpretation.

Having a customer located in the H (transportation and storage) and G (retail and wholesale trade) PKD sections also stimulates coopetition. In such cases the probability of coopetition equals 0.15 and 0.10 respectively. When a company has its customers located in the H section, the probability of coopetition is also two and a half times higher than in the case of companies with customers located in other PKD sectors. When a company has its customers located in the G section, the probability of coopetition is 66% higher than in the case of companies with customers located in other PKD sectors.

Having customers located in the D section of PKD (energy production and supply) clearly inhibits coopetition. In such cases the probability of coopetition equals 0.02 and is more than four times lower than in the case of companies with customers located in other PKD sectors.

Influence of relations with other supply network participants on establishing coopetition in Western Poland

Close relations with competitors and suppliers has a stimulating effect on establishing coopetition, as shown in Table 2.

Table 2. An influence of relations with other supply network participants on establishing coopetition in Western Poland in 2009–2011 period

Relation	Parameter	S	T	P > |z|	P_1	P_2	χ^2	P
Collaboration with competitor	+0.46	0.15	3.07	0.00	0.14	0.06	9.05	0.00
Necessary relations with suppliers	–0.45	0.21	–2.14	0.03	0.04	0.09	5.24	0.02
Collaboration with suppliers	+0.43	0.18	2.33	0.02	0.15	0.07	5.10	0.02

Source: Compiled on the basis of own research.

The probability of coopetition in companies that collaborate with their suppliers and competitors equals 0.15 and 0.14 respectively. In both cases, the probability of establishing coopetition is more than two times higher, than in the case of companies that have other than close relations with their suppliers and competitors. The last statistically significant model confirms this observation. The model describes an inhibiting influence on coopetition of companies having only necessary relations with suppliers. In such cases the probability of coopetition equals 0.04 and is more than two times higher than in the case of companies having other than necessary relations with their suppliers.

Influence of distance to supply network participants on establishing coopetition in Western Poland

Table 3 describes the influence of distance to supply network participants on establishing coopetition in Western Poland.

Table 3. An influence of distance to supply network participants on establishing coopetition in Western Poland in 2009–2011 period

Distance from a supply network participant	Parameter	S	T	P > |z|	P_1	P_2	χ^2	P
Supplier located in local scale	+0.32	0.15	2.16	0.03	0.12	0.07	4.51	0.03
Supplier located outside Poland	–0.58	0.25	–2.26	0.02	0.03	0.09	6.28	0.01
Customer located outside Poland	–0.52	0.20	–2.49	0.01	0.03	0.09	7.23	0.01

Source: Compiled on the basis of own research.

The Table 3 shows that only having a locally located supplier stimulates coopetition. The probability of entering into coopetition by a company that has a locally located supplier equals 0.12 and is 70% higher than in the case of companies with supplier located somewhere else in the region, country or even outside Poland.

One obtains similar results analysing the other of the above presented models. Having supplier located outside Poland has a clear inhibiting effect on establishing coopetition by the companies from Western Poland. The probability of establishing coopetition in this group equals 0.03 and is three times lower than the probability of establishing coopetition by companies having their suppliers located within Poland.

Having customer located outside Poland also has an inhibiting effect on establishing coopetition by the companies from Western Poland. The probability of establishing coopetition in this group equals 0.03 and is, as in the supplier case, three times lower than the probability of establishing coopetition by companies having their customers located within Poland.

Influence of technological class of the production on establishing coopetition by companies from Western Poland

An analysis of an influence of the technological class used during production on establishing coopetition by the companies from Western Poland yielded only one statistically significant model. The model was described the influence of mid-low technologies used in production on establishing coopetition by a given company. This model is as follows:

$$Y = -0.52x - 1.14$$

Student's T-statistic: (–2.12) (–14.53)
The probability of parameter non-significance: (0.03) (0.00)

where: standard error S = 0.25;
chi-squared test $\chi^2 = 5.15$;
the probability of an event in a given group of companies $P_1 = 0.05$;
the probability of an event in the remaining groups of companies $P_2 = 0.13$;
the probability of model non-significance P = 0.0233.

The presented model indicates that using mid-low technologies by the companies inhibits establishing coopetition. In such cases probability of coopetition equals 0.05 and is more than two and a half times lower than in the case of companies that use other than mid-low technologies.

CONCLUSIONS

Analysing the literature one encounters the opinion that coopetition between SMEs is crucial for the survival of this business segment. However, practice shows that coopetition is one of the less popular forms of collaboration between companies of Western Poland. There were ten times fewer companies that had entered into coopetition, compared to companies that were collaborating with suppliers, and six and a half times fewer than those collaborating with customers. The number of coopetition cases found in Western Poland can be compared to the number of cooperation cases between companies and universities or PAN (Polska Akademia Nauk – Polish Academy of Sciences) units.

Analysis of companies that had entered into coopetition, taking into account the technology these companies are using, shows that it is high tech companies that most often entered into coopetition. In the above group the coopetition had been observed to happen in 65.1% of all coopetition cases. The mid-high tech companies hold the second place, in terms of a number of coopetition cases. This group constituted 23.8% of all the companies involved in coopetition. The mid-low tech companies placed third contributing to 9.5% of all coopetition cases. The low tech companies were the ones where the coopetition had happened the least. This group constituted 1.6% of all the companies involved in coopetition.

Analysis of companies that had entered into coopetition, taking into account the size of the companies, shows that it is small-sized companies that most often entered into coopetition (46% of all coopetition cases). Medium-sized companies placed second, contributing to 22.2% of all coopetition cases. The remaining two size classes (micro and large) contributed equally with nearly 16% of all coopetition cases.

An analysis of influence of customer PKD sector on the disposition to enter into coopetition yielded four statistically significant probit models. These showed that having customers in K, H or G sections of the PKD stimulates entering into coopetition. Having customers located in D section of the PKD has an inhibiting effect on establishing coopetition.

Exploring an influence of relations with other supply network participants on establishing coopetition yielded three statistically significant probit models. According to these maintaining close relations with suppliers and competitors stimulates entering into coopetition by the companies from Western Poland. However, maintaining only the necessary relations with suppliers influences coopetition negatively.

Exploring an influence of the distance to other supply network participants, also yielded three statistically significant probit models. According to these models, having locally located supplier influences positively entering into coopetition by companies from Western Poland. Having suppliers and customers located outside Poland has a clear inhibiting effect on entering into coopetition.

Finally, an influence of technologies used in a company on entering into coopetition also had been analysed. In this case only one statistically significant probit model had been obtained. It showed that using mid-low technologies in production has an inhibiting effect on establishing coopetition by a company.

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WYBRANE CZYNNIKI WPŁYWAJĄCE NA KOOPETYCJĘ W ZACHODNIEJ POLSCE W LATACH 2009–2011

Streszczenie. Analiza literatury z zakresu koopetycji zarówno na poziomie krajowym, jak i ponadnarodowym wskazuje, że problematyka ta staje się coraz bardziej popularna. Nie można jednak tego samego stwierdzić w odniesieniu do oceny znaczenia koopetycji z praktycznego punktu widzenia. Obawa związana z koopetycjami jest zbieżna z zasadą ograniczonego zaufania, która jest stosowana przez polskich przedsiębiorców w odniesieniu do innych podmiotów. Ta zasada funkcjonowała dobrze aż do niedawna. Postępująca globalizacja i wzrastające tempo postępu technicznego zmuszają jednak – szczególnie małe i średnie przedsiębiorstwa – do zwrócenia większej uwagi na zupełnie odmienną strategię „sypiania z wrogiem". Empiryczna część artykułu wskazuje, jak wybrane czynniki wpływają na podjęcie koopetycji. Lista czynników obejmuje: sekcję PKD (Polska Klasyfikacja Działalności), pochodzenie klientów, odległość do innych uczestników sieci dostaw oraz klasę technologiczną odpowiadającą procesom technologicznym w firmie.

Słowa kluczowe: nowoczesna współpraca, koopetycje, konkurencja

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THE ECONOMIC AND SOCIAL JUSTIFICATIONS FOR PUBLIC SPENDING TO AGRICULTURE: THEORETICAL INSIGHTS AND EMPIRICAL OBSERVATIONS

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Abstract. This paper explores the theoretical justifications for public expenditures to support the agriculture sector and farming population. The market failure and welfare rationale for government intervention is contrasted with government failures. In addition to the normative analysis, the paper presents empirical evidence on the level of public agricultural expenditure based on cross-country data with main focus on the European Union countries. The results of own cross-country statistical analysis suggest that per capita costs of EU support to agriculture are only weakly related to the general economic development of the individual countries but this support is relatively more important for the economies of less developed EU members. A look at the findings of the reviewed country studies exploring the link between public expenditure allocated to agriculture and the sector performance reveals that this way to support farming and rural economy may be effective, exerting a positive effect on growth in crop and livestock production, private-sector investments in agriculture and rural and general poverty reduction, but its impact depends on the type of expenditure.

Key words: public expenditure, agriculture, theories, market and government failures

INTRODUCTION

Agriculture has always been an exceptional case for government intervention. In poorer countries it is often taxed, among others because large agricultural sectors provide extensive and available tax bases. Additionally, larger groups face higher costs of collective action in their efforts to minimize their tax base. Given that many of these countries

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are dictatorships, the taxes also reflect the exploitation of the powerless by the powerful. On the contrary, in the richer countries, most of which are democracies, agriculture has been extensively protected or subsidized by the governments.

The purpose of this study is to present theoretical and empirical perspectives on public funding to support agricultural sector. The paper attempts to focus greater attention to this, always important issue, that seems to be even more urgent today, given that the recent crisis has put pressure on public finance in many countries and there is a risk that the governments might be induced to cut down support to agricultural sector and farm population, besides the fact that agricultural spending is one of the most important tools in promoting agricultural development and enhancing rural viability.

MATERIAL AND METHODS

The main method applied in this study is theoretical analysis and discussion drawing on the findings of empirical investigations. The paper analyzes various pros and cons of public spending on agriculture and its impact on agriculture performance and rural welfare.

The data on public agricultural spending used in this paper are taken from the EU Budget Office, Ministry of Finance of Poland and from the literature on the subject. Additionally, data on per capita GDP (in current euro) obtained from the Eurostat were utilized to identify the relationship between the EU spending on agriculture and the levels of economic development across the EU countries. Pearson's linear correlation coefficients were used to describe the degree of this association in the EU and in the two subsamples of the countries: UE-15 ("old" members) and EU-12 ("new" members).

RESULTS AND DISCUSSION

Factors influencing public spending to the agricultural sector

Representatives of different schools of economic thought have advanced several explanations of the reasons for public resources allocation to the agricultural sector. The basic rationale for it derives directly from the fundamental reasoning underlying government intervention in the economy. The most well-established justifications, based on the neoclassical economic theory, refer to the two phenomena: economic inefficiencies created by market failures, which can be corrected through public-sector involvement (via subsidization, provision of public goods and regulation); undesirably low material welfare among the poorest parts of the population, which can be also rectified through public policy (Table 1).

Economic theorists (new welfare economists) see State involvement in the economy through budgetary expenditure as an issue relating to the theory of perfect competition from which the term market failure is defined. Market failure is explained by Bator [1958, p. 351] as "the failure of a more or less idealized system of price-market institutions to sustain 'desirable' activities or to estop 'undesirable' activities. The desirability of an

Table 1. The rationale behind and related examples of agricultural public spending

Rationale	Examples of public spending
Correction of market failures	Financing the provision of goods that are not efficiently and sufficiently produced by the market, e.g. public investment in infrastructure, agricultural R&D and irrigation
Control of externalities	Public funding of environmental projects, afforestation/ /reforestation projects and agroecological research
Addressing information asymmetries, eliminating information gap	Subsidizing agricultural insurance and agricultural credit; investing in public agricultural information system and in data (e.g. weather data collected by meteorological sites); financing agricultural extension
Reducing imperfect competition	Financing the activities that regulate against monopolistic behaviour; public investments in price and other market information systems, as well as in rural transport infrastructure
Provision of public and merit goods	Spending on protection of water quality and availability, indigenous species, habitats and ecosystems whose survival would have been threatened (e.g. on the EU Natura 2000), investment in animal health and welfare
Influencing resource allocation and efficiency	Expenditure on geodetic control and mapping, farm direct payments (e.g. CAP Single Payment Scheme), farm product subsidies, farm labour subsidies
The social, redistributive function of governments	Provision of direct transfers to lowest-income households (e.g. food stamps, aid for elderly); subsidization of agricultural producers' costs (inputs subsidies), provision of credit schemes, CAP support to semi-subsistence farmers

Source: own compilation based on the literature survey [Helming et al. 2010, Mogues et al. 2012].

activity, in turn, is evaluated relative to the solution values of some explicit or implied maximum-welfare problem". Activities under consideration refer to both consumption and production.

According to Krueger [1990, p. 11] "market failure has always been defined as being present when conditions for Pareto-optimality are not satisfied in ways in which an omniscient, selfless, social guardian government could costlessly correct". What is quite clear from experience in many countries is that governments are not selfless, omniscient, social guardians and their corrections of market failures are costly.

So, though market failures approach to public spending has become quite popular in theoretical and political discussions, disillusionment with governments caused that this approach has been confronted by the problem of the limitations of government or government failures pointed out, among others, by the public choice theory economists.

Using the definition parallel with that for market failures, the government failures are the sum of government actions and failures to act which result in a less-than-optimal situation. However, as underlines Krueger, this definition suggests that all uncorrected market failures as well as government interventions leading to greater deviations from efficient use of resources than a market outcome would be regarded as government failures. Using the narrower definition of the government failures, they occur when

the government intervention to improve the market failures actually makes the situation worse than what would have occurred under laissez-faire, or when the costs of the government intervention exceed the benefits [Krueger 1990]. The weakness of this definition is lack of distinction between government failures to provide essential public goods and government actions leading to greater private departures from the first-best situation than would otherwise occur.

There are various reasons for occurring government failures. Firstly, many public policies affect the creation and allocation of rents. Their existence generates the problem of rent seeking [Krueger 1974] by potential recipients of public funding. Apart from the fact that rent seeking activities (either legal or illegal) can cause distortions of the political process, they are usually competitive and resources are devoted to competing for rents. Competition in rent seeking may result in either partial or complete rent dissipation into rent-seekers' costs [Posner 1975]. The devotion of resources for capturing rents does not generate new wealth merely causing income redistribution, so from the society's perspective those resources are wasteful. The second reason of government failure is rational ignorance [Becker 1983, Tullock 1988] about policy issues among the voting public (when per person effects are small) which would result in possible control of political outcomes by special-interest groups (the farming lobby for example). The next reason is the free-ridership on public expenditures when an individual may be able to obtain the benefits without contributing to the costs incurred for the group of beneficiaries [Buchanan 1968, Zawojska 2011].

Even in the absence of market failures, government spending in the economy may be considered to be necessary in order to achieve a fair distribution of real income. Redistribution of income or wealth by government may be differently explained. Power resources theory [Korpi 1983, Esping-Andersen 1990, Hicks 1999] links income distribution with class-based political power. It recognizes income redistribution and origin of welfare states as the results of conflicts between class-related interest groups (e.g. employees versus employers; working and middle classes versus owners of capital) and collective actions. The general empirical observation is that welfare states are more egalitarian and advanced in countries with stronger left parties and labour unions.

From the structuralist economics perspective [Prebisch 1950, Furtado 1964, Taylor 1991] income redistribution is influenced by structural features of the economy (i.e. broad demographic and economic variables).

Income redistribution or poverty relief is also recognized to be a public good because it benefits large number of people including those who may not have contributed to the support of the poor. In consequence, poverty relief through redistribution programs is viewed by many economists [Friedman 1962, p. 28] as a legitimate government activity.

However, political economy models (e.g. median voter models) suggest patterns of public spending that are likely to favour the preferences of households in the middle of the income distribution. In other words, the redistribution goes in line with Aaron Director's law which states that "Public expenditures are made for the primary benefit of the middle classes, and financed with taxes which are borne in considerable part by the poor and the rich" [Stigler 1970, p. 1].

From the point of view of economic theory of democracy, government distributive benefits can increase voter turnout among their beneficiaries. Empirical evidence from

the United States, for example, shows that recipients of agricultural subsidies exhibited higher voting rates than non-recipients [Wolfinger and Rosenstone 1980]. In line with the economic theory of the rational voter, the decision to vote is basically determined by expected net benefit, i.e. voting behaviour is influenced by economic calculation [Downs 1957]. It suggests that politicians, through offering benefits in exchange for voter choice ("vote buying" or "turnout buying"), can influence the actions of the electorate and shape the electorate's composition.

Agriculture-specific government programs are often justified on the ground of the concept of the traditional, family-based farming being a part of a viable rural way of life, culture and heritage that should be preserved by government because almost everyone benefits from the survival of the culture [McKenzie 1981, p. 369]. Family farms have also a longstanding history and tradition of providing youth with valuable work experience [Preserving… 2012].

Additionally, public policy makers argue that financial support to family farms with relatively weak bargaining positions is necessary to protect them from more economically powerful agriculture companies and foreign competitors.

Public spending related to agriculture could be determined by the roles the sector plays at different stages of economic development (Fig. 1).

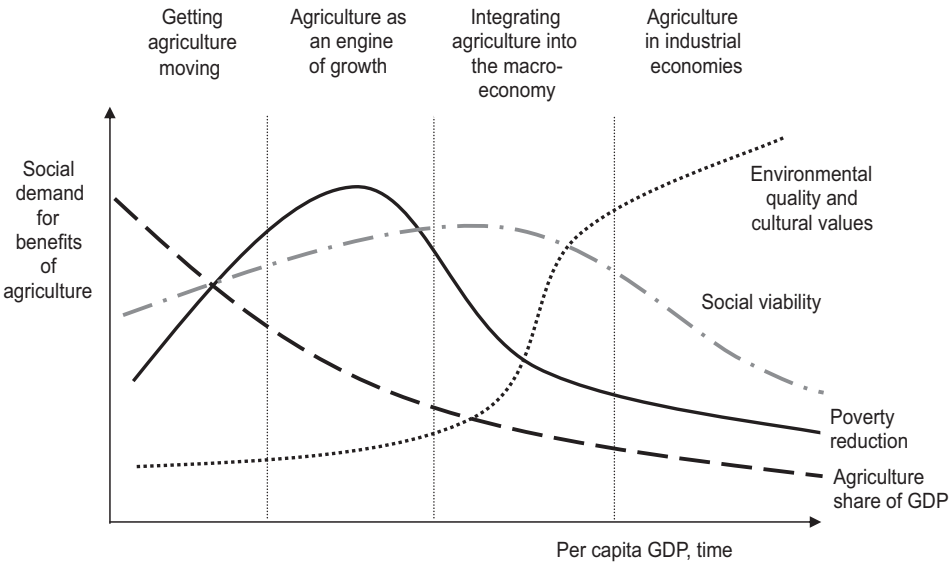

Fig. 1. Major roles of agriculture at different levels of economic development

Source: own compilation based on Dévé [2004].

The society's willingness to pay for non-market benefits generated by agriculture rises with economic development; it is the highest in rich urbanized countries with small proportions of the population engaged in agriculture, and is the lowest in the largely rural, poorest countries.

Empirical evidence on public agricultural expenditures

Budget allocations and expenditures on agriculture have received little attention in the literature on the political economy of public expenditures. One of such studies, for instance, is the research by Mogues et al. [2012] who investigate the trends in volume and intensity of total and agricultural government spending for a global sample of 70 developing and transition countries (including 14 from Eastern Europe and Central Asia – EECA[1]) over the period from 1980 to 2007. Since the composition of government expenditure has reflected government spending priorities, considerably different patterns among regions were existed. On average, the level of per capita agricultural expenditure increased from 20 USD in 1980 to 29 USD in 2000 to 44 USD in 2007. EECA topped the levels of public investment in agriculture, infrastructure and social protection. In those countries per capita agricultural spending doubled between 2000 and 2007 and was almost 100 USD in 2007, which was more than two times the sample average. Agriculture spending intensity (percentage of agricultural expenditure in agricultural GDP) also doubled the sample average, at 15 per cent, however developed countries usually have an intensity of over 20 per cent.

In Poland, current (2012, 2013) national public support to agriculture (excluding social security for farmers) accounts for almost 2 per cent of the state budget expenditure or 50–56 USD per capita. In 2012, agriculture spending intensity (percentage of national public expenditure on agriculture in Gross Value Added in agriculture) was at 11 per cent[2].

In the EU member states, including Poland, agriculture is the only sector almost entirely financed from the common budget, meaning that EU spending generally substitutes national expenditure. The EU spends about 30 per cent of its budget on agriculture (market related expenditure and direct aids). In 2011, the highest per capita outlays on agriculture from the EU budget occurred in Greece (212 EUR), Ireland and Spain, while the lowest ones were in Malta (11 EUR), Romania and Bulgaria. As a fraction of GDP, they were the largest in Greece (1.16%), Hungary and Lithuania, and the smallest in Malta (0.08%), Luxembourg and the Netherlands (Table 2).

Cross-country correlation between per capita agricultural spending and its intensity (measured by the spending share of the total GDP) in the EU-27 was moderate and positive (with Pearson correlation coefficient value of 0.48). When looking separately at the two subsamples of countries: UE-15 ("old" members) and EU-12 ("new" members excluding Croatia), the correlation coefficients across both subsamples ($r_{UE\text{-}15} = 0.86$; $r_{UE\text{-}12} = 0.77$) were higher than across the full sample of countries.

There was no observable correlation across the whole EU-27 between the level of economic development and the total EU spending on agriculture in the individual countries ($r_{UE\text{-}27} = 0.07$), probably since they are dissimilar in physical and population size.

[1] Azerbaijan, Belarus, Czech Republic, Estonia, Hungary, Israel, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Moldova, Poland, Romania, Russian Federation.

[2] The data on agriculture expenditures was derived from 2012 and 2013 Budget Acts (the Ministry of Finance website); the data on GVA in agriculture was obtained from the National Accounts Statistics database provided by the Central Statistical Office of Poland.

Table 2. EU agriculture spending by country in 2011

Country	Total (€m)	Per person	% of GDP	Country	Total (€m)	Per person	% of GDP
Austria	739.9	88.0	0.25	Italy	4 649.3	76.5	0.3
Belgium	556.9	50.6	0.15	Latvia	109.2	52.6	0.54
Bulgaria	315.1	42.8	0.84	Lithuania	279.9	91.7	0.95
Croatia	0.0	0.0	0.0	Luxembourg	36.9	72.0	0.12
Cyprus	42.0	50.0	0.24	Malta	4.4	10.6	0.08
Czech Republic	667.9	63.7	0.46	Netherlands	860.2	51.6	0.14
Denmark	964.2	173.4	0.39	Poland	2 398.3	62.2	0.68
Estonia	74.8	55.8	0.49	Portugal	760.9	72.0	0.46
Finland	496.4	92.4	0.26	Romania	795.7	37.2	0.59
France	8 679.9	133.4	0.43	Slovakia	296.9	55.1	0.44
Germany	5 498.1	67.3	0.21	Slovenia	108.7	53.0	0.31
Greece	2 406.9	212.8	1.16	Spain	5 819.5	126.1	0.56
Hungary	1 049.8	105.1	1.11	Sweden	697.8	74.1	0.18
Ireland	873.1	191.1	0.7	United Kingdom	3 315.5	53.1	0.19

Source: European Commission, Directorate General for Budget.

The results for the whole UE show weak positive correlation of per capita GDP with agricultural spending per capita ($r_{UE-27} = 0.21$). In the two sub-samples, however, GDP and agricultural spending, both on per capita basis, were inversely interrelated ($r_{UE-15} = –0.19$; $r_{UE-12} = –0.17$).

A moderate negative correlation was found between per capita GDP and agricultural spending relative to GDP ($r_{UE-27} = –0.55$). The relationship between the economic development level and EU agricultural spending share of GDP was more linear among the sample of new member states ($r_{UE-12} = –0.72$) than among the sample of old member states ($r_{UE-15} = –0.49$).

The mentioned above results suggest that per capita costs of EU support to agriculture are only weakly related to the general economic development of the respected countries but this support is relatively more important for the economies of less developed EU members.

A literature review of the effects of agricultural public spending

An in-depth review of the empirical literature on the subject is beyond the scope of this paper, so only some selected research findings for individual countries are presented in Table 3.

They show that there is empirical association between public spending on agriculture and: agricultural outcomes, private investment in the agricultural sector, farm prices, general agricultural development and rural welfare. The results however suggest that this impact differs depending on the type of expenditure (agricultural research and extension,

Table 3. The impacts of public spending on agriculture – review of empirical research

Authors	Region/study years	Type of public spending	Findings
Rosegrant et al. [1998]	Indonesia (1969–1990)	Agricultural irrigation, research and extension	Significant effect on crop growth: 85% of the growth for rice and maize, 93% for cassava, 71% for soybean
Esposti [2000]	Italy (1956–1995)	Agricultural R&D and extension investment	The main impact of public R&D and extension investment is on capital use and animal products
Siudek [2008]	Poland (1997–2006)	Agricultural loans (incl. preferential ones) given by the cooperative banks	Significant positive Pearson's correlation (r = 0.29) between ratio of farm loans to the cooperative banks' assets and the level of Polish agriculture development (as measured by the synthetic indicator)
Xu et al. [2009]	China (2007–2020)	Spending on agricultural R&D, subsidies and irrigation	Increased spending on irrigation and R&D contributes to the lower prices of rice, wheat and maize; on subsidies and R&D leads to higher income of farmers; on R&D, irrigation and subsidies has modest impacts on GDP growth, industry and service
Dastagiri [2010]	India (1970–2004)	Livestock-specific expenditures and public gross capital formation (GCF) in agriculture	Significant positive expenditures' effect on the livestock sector, and rural/general poverty reduction. GCF is effective in improving output only in some livestock commodities and has much weaker than spending positive impact on poverty reduction
Baba et al. [2010]	Himachal Pradesh, India (1969–2002)	Investment in agriculture	A positive highly significant effect of public-sector investment in agriculture on private-sector investments in agriculture
Kilian et al. [2012]	Germany, Bavaria (2005)	Single Farm Payments (SFP)	Decoupled SFP are capitalized into land rental prices, and to a larger degree than the coupled direct payments of the time prior to the Fischler reform of the CAP
Karlsson and Nilsson [2013]	Sweden (2007–2008)	Income support – Single Farm Payments (SFP)	The decoupled SFP has no influence on prices of small- and medium-sized farms (both built and non-built land) at local and regional levels
Daniłowska [2013]	Poland (2000–2011)	Agricultural investment loans on preferential terms	Great importance of the preferential loans in farm investment financing (excl. farmland buying). The period mean ratio of investment credit value to investment outlays at 60% with its drop since 2007 (from 73 to 42% in 2011)
Easterly and Rebelo [1993]	About 100 countries (1970–1988)	Agriculture investment	A statistically insignificant effect on economic growth and statistically significant negative impact on private investment
Mosley et al. [2004]	34 transition & developing countries (1980–2000)	Spending to whole agricultural sector	Agricultural expenditure as a share of GDP has a statistically significant positive impact on poverty reduction but lower than spending on education, housing and social services

Source: own compilation based on the literature survey.

rural infrastructure, subsidies, irrigation etc.). Additionally, in some cases public agriculture expenditures exercise negative effects, for example "crowding out" effect on private investments.

CONCLUSIONS

Although agricultural public spending has attracted quite considerable attention in economic research, it seems that recently it has been investigated less frequently than other types of public expenditures, especially when it comes to the developed economies, where agricultural sector accounts for a small fraction of the economy.

In the case of the developed countries, the conventional wisdom that public expenditure should be addressed to agriculture, since it positively affects the sector development and overall economic growth as well as poverty reduction, has been largely replaced by the belief that agriculture should be supported because it offers a range of positive externalities and public goods.

Consequently, the questions which need to be addressed in the future research on agricultural public expenditure include: (1) How much of this spending is for pure public goods or for goods with large positive externalities and how much for private goods?; (2) How much of public spending is for activities that are most likely to benefit the rural poor?; (3) How much of this spending goes to those intended to receive it?; (4) What part of this spending is for current consumption and what part is for on-farm capital investment?

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EKONOMICZNE I SPOŁECZNE UZASADNIENIE WYDATKÓW PUBLICZNYCH NA ROLNICTWO: SPOSTRZEŻENIA TEORETYCZNE I OBSERWACJE EMPIRYCZNE

Streszczenie. W pracy zilustrowano teoretyczne uzasadnienie wydatków publicznych na wsparcie sektora rolnego i ludności rolniczej. Korygowanie nieprawidłowości w funkcjonowaniu rynku oraz konieczność sprawowania przez państwo funkcji opiekuńczych, przytaczane jako argumenty za jego interwencją, skontrastowano, przez analogię do zawodności rynku, z niesprawnością państwa. Oprócz analizy normatywnej przedstawiono fakty empiryczne dotyczące wydatków publicznych na rolnictwo w różnych krajach, ze szczególnym naciskiem na państwa UE. Wyniki przeprowadzonej analizy statystycznej sugerują, że koszty wspierania rolnictwa przez UE w przeliczeniu na mieszkańca są słabo powiązane z ogólnym rozwojem gospodarczym poszczególnych krajów, ale pomoc ta ma stosunkowo większe znaczenie dla mniej rozwiniętych gospodarek UE. Z przeglądu obcych badań empirycznych dotyczących związku wydatków publicznych na rolnictwo z sytuacją ekonomiczno-finansową gospodarstw rolnych oraz ogólnym rozwojem sektora i obszarów wiejskich wynika, że ten sposób interwencji może być skuteczny, wywierając pozytywny wpływ m.in. na wzrost produkcji roślinnej i zwierzęcej, prywatne inwestycje oraz łagodzenie ubóstwa na terenach wiejskich, ale jego efekty są uzależnione od rodzaju wydatków.

Słowa kluczowe: wydatki publiczne, rolnictwo, teorie, zawodności rynku i państwa

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CONTENTS
SPIS TREŚCI

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