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Political rents in the European Union's agriculture[1]

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1. Introduction

Political rent is M. Olson's concept of which G. Tullock is the precursor. It is the key element of the 'rent-seeking' theory. The rent is the part of revenue which exceeds expenses indispensable to maintain resources in their current use (i.e. it exceeds their opportunity cost). If within a democratic society the interests of small social groups are transferred onto the actions of public authorities, providing such groups with exclusive benefits (rents), then it is a political rent (Wilkin 2012). To sum up, the source of political rent is the activity in the political sphere aiming at obtaining benefits in the form of revenue transfer from the budget. A question arises whether and to what extent we deal with this kind of rent in agriculture, bearing in mind the scope of national interventionism in this sector within the EU's Common Agricultural Policy.

Occurrence of land rents in modern agriculture of the EU is a fact. This is confirmed by numerous premises (Czyżewski 2013, p. 190-191):

- growing prices of agricultural land,
- valorisation of public goods supplied by agriculture through the Rural Development Programme, which may be considered as an institutional attempt at valuating land rent,
- total productivity accounts in agriculture that show increasing real productivity of this sector.

However, a question concerning the character of these rents arises. Are they differential rents linked with different productivity of agricultural land, absolute rents in the classical sense or political rents in the meaning of the public choice theory? Therefore, the objectives of the article are mainly theoretical. The authors make an attempt at verifying the concept of land rent formulated on the basis of studies carried out in Poland (Czyżewski 2013, ch. 2 and 3), this time, however, in the EU cross-section. Thus, the statistical data gathered in this study was aggregated at the macroeconomic level according to particular countries and sectors of economy according to NACE (Nomenclature statistique des activités économiques dans la Communauté européenne). The basic thesis of the aforementioned land rent concept states that higher expected productivity of capital in agriculture than in its market environment is the source of the rent. At the heart of this thesis lie key assumptions of the neoclassical economy and the new classical economy, according to which the marginal productivity of production resources in different uses becomes steady and heads towards zero, affecting the equilibrium prices that clear markets of surpluses ('total supply-side hypothesis', Bludnik 2010, p. 23-33). However, taking into account that land and labour factors in agriculture are to a large extent nonmobile, the above assumption may be reduced to a statement that it is the marginal capital productivity that steadies and heads towards zero. Therefore, a question arises whether the expected capital productivity in agriculture of individual EU countries is really higher than it is in its market environment, whether it is a constant phenomenon, and to what extent it results from the CAP subsidies and other factors? An alternative (according to the political rent concept) explanation of higher capital productivity in agriculture is presented in the next point of the article.

The authors estimated capital productivity in agriculture and its sectorial environment in two variants: "with" and "without" subsidies for agricultural producers (area payments). Differences in these estimates show to what extent higher capital productivity in agriculture results from the support within the CAP and thus is a political rent (institutional). The ranking of countries,

however, indicates whether the CAP changes the relative level of political rents in individual countries.

2. Political rents versus new utilities of agricultural land

Land's intrinsic abilities to create, in a broad meaning of the word, are timeless and have their ontological dimension when referring to Platonic philosophy of nature or purposefulness of nature according to St. Thomas Aquinas. The problem is whether these ontological values can be translated to the language of economy. In the paradigm of sustainable agriculture, land has an intrinsic utility (Czyżewski A., Czyżewski B., 2014, p. 460-472), i.e. it supplies parts of utilities without additional capital and labour input (although not entirely without their causative role) through limiting intensity of agricultural production or its partial abandonment. The condition for these processes to begin is, however, the anthropogenic character of natural environment and far-reaching previous accumulation of capital. Under such circumstances, in highly developed countries, a situation occurs in which bigger social benefits are brought rather by slowing down the economic growth processes than by stimulating them. It particularly concerns agriculture. Although since the very beginning of the human civilization, land provided men with particular gifts of nature (e.g. in natural agriculture it provided fuel and game or in feudalism in the form of servitudes), in sustainable agriculture, the gifts have taken on a different character. These are no longer utilities that fulfil only individual needs of a farmer. They are public goods for which there is public demand. Therefore, society aims at their institutional valorisation. Intrinsic utilities of land create a monetary product and play a complementary role to the utilities of capital and labour that are subject to the market valuation laws.

To conclude, agriculture generates market goods, i.e. goods that are subject to market transactions, and goods that do not occur on the market. The first goods obtain a market price that allows economic entities, in this case farms, to determine economic gain (profit) that is the basic economic motive of their economic activity.

The model of multifunctional agriculture (excluding agricultural products) recognizes the importance of rural areas and the need to pay special attention to the protection of water resources, soil and preservation of habitat and landscaping. However, making up for delays requires the introduction of appropriate CAP's instruments that support both economic efficiency and provision of public goods (Brelik 2014, p.112-121.). The case of external effects

that inherently accompany agricultural activity is different. These effects may be negative (anti-public goods) and occur when agricultural activity causes specific damages in people's environment. They may also be positive (public goods) which takes place when agricultural activity is accompanied by generating goods favourable to people, which can be used by them at no cost. These goods are not a subject of market transactions, thus, they do not have a fixed price. However, it does not mean that they are worthless or insignificant for well-being of people. Valuating environmental services and public goods (Czyżewski, Brelik 2013) for life quality, further development, and even possibility for future generations to dwell increases rapidly. The necessity to limit pressure placed by industrial agriculture on the environment due to, on the one hand, the use of non-renewable natural resources, soil degradation and emissions of pollutions, and on the other hand, due to supplying public goods (environmental, such as landscape, social and cultural) and renewable raw materials shows agriculture in an entirely different light in the social valuation structure (Zegar 2005).

Summing up, agricultural land has a determined "intrinsic utility", depending on the agriculture development model. Under conditions of the money-goods economy, this utility will increase capital productivity linked with land while stimulating processes of its accumulation as well as creating specific economic rents called 'land rents'. Capital inflow in the form of material and fixed assets inputs may, however, lead to decrease of land utility and disappearance of these rents, which takes place in the case of gradual degradation of the natural environment through industrial methods of agricultural raw materials production. However, by introducing specific limitations and institutional stimulants, it is possible to ensure a more sustainable path for the development of agriculture, towards which its European model is heading.

3. Methodological notes

Firstly, it has been assumed that the right approximation of the expected values will be the sectorial means, on the basis of which two types of indexes have been estimated:

Capital productivity index excluding subsidies for producers (1) and with subsidies (1a)

$$\text{CP in euro/1 euro input} = \frac{\text{global production}}{\text{indirect consumption} + \text{employment related costs}} \quad (1)$$

$$\text{CP in euro/1 euro input} =$$
$$\frac{\text{global production}}{\text{indirect consumption} + \text{employment related costs} + \text{net taxes from producers*}} \quad (1a)$$

*Such a presentation of subsidies results from the methodology of constructing matrices of inputs-results used by Eurostat. Net taxes from producers = taxes from producers – subsidies for producers, therefore versions 1 present agriculture without support of the CAP due to direct subsidies, although it includes the Rural Development Programme support which is included in the global production. In variants 1a, the values of indexes are higher if subsidies exceed taxes, which is the case in the agricultural sector.

Capital productivity index has been counted for section A1 acc. NACE Rev.2 (i.e. "agriculture and hunting" acc. the Polish Classification of Activity) by comparing them with sections C10-C12 and C20 together (i.e. "Processing industry, production of beverages and tobacco products" and "Chemical industry") as the share of these sectors in the input-output flows in agriculture is the biggest. The data comes from the "National Accounts" acc. Eurostat ("Tables of use of goods and services") .

A detailed explanation of the construction of the above-mentioned indexes was presented in (Czyżewski 2013, chapter 3.1) and has been omitted here due to its extensiveness. As for the objective scope (sectors) and time scope (years) of the research, availability and comparability of statistical data was a significant limitation. For this reason, only data from 2008, 2009 and 2010 have been presented here, although calculations were conducted for more than 10-year sequences (they confirm the formulated conclusions). In 2008, the classification "NACE rev.2" was introduced. Its comparability with the previous NACE rev.1" raises concerns.

As for the choice of countries for the analysis, the key criterion was the type of agricultural structure from the point of view of involvement of the land factor and the dominating types of agricultural production. The authors used the typology of agriculture developed by A. Matuszczak (Matuszczak 2013, p.139) so that each of the four classes of structures identified by the Author was represented by 2-4 countries. As a result, the analysis included 17 EU countries

(cf. Table 1) which represent the full scope of agricultural structures of the European agriculture.

4. Research results and their interpretation

The countries were arranged in tables according to the value of the difference between capital productivity in agriculture and in its sectorial environment (in decreasing order), in the first year of the analysis – fourth column in tables 1-2.

The most important conclusion that arises on the basis of the data from table 1 is the fact that even without area payments, capital productivity in agriculture higher than in its environment is a common phenomenon in the EU. It is a confirmation of the thesis concerning sources of land rent proposed in the introduction. It also shows what part of land rent does not have a political (institutional) character. Therefore, it may be assumed that in the agriculture of the studied countries, the marginal productivity of materials and costs of external production factors is higher than zero and differs in plus from the level shaped in the sectorial environment of agriculture. It means that land still has specific utilities complementary to capital, and the marginal utility of land products is positive. As a result, there still exists a certain margin for agricultural production intensity growth understood as increase of input absorption, i.e. the consumption of materials and external production factors per land unit (Czyżewski, Smędzik 2013, p. 28-30).

Table 1. Comparison of the average capital productivity in agriculture and in its sectorial environment without taking into account area payments (section A1 vs. C10-12, C20 acc. NACE Rev. 2) – global production in EUR per 1 EUR of input*

Chosen EU countries	Sections acc. NACE Rev. 2	2008		2009		2010	
Slovenia	A1 C10-12,C20	1.67 1.09	0.58**	no data	no data	1.64 1.10	0.54
Greece	A1 C10-12,C20	1.70 1.16	0.54	1.75 1.30	0.44	1.68 1.32	0.36
Italy	A1 C10-12,C20	1.63 1.09	0.54	no data	no data	1.54 1.10	0.44

Austria	A1 C10-12,C20	**1.67** **1.14**	**0.53**	**1.54** **1.17**	**0.37**	**1.60** **1.16**	**0.44**
Slovakia	A1 C10-12,C20	**1.62** **1.16**	**0.46**	**no data**	**no data**	**1.39** **1.15**	**0.24**
Poland	A1 C10-12,C20	**1.50** **1.12**	**0.39**	**1.54** **1.17**	**0.37**	**no data**	**no data**
Germany	A1 C10-12,C20	1.41 1.11	0.31	no data	no data	1.31 1.13	0.18
Hungary	A1 C10-12,C20	1.40 1.10	0.30	1.33 1.10	0.23	1.37 1.10	0.27
France	A1 C10-12,C20	1.39 1.10	0.29	1.33 1.11	0.22	1.44 1.09	0.35
Portugal	A1 C10-12,C20	1.35 1.09	0.27	1.37 1.11	0.26	1.35 1.11	0.24
Romania	A1 C10-12,C20	1.50 1.26	0.24	1.47 1.35	0.12	1.34 1.42	-0.08
Belgium	A1 C10-12,C20	1.31 1.09	0.22	no data	no data	1.33 1.10	0.23
Lithuania	A1 C10-12,C20	1.36 1.15	0.21	1.20 1.17	0.03	1.26 1.18	0.08
United Kingdom	A1 C10-12,C20	1.29 1.10	0.19	1.15 1.07	0.08	1.24 1.08	0.16
Czech Republic	A1 C10-12,C20	1.21 1.14	0.08	1.16 1.16	0.00	1.08 1.15	-0.07
Ireland	A1 C10-12,C20	1.36 1.31	0.05	no data	no data	1.32 1.31	0.01
Denmark	A1 C10-12,C20	1.08 1.06	0.02	1.09 1.07	0.01	no data	no data

*calculated on the basis of the following formula (1): global production / (indirect consumption + employment costs)

** Difference of productivity indexes from column 3

Source: own calculations on the basis of the Eurostat data

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Table 2. Comparison of the average capital productivity in agriculture and in its sectorial environment taking into account area payments (section A1 vs. C10-12,C20 acc. NACE Rev. 2) – global production in EUR per 1 EUR of input*

Chosen EU countries	Sections acc. NACE Rev. 2	2008		2009		2010	
Greece	A1 C10-12,C20	2.96 1.16	1.80	3.56 1.30	2.26	2.87 1.32	1.55
Austria	A1 C10-12,C20	2.67 1.14	1.53	2.57 1.17	1.41	2.61 1.16	1.45
Slovakia	A1 C10-12,C20	1.99 1.15	0.84	no data	no data	1.66 1.15	0.51
Slovenia	A1 C10-12,C20	1.91 1.09	0.82	no data	no data	1.82 1.10	0.72
Italy	A1 C10-12,C20	1.81 1.08	0.73	no data	no data	1.75 1.09	0.66
Germany	A1 C10-12,C20	1.72 1.11	0.62	no data	no data	1.62 1.13	0.49
Hungary	A1 C10-12,C20	1.70 1.09	0.60	1.65 1.10	0.55	1.76 1.10	0.66
Poland	A1 C10-12,C20	1.69 1.11	0.58	1.66 1.16	0.50	no data	no data
Portugal	A1 C10-12,C20	1.63 1.09	0.54	1.57 1.11	0.46	1.59 1.11	0.48
Ireland	A1 C10-12,C20	1.79 1.29	0.49	no data	no data	1.72 1.31	0.41
France	A1 C10-12,C20	1.58 1.08	0.49	1.50 1.09	0.41	1.69 1.07	0.62
United Kingdom	A1 C10-12,C20	1.55 1.09	0.46	1.43 1.07	0.36	1.46 1.07	0.39
Romania	A1 C10-12,C20	1.60 1.25	0.35	1.64 1.34	0.30	1.43 1.41	0.02
Belgium	A1 C10-12,C20	1.43 1.09	0.34	no data	no data	1.44 1.10	0.34

Czech Republic	A1 C10-12,C20	1.46 1.14	0.32	1.59 1.17	0.42	1.36 1.15	0.21
Lithuania	A1 C10-12,C20	1.40 1.15	0.25	1.26 1.17	0.09	1.30 1.18	0.12
Denmark	A1 C10-12,C20	1.23 1.06	0.17	1.27 1.08	0.19	no data	no data

*calculated on the basis of the following formula (1a): global production / (indirect consumption + employment costs + net taxes from producers)
** Difference of productivity indexes from column 3

Source: own calculations on the basis of the Eurostat data

As long as this stat persists, there exist conditions for realization of rents, in this case differential ones as they are not permanent in nature because the tendencies encouraging to increase input absorption and intensity of rural production gradually reduce the intrinsic utility of land to zero. Then it stops being complementary to capital and it becomes fully dependent on it.

It is worth observing which countries and agricultural structures are characterized by the biggest advantage of capital productivity, without area payments – cf. table 1. In this respect, Slovenia, Greece, Italy, Austria, Slovakia and Poland stand out (cf. table 1).

Although a detailed analysis of agricultural structures in these countries goes beyond the hereby article, they have a number of common features:
• relatively small share of 'capital intensive' farms in the use of cultivated land,
• advantage of land-absorption profiles of production in creating the global production of agriculture,
• relatively considerable importance of the Rural Development Programme.

As shown above, these characteristics create conditions for production growth through material-absorption intensification (since the marginal capital productivity is relatively high). However, it does not mean that this direction of development is desirable because it may lead to gradual disappearance of differential rents. Therefore, it is not the sustainable (constant) development path. The authors are also aware that in the EU there are other countries, not mentioned here, that meet the above conditions. Therefore, the collection of capital productivity determinants in agriculture is certainly much bigger.

Among the countries listed in table 1, only in two cases, in one year, capital productivity in agriculture is slightly lower than in its environment (without area payments). These two countries are the Czech Republic and Romania.

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In the first case, it might result from the fact that in the Czech Republic contract work exists almost exclusively which increases the costs of external production factor. In Romania, it may be connected with a relatively low level of use of resources from the Rural Development Programme, and with significantly large fragmentation of agricultural structures due to which there is little correlation between production intensification and increase of its value.

Taking the CAP subsidies into account significantly increases the advantage of capital productivity in agriculture over its environment – this increase is a measure of political rents (cf. tables 1 and 2). However, the ranking of countries presented above changes slightly. It allows to formulate a conclusion that political rents are by no means a decisive factor in shaping a relative level of land rents! Countries characterized by "capital intensive" agricultural structures such as Germany move up by several positions. The data from table 2 also shows to what extent direct payments stimulate capital intensification of production.

5. Conclusions and summary

On the basis of the presented research results, a general conclusion arises that the land factor is significant in the macroeconomic processes of levelling marginal productivities of production factors (contrary to what some of the main trend economists claim) – (Blaug 2000, p. 100). The significance differs depending on the agriculture development model. Land utilities are complementary to capital inputs. Higher capital productivity in agriculture creates land rents, although above all - differential ones. The reasons for higher productivity are various and this problem requires further detailed analyses. Potentially, they include such factors as:

- diverse costs of agricultural land use and legislation barriers concerning its purchase and sales,
- institutional and natural limitations of production intensity growth,
- supplying public goods by agriculture, and their valorisation (by the market or institutions),
- institutional rents linked with compensation of unreliability of the market mechanism,
- political rents resulting from lobbying,
- diverse own labour costs in agriculture and hidden unemployment.

These factors occur in individual countries and agricultural structures with variable intensity. However, their significance will be growing as the premises of the sustainable agriculture will be realized. From that point of view, the

presented concept of creating land rent seems to be valid. The following mechanism arises from it: relatively low intensity of agricultural production (in terms of the relation between production means and land resources) contributes to relatively high capital productivity. Under these conditions, the cost of land use should increase. However, due to various aspects this process is slow, and as a result, land utilities become input-free complementary to capital inputs. In this sense, land is intrinsically productive. It results in relatively high marginal capital productivity in agriculture in relation to the purchasing power of incomes in a given country. Moreover, differential rents appear. They may last as long as the absorbing capabilities of the natural environment are not used (therefore, surely longer in the new member states of the EU12). However, with time the conditions favourable to growing input absorption decapitalize the value of land and threaten the sustainability of this resource.

Abstract

Common Agricultural Policy versus political rents – a comparative analysis on the basis of chosen countries of the European Union
Occurrence of land rents in modern agriculture of the EU is confirmed by the long-lasting upward trend in agricultural land prices. However, a question arises whether these rents are differential ones, linked with a different productivity of agricultural land, absolute ones in the classical sense, or political rents in the meaning of the public choice theory? The objectives of the article are mainly theoretical. The authors made an attempt at verifying the concept of land rent formulated on the basis of studies carried out in Poland. This time, the scope of research includes a cross-section of all agricultural structures of the EU. According to the above-mentioned concept, the source of a modern land rent is higher expected productivity of capital in agriculture than in its market environment. This phenomenon is often justified by paying political rents within the CAP. Is it really the case? The conducted research answers i.a. the question: in which countries and agricultural structures the possible difference of the above-mentioned capital productivity is the biggest and to what extent it results from political rents or other factors?

Key words: *and rent, political rent, agriculture, CAP of the UE, sustainable development.*

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Streszczenie

Wspólna Polityka Rolna a renty polityczne - analiza komparatywna na podstawie wybranych krajów Unii Europejskiej

Występowanie rent gruntowych we współczesnym rolnictwie UE potwierdza wieloletni rosnący trend cen ziemi rolniczej. Nasuwa się jednak pytanie, czy są to przede wszystkim renty różniczkowe związane z różną wydajnością gruntów rolnych, czy renty absolutne w klasycznym rozumieniu, czy też renty polityczne w ujęciu teorii wyboru publicznego? Cele artykułu mają przede wszystkim wymiar teoriopoznawczy. Podjęto w nim próbę weryfikacji koncepcji renty gruntowej, którą sformułowano na podstawie badań przeprowadzonych w Polsce. Tym razem jednak zakres badań obejmuje pełen przekrój struktur agrarnych UE. Według wspomnianej koncepcji źródłem współczesnej renty gruntowej jest wyższa oczekiwana produktywność kapitału w rolnictwie niż w jego otoczeniu rynkowym. Często tłumaczy się to zjawisko wypłacaniem rent politycznych w ramach WPR. Czy tak jest w istocie ? Przeprowadzone badania odpowiadają m.in. na pytanie w jakich krajach i strukturach agrarnych ewentualna różnica wspomnianej produktywności kapitału jest największa i na ile wynika to z rent politycznych, a na ile z innych czynników?

Słowa kluczowe: *renta gruntowa, renta polityczna, rolnictwo, WPR UE.*

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