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**Modernising the  
agricultural sector and  
stabilising the agricultural  
markets in budgetary  
expenditures in Poland in  
the years 1997-2011<sup>1</sup>**

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**1. Introduction<sup>2</sup>**

The aim of the discussion is to assess the budgetary expenditures related to the implementation of agricultural policy in the activities of the two largest paying agencies - AMA and ARMA responsible for the implementation of the title problem. The analysis applies to changes in share of spending on agricultural markets and the modernization of the agricultural sector in Poland in the total budgetary expenditures in the long run, ie in the years 1997-2011 (15 years) with highlighting the period before and after accession to the EU. It will also be taking the relationship between spending from the national budget for the institutions, and the total budgetary expenditures and the funds allocated to the agricultural sector (agriculture, rural development and agricultural markets). Everything is done to prove the growing role of the paying agencies in the post-accession

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period, ARMA - the largest distributor of subsidies for the agricultural sector, determining the processes of modernization and the AMA is responsible for the stabilization of agricultural markets.

## 2. Institutional aspects of agricultural support

Institutions are a vital segment of an efficient market economy, and its sectors, especially the agricultural sector. They are differently defined in subjective and functional terms (Czternasty, Czyżewski 2007). For the purposes of this article they represent subjects organising and regulating the changes in the agricultural sector with the means of budgetary expenditures, and thus initiating behavioural patterns subject to evolution and defining their identity. They are the instruments of the improvement of individual economic conditions of economic entities, whilst the demand for the appropriate correction of the institutional structures stems from the need for achieving given income and effective coordination of business activity (Czyżewski, Henisz-Matuszczak 2006). With the help of the above institutions a number of objectives for agricultural policy is being implemented, i.e. maintaining agricultural income, stabilisation of agricultural markets, the restructuring and modernisation of agricultural sector, and the development of rural network infrastructure, and social purposes.

Unfortunately, one of the major weaknesses of agriculture, which visibly revealed itself in the first decade of the transformation of the Polish economy, and which systematically lead to the degradation of the economy of the agricultural sector within the pre-accession period, was the area of institutional development. During the transition to a market system certain 'institutional gaps' emerged, which automatically found their reflection in deteriorating conditions of management, and consequently, in the decreasing income parity and impossibility of introducing extended reproduction by most agricultural holdings (Wilkin 2000/4). In the section below we focus on major institutions, which have been established administratively to correct the vitality of the market mechanism in the quest to balance the market, while improving farming efficiency and competitiveness of agricultural products. This helps farmers achieve economic rent and strengthens its competitive positions, i.a. with financial support, i.e. subsidies, funding and other elements of state protectionism.

While creating individual institutions certain objectives were assigned to each of them, concerning the area of agricultural policy, and thus the following subjects were established: the Agricultural Market Agency, the Agency for Restructuring and Modernisation of Agriculture - presently acting as paying

agencies – and the Agricultural Property Agency of the State Treasury (currently the Agricultural Property Agency).

### **3. Agency for Restructuring and Modernisation of Agriculture**

The institution meeting the objectives of agricultural policy as primary goals is the Agency for Restructuring and Modernisation of Agriculture, whose task, among others, within the pre-accession period, was to support the development of the rural network infrastructure. The agency was then equipped with rights to assign subsidies to preferential credits granted for investment purposes to agricultural producers, agri-food processing plants, and communes [Journal of Laws 1994/1 item 2], as well as subsidising extra-class milk production, building the system of identification and registration of breed animals and agricultural holding records, and co-financing PHARE and SAPARD programmes. Currently, ARMA is implementing a number of tasks (from the state budget): subsidising the interest rate of investment bank credits for the liquidation of natural disasters, aid for utilisation plants performing the processing, transportation and combustion of animal meals, subsidising the areas of rape cultivation and the subsidising of: land afforestation, producer group organisation, information and promotion activity, animal identification and registration, etc.

The Agency for Restructuring and Modernisation of Agriculture is a major institution for structural transformations in agriculture and rural areas. Their support determines, i.a., the development of pro-income agriculture policy, and consequently, multi-functional rural development. While analysing the resources granted for supporting the structural transformations of agri-food sector within the pre-accession period, one realises that they were too low to initiate significant qualitative changes. Nevertheless, this was the basic source that supported investments in the agriculture and agri-food processing industry, agrarian structure improvement and undertakings concerning education, consulting and information. The budgetary resources for paying agencies grew systematically in absolute terms; however, their share both in total budgetary expenditures and in expenditures on the agricultural sector (agriculture, rural development and agricultural markets) underwent considerable fluctuations (cf. fig 1 and 2). Concurrently, the average share of the expenditures on the ARMA within the total budgetary expenditures in the corresponding period increased to 270%. Before integration with the EU, the ARMA faced similar financial problems to the AMA. The limitations on budgetary expenditures for the statutory purposes of the Agency were restricted, whilst the substantial majority of the Agency's

expenditures involved the payment of debts from previous years, which resulted in the insufficiency of resources for managing current and new forms of activity. This situation was so inexplicable that soon the ARMA was transformed into a paying agency, managing, i.a., the EU Integrated Administration and Control System of the Common Agricultural Policy, and the funds granted to the agency were restricted by the poor possibilities to prepare for this function. In light of growing income disparities among agricultural holdings within the pre-accession period, the systematic reduction of aid funds for farmers was unjustifiable. This was in opposition to official government declarations concerning activities to improve their income situation<sup>3</sup>.

#### 4. Agricultural Market Agency

For the realisation of interventions aiming at agri-food market stabilisation and protecting income from agriculture, the Agricultural Market Agency (AMA) was established (Gutowski 1995). The intervention activities of AMA within the pre-accession period were of market nature, excluding administrative actions; however, they also involved production support and subventions. Nevertheless, they did not replace the market mechanism of price shaping, restricting themselves only to supporting and verifying it. Up to this day, the activity of the AMA is focussed on the markets for grain, milk and its products, meat, poultry and eggs, potato starch, and sugar, which are of key importance for the income generated from agriculture, as well as on the markets for honey, fruit and vegetables, dry fodder, flax, hemp fibre and wine. The current activity of the agency is connected with the administration of CAP mechanisms, including intervention activity and, within the national supplement payment, co-financing (from the state budget) CAP mechanisms, as well as activities not directly concerned with payments<sup>4</sup>.

However, in order for the realisation of the objectives of the above institutions to be possible, certain resources are required. The scope of the activities of paying agencies is connected and determined most of all by the volume

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3 Cf. „Pact for agriculture and rural areas” approved by the Council of Ministers in September 2000.

4 E.g. on the markets of biocomponents, biofuels, energetic plants, concerning managing the record of biofuel producers, certifying purchasing and plant processing subjects and supervising their use. One of such activities is the supervision of the use of raw materials cultivated on set-aside lands destined for the production of non-food products.

of financial resources at their disposal, being supplied with a budgetary subsidy, whose amount is established annually in the budgetary act, as well as the stream of EU funds. As mentioned earlier, the expenditures on the agricultural sector, presented by the Minister of Finance in annual budgets, drastically decreased after 2002, after their significant and systematic growth was recorded. As regards budgetary resources for the Agricultural Market Agency, their dynamics are variable. Expenditures on AMA in budgetary acts were a repeatedly discussed issue, which is reflected in their fluctuating level in subsequent years. The pre-accession experience clearly showed that the effectiveness of the Agency activity, regarding both maintaining the prices of purchases (and agricultural income), and counteracting their excessive growth (market stabilisation), depended mainly on the scale of agricultural and food product provisions remaining at the Agency's disposal, creating operational stocks of grain and intervention activity on the markets for grain, meat, milk and its products, and sugar. Provisions and stocks must be stable and in the proper volume. Unfortunately, fluctuations in the level of funds granted often triggered the situation where the agency was not able to fulfil its statutory tasks resulting from the necessity of regulating financial obligations, maintaining the high level of state reserves, the costs of acquisition and intervention stock maintenance and the costs of Agency activity plus adjusting it to the requirements of the Common Agricultural Policy of the EU. The credit situation for the Agency was indeed poor – the payment deadlines for the previously-taken credits for intervention activities purposes (e.g. grain buyout in 1998) were drawing near<sup>5</sup>. A restructuring of this debt was needed, as the budget had no means of paying the instalments or to deal with previous obligations, so that current expenditures related to this debt would considerably reduce the statutory activity of the institution. Another outstanding problem involved the declarations made with regard to the negotiation standpoint submitted to the EU, concerning the "Agriculture" area, the implementation of which became doubtful.<sup>6</sup> As of 2003 the situation slightly improved. The recorded growth could

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5 Taking credit was a frequent practice of the Agency. Eventually, however, these credits had to be paid off by the state budget, due to the public character of AMA's activities. Cf. *Skup z dopłatami jest korzystny dla rolników i dla rynku (Acquisition with subsidies is profitable to farmers and market)*, "Information Bulletin" of AMA, Warsaw 1999/10, p.9.

6 It projected that within The EU Integrated Administration and Control System of the Common Agricultural Policy, Poland would have to devote budgetary resources to adjusting AMA to fulfilling the tasks of intervention agency, as it is the case with corresponding institutions in the EU, and to cover the costs of new forms of intervention on the markets of grain, potato starch, milk and its products, and beef meat.

be treated as the initiation of a broader cover of Agency's intervention activity using budgetary subsidies. At the same time, higher amounts were given for the implementation of tasks concerning the agricultural and food product markets and financing administration costs of the Agency, including the financial management of EU's CAP, resulting from its function as a paying agency. The majority of resources within the agency budget are spent on the administration of the Common Agricultural Policy mechanisms.<sup>7</sup> The expenditure structure after the integration with the EU retains relatively constant proportions - most (about half the resources) is spent on market intervention, then refunding-raised expenditures (ca. 30-40% of resources), and the rest are expenditures on payments and the refund of costs related to the distribution of food aid. It must be noted that the scope of AMA's activity has grown and the tasks of the agency required greater financing. This was reflected in the level of absolute expenditures on AMA (excluding 2005), but the dynamics of these expenditures compared to the total budget expenditures (cf. Fig. 1) and expenditures on the agricultural sector indicated a certain cyclicity (cf. Fig. 2). Yet, the average share of the expenditures on the AMA in total budgetary expenditures within the post-accession period increased to 150% of the expenditures in the pre-accession period.

**Table 1. The share of expenditures on AMA and ARMA within state budget total expenditures in 1997-2011 (in %)**

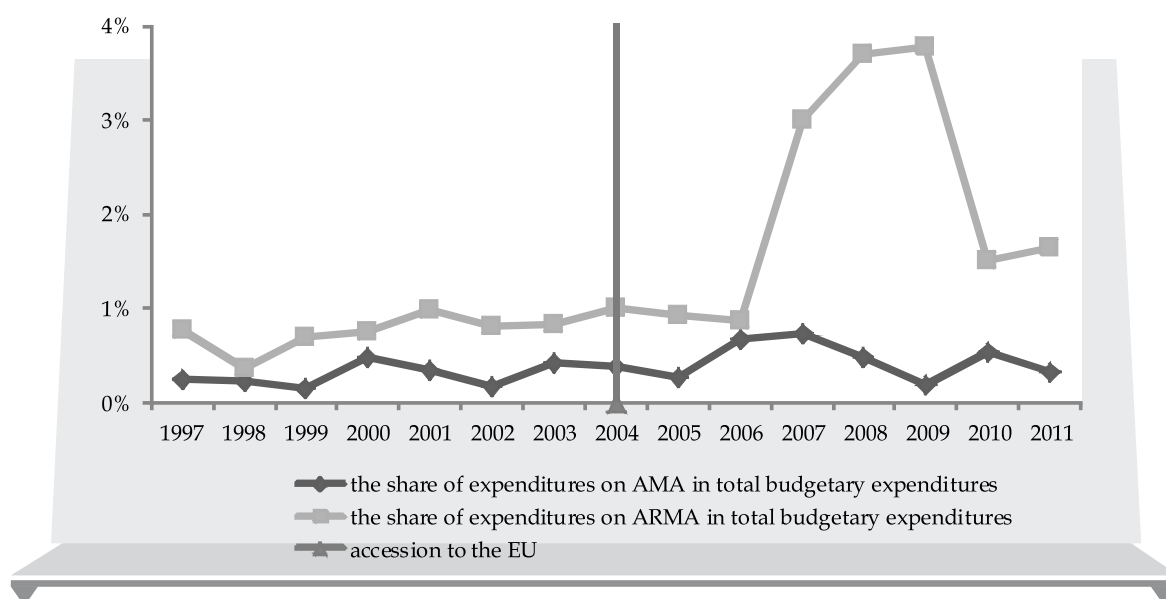
Before accession to the EU	1997	1998	1999	2000	2001	2002	2003	average	
The share of expenditures on AMA* in state Budget total expenditures	0.25	0.22	0.15	0.47	0.35	0.16	0.42	<b>0.29</b>	
The share of expenditures on ARMA* in state budget total expenditures	0.77	0.36	0.69	0.75	0.98	0.81	0.83	<b>0.74</b>	
After accession to the EU	2004	2005	2006	2007	2008	2009	2010	2011	average

7 The intervention activities of AMA in 1997-2008 concerned agricultural markets of: grain, sugar, meat, milk and its products, potato starch, dry fodder, flax, hemp fibre, fruit, vegetables, silkworms and other agri-food products. One of the tasks of the Agency is supporting the provision of food surplus to the poorest population of EU and supporting promotion and information activities on selected agricultural product markets.

The share of expenditures on AMA* in state Budget total expenditures	0.38	0.27	0.67	0.73	0.47	0.18	0.54	0.33	<b>0.45</b>
The share of expenditures on ARMA* in state budget total expenditures	1	0.92	0.87	3	3.7	3.37	1.5	1.64	<b>2.01</b>

\* the activity of the AMA and ARMA – expenditures on own and outsourced tasks, including specific subsidies, pre-financing tasks concerning financing from EU resources, co-financing projects with EU resources including technical support under RDP 2007-2013, without additional resources from specific provisions.

Source: Wykonanie Ustaw Budżetowych na rok 1996 (p.2/8), 1997 (p. 2/8), 1998 (p.2/9), 1999 (p.2/8), 2000 (p. 2/14 ), 2001, 2002, 2003, 2004, projektu Ustawy Budżetowej na rok 2005, a także 2005 oraz A.Czyżewski, Opinia o budżecie na 2002 r. w części dotyczącej rolnictwa, rozwoju wsi i rynków rolnych, "Wieś Jutra", 2002,/3, p.2-5, A.Czyżewski, Opinia o ustawie budżetowej na 2003 r. w części dotyczącej rolnictwa, rozwoju wsi i rynków rolnych, Druk Sejmowy nr 918, "Wieś Jutra" 2003/1(54), A.Czyżewski, Opinia o ustawie budżetowej na 2004 r. w części dotyczącej Rolnictwa, rozwoju wsi i rynków rolnych, "Wieś Jutra" 2004/1, A.Czyżewski, Opinia o ustawie budżetowej w części dotyczącej Rolnictwa, rozwoju wsi i rynków rolnych odpowiednio na 2005, 2006, 2007, 2009, 2010 i 2011, Dział Analiz i Opracowań Tematycznych Kancelarii Senatu RP.



**Figure 1. The share of expenditures on the AMA and ARMA within the state budget total expenditures in 1997-2011 (in %)**

Source: as in table 1

A significant point is that the level of nominal expenditures during the period of economic stagnation (2000-2001) was relatively high compared with the period directly after accession (2004-2005), which might have been related to activities for aid-fund absorption. Assuming that the basis for structural transformations in Polish agriculture are the changes in the income situation of agricultural holdings, we should hypothesise that each measure supporting the restructuring and modernisation of the sources of agricultural holdings' income acquisition constitutes a basis for the development of the subject sector. From this point of view, the significant factors are budgetary expenditures directly supporting the implementation of the income objectives of agricultural holdings.

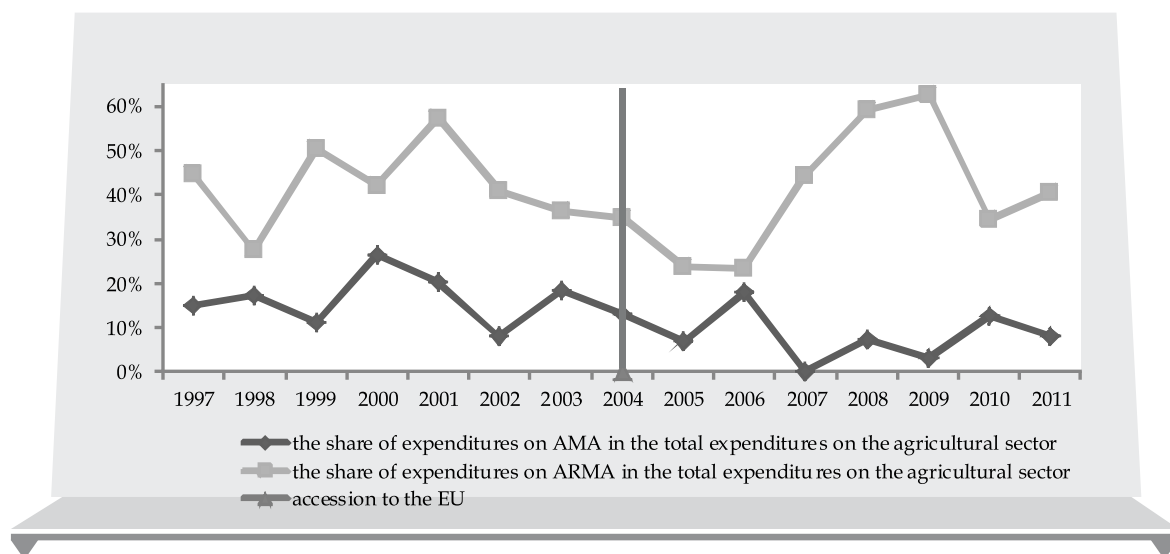
**Table 2. The share of expenditures on the AMA and ARMA in the expenditures on agriculture, rural development and agricultural markets in 1997-2011 (in %)**

<b>Before accession to the EU</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>		<b>average</b>
The share of expenditures on the AMA* in expenditures on agriculture, rural development and agricultural markets	15	17.1	11.2	26.6	20.5	8.1	18.4		<b>16.7</b>
The share of expenditures on the ARMA* in expenditures on agriculture, rural development and agricultural markets	44.8	27.6	50.5	41.9	57.2	41.1	36.2		<b>42.8</b>
<b>After accession to the EU</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>average</b>
The share of expenditures on the AMA* in expenditures on agriculture, rural development and agricultural markets	13	7	18	11	7.5	3.09	12.6	8.2	<b>10.1</b>
The share of expenditures on the ARMA* in expenditures on agriculture, rural development and agricultural markets	34.7	23.9	23.3	44.5	59.1	62.7	34.5	40.4	<b>40.4</b>

\* the activity of the AMA and the ARMA – expenditures on own and outsourced tasks, including specific subsidies, pre-financing tasks concerning financing from EU resources, co-financing projects with EU resources including technical support under RDP 2007-2013, without additional resources from specific provisions.

Source: as in table 1





**Figure 2. The share of expenditures on the AMA and ARMA in the expenditures on agriculture, rural development and agricultural markets combined in 1997-2011 (in %)**

Source: as in table 1

One should also note the deterioration in the situation of subsidies to the investment rate of working-capital credit for agricultural purposes.<sup>8</sup> During the period close to accession expenditures in nominal terms began to grow, yet, in relative terms (e.g. in reference to total budgetary expenditures), during the ten-year period (1997-2005) we experienced a stagnation in that area (cf. fig. 1). What is worse, the ratio of expenditures on agriculture, rural development and agricultural markets indicated a falling trend (cf. fig. 2). We must highlight, however, that expenditures on agencies are presented with the aid funds from the EU, whereas expenditures on the agricultural sector - only with funds for fisheries, are presented without non-refundable aid from EU pre-accession aid schemes and other EU resources after integration. Thus we may state that maintaining a relatively stable share of financing agencies

<sup>8</sup> Pursuant to the Act of 1995 this involves funds for investment rate of certain bank credits for the purchase of floating assets for agricultural production, but also for ecological food production within the biological progress in agriculture and purchasing agricultural products from national producers, as well as storing products. In the pre-accession period, i.e. within seven years under research, the funds decreased by over 6.2 times and in 2004 amounted to a mere 16% of the level from 1997.

compared to the growing total budgetary expenditures is owing to EU support. Another required component is the diagnosis of the material growth of funds granted to the ARMA, which results from the account of ordered tasks realised by the Agency, and financed from the resources at the disposal of the Minister of Agriculture and Rural Development, together with the resources included in specific provisions.<sup>9</sup> The progress of the expenditures of the ARMA acting as paying agency was visible in the following years, as it fulfilled the tasks of financing projects with EU resources, which dignified this deficit institution, and also increased the competitiveness of objectives implemented by the agency.

## 5. Interdependence

The tables below present an analysis of the dependency of expenditures on paying agencies on state budget total expenditures and expenditures on agriculture, rural development and agricultural markets. The analysis of expenditures on the AMA compared to the state budget total expenditure and expenditures on agriculture, rural development and agricultural markets indicates an average in the first case, and a relatively stronger, positive and statistically significant correlation in the second. At the same time, the estimated regression function explains the researched phenomenon to a relatively small extent (respectively  $R^2=29\%$  and  $R^2=35\%$ ). Thus, we can state that supporting objectives implemented by the AMA is rather poorly connected with the general budget condition.

**Table 3. The dependency between expenditures on the AMA and the ARMA and budget total expenditures and expenditures on agriculture, rural development and agricultural markets**

Specification	Expenditures on the AMA <i>versus</i> state budget total expenditures	Expenditures on the AMA <i>versus</i> expenditures on agriculture, rural development and agricultural markets	Expenditures on the ARMA <i>versus</i> state budget total expenditures	Expenditures on the ARMA <i>versus</i> expenditures on the agriculture, rural development and agricultural markets

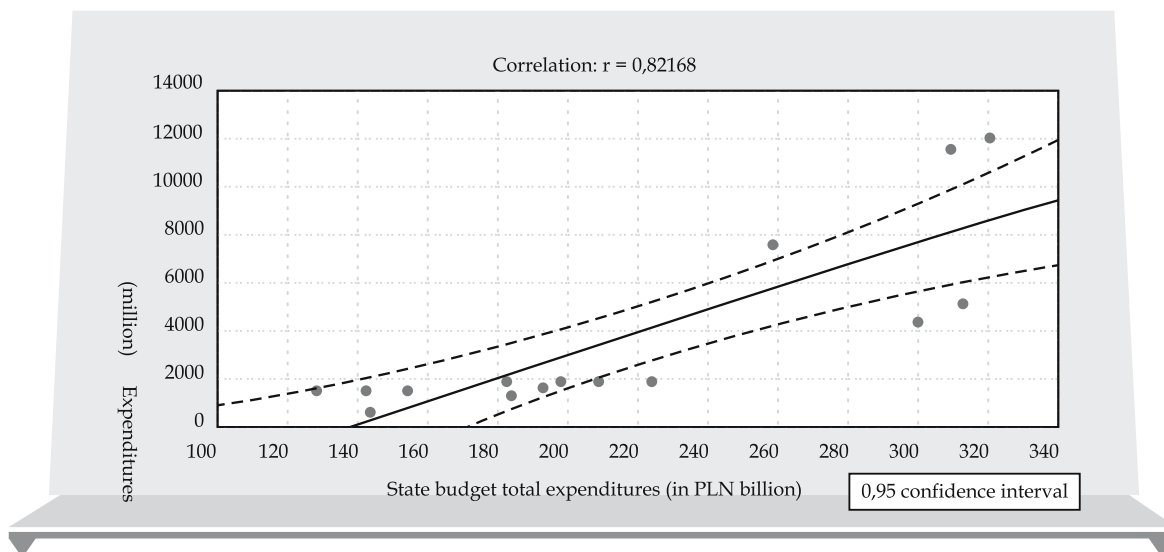
<sup>9</sup> This involves the ARMA financing projects using EU resources and co-financing the costs of the implementation of „Transition Facility” projects.

Regression function	<i>Expenditures on the AMA (in PLN million) = 4.4045 * State budget total expenditure (in PLN billion) - 58.12</i>	<i>Expenditures on the AMA (in PLN million) = 0.05124 * Expenditures on agriculture, rural development and agricultural markets (in PLN million) - 463.84</i>	<i>Expenditures on the ARMA (in PLN million) = 45.497 * State budget total expenditure (in PLN billion) - 6,093</i>	<i>Expenditures on the ARMA (in PLN million) = 0.56734 * expenditures on the agriculture, rural development and agricultural markets (in PLN million) - 1,025</i>
Correlation coefficient	0.58863	0.82168	0.63139	0.94465
Coefficient of determination R <sup>2</sup>	R <sup>2</sup> =29%	R <sup>2</sup> =35%	R <sup>2</sup> =65%	R <sup>2</sup> =89%
Shapiro-Wilk test	p=0.9896>0.05	p=0.6942>0.05	p=0.6326>0.05	p=0.4724>0.05

Source: Own compilation with the help of STATISTICA 9.0 software

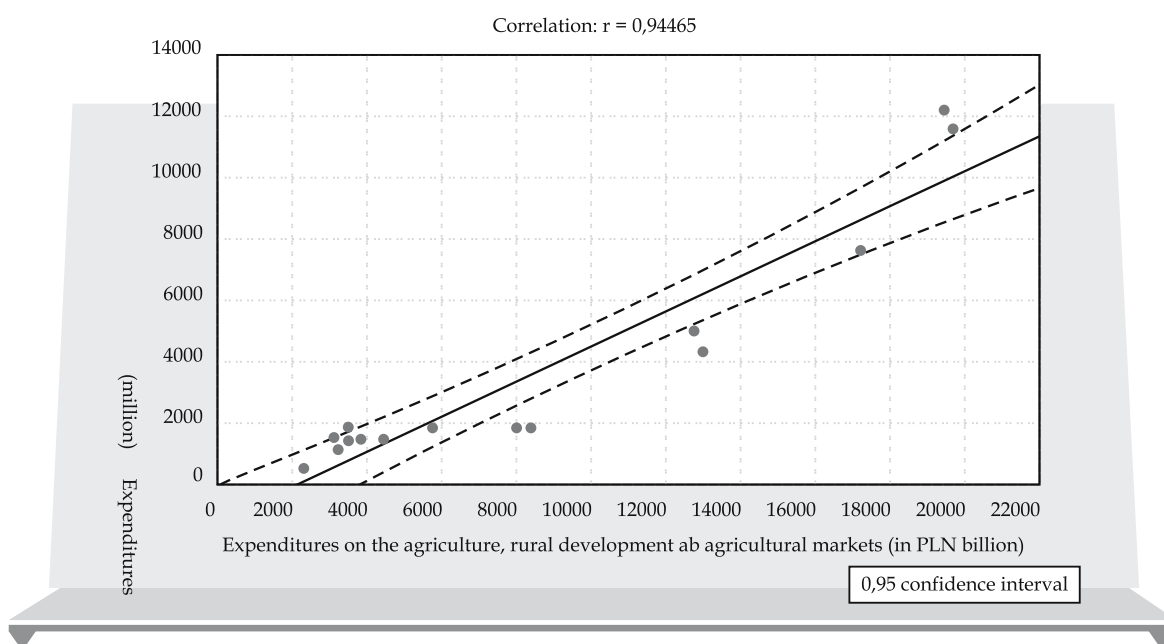
The analysis of expenditures on the ARMA compared to state budget total expenditures indicates a slightly higher than AMA, positive, statistically-significant correlation. The estimated regression function explains the researched phenomenon only by 65%, yet we can observe that throughout the first 10 analysed years, i.e. until 2005, the expenditures on objectives implemented by the ARMA remained more or less stable, or even independent of state budget total expenditures (cf. fig. 3). The breakthrough took place in 2006, when EU programmes concerning the agricultural sector became financed on a larger scale than ever before.

A similar situation involves the analysis of expenditures on the ARMA compared to expenditures on agriculture, rural development and agricultural markets. Here we observe a strong, positive correlation, whilst the relatively well-fitted regression function indicates that each extra million PLN on agriculture, rural development and agricultural markets increased the expenditures on this agency by slightly more than half a million. This confirms previous observations with priority approach to rural areas in budgetary financing, and consequently - institutions which operate programmes covering those areas.



**Figure 3. Expenditures on the ARMA (in PLN million) in relation to the state budget total expenditures (in PLN billion) in 1997-2011**

Source: as in table 1



**Figure 4. Expenditures on the ARMA (in PLN million) in relation to expenditures on agriculture, rural development and agricultural markets (in PLN million) in 1997-2011**

Source: as in table 1

## 6. Conclusions

Analysis of the share of expenditures for the paying agencies in government spending in general and the agricultural sector can be noted that in the pre-accession period with little effect meet the objectives related to the restructuring of the agricultural sector, increase the profitability of agricultural producers and markets stabilize. Support for pro-supplying and so pro-incoming agricultural policy was then too weak. After integration with the EU situation has changed. Compared to the share of expenditure on ARR and ARMA in spending for the state budget and the total for agriculture, rural development and agricultural markets, in order to show the importance of the modernization of the agricultural sector and stabilizing agricultural markets. They show that after 2004, these shares (the agencies in government spending) increased in the case of AMA an average of half, and the ARMA - nearly three times. This issue is illustrated in a measurable way depending regression between these variables (see table. 3).

### Summary

#### **Modernising the agricultural sector and stabilising the agricultural markets in budgetary expenditures in Poland in the years 1997-2011**

The purpose of the article was to evaluate the budgetary expenditure related to the modernization of the agricultural sector and stabilization of agricultural markets, which are implemented in the framework of the common agricultural policy by two paying agencies. Research related to changes in share of spending on activities of the Agricultural Market Agency (AMA) and the Agency for Restructuring and Modernisation of Agriculture (ARMA) in total budget expenditure in the long run, ie in the years 1996-2011 (16 years) with honors from the period before and after accession to the EU. It shows the relationship between ongoing spending from the national budget for the institutions, and the total budgetary expenditure and the funds allocated to the agricultural sector (agriculture, rural development and agricultural markets), which show that a substantial increase in the role of the paying agencies in the post-accession period.

**Keywords:** *agriculture, modernising, agricultural markets, budgetary expenditures*

## Streszczenie

### **Modernizacja sektora rolnego a stabilizacja rynków rolnych w wydatkach budżetowych Polski w latach 1997-2011**

Celem artykułu była ocena wydatków budżetowych związanych z modernizacją sektora rolnego i stabilizacją rynków rolnych, które są realizowane w ramach wspólnej polityki rolnej przez dwie agencje płatnicze. Badania dotyczyły zmian udziałów wydatków przeznaczonych na działalność Agencji Rynku Rolnego (ARR) oraz Agencji Restrukturyzacji i Modernizacji Rolnictwa w wydatkach budżetowych ogółem w długim okresie, tj. w latach 1996-2011 (16 lat) z wyróżnieniem okresu przed i po akcesji do UE. Ukazano zachodzące zależności między wydatkowaniem środków z krajowego budżetu na wspomniane instytucje, a wydatkami budżetowymi ogółem oraz środkami przeznaczonymi na sektor rolny (rolnictwo, rozwój wsi i rynki rolne), z których wynika, że zdecydowanie wzrosła rola agencji płatniczych w okresie poakcesyjnym.

### **Słowa**

**kluczowe:** *modernizacja, rynki rolne, rolnictwo wydatki budżetowe*

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