

# Expenditure on the implementation of KRUS tasks in the light of Poland's agricultural budgets and shares in GDP in the past quarter of the century (1995–2020)

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## Abstract

The objective of the article was to determine the level of expenditure of the Polish agricultural budget and expenditure on the Agricultural Social Insurance Fund (KRUS), taking into account the share of the national agricultural budget and the budget of European funds in a long term (25 years). The authors attempted to estimate the function of the trend for these time series and the degree of matching of the equations describing them. This made it possible to assess the share of KRUS expenditure in the national agricultural budget and in the general agricultural budget (i.e. national and European funds). The next step was to refer both agricultural budgets (national and increased by European funds) to the share in the national income (GDP) and the state budget. These procedures allowed to indicate how the position of KRUS in budget expenditure in the share formula and in relation to the national income and expenditure of the general agricultural budget has changed in the long term. They also made it possible to determine whether the changes in the share of expenditure in the total agricultural budget and the national budget were proportional to the changes in GDP and expenditure of the general state budget. Attempts were also made to find out whether agriculture in Poland, including KRUS, benefited from the economic growth of the country through budget expenditure and in a sustainable manner. In the conclusions, it was stated that before Poland's accession to the European Union (EU), i.e. until 2004, agriculture was not favoured in any way, and budget expenditures were at a stable, but very low level, which did not make it possible for its restructuring. After 2004, i.e. after integration with the EU, the situation changed in terms of quantity and quality, and expenditure on agriculture, rural development and agricultural markets actually increased, stabilising at a level about 2.5 times higher than in the pre-accession period. It was noted that before the integration,

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the development goals were clearly undervalued in agricultural budgets, among others due to the high competitiveness of the social goal in the form of expenditure on KRUS. After 2004, the tendency to socialise expenditure in the national agricultural budget for the growth of modernisation expenditure, mainly from EU funds, was initially slowed down. This trend stabilised in the subsequent years. The share of expenditure on KRUS in the total state budget expenditures decreased by nearly one half between 2003 and 2020 (18 years). However, in recent years, i.e. 2016–2020, the socialization of the national agricultural budget has accelerated, and the share of KRUS in it has been increasing.

**Keywords:** state budget, agricultural budget, state intervention, GDP, spending on KRUS.

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## Introduction

One of the main reasons for state intervention in the economy is the failure of the market mechanism, which is particularly badly revealed in the agricultural sector. Currently, many decision-makers, including in the most developed countries, do not agree with the profound inequality of farmers' incomes in relation to other social and occupational groups, the instability of agricultural incomes, the low profitability of assets involved in agricultural production, as well as unstable and rising food prices for consumers<sup>1</sup>. Furthermore, it is their duty to ensure food security as well as competitiveness and efficiency of agriculture, and to preserve and support farms. The market mechanism does not automatically lead to the achievement of these objectives so it is necessary to adjust and compensate it, which takes place mainly through public expenditure, directed to the implementation of the fiscal policy function, primarily the allocation and redistribution function.

The causes and effects of market mechanism failing in agriculture are widely described in various publications<sup>2</sup>. In general, the failure of the market mechanism leads to inefficient allocation of resources in agriculture, low efficiency of production

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1. J.W. Hopkins, M.A. Taylor, *Are U.S. Farm Programs Good Public Policy? Taking Policy Performance Seriously, Communication presented at the American Agricultural Economics Association Annual Meetings, 5–8.08.2001, Chicago 2001*; A. Matuszczak, *Ewolucja kwestii agrarnej a środowiskowe dobra publiczne*, Warszawa, IERiGŻ-PIB, 2020.
  2. N. Acocella, *Zasady polityki gospodarczej*, Warszawa, Wydawnictwo Naukowe PWN, 2002; J. Wilkin, *Interwencjonizm państwowy w rolnictwie – dlaczego był, jest i będzie* [in:] *Dostosowywanie polskiego rynku rolnego do wymogów UE*, Warszawa, IERiGŻ-PIB, 2003; J.S. Zegar, *Dochody w rolnictwie w okresie transformacji i integracji europejskiej*, Warszawa, IERiGŻ-PIB, 2008; J.S. Zegar, *Kwestia agrarna w Polsce*, Warszawa, IERiGŻ-PIB, 2018; A. Czyżewski (red.), *O potrzebie koordynacji procesów globalizacji i polityki makroekonomicznej względem rolnictwa*, Warszawa, Instytut Nauk Ekonomicznych PAN, 2009.

factors in this sector, high risk of agricultural production and uncertainty of its effects and income depreciation of farmers resulting, among others, from the fact that the market mechanism does not take into account (i.e. does not value and provide farmers with) fees for co-creating public goods and positive external effects<sup>3</sup>. In addition, there is a development paradox, according to which, along with the social and economic development, the level of agricultural support increases<sup>4</sup>, which results most often from two issues: compensation for the earlier outflow of a part of the generated economic surplus to the non-agricultural environment and fees for the use of positive external effects and public goods related to agricultural activities by the society<sup>5</sup>. Hence, the justified adjustment of the market mechanism.

The objectives for this compensation have been set by sector-specific policies and, in the case of EU agriculture, by the common agricultural policy (CAP) for several decades. It should be noted that for nearly 30 years (since the MacSharry reform) its instrumentation has been subject to evolution. There has been a shift from market-based instruments (regulating supply, impact on demand, intervention prices) to non-market-based instruments (subsidies, direct and indirect subsidies, structural policy instruments)<sup>6</sup>. The reforms to which the cap was subjected were successful. They contributed to improving the market balance as well as growth and stabilisation of agricultural incomes, but they did not fully solve the problem of agricultural income inequality. Interventionism in agriculture carried out by various instruments, but essentially based on budget expenditure (more broadly: financial transfers to agriculture), can be considered universal, as the solutions introduced in different parts of the world are unified, specifically in economically highly developed countries (EU, USA, Japan, Canada and many others)<sup>7</sup>.

3. O. Mancur, *The Logic of Collective Action: Public Goods and the Theory of Groups* (Revised ed.), Cambridge, Harvard University Press, 1971; R.J. Brunstad, I. Gaaslad, E. Vardal, *Agriculture as a provider of public goods: a case study of Norway*, "Agricultural Economics" 1995, Vol. 13, p. 39–49; R.J. Brunstad, I. Gaaslad, E. Vardal, *Multifunctionality of agriculture: an inquiry into the complementarity between landscape preservation and food security*, "European Review of Agricultural Economics" 2005, Vol. 32(4), p. 469–488; D. Baldock, *Conceptual Framework on Public Goods Provided Through Agriculture in the EU*, Working Document for the Meeting of the Technical Working Group "Public Goods", European Network for Rural Development, 2009.
4. A. Czyżewski, P. Kułyk, *Zmiany w systemie wsparcia rolnictwa i jego makroekonomicznym otoczeniu w wysoko rozwiniętych krajach OECD w długim okresie (1990–2012)* [in:] *Kierunki rozwoju rolnictwa i polityk rolnych – wyzwania przyszłości (Synteza)*, red. R. Grochowska, Warszawa, IERiGŻ-PIB, 2014.
5. A. Matuszczak, *Ewolucja kwestii agrarnej a środowiskowe dobra publiczne*, Warszawa, IERiGŻ-PIB, 2020.
6. M. Wigier, K. Chmurzyńska, *Interwencjonizm w agrobiznesie na przykładzie PROW 2007–2013 – teoria i praktyka*, "Ekonomika i Organizacja Gospodarki Żywnościowej" 2011, nr 90, p. 25–40; A. Matuszczak, *Ewolucja kwestii agrarnej a środowiskowe dobra publiczne*, Warszawa, IERiGŻ-PIB, 2020.
7. P. Kułyk, *Finansowe wsparcie rolnictwa w krajach o różnym poziomie rozwoju gospodarczego*, Poznań, Wyd. Uniwersytetu Ekonomicznego w Poznaniu, 2013.

It should be noted that interventionism in agriculture also has its roots in the broadly-defined agrarian issue, understood as problems that the agricultural sector generates in the economy, and which are experienced at various levels by the entire economy, society and the natural environment<sup>8</sup>. They relate, among others, to such issues as: 1) the aforementioned inequality of agricultural income, resulting, among others, from the drainage of the economic surplus; 2) the high dependence of the agricultural sector on other links (i.e. on the sector of means of production for agriculture and on processing); 3) as well as the signalled guarantee of food security; 4) a higher than average level of unemployment in rural areas; 5) social exclusion; 6) worse access to basic services; 7) aging of the rural population; 8) disappearance of farmers as a separate social layer; 9) threat to the vitality of rural areas; 10) loss of biodiversity; 11) pollution and erosion of soil; 12) limitation of water resources; 13) food security; 14) increased volatility of agricultural product prices; 15) increased risk of agricultural production caused by climate change<sup>9</sup>. Climate change and environmental challenges have prompted the EU to take on new, ambitious international commitments in the area of environment and climate protection (EC 2018), contained, among others, in the European Green Deal Strategy (EC 2019). According to the European Commission, farmers play an important role

8. J. Wilkin, *Współczesna kwestia agrarna*, Warszawa, WN PWN, 1986; P. McMichael, *Rethinking globalisation: the agrarian question revisited*, "Review of International Political Economy" 1997, Vol. 4(4), p. 630–662; M. Adamowicz, *Teoretyczne uwarunkowania rozwoju rolnictwa z uwzględnieniem procesów globalizacji i międzynarodowej integracji*, "Roczniki Nauk Rolniczych. Seria G" 2008, nr 94(2), p. 49–64; A. Czyżewski, A. Matuszczak, *Dylematy kwestii agrarnej w panoramie dziejów*, "Ekonomika i Organizacja Gospodarki Żywnościowej" 2011, nr 90, p. 5–23; H. Bernstein, *Is There an Agrarian Question in the 21st Century?*, "Canadian Journal of Development Studies" 2011, Vol. 36(1), p. 449–460; J.S. Zegar, *Kwestia agrarna w niepodległej Rzeczypospolitej – aspekt ekonomiczny*, "Nierówności Społeczne a Wzrost Gospodarczy" 2019, nr 59(3), p. 83–94.
9. J. Guthman, *Agrarian Dreams: The Paradox of Organic Farming in California*, Berkeley, University of California Press, 2004; J. Wilkin, *Uwarunkowania rozwoju polskiego rolnictwa w kontekście europejskim i globalnym. Implikacje teoretyczne i praktyczne*, Referat przygotowany na VIII Kongres Ekonomistów Polskich: *Polska w gospodarce światowej – szanse i zagrożenia rozwoju*, 29–30 November 2007, Warszawa 2007; B. Yu, L. You, S. Fan, *A Typology of Food Security in Developing Countries under High Food Prices*, Contributed Paper prepared for presentation at the International Association of Agricultural Economists Conference, 16–22.08.2009, Beijing, China; A. Tarnowska, *Ekonomiczna dostępność żywności w krajach Unii Europejskiej*, "Roczniki Naukowe SERiA" 2010, t. 12, z. 1, p. 224–229; FAO, *Global food losses and food waste*, 2011, <http://www.fao.org/3/a-i2697e.pdf>, access 13.06.2020; J.D. van der Ploeg, *The New Peasantries: Struggles for Autonomy and Sustainability in an Era of Empire and Globalization*, London, Routledge, 2012; A. Jakubowska, *Starzenie się zasobów pracy na obszarach wiejskich – analiza regionalna*, "Roczniki Naukowe SERiA" 2016, t. 18, z. 5, p. 54–59; E. Wasilewska, *Starość demograficzna obszarów wiejskich i jej zróżnicowanie*, "Roczniki Naukowe SERiA" 2017, t. 104, z. 3; W.J. Cosgrove, F.R. Rijsberman, *World water vision: making water everybody's business*, Oxon-New York, World Water Council, 2014; J. Krysztofiak, K. Pawlak, *Ekonomiczna dostępność żywności w gospodarstwach domowych krajów Unii Europejskiej*, "Zeszyty Naukowe Polskiego Towarzystwa Ekonomicznego w Zielonej Górze" 2017, z. 7, p. 179–195; A. Wąs, P. Kobus, *Implikacje mechanizmu degressywności płatności bezpośrednich w WPR 2020+ w Polsce [in:] Subsydia a ekonomika, finanse i dochody gospodarstw rolniczych*, red. M. Soliwoda, nr 4, Warszawa, IERiGŻ-PIB, 2018.

in the process of combating climate change, protecting the environment and preserving biodiversity, whereas CAP and the relatively high public expenditure directed at it will remain a key tool to support these efforts, while ensuring decent living conditions for farmers and their families. The objectives of CAP are reflected in the budgetary expenditure on agriculture (from EU and national funds). One of them is the problem specified in the title, regarding KRUS, which is referred to below.

Nowadays, in the face of economic crises and deepening environmental and climate problems in the global and regional aspects, it is no longer a matter of dispute whether to support agriculture through a budgetary mechanism (public expenditure). On the other hand, there is an open issue regarding where the possible borders of state interference in the market mechanism in agriculture lie and which objectives of the agricultural policy should be implemented, and which instruments should be used to make agriculture an important element of sustainable development and effectively perform its functions. Thus, it is worth examining the level, shares and structure of budget expenditure on agriculture, including KRUS, which reflects care for the aspect of social as well as economic sustainability of rural residents. The analysis of budget expenditure on agriculture and KRUS in the long term, compared to the changes in the share in gross domestic product (GDP) or expenditure of the state budget in total, seems to be particularly interesting, as it shows long-term and permanent trends in the area of fiscal policy towards agriculture and objectively assesses these trends.

The subject of this article is the analysis of budget expenditures on agriculture, including KRUS, in Poland in a long term, i.e. between 1995 and 2020 in the context of their level, structure and trends that occurred in this area. These figures will then be applied to the shares in GDP and in the state budget.

In this article, the expenditure of the state budget is understood as the expenditure of the national budget together with the budgets of voivodes. On the other hand, the agricultural budget of Poland, also referred to in the article as the total agricultural budget, is understood as public expenditure provided directly or indirectly to agriculture and rural areas, including KRUS. Poland's agricultural budget therefore consists of:

- expenditure from the national budget allocated to agriculture, rural development and agricultural markets, together with the voivodes' budgets and special-purpose reserves and expenditure planned in other parts of the budget and directed to the agricultural sector; we will also refer to this expenditure as the national agricultural budget or as national expenditure on agriculture;
- European expenditure on agriculture and rural areas under instruments I and II of the common agricultural policy; this expenditure was institutionally allocated to the national budget until 2009 and since 2010 it has been included in the budget of European funds.

The general period of research covers the period from 1995 to 2020, which in terms of the analysis of dynamics in a single base (base year 1995) and chain (comparison to the previous year) gives a time series covering 25 years. Such a long period (a quarter of a century) allows for noticing long-term trends in the development of the surveyed quantities (agricultural budget expenditures, including KRUS, state budget expenditures and GDP), analysing the trend and determining its function and searching for relationships between the surveyed quantities. It should be added that the pre-accession period was reduced to two averages from 1996–1999 and 2000–2003. The argument about the need to simplify the above-mentioned analysis was decisive here. It is worth emphasizing that these years refer to the periods before Poland's accession to the European Union, when budget expenditures on the titles examined in the article were of a growing linear function and were more predictable and also relatively stable. They were also accordingly lower than after accession to the EU. The presented research instrument will allow to verify two research theses: the first one that “agriculture has benefited to a limited extent from the effects of economic growth in Poland in the period between 1995 and 2020” and the second one that “over the quarter of the researched century, the share of budget expenditures on KRUS in Poland is relatively decreasing, i.e. the socialization of the Agricultural Budget, although this share increases slightly after 2013”.

### Sources of empirical materials and research methodology

The source of empirical materials on the expenditure of the Polish agricultural budget were mainly data of the Ministry of Agriculture and Rural Development (formerly the Ministry of Agriculture and Food Economy) in the form of annual *Information on the draft state budget and the budget of European funds in the field of agriculture, rural development and agricultural markets and special purpose funds and provincial budgets*, annually prepared opinions (expert opinions) on the budget law in relation to the above-mentioned budgetary parts for the Office of Information and Documentation of the Chancellery of the Senate of the Republic of Poland (until 2017) and in some years for the Sejm Committee on Agriculture and Rural Development<sup>10</sup>, as well as studies as own research for the remaining years<sup>11</sup>. Additionally,

10. Also published in abbreviated version in “Wież Jutra” (publications in 2003–2017).

11. A. Czyżewski, P. Kułyk, *Zmiany w systemie wsparcia rolnictwa i jego makroekonomicznym otoczeniu w wysoko rozwiniętych krajach OECD w długim okresie (1990–2012)* [in:] *Kierunki rozwoju rolnictwa i polityk rolnych – wyzwania przyszłości (Synteza)*, ed. R. Grochowska, Warszawa, IERiGŻ-PIB, 2014.

the source of the materials was the data obtained from the Central Statistical Office (GUS) on GDP and inflation as well as income of farm households, available in the form of *Annual Macroeconomic Indicators* recorded in budget acts (from 1995–2020) and Statistical Yearbooks of agriculture from 2007–2020, *Household budgets* (from 2016–2019) as well as *Information on the situation of households in the light of the results of household budget surveys* (from 2003–2020). Also publications of the Supreme Chamber of Control (NIK) on the implementation of state budgets were the source of data. In the analysis of the volatility of the studied values, i.e. expenditure on KRUS, expenditure on the agricultural sector in total, as well as expenditure of the state budget and GDP, the share formula was applied. The quantities covered by the study were recorded and analysed in nominal values, i.e. at current prices. In order to determine the trend of the individual values covered by the analysis, an additive development trend model in the form of a non-linear trend function was used.

### **Expenditure on KRUS in the light of the structure of Poland's agricultural budget (national and budget of European funds)**

The following are data on the nominal level (in current prices) and the structure of Poland's agricultural budget in the past quarter of a century, with particular emphasis on measures directed at KRUS, as well as broken down by national and EU. It can be noted that during the researched period there was a threefold nominal increase in spending on KRUS (from PLN 6.3 billion to PLN 18.9 billion), while agricultural budget expenditures increased almost by six times in the same period (from PLN 8.7 billion to PLN 49.5 billion) mainly due to the support from the EU, which resulted from the inclusion of the Polish agricultural sector in the common agricultural policy in 2004 (see Table 1). Although in the past, the Polish agriculture received aid from the EU (such as SAPARD), the key aspect here was the accession to the EU, when farmers received income support in the form of direct subsidies, payments for management in disadvantaged areas, agricultural and environmental programmes, and others. At the same time, we can observe significant changes in the structure of the agricultural budget as a result of the inclusion of agriculture in the support from EU funds. Since 2004, European funds have accounted for 20% to over 51% of Poland's total agricultural budget and have not only become a significant complement to domestic transfers to agriculture and rural areas, but have also (to some extent) replaced these national streams. This is indicated by the declining share of the national budget in the total agricultural budget, when it is approached without a subsidy made to KRUS (see Table 1).

## Expenditure on the implementation of KRUS tasks in the light of Poland's agricultural budgets

Table 1. The level and structure of expenditure of the Polish agricultural budget in total (national and EU funds), taking into account KRUS in the period from 1995 to 2020 in current prices

Year	Total agricultural budget in mPLN	of which (in mPLN)		Structure of total agricultural budget expenditure (in %)		
		expenditure on KRUS in mPLN	funds spent from the EU in mPLN	expenditure on KRUS	EU-funded expenditure	expenditure from the national budget without KRUS
1995	8,673.6	<b>6,269.1</b>	-	<b>72.3</b>	-	27.7
Average of 1996–1999	13,738.0	<b>10,378.5</b>	-	<b>74.9</b>	-	25.1
Average of 2000–2003	20,396.7	<b>15,392.1</b>	1,165.3	<b>75.6</b>	5.7	18.8
2004	26,700.3	<b>15,607.6</b>	5,352.2	<b>58.5</b>	20.0	21.5
2005	30,241.0	<b>14,538.1</b>	8,808.4	<b>48.1</b>	29.1	22.8
2006	34,166.2	<b>14,968.8</b>	10,927.4	<b>43.8</b>	32.0	24.2
2007	45,470.8	<b>15,152.0</b>	11,814.0	<b>33.3</b>	26.0	40.7
2008	57,207.7	<b>15,771.4</b>	14,928.3	<b>27.6</b>	26.1	46.3
2009	49,055.2	<b>16,558.0</b>	13,205.0	<b>33.8</b>	26.9	39.3
2010	50,687.6	<b>16,187.8</b>	21,092.1	<b>31.9</b>	41.6	26.5
2011	46,773.4	<b>15,811.7</b>	24,007.4	<b>33.8</b>	51.3	14.9
2012	49,777.8	<b>15,906.6</b>	22,300.1	<b>32.0</b>	44.8	23.2
2013	52,504.8	<b>16,490.1</b>	25,029.4	<b>31.4</b>	47.7	20.9
2014	54,237.6	<b>16,698.6</b>	26,716.8	<b>30.8</b>	49.3	20.0
2015	55,240.9	<b>17,565.7</b>	28,561.8	<b>31.8</b>	51.7	16.5
2016	53,760.0	<b>18,238.9</b>	27,117.5	<b>33.9</b>	50.4	15.6
2017	48,414.9	<b>17,924.8</b>	20,803.4	<b>37.0</b>	43.0	20.0
2018	48,739.1	<b>17,936.4</b>	22,008.5	<b>36.8</b>	45.2	18.0
2019	47,467.5	<b>17,700.5</b>	20,588.5	<b>37.3</b>	43.4	19.3
2020	49,533.5	<b>18,943.2</b>	21,140.0	<b>38.2</b>	42.7	19.1

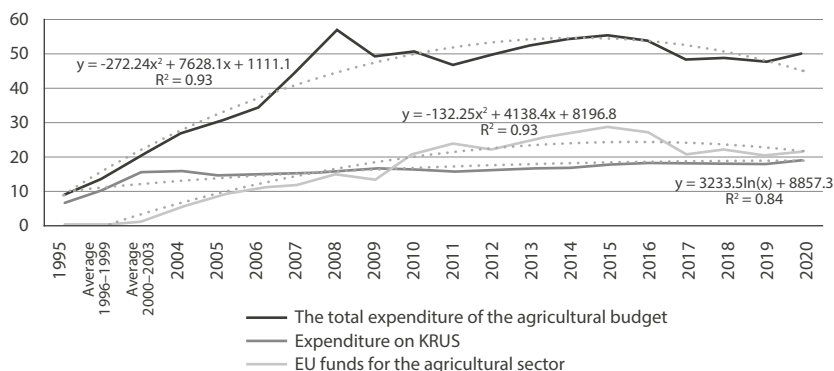
Source: Ministry of Agriculture and Rural Development, data on projects and implementation of the state budget and the budget of European funds in the area of agriculture, rural development and agricultural markets from 1995–2020.

Looking at the three groups of budget expenditure analysed (cf. Figure 1), we can notice that in the case of two of them, the total budget expenditure on the agricultural sector and the EU funds contributing to this budget, the changes in the last quarter of the century (1995–2020) were second-degree polynomials with a relatively well-matched trend line ( $R^2=93\%$ , cf. Figure 1). In the case of both of these items, the volumes increased in the first period, in order to achieve maximum values after several



years of Poland's accession to the EU, and recently, especially since 2017, they have started to decline systematically. The calculations also showed that there is a positive, significant correlation between the two figures (0.74), which shows that European funds have had a significant impact not only on the stepped increase in the amount of public funds provided to agriculture since 2004, but also stabilised budget expenditure on agriculture, which, together with these funds, showed a much lower volatility, compared to expenditure obtained only from the national budget. When analysed in view of the above, the expenditure on social objectives, mainly related to the implementation of the redistributive function of the fiscal policy, i.e. primarily funds provided to KRUS (the third group), contribute to the increase in income of farm households, and thus to the reduction of the income inequality of farmers in relation to other social and occupational groups and to the reduction of excessive income spreads within farms<sup>12</sup>. Their level was the closest to the logarithmic process. Since 1995 it has been increasing, while approximately since halfway of the examined period these expenditures have stabilised, while slightly increasing (cf. Figure 1). In the last five years, they were on average at the approximate level of PLN 18 billion.

Figure 1. Expenditure on KRUS and EU funds for the agricultural sector compared to the total expenditure of the agricultural budget in 1995–2020 (in billion PLN)



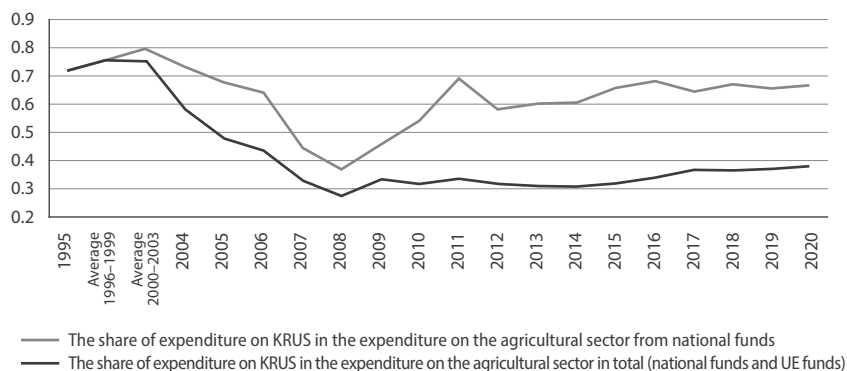
Source: Ministry of Agriculture and Rural Development, data on projects and implementation of the state budget and the budget of European funds in the area of agriculture, rural development and agricultural markets from 1995–2020.

12. J. Kulawik, *Polityka fiskalna i budżetowa a finanse polskiego rolnictwa*, “Zagadnienia Ekonomiki Rolnej” 2009, nr 4(321), p. 21–39; S. Juszczak, P. Gołasa, M. Wysokiński, *Redystrybucyjna rola Wspólnej Polityki Rolnej Unii Europejskiej – przesłanki teoretyczne i rezultaty*, “Ekonomista” 2016, nr 5, p. 704–726; H. Runowski, *Zróżnicowanie dochodów ludności rolniczej między krajami Unii Europejskiej i kierunki ich zmian*, “Wieś i Rolnictwo” 2018, nr 2(179), p. 65–84; R. Kata, *Wewnątrzsektorowe nierówności dochodów gospodarstw rolniczych w Polsce w latach 2004–2017*, “Nierówności Społeczne a Wzrost Gospodarczy” 2020, nr 61, p. 26–42.

## Expenditure on the implementation of KRUS tasks in the light of Poland's agricultural budgets

Nominally, social expenditures distributed by KRUS consume the most funds in the analysed agricultural budgets, if we consider national transfers to the agricultural sector (on average they represent nearly  $\frac{2}{3}$  of them, see Figure 2), with a clear downward trend in the first years of accession to the EU. It should also be noted that in the last five years (2016–2020), expenditure on KRUS actually decreased by nearly 5% (the nominal increase in expenditure on KRUS amounted to 3.8% with cumulative inflation equal to 8.96%)<sup>13</sup>. This is incomprehensible because the number of beneficiaries after a strong decline, stabilised (in Q2 of 2021, it fell to 1.04 million, when in 1998 there were still over 2 million of them), while the average pension benefit paid increased to the level of PLN 1,438 (in Q2 of 2021). As it has already been mentioned above, the number of insured persons is decreasing, fewer persons are paying Pension and Disability Fund contributions and those who do not meet the conditions for agricultural insurance are excluded.

**Figure 2. The share of expenditure on KRUS in the expenditure on the agricultural sector from national and total funds (national and EU) in Poland in 1995–2020**



Source: Ministry of Agriculture and Rural Development, data on projects and implementation of the state budget and the budget of European funds in the area of agriculture, rural development and agricultural markets from 1995–2020.

If we take into account the total expenditure on the agricultural sector (national funds and EU funds), then it is observed that the share of KRUS has been relatively increasing (in 2014–2020, an increase by 7.4 percentage points), nevertheless this is the result of decreasing transfers from the EU, which results in a decreasing

13. GUS, <https://stat.gov.pl/obszary-tematyczne/ceny-handel/wskazniki-cen/wskazniki-cen-towarow-i-uslug-konsumpcyjnych-pot-inflacja-roczne-wskazniki-cen-towarow-i-uslug-konsumpcyjnych/>, 2021, access 7.07.2021.

amount of expenditure on the Polish agricultural sector in total (it decreased by 9% from PLN 54.2 billion to PLN 49.5 billion in this period). Nevertheless, in 2020, public expenditure on KRUS in the amount of PLN 18.94 billion constitutes twice the funds that will be spent this year on agriculture, rural development, agricultural markets in the national agricultural budget (PLN 9.45 billion). It is worth noting that in 2019 this ratio was 192%, in 2018 – 204%, in 2017 – 185%, in 2016 – 217%, in 2015 – 189%, in 2014 – 152%, respectively<sup>14</sup>. It can therefore be concluded that in the last EU financial perspective, and specifically in 2016–2020, there was once again an increase in the socialisation of the agricultural budget, directly resulting from decreasing the expenditure for development purposes. The social security provided by KRUS is important, particularly for the owners of small and very small farms, which are the predominating ones in the agrarian structure of Poland. Nevertheless, due to the excessive polarisation of incomes within the agricultural sector in Poland, a greater variation in the contribution to KRUS depending on the area of the farm, and even better – its economic size, could be considered. It should be added that social expenditure is to some extent treated as competitive with measures aimed at the development of agriculture and agricultural holdings, for example in relation to their modernisation. The competitiveness of the expenditure is revealed because, with a budget that is cost-effective, higher expenditure on KRUS necessarily limits expenditure on other budget titles, including pro-development expenditure. However, it should be added that due to their different purpose, they are expenditures from two different independent groups.

### **Expenditure of the agricultural budget including KRUS in relation to the total Polish budget and GDP**

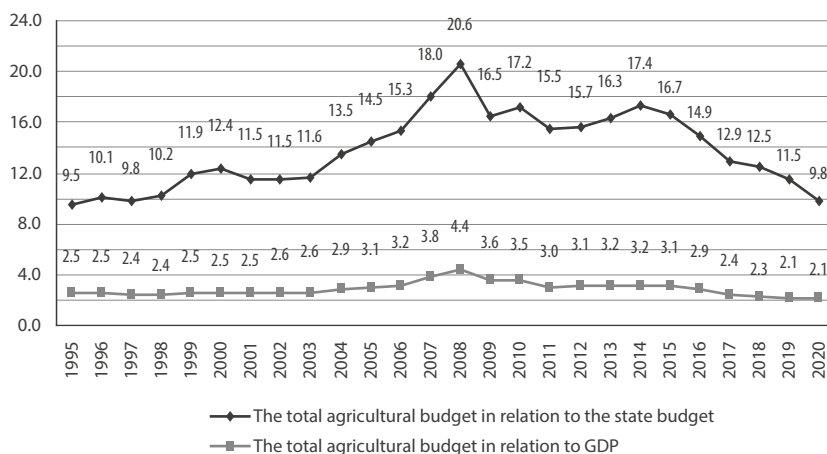
For several years, the share of expenditure on the agricultural sector and KRUS in the total state budget expenditures, has been systematically decreasing. If you look at the share of the agricultural budget together with KRUS in the total state budget expenditure, you will notice that in the pre-accession period (1995–2003) it was on average 10.9%, showing some annual deviations, with a slight upward trend

14. A. Czyżewski, *Opinie o budżecie rolnym Polski*, written on the basis of draft Budget Acts in parts related to: agriculture, hunting rural development and agricultural market development as well as KRUS along with special-purpose funds, published by the Department of Information and Expert Opinion of the Information and Documentation Bureau of the Polish Senate Office for 1999–2017 and “Wieś Jutra” (2003–2017), and for the remaining years, prepared on the basis of source materials obtained from the Ministry of Agriculture and Rural Development and KRUS as part of own research, 1995–2020.

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(from 9.5% in 1995 to 11.6% in 2003). Since 2004, there has been a clear increase in the share of agricultural budget expenditure in the state budget, from 13.5% in 2004 to 20.6% in 2008. Subsequently, this relation decreased and its relative stabilisation took place at the level of 16.5% on average in 2009–2014 (Figure 3). Since 2015, however, we have observed a constant tendency to decrease this relation, from 16.7% in 2015 to 9.8% in 2020. Such a trend means that agriculture in Poland is relatively losing importance in the allocation and redistribution of public funds through the budgetary mechanism. The share of expenditure on KRUS in the total state budget in 2020 alone amounted to 4.12%, while in 1998 it was 10.16%. Since that period it has decreased in real terms nearly by as much as 2.5 times<sup>15</sup>.

**Figure 3. The total agricultural budget (with KRUS and European funds) in relation to the state budget and GDP at current prices in 1995–2020 (% share)**



Source: Ministry of Agriculture and Rural Development; data on projects and implementation of the state budget and the budget of European funds in the area of agriculture, rural development and agricultural markets from 1995–2020 and Central Statistical Office data, <https://stat.gov.pl/wskazniki-macroekonomiczne/>, access 7.07.2021.

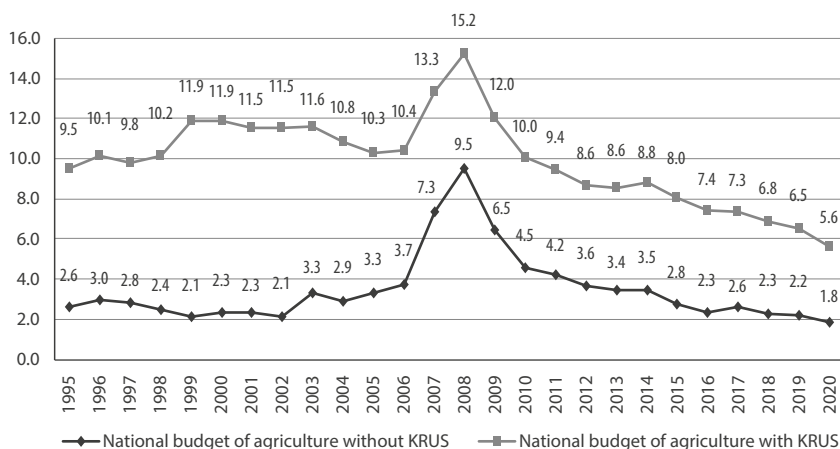
15. A. Czyżewski, *Opinie o budżecie rolnym Polski*, written on the basis of draft Budget Acts in parts related to: agriculture, hunting rural development and agricultural market development as well as KRUS along with special-purpose funds, published by the Department of Information and Expert Opinion of the Information and Documentation Bureau of the Polish Senate Office for 1999–2017 and “Wies Jutra” (2003–2017), and for the remaining years, prepared on the basis of source materials obtained from the Ministry of Agriculture and Rural Development and KRUS as part of own research, 1995–2020.

The importance of the agricultural sector together with KRUS can also be related to the GDP generated. Expenditure on the discussed sector in relation to the GDP generated was the highest in 2008, when it constituted as much as 4.4% of national income. Since that period, the expenditure has been systematically decreasing, achieving in the recent years a lower level (2.1%) than at the beginning of the researched period (2.5%), cf. Figure 3. This may indicate that agriculture is benefiting from the effects of economic growth to a limited extent, when the benefits are measured through budget expenditure transferred to farmers, to agricultural markets and to rural areas. As shown<sup>16</sup>, the growth rate of the agricultural budget was lower than the GDP growth rate in the analysed period<sup>17</sup>. This depreciation of agriculture in the state's fiscal policy can be seen even more when taking into account the national expenditure on agriculture, agricultural markets and rural areas, i.e. without European funds (Figure 4). The share of domestic expenditure on agriculture (including KRUS) in the total expenditure of the state budget in the pre-accession period, as mentioned above, was 10.9%, and without KRUS – 2.56%, on average. In the first years of Poland's EU membership (2004–2008), the average share of agricultural expenditure in the state budget increased to 12% and 5.36%, respectively, showing a clear upward trend (Figure 4). In 2008, this share reached the highest level in the entire researched period, i.e. 15.2% and 9.5%, respectively. In the subsequent years, however, a clear downward trend in these figures has been observed, to the level of only 5.6% (expenditure with KRUS) and 1.84% (excluding KRUS). In the period from 2009 to 2020, the average share of domestic expenditure on agriculture in the state budget was 8.3%, including KRUS, and without KRUS – 3.3%.

16. A. Czyżewski, R. Kata, A. Matuszczak, *Wpływ krajowych i unijnych wydatków budżetowych na alokację czynników produkcji w polskim rolnictwie*, "Ekonomista" 2019, nr 1, p. 45–72.

17. If the expenditure for agriculture is "cleared" from expenditure for KRUS, then this tendency will be different and it will indicate the net benefits of the agricultural sector in the post-accession period, since the average yearly growth rate of expenditure for this sector, exceeded the growth rate of GDP. A. Czyżewski, R. Kata, A. Matuszczak., *Wpływ krajowych i unijnych wydatków budżetowych na alokację czynników produkcji w polskim rolnictwie*, "Ekonomista" 2019, nr 1, p. 45–72.

Figure 4. The share of national agricultural expenditure in national budget expenditure in 1995–2020 (in %)



Source: Ministry of Agriculture and Rural Development, data on projects and implementation of the state budget and the budget of European funds in the area of agriculture, rural development and agricultural markets from 1995–2020.

In the expenditure of the national budget on agriculture, the subsidy to KRUS, which implements the objectives of the redistributive function of fiscal policy, is crucial. In the pre-accession period, its share in this budget was 76.2%, on average. After Poland's accession to the EU and agricultural support under CAP, the share of expenditure on KRUS in the expenditure of the national budget decreased to an average of 55.8% in 2004–2012, which resulted from allocating larger funds as a national contribution under direct subsidies and other CAP instruments. This decrease in the KRUS share in the national agricultural budget also meant a qualitative change towards the greater importance of allocative and stabilising agricultural policy objectives in relation to the redistributive (income and social) objectives. Since 2013, we have once again observed an increase in the share of subsidies for KRUS in the national agricultural budget, from 60% in 2013 to as much as 68.5% in 2016. This share was 65% in 2013–2020, on average<sup>18</sup>.

18. A. Czyżewski, R. Kata, A. Matuszczak, *Wpływ krajowych i unijnych wydatków budżetowych na alokację czynników produkcji w polskim rolnictwie*, "Ekonomista" 2019, nr 1, p. 45–72.

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## Conclusion

The data and analyses presented in this article shows that:

1. The expenditure of the budget in the part allocated to the agricultural sector has been a compromise between what is necessary and what is possible, for many years. At the same time, it cannot be stated that this sector of the economy was favoured in any way, which would increase its competitiveness in relation to other sectors. It is reasonable to say that until 2003, the expenditure was at a stable but very low level, which did not allow for meeting the assumed priorities of the state's economic policy aimed at restructuring the agricultural sector<sup>19</sup>.
2. Since 2004, i.e. after Poland's accession to the EU, the situation has changed significantly both in terms of quantity and quality. The analysis of budget laws shows that, mainly thanks to the co-financing from EU funds and programmes, as well as the complementary financing of region-based (direct) subsidies from the national budget, expenditure on the agricultural sector increased, stabilising at a level about 2.5 times higher than in the pre-accession period. In such a situation, it became possible to achieve pro-development restructuring goals in relation to the national agricultural policy.
3. The pro-development goals in the budgets were clearly undervalued before Poland's accession to the EU, which was presumably due to the competitiveness of the social goal in the form of spending on KRUS. After Poland's accession to the EU, the situation has changed significantly. Initially (in 2004–2008), the tendency to socialise budget expenditure for the increase in expenditure on structural changes in agriculture and rural areas (mainly financed by EU funds) slowed down, with a relative increase in 2016–2020. Nevertheless, the analysis of the budget laws indicates that the share of expenditure on KRUS, and generally the state budget expenditure after 2003, decreased by nearly half, and in recent years significantly increased again. Unfortunately, in recent years, the imbalance between the two goals has been again marked by a relatively higher valuation of social goals (with the level of spending on KRUS characterized by a minimal upward trend, with a stabilising number of beneficiaries), with the depreciation of development goals due to shrinking flows

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19. What is meant here, for example, is the allocation of funds for structural pensions, afforestation of land, as well as expenditure on the implementation of tasks in the area of biological progress, milk subsidies in the Extra class, the construction of the IACS system (integrated management and control system), as well as the continuation of tasks of Agricultural Chambers.

from the EU, and thus decreasing the overall amount of expenditure on the agricultural budget. In such a situation, the state should increase the national component of the budget, which, however, is not done sufficiently. It is also worth noting that expenditure on KRUS to some extent performed a classic stabilising function as part of fiscal expenditures. On the one hand, it is clear that the subsidy to KRUS did not depend on the social needs of farmers, but on the other hand, their modelling role consisted in the fact that during the pre-accession period, they generated agricultural income to a significant extent through social transfers, thus eliminating the shortcomings resulting from neglected reproductive processes.

4. When measured by the benefits to the sector through budget expenditure transferred to farmers, to agricultural markets and to rural areas, agriculture benefited from the outcome of economic growth over the last quarter of the century (1995–2020) throughout the researched period in an unsustainable way. Sectoral fiscal expenditure gave in to the GDP growth. However, the elimination of transfers to KRUS from these expenditures means that the assessment of the situation after 2003 is different, as the average annual growth rate of expenditure on the agricultural sector was ahead of GDP growth.

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