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Does a Demographic Crisis Threaten European and Polish Agriculture?

Abstract: In recent decades, problems in family farming have been coupled with a demographic crisis. In the face of unfavourable demographic forecasts and processes, the EU's agricultural policy has consistently underlined the strategic importance of family farming and the need for its development as a vital segment of the economy and the core of rural communities. The paper aims to assess the grounds for policies focusing on alleviation of the demographic crisis in EU agriculture as well as giving a preliminary presentation of the effects of implementing the instrument involving subsidies for young farmers' farms, on the example of Poland. The analyses suggest that the mechanisms for accelerating generational changes in EU agriculture have been based on questionable premises and have been not adjusted to the needs at national and regional level. In the EU policy documents and public debate, the support for generational turnover is based on arguments diagnosing a particularly adverse demographic situation in the agricultural sector. The article shows that this position is too general and unnuanced, because it does not include the general long-term population changes, other economic sectors and the different socio-economic and institutional contexts in member states, as well as being limited to a narrow range and often non-comparable public statistics. At present it is also hard to find justification for claims that instruments like subsidies for young farmers have resolved the problem of farms without successors and contributed to generational renewal in agriculture. Varied sources of data and information have been used, including EU and Polish legislation, thematic and expert studies related to demographic issues in agriculture, and empirical material gathered by public institutions.

Keywords: age, demographic crisis in agriculture, family farms, young farmers, CAP.

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1. Introduction

In recent decades, problems in family farming have been coupled with a demographic crisis. The number of farms as well as the number of people working on them is decreasing. Farmers are finding it increasingly difficult to deal with the market environment's pressure to boost the economies of scale and the concentration and intensification of production. This is why more and more often, people consider the launch of agricultural activity to be economically unviable, while the continued running of many operating farms by successors is associated with uncertainty (Wojewodzik 2013). The tough financial situation of a large group of producers is compounded by socio-cultural changes that consolidate the non-agricultural and non-rural model of life and professional aspirations (Gorlach and Starosta 2018). The aforementioned economic and social factors have caused the future of the family model of business activity in the agricultural sector to be questioned (Tomczak 2005; Michalska 2015; Figiel 2019). On the other hand, food-producing organisations that are an alternative to family farms, such as agricultural corporations, group farms, urban agriculture and hobby farming, are mentioned as being promising (Jarosz 2008; Ziętara 2018; Sroka et al. 2019).

In the face of unfavourable demographic forecasts and processes, the EU's common agricultural policy (CAP) underlines the strategic importance of family farming and the need for its development as a vital segment of the economy and the core of rural communities (European Commission 2012). Maintaining this form of farming and improving its chances of continued functioning is meant to be served by specially designed interventions in the form of support for young farmers' investments and incomes as well as welfare support for retiring farm owners.¹ Direct support for generational turnover is founded on arguments invoking dangers related to food security, maintaining the competitive position of European agriculture on global markets, and challenges linked to climate change and progressive degradation of the natural environment (European Commission 2010). Activities aimed at preventing a demographic crisis have thus become an important element of the EU's agricultural and rural-development policies. Including resources contributed by the member states, the sum of EUR 18.3 billion was earmarked for their implementation in the years 2007–2020 (European Court of Auditors 2017). The aforementioned interventions also gained importance in Poland's agricultural and rural development policies (Stępień and Czyżewski 2016; Wieliczko et al. 2017). The aim of the article was to analyse and assess

¹ The present paper does not discuss the principles and effects of implementation of structural pensions in the EU and in Poland, due to the paper's limited framework and the fact that this instrument was withdrawn from implementation in the CAP in the period 2014–2020.

the premises and assumptions of EU policy aimed at generational renewal in agriculture. In particular, the research task was to present the different arguments on the reasons for the ageing process in the agricultural sector and mechanisms aimed at countering it that have been raised in the public and expert debate. This discussion relates to the context of generational changes in the Polish agriculture through the analysis of motives and effects of using the CAP pro-demographic instrument, namely setting up aid for young farmers.

The following sources of data and information have been used for the purpose of this paper: EU and Polish legislation, the results of evaluation studies and reports on agricultural and rural policy containing assessments of the effects of implementing instruments that support generational changes in agriculture, and scientific literature. The discussion is also based on quantitative empirical material made available by public institutions, including Eurostat, the Polish FADN², MARD and AMRA. The conclusions of the present study have been based on an analysis of the content of the above documents and a statistical analysis of quantitative data.

2. The premises of selected CAP interventions aimed at counteracting the demographic crisis in EU agriculture

The strategic assumptions of the EU's CAP are directed towards increasing the productivity and profitability of agriculture. At the same time, they devote a lot of attention to achieving positive environmental and social effects (European Commission 2010). According to policy makers, achieving these goals depends not only on the effective operation of farms, but also on the commitment of the young generation of farmers to agricultural activity (European Commission 2015, 2017). The trend observed in agriculture in the member states in recent decades has seen a decreasing number of farms and the increasing average age of their managers, which has usually been explained by the depopulation of rural areas, intensified by the migration of young women to urban areas, older farm owners' reluctance to withdraw from economic activeness, young people's low willingness to pursue agricultural activity due to the high costs of launching it, and the difficult economic situation of the agricultural sector (European Commission 1996; Ross Gordon Consultants SPRL 2000). These factors as well as the drive to improve EU agriculture's competitive edge have become reasons for public intervention aimed at generational renewal in the sector (Regulation EU No. 1307/2013 2013; European Commission 2015, 2019).

² Authors would like to thank to the Polish FADN for providing access to data used in the study, as well as for preparing the data set for statistical analysis.

The demographic aspect, which has been present in the CAP for the last four decades, is gradually being expanded and intensified. Previously, policy interventions focusing on the modernisation of agricultural production favoured its concentration and specialisation, which was coupled with decreasing employment in agriculture and the depopulation of some rural areas. That is why, from the times of the reforms of McSharry, Agenda 2000 and Fischler, relatively greater emphasis has been placed on rural development and environmental protection, including issues of structural adaptation and support for young farmers³ (Moehler 2008; European Commission 2019). The CAP's second pillar offered EU member states voluntary instruments of subsidies for investments, intended for the farms of young farmers; most countries and regions took advantage of these instruments through national rural development programmes (European Court of Auditors 2017). Even greater emphasis on overcoming the demographic crisis in agriculture was placed in the EU budgetary framework for the years 2014–2020. It introduced additional area payments increasing the incomes of young farmers, while rural development programmes saw the expansion of the pro-demographic focus of some previously existing actions (including consulting services, investments in fixed assets) and increased levels of public financial support for selected operations undertaken by this category of agricultural producers (Regulation EU No. 1305/2013 2013).

However, the EU's activity involving intensive support for generational changes in agriculture has caused controversy. Analyses assessing the effectiveness of the implementation of individual instruments have yielded inconclusive results, raising doubts concerning the arguments on which interventions were based and the interventions' effectiveness in accomplishing the planned objectives (Davies, Caskie and Wallace 2013; European Court of Auditors 2017). Different stances towards EU policies supporting generational changes in agriculture can be distinguished in the public, expert and scientific debate. One of them, which

³ Implemented in the period 1992–1998, McSharry's reform of the CAP primarily consisted in shifting from a policy of price support for agriculture towards income support for the sector (direct payments) and in boosting the possibilities for extensification and withdrawal from production, the aim being to achieve a balance on agricultural markets and to secure the foundations of operation of large as well as small farms. As part of the subsequent reform (Agenda 2000, the years 1999–2001), two main areas of activity were defined within the CAP, namely the first pillar, which involved market policy, and the second pillar, which concerned rural development policy. The instruments within these pillars were designed to foster the implementation of the European Model of Agriculture concept, founded on multifunctional family farms and a varied rural economy. Fischler's reform (2003–2007) included the introduction of a uniform area payment system, the separation of direct payments from agricultural production as well as working towards environmental goals on the basis of cross-compliance, which made payments contingent upon farmers keeping arable land in good agricultural condition and following basic management requirements (public health, animal and plant health, environmental protection, and animal welfare) (Tomczak 2009; Adamowicz 2015).

is shared by EU institutions, farmer organisations as well as some researchers, notes the rapid rate of farmers' ageing and sees it as a key challenge for agricultural policy (Fischer and Burton 2014; Adamowicz and Szepeluk 2016; European Council of Young Farmers 2017; European Parliament 2018). According to this approach, the cause of the breakdown of generational turnover in the agricultural sector is multifaceted, involving many different factors: economic (growing price scissors in agriculture, high demand for arable land, a relative decrease in the profitability of agricultural production), regulatory (legislation restricting land mobility, a lack of town-and-country planning), and socio-cultural (a disrupted successor socialisation process, the low prestige of the farmer's occupation, land being treated as a precious good, the widespread non-market transfer of land by inheritance of ownership) (Ross Gordon Consultants SPRL 2000; Zondag et al. 2015b). For these reasons, it has been suggested that it is necessary to continue and expand interventions aimed at accelerating and facilitating farm succession (Zondag et al. 2015a; European Council of Young Farmers 2017; European Parliament 2018).

Another view that notes farmers' ageing points out that this process has been taking place for a long time, and sees it as part of a general European and long-standing trend (Matthews 2018). Among other things, it is caused by the generation of the post-war demographic boom reaching retirement age, the dropping number of births and growing life expectancy (Rachel et al. 2013). According to this viewpoint, demographic changes affect most sectors, but are also concurrent with longer professional activity (due to the population's improving health, among other factors) and labour-saving technological changes (mechanisation of labour), which help alleviate unfavourable demographic trends. That is why it is believed that a wide range of remedial measures undertaken by public authorities might turn out to be ineffective, uneconomical, or result in effects opposite to those intended (Davies, Caskie and Wallace 2013). One cited example of such interventions is the area payments provided under the CAP, which result in an increase in land prices, making it harder for younger people to gain access to land (whether by purchase or tenancy) (The World Bank 2017). In this context, the growing average age of farmers is largely the result of structural transformations in the sector, as well as stemming from the necessity for it to adjust to the changing economic situation and from accumulating ownership problems in agriculture (Bernstein et al. 2018). That is why problems with the emergence of successors on some farms are also considered in terms of a chance for expanding the possibilities for the young generation of farming family members to freely shape their career path. On the other hand, unwillingness to take over some farms offers the possibility for the agricultural sector to gain new entrants, with non-agricultural qualifications and professional experience, who could trigger processes of the multifunctional

development of agriculture and rural areas on a local scale (Lobley 2010; Joosse and Grubbstrom 2017).

The discussion on the demographic situation of European agriculture also features views stating that hard and general statements about a demographic crisis should not be made in relation to this sector. To support this point of view, its proponents cite the results of quantitative studies conducted on large samples in different countries and regions. Among other things, they show that the proportion of older and young farmers varies between regions and EU member states, and the continuance of most currently operating farms is mostly unthreatened (Chiswell and Lobley 2018). For example, according to studies carried out in the *Farmtransfer* project, farms functioning in many EU member states usually had designated successors. This applied especially to modern, efficient and profitable farms, which determine the current condition and future development of agriculture (Zagata and Sutherland 2015; Chiswell and Lobley 2015). In this context, a demographic problem stemming from a lack of successors is observed mainly on smaller farms.

Different opinions on the demographic crisis in EU agriculture as regards its reach, depth and the right ways to respond to it should be juxtaposed with empirical data from a structural survey of agriculture gathered by Eurostat (*Farm Structure Survey*). These data suggest a large scale of changes in the European agricultural sector (Figure 1). They show that in the period 2005–2016, the number of farms in the EU-27 decreased from 14.5 to 10.3 million, or by almost 29%. This decrease in the number of farms progressed with varying intensity in different farm manager age categories. The biggest relative drop in the number of farms was recorded in the youngest group of farmers, i.e. aged up to 34. In the EU-27, this group diminished by 47%, i.e. 469,000 (relatively the biggest drop was in Denmark – 76%, followed by Czechia with 72%, Finland with 71%, Romania and Poland with 53%). The size of the other agricultural producer age groups diminished relatively less, although also significantly. The number of EU-27 farmers aged 65 and over decreased by 27% (i.e. 1.2 million), in the 45–54 age group by 29% (949,000), and in the 35–44 group by 39% (909,000).

An analysis of Eurostat data on demographic changes in the EU's agricultural sector in the years 2005–2016 in a relative approach indicated progressive transformations in the farmer age structure (Figure 2). However, the changes observed were not one-directional, although they usually involved a decreasing proportion of the younger categories of agricultural producers (age groups: up to 34 and 35–44) and a growing share of older farmer groups (age groups: 45–54, 55–64, 65 and over). In all the member states (EU-26), the biggest drop was in the percentage share of young farmers, i.e. those aged 35–44 (a decrease of 2.5 pp), whereas there was an increase in the share of older farmers, i.e. those aged 45–54

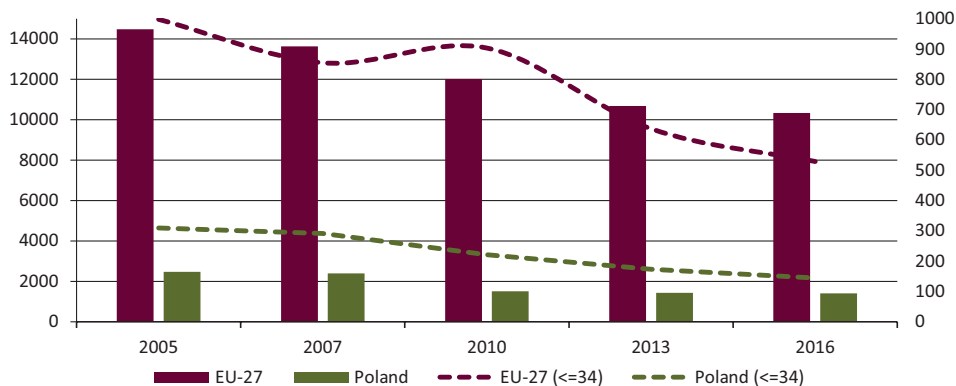


Figure 1. Changes in the number of farms overall (left-hand side) and young farmers' farms (right-hand side) in selected groups of EU-27 member states* and in Poland (in thousands)

Rysunek 1. Zmiany w liczebności gospodarstw rolnych ogółem (lewa strona) i gospodarstw rolnych młodych rolników (prawa strona) w wybranych grupach państw członkowskich UE-27* i w Polsce (w tysiącach)

*The data presented for the EU-27 included the United Kingdom but did not include Croatia (EU accession in 2013).

*Przedstawione dane dla UE-27 obejmowały Wielką Brytanię, a nie uwzględniały Chorwacji (przystąpienie do UE w 2013 roku).

Source: Own calculations based on Eurostat data.

Źródło: Obliczenia własne na podstawie danych Eurostatu.

(an increase of 0.9 pp), 55–64 (an increase of 1.5 pp), and 65 and over (an increase of 1.6 pp). By comparison, Poland recorded different and relatively more noticeable changes in the farmer age structure. There was a significant increase in the size of the 55–64 category (by 9.4 pp), and a decrease in the group of the oldest farmers (by 5.2 pp). On the other hand, the proportion of the youngest farmers (aged up to 34) shrank more than in the EU-26 (by 2.3 pp versus 1.4 pp).

The changes in the farm manager age structure presented above, consisting in a decreasing proportion of young people, reflected the general demographic trend for ageing of the population observed in most European societies. This process, which is mainly determined by the population's longer life expectancy (retirement age being attained by the post-war baby boom) and decreasing fertility rate, has affected the economy by reducing the group of professionally active people and increasing the group of people who reach retirement age and withdraw from the labour market (Rachel et al. 2013). As a result, most sectors in the EU countries recorded a predominance of older employees over younger ones, and in many

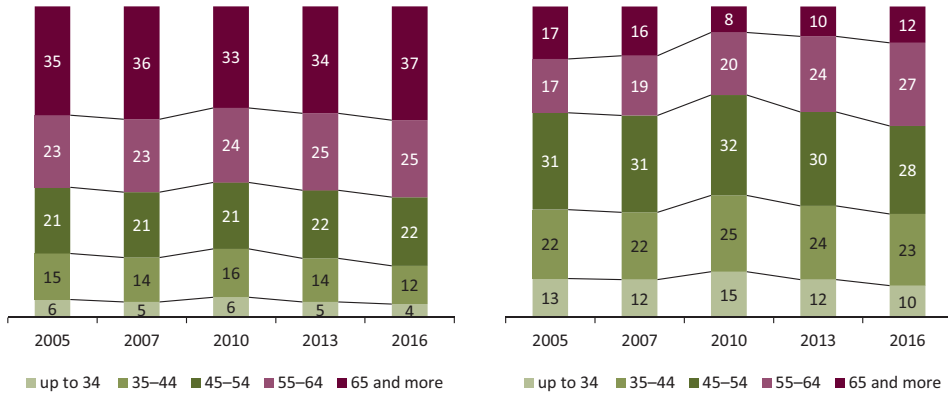


Figure 2. Changes in the age structure of selected farmer categories in the EU-26 member states* (left-hand side) and in Poland (right-hand side) in the years 2005–2016 (%)

Rysunek 2. Zmiany w strukturze wieku wybranych kategorii w państwach członkowskich UE-26* (lewa strona) i w Polsce (prawa strona) w latach 2005–2016 (w %)

*The data for the EU-26 included the United Kingdom but did not include Croatia or Poland.

*Dane dla UE-26 obejmowały Wielką Brytanię, a nie uwzględniały Chorwacji i Polski.

Source: Own calculations based on Eurostat data.

Źródło: Obliczenia własne na podstawie danych Eurostatu.

branches the labour force shortage was partially levelled out by hiring people arriving from outside the EU. *Labour Force Survey* (LFS) data suggested that the outflow of young employees affected not only agriculture, but most occupations and specialisations, especially industrial workers, artisans, office workers, machine and equipment operators and assemblers⁴ (Fargues and McCormick 2013).

When considering changes in the age structure of the farmer population, it is also necessary to take into account the dynamic transformations occurring in the agricultural sector in recent decades, which involved the industrialisation of agriculture, the effects of which included the diminishing total number of farms and a decreasing demand for workers (Zegar 2018). These processes reflected the structural changes in the agricultural sector (increased concentration, automation and specialisation of agricultural production), mainly stemming

⁴ These were labour-intensive occupations, often poorly or inadequately paid, which the automation process was eliminating from the market. The percentage of skilled young agricultural, forestry and fishery workers decreased relatively less noticeably, according to the results of the surveys in question. Meanwhile, a growing proportion of young people was only reported in the case of specialists from different sectors as well as services employees and salespeople (Eurostat 2020a).

from its adaptation to the situation in the business environment, and especially to the situation in the other elements of the agri-food chain. They were thus not exclusively the outcome of unfavourable demographic change, but were also significantly grounded in economic transformations.

Analysing the Eurostat data related to changes in the overall number of farms, the size of different demographic categories of farmers and their proportions in the EU member states, it is also worth noting that they were partially the effect of changes made to the methodology of studying the farm structure (Dudek 2015; Eurostat 2020b). Among other corrections, additional criteria of including farms in the survey were introduced, which usually meant that the population for analysis was narrowed down. At the same time, when considering issues of demographic change in EU agriculture covered in documents related to agricultural and rural policy, it should be taken into account that they were mainly discussed on the basis of a single variable characterising the social-occupational category under investigation, namely the age of farm managers. In addition, FSS data reviewed by EU and national public institutions in the context of policies for generational changes in agriculture usually did not account for other people working on farms, including prospective successors (Milne and Butler 2014; Zagata and Sutherland 2015). Another fact that needs underlining is that the category of the youngest farm managers was the least numerous in all the years under consideration in the EU member states (the other farmer groups were over twice or more than four times larger). That is why studies and documents produced on the basis of FSS studies usually reported relatively the greatest intensity of changes in relative measures.

Looking at policies aimed at generational changes in agriculture, it is worth noting that, usually, neither EU documents nor expert opinions specified any desirable proportion (number) of young farmers. On the other hand, they typically underlined that the enlargement of this group would bring positive effects for the agricultural sector (continued production on family farms, a greater chance of introducing farming innovations or expanding operations) and for rural areas (keeping young people in the countryside, maintaining and developing business activity) (European Commission 2010; European Commission 2015). However, the claim that succession has an unequivocally positive impact on the economic and environmental functioning of farms was usually taken for granted. Studies on the effects of intergenerational succession or analyses of the impact of succession on the economic and environmental situation of transferred farms have not been many so far, and the results have not enabled clear conclusions to be drawn (Zhengfei and Lansik 2006; Bretoni, Cavicchioli and Latruffe 2016). At the same time, it has been rare for the public debate to indicate any possible unfavourable economic

and environmental consequences of intensified succession in the agricultural sector (Milne and Butler 2014).

Preliminary findings on the effects of supporting generational changes through the CAP at the level of all the EU member states indicate that assistance provided under the policy's second pillar so far has had a generally positive although indirect and regionally varied impact on generational renewal. The implementation of relevant instruments has led to increased employment in rural areas and also to increased incomes and economic results on some farms run by young people. At the same time, the CAP's pro-demographic instruments served the transfer of farms among family members rather than the arrival of new entrants in the agricultural sector (Zagata et al. 2017; European Commission 2019). However, it has been difficult to assess the accomplishment of the demographic goal of rural development policy actions, mainly due to the lack of relevant data. Surveys have shown that generational renewal was noticeable in regions where the implementation of CAP instruments was coupled with supplementary initiatives on the local, regional and national levels.⁵

3. The premises and effects of CAP interventions aimed at preventing a demographic crisis in Polish agriculture: The case of subsidies for young farmers

The farms of young farmers received support from the moment Poland joined the EU and its agriculture was included in the CAP mechanisms, regardless of the favourable farmer age structure (Figure 2), a fact that was counted as a developmental opportunity for Polish agriculture. According to policy makers, the demographic differences between farmer groups in Poland and in the EU-15 stemmed from Poland's tough economic situation in the past. Even so, the need to support generational changes in the sector for economic reasons was acknowledged. Assistance for young farmers was supposed to facilitate Polish farms' adaptation to operating on the European single market (Sectoral Operational... 2004). Strategic documents also indicated that replacing managers with younger and, by definition, better-educated people might solve already diagnosed problems of Polish agriculture, such as a shortage of capital, arable land and funding for investments as well as technological stagnation (Sectoral Operational... 2004; Rural Development... 2007). Supporting demographic changes among farm managers

⁵ Among other things, this involved institutional and fiscal support for transfers of arable land, the formation and development of group projects in agricultural production, offering tax breaks on the transfer of capital in agriculture, using land banks, and the activity of social organisations facilitating the takeover of land by new entrants (European Commission 2019).

through subsidies was therefore supposed to contribute to the modernisation of farms and the improvement of their competitiveness (Table 1).

The arguments justifying support for young farmers through bonuses in the years 2014–2020 indicated that Polish agriculture had a substantial excess of labour. In this context, however, it was also noted and seen as a problem that the sector was seeing a population ageing trend, which was stronger in the farmer occupational group than in other economic sectors in rural areas (Rural Development... 2013). Increasing the number of farms with a competitive edge was identified as one of the needs. According to the document's authors, maintaining and increasing the competitiveness of Polish agriculture relied on a favourable structure of the agricultural population. Justifying the bonuses for young farmers, the document presented some general statements related to an inclination for innovation and the ageing of different occupational categories. In this light, generational turnover was recognised as the most important factor contributing to the modernisation and improved competitive edge of farms (Stępień and Czyżewski 2016).

Data from MARD and ARMA show that almost 65,000 beneficiaries took advantage of subsidies for the launch and development of farms in Poland in the years 2004–2019 (Table 1). In the total number of farms, those that received support for young farmers accounted for a small percentage (from around 1% to 3% of the overall number of farms with over one hectare of arable land), and for a slightly larger proportion of farms run by people up to 40 years of age (approx. 10–13%). Subsidies for young farmers undoubtedly contributed to the modernisation of some farms, and also to the improved education level of the beneficiaries. The funding obtained as bonuses was mainly spent on the purchase of machinery, farming equipment and fittings, and on expanding farm animal herds (Wigier 2019). This support likely caused a temporary increase in the value of production output and farms' fixed assets, which translated into higher incomes for some of the beneficiaries. However, it should be assumed that the aid in itself did not have a significant impact on people's decisions to take over a farm.⁶

Support in the amount offered in the period 2004–2020 was usually insufficient to overcome the barriers and problems that successors encountered on farms (the subsidies ranged from PLN 50,000 to PLN 150,000), all the more so in the case of new entrants from outside the sector (Table 1). The aid also bypassed a large

⁶ Any assertions as to the favourable impact of subsidies on the process of generational changes in Polish agriculture need to be backed by in-depth research. The scope of information gathered in the monitoring and reporting system also requires modification in a way that would yield answers to questions about how subsidies influence decisions to take over farms and affect the economic situation in agricultural activity (Zagata et al. 2017).

Table 1. Selected premises and effects of support for young farmers using resources from EU funds in Poland in the years 2004–2020

Tabela 1. Wybrane założenia i efekty wsparcia młodych rolników z wykorzystaniem środków finansowych z funduszy UE w Polsce w latach 2004–2020

Specification	SOP 2004–2006	RDP 2007–2013	RDP 2014–2020
Measure	setting up of young farmers	setting up of young farmers	business start-up aid for young farmers
Objectives	accelerating generational turnover in agriculture; improving the economic condition of farms	stimulating structural changes in the agricultural sector; improving farms' competitive edge	facilitating the entry of farmers with the necessary skills into the agricultural sector
Amount of bonus (PLN)	50,000	50,000/100,000	100,000/150,000
Eligible beneficiaries	age up to 40 years; professional qualifications; minimal economic size of farm; meeting cross-compliance requirements	age up to 40 years; professional qualifications; having a business plan prepared; minimal economic size of farm and amount of arable land; meeting cross-compliance requirements	age (up to 40 years); professional qualifications; having a business plan prepared; minimal economic size of farm and amount of arable land
Number of beneficiaries	14,151	38,857	11,801*
Selection procedure applied	first come, first served	number of points (bonus for arable land area, professional qualifications, unemployment rate in the region)	number of points (bonus for arable land area, qualifications, pro-environmental investments, taking over a farm from an older person)
Total payments in programme (in million PLN)	6,440	74,289	23,811
Total payments in measure (in million PLN)	708	3,165	987
Share of measure's payments in total payments (%)	10.9	4.3	4.1

*Status as of 31 December 2019.

*Stan na dzień 31.12.2019.

Source: Own compilation based on data and studies published by the Ministry of Agricultural and Rural Development (MARD) and the Agency for Restructuring and Modernisation of Agriculture (ARMA): Sectoral Operational Programme Restructuring and modernisation of the food sector and rural development 2004–2006 (2004), Rural Development Programme for 2004–2006 (2007), Rural Development Programme for 2007–2013 (2013), Rural Development Programme for 2014–2020 (2013).

Źródło: Opracowanie własne na podstawie danych i opracowań publikowanych przez Ministerstwo Rolnictwa i Rozwoju Wsi (MRiRW) oraz Agencję Restrukturyzacji i Modernizacji Rolnictwa (ARiMR): Sektorowy Program Operacyjny Restrukturyzacja i Modernizacja Sektora Żywnościowego oraz Rozwój Obszarów Wiejskich 2004–2006 (2004), Plan Rozwoju Obszarów Wiejskich 2004–2006 (2007), Program Rozwoju Obszarów Wiejskich na lata 2007–2013 (2013), Program Rozwoju Obszarów Wiejskich 2014–2020 (2013).

group of small farms run by young people. Preliminary analyses additionally showed that the bonuses improved the economic results of beneficiaries' farms significantly, but only within a very short time from their granting (Dudek and Pawłowska 2020). It is worth pointing out that the support system implemented in Poland, in the form of a uniform subsidy amount across the whole country, did not adequately account for local and regional agricultural development conditions, and rewarded large and medium-sized farms as well as people from farming families (Zagata et al. 2017; European Court of Auditors 2017). Considering the restrictive regulations on land sale/purchase in Poland and unequal terms of access to agricultural land, it would seem advisable to expand the availability of funding to include young farm owners insured in the non-agricultural system and owners of smaller-area farms. In such cases, the subsidy could be conditional upon the quality of the planned project to expand or diversify agricultural activity, and not on rigorously defined criteria of the economic or area size of a farm and the type of insurance the farmer has. Just like in some of the member states, financial support for young farmers in Poland should also be expanded to include advisory assistance, networking support and specialist training specifically targeted at this group of farmers (European Commission 2019).

The Eurostat data cited here, illustrating unfavourable changes in the age structure of Polish farmers, as well as the preliminary information presenting the effects of support for young farmers through subsidies, lead us to consider the scale of the threat of a demographic crisis in Polish agriculture in the longer term. This purpose is served by data from the Polish FADN gathered from farmers aged 50 and over who run commercial farms (Goraj and Olewnik, 2014). These data show that in different years, around half of the farms studied had a designated successor (Table 2). It is not possible to unequivocally estimate the actual level of intergenerational succession on farms solely on the basis of the respondents' answers. Nevertheless, the continued functioning of most of these farms in the coming years seems highly probable.

According to farm life cycle theory, the farms of farmers aged up to 50 should be at the optimal stage of their development, a time when the question of the future of agricultural production assets are far from being fully resolved (depending on the respondent's sex, this is 10–15 years left until retirement age, which usually defines the time when the farm manager and owner changes). At the same time, one needs to take into account that the respondents' declaration that they will transfer the farm to a specific person will not always be fulfilled (Viira, Poder and Varnik 2014). This decision could be changed in future due to many factors, starting with economic determinants (the possible shutdown of farms or land tenancy), through regulatory causes (changes in agricultural policy, the agrarian

Table 2. Changes in the proportion of selected farm groups with a declared successor* among all the farms surveyed in Poland in the years 2009–2015 (in %)

Tabela 2. Zmiany udziału wybranych grup gospodarstw rolnych z zadeklarowanym następcą* wśród ogółu badanych gospodarstw w Polsce w latach 2009–2015 (w %)

Specification	2009 N=4846	2010 N=4762	2011 N=4879	2012 N=4978	2013 N=5463	2014 N=6123	2015 N=6367
By farming type							
Field crops	47.8	46.3	47.0	37.4	46.8	50.0	49.0
Horticulture	38.2	35.1	38.5	47.9	41.1	47.2	53.0
Permanent crops	54.5	48.4	48.8	42.0	49.0	52.4	50.6
Dairy cows	49.2	48.6	49.7	75.3	52.0	54.5	55.5
Grazing livestock	46.5	44.4	37.1	79.9	39.9	42.7	43.8
Granivores	45.1	39.9	44.6	60.7	47.4	54.8	53.5
Mixed	48.0	48.1	47.1	56.7	49.5	53.2	53.2
By economic size**							
Very small	51.5	45.2	50.0	48.5	50.3	44.8	45.2
Small	45.0	43.8	42.8	42.2	43.4	45.7	45.6
Medium small	46.4	45.1	46.5	47.0	46.2	49.6	48.2
Medium large	48.3	48.8	48.8	50.6	53.6	56.8	57.4
Large	57.4	53.2	54.7	54.1	57.3	65.6	67.8
Very large	31.8	62.5	52.9	62.5	55.6	68.2	75.0

* In all the years, the results concerned farms whose owners were aged 50 years and over. ** Economic size in euros: very small – 2,000 to 8,000; small – 8,000 to 25,000; medium small – 25,000 to 50,000; medium large – 50,000 to 100,000; large – 100,000 to 500,000; very large – equal to or greater than 500,000.

* We wszystkich latach podane wyniki dotyczyły gospodarstw rolnych, których posiadacze byli w wieku 50 lat i więcej. ** Zakres wielkości ekonomicznej w tys. euro: bardzo małe – od 2 do 8; małe – od 8 do 25; średnio małe – od 25 do 50; średnio duże – od 50 do 100; duże – od 100 do 500; bardzo duże – większe lub równe 500.

Source: Own calculations based on FADN 2009–2015 data.

Źródło: Obliczenia własne na podstawie danych FADN 2009–2015.

system), all the way to individual motives (the redirection of the prospective successors' career, force majeure).

Nevertheless, an analysis of the data from farms covered by FADN monitoring, related to their characteristics and declarations on succession, does reveal some regularities. First of all, the share of farms run by farmers aged 50 and over increased throughout the period 2009–2015 in the sample surveyed, indicating ageing in the surveyed group of farms covered by agricultural accountancy (Table 2).

Secondly, the scale of declared succession usually grew in consecutive years with the increasing age of those surveyed. The intensified frequency of responses declaring a designated successor thus increased the chances for the continued operation of these farms in the future.

Moreover, data from the Polish FADN documented the fact that the level of declared succession was territorially varied. Farms from western and southern regions (macro-regions: Wielkopolska and Silesia, Małopolska and Pogórze) had a designated successor slightly more often than farms from the eastern and especially the northern parts of the country (macro-regions: Mazovia and Podlasie, Pomerania and Masuria).⁷ The empirical material also suggested that a higher-than-average level of declared succession was present on dairy farms (Table 2). In the years 2009–2015, between 49% and 75% of farms run by farmers aged at least 50 and concentrated on milk production had a designated successor. This noticeably higher trend towards succession should be associated with the special character of this type of production. Dairy farms are usually profitable and have a high value of committed capital, which largely determines the attractiveness of working on such farms in the eyes of prospective successors. At the same time, milk production requires a significant amount of work as well as know-how and high qualifications from the people working on such farms. This means that the process of succession (agricultural socialisation) on dairy farms was lengthy and stretched over many years (Fisher and Burton 2014).

Data from the Polish FADN allow us to say that the succession level was also linked to the economic size of the farms surveyed (Table 2). In most of the years under analysis, in the group of farms of large and very large economic size, the share of entities with a designated successor ranged from 32% to 75% and was higher on average than that for medium-sized and small farms, where this percentage usually did not exceed 50%. Young people are more inclined to take over economically larger farms, as they offer a relatively greater chance of satisfactory income in the future and possibilities for expanding farming operations. Taking over the running of such farms is often a more attractive job for prospective successors than a career in non-agricultural sectors. The above-average level of declared succession on farms with the smallest economic size is also worth noting (Table 2). This trend reflects young people's strong inclination to take over farms as a hobby or as a potential source of extra income or other benefits.

⁷ Differences in the frequency of potential family transfers could be viewed as being due to differences in the strength of farms' market ties (relatively stronger market relations were present on farms operating in the Wielkopolska and Silesia macro-regions), and also socio-demographic and cultural factors in farmer families and rural communities (importance attached to the non-market value of land and the high rural population in the south of Poland), which are conducive to the continuity of farming operations.

4. Conclusion

Support for generational changes will be one of the nine main objectives of the EU's CAP for the years 2021–2027. The intention of policy makers is to make it the core element of strengthening rural communities and the rural economy. Aid will concentrate on small and medium-sized farms and on encouraging young people to take up farming. Moreover, in the EU's newest financial framework, in an effort to overcome the demographic crisis in European agriculture, alongside previously existing instruments of agricultural policy, member states will be encouraged to introduce solutions that would be better adjusted than before to local and regional circumstances. Actions aimed at modifying and increasing the flexibility of national regulations related to fiscal solutions and land sale/purchase are also indicated as being essential. In the face of a demographic crisis, EU institutions are also positing actions conducive to extending the professional activity of workers in the agricultural sector, in the form of measures such as financial incentives, improved work organisation and conditions, and greater support for farmers.

The analyses conducted suggest that, so far, the mechanisms of accelerating generational changes in agriculture in Poland, as in the whole EU, have been based on questionable premises. According to Eurostat data, in the period 2005–2016 in the EU-27, the number of farmers aged up to 34 decreased by 469,000 (47%), although the share of this category in the overall number of farm managers remained relatively stable (down from 6.9% to 5.1%). In Poland, the group of the youngest farmers diminished by 165,000 (53%), while its share dropped by 2.3 pp (from 12.5% to 10.2%). This might suggest that the effectiveness of agricultural policy instruments applied to achieve generational renewal so far has been small. However, the observed direction of change has not allowed an unequivocal conclusion to be drawn about a demographic crisis on a scale that would threaten agricultural development in the coming years. EU documents and national studies related to policies for generational changes in the sector have given inadequate consideration to the causes behind the decreasing number and proportion of the youngest category of farmers. These have included, for example, dynamic structural transformations in agriculture (significant drops in numbers were seen for farms from all the farmer age categories in the period under analysis) and problems with the scope and comparability over time of data gathered during the structural survey of farms. Furthermore, the diagnosis of the agricultural sector's situation ignored the broader context of the ageing of European societies and the factors involved in this, which also have an impact on the problems of other sectors of the economy, sometimes more serious than those emerging in agriculture.

To date, support for young farmers in Poland under the CAP was provided irrespective of Polish agriculture's relatively favourable demographic situation compared to the EU as a whole. It was concentrated on the group of economically stronger farms, with chances for development, and focused on the modernisation of agricultural production assets. In addition, an analysis of Eurostat and Polish FADN data and studies evaluating CAP implementation indicates that at present it is hard to find grounds for the view that subsidies for young farmers have solved the problems of farms without successors and contributed to generational renewal in farming. This means that the inflow of new entrants to the agricultural sector in Poland is largely determined by other factors. These include the overall economic situation in the country, the availability and attractiveness of jobs in non-agricultural sectors, and regulations related to the functioning of farms (including fiscal regulations, social insurance and the agrarian system). Polish FADN data enable us to conclude that on the majority of commercial farms, which decide about agricultural production in the country, generational changes are unlikely to be threatened in the nearest future.

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Czy kryzys demograficzny zagraża europejskiemu i polskiemu rolnictwu?

Streszczenie: W ostatnich dekadach problemy rolnictwa rodzinnego sprzęgają się z kryzysem demograficznym. Na tle niekorzystnych prognoz i procesów ludnościowych polityka rolna UE niezmiennie akcentuje strategiczne znaczenie rolnictwa rodzinnego i potrzebę jego rozwoju jako żywotnego segmentu gospodarki oraz rdzenia społeczności wiejskich. Celem artykułu jest ocena uzasadnień polityki ukierunkowanej na zahamowanie kryzysu demograficznego w rolnictwie UE, jak również wstępne przedstawienie efektów realizacji instrumentu dotacji dla gospodarstw prowadzonych przez młodych rolników na przykładzie Polski. Z przeprowadzonych analiz wynika, że mechanizmy przyspieszenia zmian generacyjnych w rolnictwie w UE miały dyskusyjne przesłanki i nie były dostosowane do potrzeb zaznaczających się na poziomie krajowym i regionalnym. W unijnych dokumentach strategicznych i debacie publicznej wsparcie dla wymiany pokoleniowej w rolnictwie opiera się na argumentach diagnozujących szczególnie niekorzystną sytuację demograficzną tego sektora. Artykuł pokazuje, że stanowisko to jest zbyt ogólne i uproszczone, ponieważ nie uwzględnia długookresowych zmian populacyjnych, sytuacji w innych branżach gospodarki oraz różnych kontekstów społeczno-ekonomicznych i instytucjonalnych w państwach członkowskich, a także ogranicza się do wąskiego zakresu, często nieporównywalnych danych. Obecnie trudno znaleźć podstawy do twierdzeń, iż dotacje dla młodych rolników rozwiązały problemy gospodarstw bez następców i przyczyniały się do odmłodzenia populacji rolników. Na potrzeby artykułu wykorzystano różne źródła danych i informacji, w tym: akty prawa UE i prawa krajowego, opracowania tematyczne i eksperckie dotyczące problematyki demograficznej w rolnictwie oraz materiał empiryczny zgromadzony przez instytucje publiczne.

Słowa kluczowe: wiek, kryzys demograficzny w rolnictwie, rodzinne gospodarstwa rolne, młodzi rolnicy, WPR.

