

Karol KOCISZEWSKI

PERSPECTIVES OF POLISH ORGANIC FARMING DEVELOPMENT IN THE ASPECT OF THE EUROPEAN GREEN DEAL

Karol **Kociszewski** (ORCID: 0000-0003-3971-1486)

Wrocław University of Economics and Business

Correspondence address:

Szronowa Street 11, 53-023 Wrocław, Poland

e-mail: karol.kociszewski@ue.wroc.pl

ABSTRACT: The paper aims to examine the determinants for the development of organic farming in Poland under the present conditions associated with membership in the European Union (EU). The study is based on analyses of secondary sources and a nationwide survey among organic farmers. Organic farming in the EU is a subject to development under the influence of the strategies related to the European Green Deal. Polish organic agriculture developed dynamically after the EU accession. However, the process reversed from 2013 due to the unstable domestic support policy. The barriers are poor connections between farmers and distributors, bureaucratic procedures and low profitability. A significant chance for the development is the expected demand growth. The most important factors encouraging farmers were associated with environmental aspects and the use of labour. The further growth is conditioned by the better organized policy of Polish organisations involved in agricultural policy.

KEYWORDS: sustainable agriculture; organic farming; ecological products markets

Introduction

According to the UE, A Farm to Fork Strategy adopted in 2020, 25% of the EU's agricultural land is expected to be under organic farming by 2030 (European Commission, 2020a). Together with the EU Biodiversity Strategy for 2030 (European Commission, 2020c), the strategy is one of crucial parts of the European Green Deal (EGD), which sets out how to make Europe the first climate-neutral continent by 2050 with a fair and prosperous society, as well as a modern, resource-efficient and competitive economy. The strategies are connected with a need to rethink crucial UE policies, including food and agriculture, so as to reduce the use and risk of pesticides, the use of antibiotics and fertilisers in agriculture, increase the share of organic farming and enhance the percentage of landscape elements (European Commission, 2020b).

This paper aims to examine the determinants for the development of organic farming in Poland under the present conditions associated with membership in the European Union (EU). To indicate these determinants, the problem of motivation of farmers to convert into organic farming was analysed on the example of Poland in the aspect of plans of development of organic agriculture connected with the EGD. The results obtained in the course of such examination would provide valuable information on the relative impact of each of the studied spheres upon the availability of income sources for producers, with good potential to explain some of the reasons behind the observed decline in the number of Polish organic farms (and the associated acreage). The recognition of the conditions and prospects for the development of the organic food market and production potential could contribute to the better policy of public institutional and financial support for organic farming.

An overview of the literature

Organic farming contributes to sustainable development in its three main dimensions (environmental, economic and social), which are essential for the green economy, and the EGD. In organic farming, the negative environmental consequences of agricultural activities are minimised (Cattell Noll et al., 2020), while their positive side effects are increased compared to conventional agriculture (Zaher et al., 2016). Most of the studies that compared biodiversity in both types of farming demonstrated lower negative environmental impacts from organic than from conventional farming (Tuomisto et al., 2012). Organic fields have around 30% more biodiversity, and organically farmed animals enjoy a higher degree of animal welfare and take fewer anti-

biotics. Water and air pollution, as well as soil contamination, are minimized. These external effects are significant both for people living in the countryside (internal environmental sustainability) and those living outside rural areas (external environmental sustainability).

Organic farming is important for the social pillar of sustainable development (MacRae, Frick, & Martin, 2007). It is the source of the provision of high-quality food products to consumers, which contributes to the well-being of the population living outside of rural areas (external social sustainability). It can also stimulate the use of labour surplus in the countryside (internal social sustainability). Torres et al. (2014) found that restructuring the citrus sector towards organic farming in one of the regions in Spain resulted in a significant improvement of employment both at the farm level and the municipality level.

In the economic dimension, organic farming falls into a special category. Its efficiency is lower than conventional farming (Seufert et al., 2012). It was also indicated in the study of Krause & Machek (2018). Organic farms have a lower operational efficiency; to achieve their sales, they spend more than double the operating costs of conventional farms. Consequently, an interesting scientific problem is to investigate factors influencing the profitability of Polish organic farms compared to conventional ones. Many elaborations showed that demand is an essential factor affecting the possibilities of organic production (Tzouramani et al., 2014). That is why ecological consumption patterns determine the market's capacity and capability. It was confirmed by the study of McCullough et al. (2008), which showed global shifts in consumption, marketing, production and trade and their consequences on organisational changes along the food chain. Growing demand could enable the price of organic products, which would be a premium for farmers, as powerful motivation for conversion to organic methods (Siepmann & Nicholas, 2018). Serra et al. (2008) estimated that 37% of farms would start organic production as a result of a 40% increase in the price, while a 90% premium may trigger the conversion of 70% of farms. An increased price should cover lower yields and labour cost bigger than in conventional agriculture, which could be a barrier to the further development of organic farming. Another one is a financial risk during the conversion period (Siepmann & Nicholas, 2018), which is confusing because of producer cost (Veldstra et al., 2014). It is not only associated with a financial burden but also with administrative procedures. Bravo et al. (2012) found that certification-related bureaucracy negatively affected farmers' expectations. All these factors influencing Polish farmers' decisions to convert were examined in the study presented in this paper.

Research methods

The first part of the paper presents the comparison of the development of organic farming in the EU and Poland. The next part includes the latest solutions of the EU's policy related to the development of organic agriculture in the context of documents of the EGD. These parts of the study were based on the descriptive and comparative analyses of secondary sources from Statistics Poland, Agricultural and Food Quality Inspection (IJHARS – Inspekcja Jakości Handlowej Artykułów Rolno-Spożywczych), international organic agriculture organisations, the EU databases, scientific papers referring to the conditions of organic farming development in years 2004-2019. These parts of elaboration include law analysis referring to current issues of the EU policy connected with support for the development of organic farming for the years 2021-2027 and was based on regulations of the Common Agricultural Policy (CAP) and the EU strategic documents.

The results of the surveys on factors influencing Polish organic farms are in the further section. The empirical study among farmers was conducted using questionnaires prepared by the author. The nationwide surveys were performed in 2019 by a professional research institute, using CATI (Computer Assisted Telephone Interviews) and CAWI (Computer Assisted Web Interviews) methodology. The nation-representative sample in Poland involved 65 certified organic farms. The questions concerned their experiences connected with participation in the market and were focused on four groups of factors: those influencing the economic performance of farm (price, income, cost, demand, subsidies), environmental aspects (care for the environment, ecological standards, clean environment in farm area), the social ones (prestige in society, job satisfaction care for health) and the institutional conditions (administrative procedures). The results enabled us to explain existing barriers and stimulants for organic production in Poland in the aspect of the future perspectives for that process. The discussion involves remarks on investigated conditions of development of organic farming in the light of the UE policy with special consideration of CAP for the years 2021-2027 under the influence of the EGD.

Results of the research

Development of organic farming market in the European Union and in Poland

In 2020 9.2% of the total Utilized Agricultural Areas (UAA) in the EU were certified organic (Trávníček et al., 2022). In Austria, organic farming was carried out at 26.5% UAA, in Italy at 16% UAA, in Germany at 10.2%

UAA, in Spain at 10% UAA, and in France at 8.8% UAA. In Poland, it was only 3.5% UAA which was less than the new member states (UE 13) average – 5.95% UAA. According to the author's calculations based on IJHARS data (2007, 2011, 2019a, 2019b), in Poland, in the years 2004-2013, thanks to the implementation of the CAP subsidies, the organic area has increased by 737% (to 0.67 million hectares UAA) and the number of farms by 608% (to 26.6 thousand). The trend of development of Polish organic farming reversed in 2013. Between 2013 and 2020, the number of organic farms fell by 24% (to 19.2 thousand, which represented 1.3% of all farms), and the area of crops fell by 27% (to 50.9 million hectares UAA). In the EU, the number of farms increased by 61%, and the crop area increased by 47.5% over the same period. The decrease in the number of organic farms and areas in Poland was due to how government agricultural organisations distributed CAP subsidies. When irregularities in the application for these funds occurred between 2008 and 2013, the Ministry of Agriculture and Rural Development (MARD) streamlined and tightened procedures¹. The errors in the support system have been partly reduced but have discouraged some farm owners from taking organic production. Moreover, the policies pursued by the MARD and the Agency for Restructuring and Modernization of Agriculture (ARMA) were inconsistent. It applied to frequent and chaotic changes in the procedures and delays in the payments. Bureaucratic obstacles have become an important barrier to the development of Polish organic farming. Finally, the MARD cut the CAP support for organic farming in 2014-2020 by EUR 178 million compared to the original plan.

The largest global organic food markets are in the United States (EUR 49.5 billion in sales in 2020) and the EU (EUR 44.8 billion) (Trávníček et al., 2022). In 2020, Germany had the largest market in the EU – EUR 15 billion (33.5% of the EU market value). The highest share of organic products sales value in the national food markets has been recorded in Denmark (13%), Austria (11.3%), Luxembourg (9.1%), Sweden (8.7%), and Germany (6.4%). In Poland, sales value was one of the lowest in the EU. In 2019, it amounted to EUR 314.1 million. Organic food expenditures accounted for 0.6% of the value of total food sales in Poland and 1.5% in the Czech Republic – a country with a similar level of economic development. Polish consumers spent only EUR 8.3 per person on organic food, which is 43.5% of the value in the Czech Republic (EUR 19.1 per person) and twelve times less than the average in the EU as a whole (EUR 101.8). In the most developed European markets, the expenditures are much higher than the EU average: in Denmark, EUR 383 per

1 An ineffective system of control and attestation of production was not able to prevent from granting subsidies for farm holders without providing environmental services, without supplying products to the market, or even without real crops (sometimes they were carried out ostensibly).

person, in Sweden, EUR 212.3 per person, in Germany, EUR 180.3 per person. The problem with the functioning of the Polish organic market is the poor connection of producers with the distribution system (NIK, 2019). Retail sales are dominated by imported final products, which account for about 50-60% of their value. Consequently, the market does not effectively absorb production potential. It could be another reason why the organic area and the number of farms decreased from 2013 until now.

The latest solutions of the European Union's Policy are related to developing organic farming

According to A Farm to Fork Strategy, at least 40% of the total budget of the CAP will be intended for combating climate change. According to the strategy, agricultural holdings should be rewarded more than ever for achieving environmental and climate goals. It influenced the shape of the CAP for the years 2021-2027 (adopted in 2021 and planned to be implemented from 2023) aligned with the EGD objectives. The total allocation for the CAP in 2021-2027 amounts to EUR 386.6 billion at current prices (European Commission, 2022). The value is reduced by 5% in comparison to the years 2014-2020. Its share in the EU's multiannual financial framework is less too (32% form EUR 1.21 trillion). However, the division of the CAP funds is more favourable for the Pillar II (25.4%) than for Pillar I (74.6%) in comparison to the previous period when they had respectively 21.5% and 78.5%. The Pillar II includes more measures aimed at organic farming support than the Pillar I. The new CAP includes new elements contributing to the EGD (with the target of a 25% organic area in the EU by 2030). From 2023 at least 25% of the Pillar, I (direct payments and market interventions) will be allocated to eco-schemes (Regulation 2021/2115). This is the new tool supporting organic farming, precision farming, agro-ecology and agro-forestry, which is mandatory for the Member States but designed on their own in a 'bottom-up' approach. At least 35% of the Pillar II (rural development measures) should be devoted to actions that benefit the environment, climate and animal welfare (agri-environment programmes, Natura2000 and Water Framework Directive payments). The EU Member States will implement the new CAP with National Strategic Plans addressing their specific needs and delivering tangible results in relation to the EU objectives, including those laid out in the EGD, Farm to Fork and biodiversity strategies. The plans should display a higher ambition for the environment and climate action compared to the previous programming period.

In 2021 the Commission presented the Action Plan for the Development of Organic Production (European Commission, 2021a), which is another document in line with the EGD. It is designed to provide the organic sector with

the right tools to achieve the 25% target. The growth in the sector must be more dynamic because the trends show that with the present growth rate, the EU will reach 15-18% UAA by 2030 (European Commission, 2021b). It will be stimulated by supporting demand through green public procurement (for example, a greater use of organics in public canteens) and promotion of the consumption of organic food, maintaining consumer trust and bringing products closer to citizens. Furthermore, the supply-side will be granted by increased funds from the CAP – mainly thanks to the implementation of the eco-schemes, which will be backed by a budget of EUR 38-58 billion for the period 2023-2027 (European Commission, 2022). That kind of financial support for sustainable agriculture will have a 25% share in total Pillar I expenditures in these years. Currently, around 1.8% of CAP is used to support organic farming (EUR 7.5 billion from the Pillar II).

The results of the surveys on organic farmers' experiences connected with their participation in the market

Surveyed farmers declared that mostly the environmental factors influenced their decisions to switch farms to organic methods: care for an environment and a clean environment in the farm area (Table 1).

Table 1. Factors that influenced the decision to switch the farm into organic methods

Rank	Factor	(% responses)
1	a care for the environment	64.6
2	clean environment in the farm area	53.8
3	the ability to increase the use of labor resources	43.1
4	growing sales opportunities	35.4
5	job satisfaction	30.8
6	prestige in society	16.9
7	high prices for organic products	6.2
8	increased profitability	4.6
9	care for health (of my family and mine)	3.1
10	use of extensive production methods on the farm	0.0

Source: author's work.

In the third place (in terms of the number of indications) was the socio-economic factor – the possibility of using labour resources. Slightly more than one-third of respondents expected increasing sales opportunities, which came in fourth place. This was reflected in the assessment of opportunities

and barriers to the development of organic production (Table 3). The strictly economic incentives were less important – high prices for organic products were ranked seventh, and increased profitability ranked eighth place in terms of frequency of indications.

Most farmers replied that after the conversion, there was no change in the economic conditions for their operation (Figure 1). Among those, who have identified changes in their economic situation, the most significant number of producers declared the simultaneous decrease in yields, the increase in production costs and the increase in income after the conversion. In terms of response frequency, the most critical category of inputs associated with an increase in production cost were expenditures associated with the fulfilment of environmental standards. They are necessary to deliver agricultural public goods (rural amenities), so it is justified. The second one was bureaucracy (administrative procedures) connected with documentation and other requirements associated with certification.

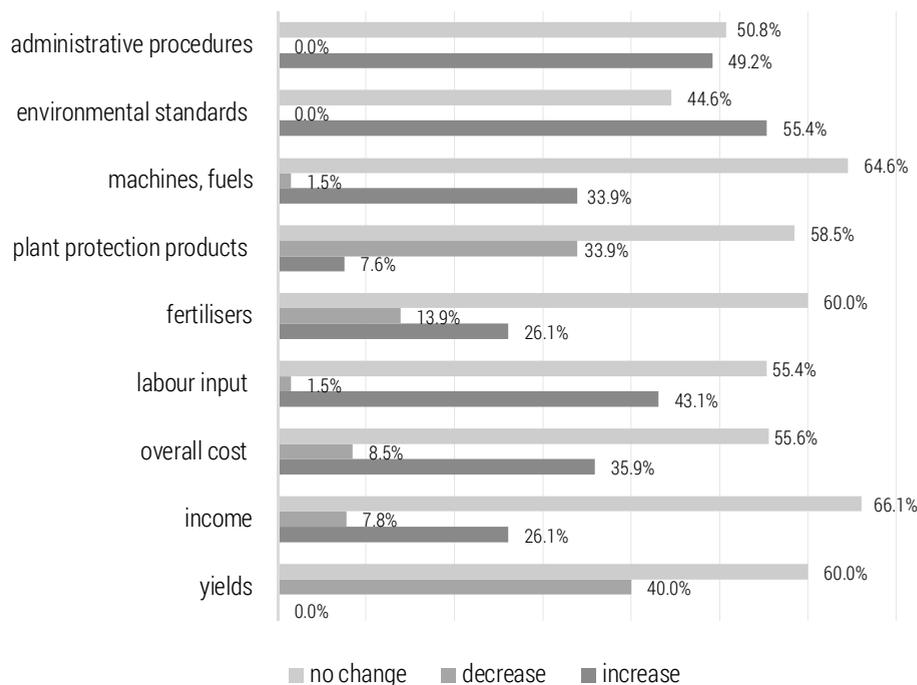


Figure 1. Change of yield, income and different cost categories after conversion into organic farming (% response)

Source: author's work.

Labor input was the third most frequent answer indicating the increase of a production cost (43.1%). 34.9% of respondents saw a decrease in expenditures for plant protection products after conversion.

75.38% of farmers assessed the subsidy rate and the level of support offered to farmers during conversion into organic farming as too low (Table 2). According to 69.2% of respondents, the prices of organic products were too low. Most of them accepted the level of retail margins taken by distributors.

Table 2. Assessment of factors influencing income of organic farming (% responses)

Specification	should be higher	could be lower	it is at the appropriate level
price	69.2	0.0	30.8
retail margins	10.7	15.4	83.9
rate of subsidy per hectare of organic farming	75.4	1.5	23.1
the subsidy for farms in conversion into organic farming	75.4	6.1	18.5

Source: author's work.

Only 18.5% of respondents identified subsidies as the opportunity –the fourth one in terms of response frequency (Table 3). Many more farmers saw opportunities in demand factors: growing environmental awareness of consumers (the first place), increasing demand (the second place) and popularity of ecological consumption patterns (the third place).

Table 3. The opportunities and barriers to the development of organic production

Rank	Opportunities	% responses	Barriers	% responses
1	growing environmental awareness of consumers	67.7	a weak system of distribution and promotion	46.2
2	growing demand	52.3	too much bureaucracy	46.2
3	popularity of ecological consumption patterns	52.3	low profitability	44.6
4	EU subsidies	18.5	small sales opportunities	33.9
5	better distribution	15.4	too difficult procedures	27.7
6	favorable policy of Polish authorities	12.3	too high production costs	27.7
7	any of these factors	9.2	low yields	24.6

8	-	-	the difficulty of applying organic farming methods	13.9
9	-	-	limited access to fertilizers, pesticides and feed additives	7.6

Source: author's work.

The most important barriers were a weak distribution system, bureaucratic procedures and low profitability.

Discussion and conclusion

Organic farming is well developed in the EU and is a subject of further development. Polish organic agriculture is at a low level of growth compared to most old Member States (EU15) but also to the Czech Republic and other EU 13 countries. It developed dynamically after its accession to the EU (in years 2004-2013); however, from 2013, it is a subject to regressive trends. Years 2013-2020 saw a decrease in the number of farms by 24% and a reduction in organically farmed areas by 27%. Consequently, organic agriculture constituted 3.5% of the UAA in Poland – much less than across the EU (9.2% of the UAA). Among the factors which contributed to the reduced willingness of farmers to take up organic production, attention should be paid to the policy pursued by the Polish authorities and organisations concerned with organic farming support. It was inconsistent and disorganised. Unless the regressive trends were reversed, Polish organic agriculture would not reduce the development gap.

Considering the EGD and A Farm to Fork Strategy, organic farming will grow in importance in European agriculture and the food market. Its supply side will be supported by increased spending and new tools from Pillar I and Pillar II of the CAP. However, the definition of new eco-schemes has been left in the hands of Member States and, in some countries, could be not ambitious enough to favour organic farming. It depends on the effectiveness of their domestic policies and procedures. Activities of the EU member states will foster the demand according to the new Action Plan for the Development of Organic Production. These measures contribute to sustainable agriculture development.

The empirical surveys showed that the most critical factors encouraging farmers to take up production were associated with environmental aspects and the possibility of using labour resources (Table 1). It could confirm findings from previously considered studies related to ecological elaborated by Cattell Noll et al. (2020), Zaher et al. (2016) and Tuomisto et al. (2012). This also refers to the aspects of social sustainability indicated by MacRae et al.

(2007) and Torres et al. (2016). It may also confirm that organic farming is based more on human capital than on external factors of production. It can contribute not only to ecological benefits but also to employment and thus to improving the social situation in rural areas. It is also visible infrequent answers indicating the increase in labour cost after conversion (Figure 1). It is worth underlining that the CAP 2023-2027 beneficiaries will have to respect elements of European social and labour law to receive subsidies (social conditionality). The other social factors, such as job satisfaction and prestige in society, were less critical to farmers' decisions.

Farm owners did not expect a significant improvement in their economic situation when deciding to convert to ecological methods. A small number of respondents were under the influence of high prices for organic products and increased profitability (Figure 1). It confirms the findings showing relatively low efficiency of organic farming (Seufert et al., 2012; Krause & Machek, 2018). Many farm holders did not notice any change in their economic performance after conversion. It may confirm that – as indicated in the section on the development of organic farming in Poland – they had no significant links with the distributors on the organic market. Active market participants can be found among those who have identified changes. Most registered a simultaneous decrease in yields and an increase in production costs and income (Figure 1). It may mean that one of the reasons for increased revenue is the support from the subsidies under Pillar II of the CAP. However, most farmers declared that they should be higher (Table 2). This may explain the previously presented decrease in the number of farms and the organic area in the years 2013-2018. This is also evident in the result, in which a small number of farms identified subsidies as the opportunity for organic production (Table 2). Currently, they do not function as sufficiently strong incentives for further development of organic farming.

The result showing decreased expenditures for plant protection products may suggest that farm holders were required to limit their negative impact on biodiversity. Some of them declared an increased cost of fertilisers. They had to spend more money on specific, expensive products approved under the organic farming regime. Both changes contribute to lower external environmental costs than conventional agriculture, as presented in the introduction (Tuomisto et al., 2012).

A significant opportunity for developing organic production is the expected demand growth. Its role in that process was explained by Tzouramani et al. (2014), McCullough et al. (2008), Siepmann & Nicholas (2018) and Serra et al. (2008). According to the study results, it is mainly related to the increasing environmental awareness and environmental change in consumption patterns (Table 3). However, as explained in the section presenting data

on organic farming development, it is not a sufficient factor in ensuring the economic conditions for increasing production in Poland.

The most important barriers to organic farming development are poor connections between farmers and the distribution system, bureaucratic procedures and low profitability. These results confirm that the Polish organic food market requires improving the links between farmers and wholesalers, processors, retailers and consumers. A bureaucratic burden is necessary in many cases due to the certification process requirements. It was visible in the studies taken into consideration in the introduction (Veldstra et al., 2014; Bravo et al., 2012). On the other hand, administrative procedures could be unstable, chaotic and overcomplicated – as was the case in Poland in the years 2013-2018. The domestic system of the CAP subsidies needs to be streamlined and formed in a stable manner such that it could stop being a barrier to enhanced production potential. There are important factors for developing organic agriculture coming from the demand side of the market. Still, its further growth is conditioned by increased rates of subsidies and better-organised policy of Polish government agendas and organisations involved in agricultural policy. Otherwise, they will not seize opportunities from the EGD and related documents creating new enforced policies supporting organic farming as an important element of agriculture transformation towards sustainability.

Consequently, Polish organic farming would not reach the 25% share in total UAA until 2030. IFOAM Organics Europe (2021) showed that the level of ambition to develop and support organic farming is not high enough in CAP national Strategic Plans of many EU Member States. They need significant changes in the measures and budgets to reach the Farm to Fork Strategy's target.

The research was carried out before the Covid 19 pandemic, which could change the situation of consumers and manufacturers. Therefore, it is worthwhile to undertake further research on the conditions of market development, in particular concerning the experience of organic farmers and the expectations of conventional farmers after the pandemic. There is also a need to investigate conditions and relationships between actors involved in the organic food chain, which is crucial for further market development.

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