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## THE PERSPECTIVES OF FAMILY FARMS – CONTINUATION

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### Abstract

*Family farms dominate in agriculture determining global food security and are essential for ecological security. These farms have not been precisely defined probably due to their enormous differentiation among and within regions and countries of the world. Along with the development of capitalism, family farms are subject to industrial transformation which is highly advanced in developed countries, while in less developed countries it has just started. New challenges and development conditions related mainly to environmental limitations and globalisation, as well as contestation of industrial transformation outcomes give rise to a question about the universality of such transformation and inevitability of transformations in agriculture of less developed countries to follow the path demarcated by developed countries. In addition to the issues of understanding and importance of family farms, the article presents the issue of perspectives of agricultural transformation in general and in Poland, including the position on the comments by S. Figiel.*

**Keywords:** family farms, industrial transformation, new paradigm of agriculture.

**JEL codes:** O10, Q10, Q18.

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## Introduction

In the issue 3(360) of the *Zagadnienia Ekonomiki Rolnej / Problems of Agricultural Economics* (ZER), I published an article entitled *The perspectives of family farms in Poland*, which was criticised by Prof. Szczepan Figiel published in the issue 4(361). As the problem is important, I found it purposeful to elaborate on some threads of the article. The issue of family farms deserves to be presented, simply due to the interest in family farms, both in developed and less developed countries. Taking up the issue is also justified by the fact that it does not appear often in economic journals, in particular in terms of going beyond our own domestic issues, while it is still of great interest when it comes to many fields of science and politics. It is not surprising as family farming means not only more than 10 thousand years of history, but also one of the greatest challenges of the modern world. However, the reasons for this interest are changing, with food security permanently set as a priority.

The interest in family farms has its source in the needs of non-agricultural sectors and the general socio-economic development. It was the case in the last decades of the 19<sup>th</sup> century, when the agrarian issue, whose source had been the industrial transformation of agriculture resulting from capital needs and the growing urban population, started being discussed. It was also the case in the period of decolonisation in the countries of Asia, Africa and Latin America after WWII, when countries regaining their independence faced the issue of choosing an economic development strategy. And it was also the case following turbulence in agri-food markets in the years 2007-2008. Currently, the issue of family farms is still alive and essential for civilisation development, primarily due to the persistent dominance of such farms in the world, challenges of feeding the growing and increasingly wealthy global population and also environmental protection, but also putting into question the industrial transformation of agriculture as the only way for all countries under modern development conditions. This interest is expressed by the large number of publications and scientific conferences as well as initiatives of international institutions and grassroots organisations. As a symbolic crowning, we can regard the fact that at the 66<sup>th</sup> session of the UN General Assembly the year 2014 was declared the “International Year of Family Farming”.

In developed countries, the interest in family farms is explained by a need for agriculture to become sustainable, by food quality and emerging difficulties in the development of corporate agricultural enterprises. What is observed is the altered perception of family farms which, in the period of dominance of market economy, were treated as mismatched to that economy, as family farming does not follow the logic of industrial rationality which dominated modern societies of developed countries. It is difficult to approach due to its complexity, multilevelness and multifacetedness. Family farming is deemed both archaic and anarchic but also attractive and appealing (Ploeg, 2013). The problem is also that most family farms, despite having management skills and abilities to implement new technologies and increase the area and production scale, have problems with coping with the com-

petition and keeping up with growing non-agricultural income. The importance of family farms results from their function in sustainable agricultural and rural development, taking into account all spheres of sustainability: economic, ecological and social (Woś and Zegar, 2002; Zegar 2012; HLPE, 2013; Garner and O Campos, 2014; Braun and Mirzabaev, 2015; Vliet et al., 2015).

In less developed countries, the interest in family farms results from their dominance in agriculture and from their importance for the economic and social development, from their role in reducing poverty and hunger, as well as from new challenges related to globalisation. The questioning of the Washington consensus and neoliberal globalisation resulted in an intense discussion on the role of agriculture in the economic development (Amanor, 2009), taking into account new conditions and challenges. In addition to huge market, technological and demographic pressure, the point is also to change the policy in relation to agriculture, fundamentally different in developed and less developed countries (HLPE, 2013; Graeb et al., 2016; Poczta-Wajda, 2017). Vertical food chains dominated by corporations are interested in large-scale farms while it is impossible to achieve food security without including family farms in the global food system.

In this article, I will limit myself to the following issues regarding family farms: 1) definition of family farm, 2) indication to the importance of family farms in the economy and agricultural policy, 3) transformation and perspectives of family farms and 4) taking the position on the comments by Prof. S. Figiel.

### **The concept of family farm**

Despite the long history and dominance of family farms in global agriculture and extensive literature on this issue, no single generally adopted definition of such farms<sup>1</sup> has been developed so far. In the Polish economic and agricultural literature, we usually refer to the paper by Prof. Franciszek Tomczak, where, based on the literature review, the following definition was formulated: “Family farm is an independent agricultural production entity when basic production factors belong to the owner (family) performing managerial functions; work is performed mainly by the owner and his family; ownership and management are passed down from generation to generation; household is not separated from the production entity and the result of farming is income” (Tomczak, 2005, p. 25). This definition contains basic elements of the concept of a family farm, but some of them are not precise. This is confirmed, for example, by the review of 36 definitions in the paper (Garner and O Campos, 2014) with a conclusion indicating a difficulty in defining a family farm due to many contexts, countries, development stages, political motivations, etc. The above-mentioned authors indicate that most definitions of a family farm include the role of a family in managing a family farm and the dominance of family labour inputs. The authors also formulated their own definition:

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<sup>1</sup> As an example, we may point to the following publications: Gasson and Errington, 1993; Lipton, 2005; HLPE, 2013; Van der Ploeg, 2013; EC, 2013; Garner and O Campos de la, 2014; Vliet van et al., 2015; Graeb et al., 2016; Djurfeldt, 2016; Schneider, 2016.

“Family Farming (also Family Agriculture) is a means of organizing agricultural, forestry, fisheries, pastoral and aquaculture production which is managed and operated by a family and predominantly reliant on family labour, both women’s and men’s. The family and the farm are linked, co-evolve and combine economic, environmental, reproductive and cultural functions” (Garner and O Campos de la, 2014, s. 17)<sup>2</sup>.

The definition in another publication is similar:

“Family farming refers to one of the forms of organization of agricultural production and includes holdings that are characterized by organic links between the family and the production unit and by the mobilization of family labour, excluding permanent employees. These links are reflected in the inclusion of the productive capital in the family assets and in the combination of domestic and market and nonmarket operating logics in process to assign family labour and for its remuneration, as well as in choices for the distribution of products between final consumption, intermediate consumption, investments and accumulation” (Bélières et al., 2015, s. 20, Box 2)<sup>3</sup>.

Usually, the family farm is described by enumerating the attributes such as: land use for agricultural purposes, ownership and management, handing over to successors, dominance of family labour, employment of the owner (user) on their farm, provision of agricultural income as a main or dominant source of livelihood, area, place of residence on the farm (or near the farm), lifestyle, rootedness in the local environment and other. In addition, each of these attributes has some modifications or complements. For example, with regard to labour inputs some accept the dominance of hired labour or the maximum number of permanently hired workers, purpose of production, various limits of area or production.

The problem with the concept of the family farm also stems from the fact that law defines this concept for various purposes being of interest of politics (e.g. agricultural tax, inheritance tax, social insurance, social welfare, grants, crop and livestock insurance, shaping the agricultural system). Public statistics perceive the family farm and the individual farm<sup>4</sup> in a different way. Moreover, the definitions tend to change over time.

<sup>2</sup> This definition corresponds to that by FAO: *Family farm is managed and operated by a family and predominantly reliant on family labour; the family and the farm are linked, coevolve and combine economic, environmental, social and cultural functions* (FAO, 2014).

<sup>3</sup> The authors also provided the definition of a farm and its basic types: *An agricultural holding is an economic unit of agricultural production under single management comprising all livestock kept and all land used wholly or partly for agricultural production purposes, without regard to title, legal form, or size (...) There are two types of agricultural holdings: (i) holdings in the household sector – that is, those operated by household members; and (ii) holdings in the nonhousehold sector, such as corporations and government institutions* (Bélières et al., 2015, s. 14).

<sup>4</sup> In Poland, statistics distinguish between farms of legal persons and farms of natural persons (individual).

Family farms include many types of farms. The historically oldest form – after the rural community – is a peasant farm whose characteristic feature is the orientation towards providing subsistence to the farm family<sup>5</sup>. This form, disappearing in developed countries, is still dominant in less developed countries. Another form is a part-time farm where family labour inputs are shared between the farm and other activities, while the source of livelihood for the family is income from both these activities. Such farms at first developed in combination with crafts and agricultural services and later with the industry. A relatively new form is a hobby farm where the basic source of livelihood for the family is non-agricultural income, while the agricultural production is mainly intended for self-supply.

The core of family farms in developed countries are professional farms – a form of the family farm where agricultural activities conform to the market requirements, the objective is income (or profit) which is the dominant source of livelihood for the family. Such farms are also referred to as farmer farms<sup>6</sup>. Some family farms become agricultural enterprises and are based on hired labour. According to most opinions, the last form of the farm does not fall within the concept of the family farm but is a form of an individual farm which together with other private and corporate enterprises forms the capitalist sector of agriculture<sup>7</sup>.

Important criteria of classification of family farms are: farm size (by area, production, added value), purpose of production, labour input, source of livelihood. In particular, we distinguish small farms (subsistence or semi-subsistence farms) and other farms (development, commercial, market farms). In the case of area, the utilised agricultural area (small farms are also referred to as small-scale farms) is usually taken into account, which is, however, different in individual countries, regions, places and in addition changes over time. As a criterion for distinguishing small farms, the volume of global or commodity production is also adopted. The use of the global production category is more reasonable in the case of less concentrated and less market-related agriculture, with the higher percentage of subsistence farms. The use of the added value category, standard gross margin or standard output value is important to a similar extent.

A popular criterion is the allocation of most production for self-supply or for the market. In the former case, farms are referred to as “subsistence farms”, and in the latter as “commercial farms”. An important criterion is farm income. If the income is lower than a half of available income of the family (household), this farm is considered to be small (Braun and Mirzabaev, 2015, p. 4). Sometimes, a small

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<sup>5</sup> In fact, it is assumed that a market-oriented (commercial) farm, although of family nature, is not a peasant farm any longer (Ellis, 1988, p. 4).

<sup>6</sup> The farmer farm is a family farm with modern technological equipment, using new production technologies and fully linked to the market (Tomeczak, 2005, p. 78).

<sup>7</sup> There is a problem with classifying collective family farms – families related by blood ties – and cooperative farms.



farm is the one where the labour input does not exceed 2 AWU (annual work unit). There are also various multicriteria proposals of their identification<sup>8</sup>.

The researchers outline the boundaries of family farms and categorise them depending on their interest – research objectives. In this regard, the diversity of identified groups of farms is enormous.

### **Family farms in the economy and agricultural policy**

Agriculture is still the largest sector of the global economy. The number of farms is estimated at about 570 million, including more than 500 million of small family farms. Family farms use 75% of agricultural land and produce 80% of global food (FAO, 2014; 2015) and the value of their agricultural production is estimated at USD 2.2 trillion (Graeub et al., 2016, p. 3), exclusive of non-market, particularly environmental values. The number of farms differs significantly among the regions of the world; there are 74% of farms in Asia, 9% in Sub-Saharan Africa, 7% in Europe and Central Asia, 4% in Latin America and the Caribbean, 3% in Middle East and North Africa (Lowder, Skoet and Raney, 2016, p. 20). The agricultural population is estimated at 2.6 billion people, i.e. about one third of the global population, including 1.5 billion persons working in agriculture<sup>9</sup>. According to the Global Agricultural Census “2010”<sup>10</sup>, most people worked in agriculture in the following order: China – 497 million (38%), India – 267 million (20%), Indonesia – 48 million (4%), Brazil – 11 million (0.8%), Mexico – 8 million (0.6%), Europe – 12 million (1%), Sub-Saharan Africa – 203 million (15%) (Bélières et al., 2015, p. 65). In the last 30 years, the number of people working in agriculture has increased by 350 million (37%) – mainly in Asia and Africa, and will still be growing in Africa and Asia (in the years 2010-2020: increase in India by 22 million and decrease in China by 35 million) (Bélières et al., 2015, p. 65).

In developed countries, agriculture lost its importance as the driving force of general socio-economic development and became marginal with regard to basic indices, such as the share in creating GDP, employment and consumption fund<sup>11</sup>. Also, experiences of developed countries point to the far higher importance of agriculture and farmers, as a social group, than it would result from the above-mentioned figures. In the countries subject to transformation (mostly the countries of Asia and Latin America), the share of agriculture in GDP reaches 13% while

<sup>8</sup> For example, Carmen Hubbard proposes three criteria to distinguish such farms: area of less than 1 ha, economic size of less than 8 ESU and labour input of less than 2 AWU (Hubbard, 2009, p. 4).

<sup>9</sup> According to FAO, agricultural population corresponds to all persons depending for their livelihood on agriculture, hunting, fishing and forestry. It comprises all persons economically active in agriculture as well as their nonworking dependents (FAO, after: Bélières et al., 2015, p. 63, footnote 39). In agriculture itself, the number of workers is estimated at more than 1 billion.

<sup>10</sup> The programme of global agricultural censuses was initiated by FAO in 1950 – countries should carry out an agricultural census within a decade; the last three decades are 1996-2005 (in Poland – 2002), 2006-2015 (in Poland – 2010) and 2016-2025 (in Poland – 2020).

<sup>11</sup> The share of agriculture in these categories is within the range of 1-2%, 3-6% and a dozen or so percent.

in the countries of Sub-Saharan Africa it is around 30% of GDP and is the source of livelihood for the dominant part of population (WB, 2008). Estimates of employment prepared by the International Labour Organisation for the years 1961 and 2017 show that the employment rate in global agriculture decreased from 43 to 26%, including in North America from 4 to 2%, in the OECD countries from 11 to 6%, in the European Union from 10 to 5% (in Poland from 23 to 12%), in South Asia from 58 to 38% and in Sub-Saharan Africa from 65 to 58%<sup>12</sup>.

In general, developed countries have carried out the profound restructuring of family farming with the orientation towards agricultural enterprises – corporate and family (farmer) – producing for the market, with the smaller or larger margin of small farms. The dominant form are large-scale farmer farms – with the far-reaching industrial intensification, specialisation and concentration. The increase in the size of such farms was possible thanks to the fact that less efficient farms had dropped out from the market and thanks to innovations that move up the limits of industrialisation. Technical progress allows to overcome limitations resulting from the finiteness of natural resources but only to some extent. At the macroeconomic level, the limits seem to be less sharp, assuming the competitive capacity of the given economy (necessary resources can be imported and emitted pollutants can be exported). At the microeconomic level, the competitive capacity averts environmental limitations, but only for an economic entity having the competitive capacity.

In developed countries, agriculture has been subsidised for several decades, but it would be more accurate to say: it is compensated for negative effects of the market mechanism. Support measures for farmers increase and stabilise agricultural income, but with significant leaks to unintended beneficiaries. Support for farmers' income is essential in the context of parity of labour payment and parity of income of farm and non-farm families (households). Support for family farms is justified by social, cultural considerations, their importance for the vitality of rural areas and preservation of rural landscape. The paradox is that developed countries with modern agriculture subsidise agriculture while in developing countries there is the direct (via taxes) or indirect (via prices) exploitation.

In the countries of Europe and North America, the average area of farms is still growing<sup>13</sup>. In South America, there is progressive fragmentation, but in some of them there are also large farms (such as latifundia in Brazil and Argentina). In Asia, there was a turning point from fragmentation of farms to their enlargement, as the development of non-agricultural sectors absorbs the increase in labour force

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<sup>12</sup> In some countries, the increase in the share was recorded: Angola from 38 to 51%, Guatemala from 19 to 40%, North Korea from 60 to 64%, Liberia from 40 to 43%, Nicaragua from 42 to 43%, Senegal from 45 to 49%, South Sudan from 66 to 68%, Tajikistan from 30 to 41%, Ukraine from 16 to 17%, Uruguay from 7 to 12%; in total, in the least developed countries from 72 to 65%; <<https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?page=1>>.

<sup>13</sup> Interestingly enough, in these countries the area of an average family farm is increased not only at the expense of elimination of smaller farms, but also of division of large farms based on hired labour (Djurefeldt, 2016).



and reaches for labour resources involved in agriculture<sup>14</sup>. On the other hand, in Africa fragmentation of family farms is still in progress, as the high natural birth rate is not accompanied by the sufficient increase in the number of non-agricultural jobs and, moreover, the availability of land for farmers is diminished by the demand for land on the part of corporate farms with crops for export (inter alia, coffee, tea, sugar, palm oil) and land grabbing. According to the UN forecast, by 2050 the global population is going to grow by about 2 billion while in Asia it will grow by 0.9 billion (from 4.2 billion in 2011 to 5.1 billion in 2050) and in Africa the population will grow by 1.1 billion (from 1 billion to 2.2 billion). This points to a possibility of further fragmentation of family farms, if there is no sufficient demand absorbing surpluses of agricultural labour force. The above points to shifting of Asian agriculture to less labour-intensive and more capital-intensive technologies, which will not be stimulated in Africa as so far there has been no sufficient demand on the part of non-agricultural sectors which would absorb surpluses of agricultural labour force (Masters et al., 2013).

In developed countries, industrial technologies are dominant (oriented towards nanotechnologies, precision technologies, new growth stimulators for plants and animals, satellite navigation, drones, etc.), while in less developed countries traditional technologies are dominant. Undoubtedly, technological innovations allow to increase the agricultural productivity but, as a rule, they demand a simultaneous enlargement of farms. Nevertheless, agricultural technology can be adapted to the size of farms, to specific needs as part of the existing agricultural structure. Similarly, biological progress may induce concentration, but may also serve the small-scale production. Agroecological intensification is possible on farms of various size (Valenzuela, 2016).

In developed countries, the problem is not competition between family and corporate farms, but rather competition among family farms of various size and further concentration of land which is facilitated by agricultural technology and services. Family farms, even if they have managerial skills and ability to implement new technologies (innovations) and increase the area and production scale, have problems with facing the competition and keeping up with growing non-agricultural income. Market forces result in dropping out of medium family farms, as corporations managing vertical food chains are interested in the large-scale production while small farms find their place more in local markets. Therefore, the agrarian structure of family farming is becoming progressively polarised. Small farms become part-time and hobby farms while large farms, based on hired labour, face growing problems as remunerations for hired labour follow non-agricultural remunerations – thus, it is difficult to expect popularisation of family farms where permanent hired labour is dominant.

In less developed countries, there is mainly a conflict between corporate farms and family farms, mostly small ones. The former are criticised for ousting fam-

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<sup>14</sup> This is, *nota bene*, determined by China.

ily farms from land and when are established on new areas – for environmental effects (e.g. in Amazonia), reducing the demand for surplus labour force, which they replace with agricultural technology, popularisation of monocultures with negative environmental effects, lower land productivity and decreasing the vitality of rural areas.

What also acts to the detriment of family farms, is a cultural megatrend discouraging young people to manage farms, both large in developed countries and small in less developed countries. Despite growing income, family farms are increasingly affected by the lack of successors.

In developed countries, family farming is no longer a sector adopted in the development strategy as a leverage for general economic development and elimination of phenomena of poverty and hunger, just like it is in many less developed countries. The global market and institutions watching the neoliberal order – the World Bank, the International Monetary Fund, the World Trade Organisation<sup>15</sup> – currently require the same solutions from less developed countries which have contributed to the success of developed countries, while not taking into consideration completely different conditions. Price ratios changed to the detriment of agriculture, the market of agricultural products is oversupplied, so is the labour market. This suppresses and entraps small agriculture of less developed countries. Modern developed countries, when they started taking part in structural transformation, had a smaller population and lower natural birth rate than modern less developed countries and virtually unlimited possibilities of migration to colonies, whereby production technologies were more labour-intensive which means that the industry could absorb more labour force. Formulas proposed by neoliberals for less developed countries, in a form of intensified concentration and specialisation, would accelerate the process of agricultural mechanisation in those countries – agriculture which is highly labour-intensive and capital-saving. Reaching the level of agricultural mechanisation similar to that in developed countries would release at least  $\frac{3}{4}$  of global resources of agricultural labour force which would increase the global army of the unemployed more than twice and would increase the number of people vegetating in urban slums by another billion, with disastrous economic, social and political effects of this state of affairs (Mazoyer and Roudart, 2006, p. 1920).

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<sup>15</sup> HaJoon Chang described those organisations as the “Unholy Trinity of neoliberalisation”, criticising the policy pursued towards developing countries, including liberalisation of agricultural market (opening of agricultural markets for opening industrial markets) (Chang, 2016, pp. 137-138). The same applies to TRIPS (protection of intellectual property rights), which is beneficial mostly to developed countries, which, in fact, appropriate (steal) traditional knowledge from developing countries (Chang, 2016, p. 242).

### **Transformation of family farms**

The history of family farms is very interesting and educational, first and foremost, due to the fact that this is, in fact, the history of human civilisation: of the economic, demographic, social and cultural development. This is also the history of an enormous social conflict – enslavement of small manufacturers of food for thousands years.

The basic determinants of a family farm until the industrial era have been production and consumption self-supply and orientation towards the reproduction of family<sup>16</sup>. Traditional peasant farms were oriented towards the simple reproduction rather than the maximisation of economic benefits (income). The industrial era eclipsed agriculture, changing the traditional nature of a farm and the situation of a peasant family. Once benefits in kind have been replaced by rents and monetary taxes, peasant farms started a process of huge transformation towards farmer farms. In order to survive, they had to shift to the extended reproduction – capital accumulation – as they were forced to do so by the competitive market. This still takes place with respect to family farms which is intensified by new consumption aspirations. This is not easy, as capitalist production relations limit the possibilities of accumulation of family farms by appropriation of an economic surplus through agricultural prices, various rents and taxes.

The period of capitalism is important not only due to economic, but also political conditions. In the former case, the point is that capitalism necessitated, but also created, structural changes in agriculture and the growth in income of the agricultural population and opened new horizons of thinking and lifestyle. In the latter case, the point is that capitalism replaced state (political) enslavement with economic enslavement as it made agriculture subordinate, forcing it to adapt to the environment constantly. This was expressed synthetically by Prof. Augustyn Woś: “None of the previous models of economic development have changed agriculture more than industrialism. Not only did it shift agriculture to new technologies, but also increased the lower limit of economically profitable production. In order to produce efficiently, we must produce a lot” (Woś, 2004, p. 11).

Industrialisation of agriculture contributed to a huge increase in the agricultural production, improvement in food quality in many terms, increase in the productivity of production factors and reduction in unit costs. The replacement of traditional production factors, in particular land and labour, with industrial inputs turned out to be highly productive and economically efficient. In fact, the conclusion that industrial agriculture allowed for a civilisational leap which took place in the 20th century is not exaggerated. But it was not done for free. Over time, it has turned out that the cost of this success was quite high yet not completely recognised. This is mainly about ecological and social effects (Reganold et al., 2011; Valenzuela, 2016; FABLE, 2019) and risks to food safety<sup>17</sup> and vitality of rural areas.

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<sup>16</sup> The fact that those farms were to some extent commercial was necessitated by a need to provide external benefits to the ruler, court and church.

<sup>17</sup> Admittedly, the industrial food system created an opportunity to eliminate hunger and malnutrition, but also created huge risks to human health, environment and culture, due to which, as pointed out by Paul Roberts, it is necessary to devote the incoming decades to combating its effects (Roberts, 2008, p. 28).

Capitalism, based mainly on the industry, gave an impulse to the process of agricultural industrialisation, but also put into question the very existence of family farms and revealed the agrarian issue. Family farms, undergoing industrial transformation “from peasant to farmer and agribusinessman” (Tomczak, 2004), were to be replaced by capitalist agricultural enterprises (private and corporate) or nationalised enterprises (cooperative and state-owned).

A continuation of industrial transformation of family farms currently faces new conditions. The most important ones may be: natural environment, globalisation and culture. Unquestionably, the first place must be taken by the natural environment, whose capacity has been exceeded<sup>18</sup>. This applies both to the use of non-renewable natural resources (minerals) and the environmental ability to absorb anthropogenic emissions. This is a threat to the functions of biosphere (planetary ecosystem) as regards creating the conditions for living on Earth. The risk to basic soil, aquatic, atmospheric and biological ecosystems is growing (EC, 2019). Therefore, there is a problem of determining a corridor for the sustainable use of biotic and abiotic resources of the planet, including the use of soils (Bringezu, 2015). Thus, if the development is not to result in a disaster, it must be relocated into the space defined by the planet’s boundaries.

Food security or limitations of resources (minerals) which have been for a long time increased and significantly shifted through scientific and technological progress are accompanied by much more dangerous climate change and loss of biodiversity. As regards the use of environment – global ecosystem – the fundamental place is occupied by agriculture. In this regard, its role is dual as agriculture plays a special role in preserving the values of natural environment, but also has a considerable share in environmental pressure (Zegar, 2012).

In the last decades of the 20th century, pressure on family farms became highly intensified along with shifting to the stage of neoliberal globalisation. Globalisation, consisting in the integration of markets of commodities, capital, labour force, technologies and information and dominance of corporations, leads to reduced unit costs, which is benefited by corporations, while consumers or family farms (small producers) are subject to economic degradation, the environment is subject to ecological degradation and the countryside – to social degradation. The will to use land by attracting capital under the conditions of intensified competition may lead to having recourse to social, economic and ecological dumping. The benefits of dumping are derived by capital holders – corporations, while costs are incurred certainly by societies of countries compelled to such behaviour, including farms, which are unable to cope with unfair competition. “Only those, who will cope with competitiveness based on marginal performance-based relations, will remain in the market” (Czyżewski (ed.), 2007, p. 23).

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<sup>18</sup> According to specialists, 3 of 9 large planetary boundaries have already been crossed. There are 9 boundaries: climate change, ocean acidification, stratospheric ozone, amount of nitrogen and phosphorus, freshwater, land use, biodiversity, chemical pollution and atmospheric aerosols (Rockström et al., 2009).

Globalisation puts pressure on family farms in many ways (Tomczak, 2005) and in particular by the so-called treadmill of capitalism (Cochrane, 1958; Czyżewski, 2017). This supports a more efficient use of natural and socio-economic conditions, but also entails risks to food security and stabilisation of production (capital outflows and inflows) and a threat of environmental degradation by the excessive exploitation of agrosystems. Under these conditions, staying afloat requires from a farm to increase the labour productivity by increasing the area and intensity and efficiency of management through the intensified implementation of progress or reduced labour inputs by taking up some other activity.

Neoliberal globalisation exerts a particularly strong influence and creates risks with respect to family farms in less developed countries where they can be of relevance, as a leverage of general economic development. In these countries, family farms perform mostly the food and subsistence function, as well as the function to reduce poverty and hunger<sup>19</sup>.

At present, the global food system is evolving in which the leading role is played by corporations (large retail chains). This system is to generate profits for corporations and deliver cheap food. It is economically efficient yet encumbered with externalities causing its social inefficiency. In fact, it breaks coordination of agricultural systems at the local level (environment – agricultural production – society – agricultural population) and integrates them into a single standard of global socio-technological system. Even food from organic farming is a subject of growing interest on the part of corporations along with the increased demand for it. Making the food system subordinate to capital – profit maximisation criterion – means, as a rule, the deterioration in nutritive and health values of food. Capital subdues the food system for the purposes of making profit, not for feeding the world.

The global food system based on vertical supply chains and value chains creates significant barriers to family farms due to quality standards (state-owned and private – corporate). Yet, it is impossible to provide global food security without including small family farming into this work (FAO, 2016; Humprey, 2017).

The corporate food system is confronted with various alternative food systems, including those assuming some return to the concept of food sovereignty. To this end, numerous social movements are working, with La Via Campesina in the forefront – promoting food sovereignty based on small family farms and local food. This is beneficial to the environment (lower energy consumption for transport), consumers (more natural food, without preservatives) and local communities (economic surplus generated remains in their hands). The advantage is also a synergy between the agricultural activity and other forms of activity, such as agritourism, non-agricultural activities, environmental management.

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<sup>19</sup> The change in the global balance of forces, from North to South to South to South, is becoming more and more important, which entails also the attractiveness of state capitalism (McNally, 2013; Belesky, 2015).



Culture has always been important for human development and behaviour. What currently attracts our attention, is the development of ecological ethics which creates the rules of using the natural environment in a manner which does not decrease its values and responsibly manages its resources – pursuant to the principles of ecosystem sustainability. Naturally enough, this also includes the so-called animal welfare. Particular attention is paid to the concentrated, large-scale rearing of animals where “the mass production of meat is a disgrace to all of us” (Burgat, 2007). This production is less and less socially acceptable. The values are also reflected in the model of agriculture. The model of multifunctional agriculture, of sustainable agriculture, of socially sustainable agriculture or the so-called European model of agriculture contain specific values. Sometimes, there may be even too many “values” to contain. Prof. Mieczysław Adamowicz wrote on this issue: „The modern model should ensure the simultaneous implementation of such values as: competitiveness and coherence of agriculture, common availability of food and its health safety, production efficiency and environmental harmlessness, profitability for producers and accepted scope of subsidisation, being of service to society and maintenance of the important role in the local and regional environment” (Adamowicz, 2005, p. 21).

The growing awareness of importance of natural values and public goods created by family farming, as well as large vital forces of this farming, give it a new chance for development.

The existing consumption-driven economic development is based on an assumption that the infinite growth is possible on a finite planet, as limitations of resources can be overcome by progress (innovations) as part of the existing economic order<sup>20</sup>. But this undermines the natural base of life on Earth. What we need, is a new Great Transformation (of the food system, agriculture, production of goods and services, consumption) by analogy with the Great Capitalist Transformation (Polanyi, 1944). The latter meant the transition from feudalism to capitalism – transition from one civilisation to another, with change in values, knowledge, norms, rules, technologies. The replacement of the subsistence motive with the motive of economic benefit (greed) was essential. The market started governing the economic system which subdues the social system, while ignoring the ecological system. Yet at present, the ecological system should be considered as superior. The current transformation must consider the finiteness of biosphere and requires technological progress, new concept of well-being, social innovations, international cooperation on an unprecedented scale as well as change in our perception of the world.

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<sup>20</sup> Supporters of technological optimism are of opinion that there are no environmental risks to increasing the economic growth and human welfare, as they are the function of human knowledge which keeps on growing. The best way to the ecologically sustainable development is the current system of free markets, property rights and legislation (Taylor, 2002). However, we may cite many examples where innovations turned out to be the cure worse than the disease, such as chlorofluorocarbons (CFCs), asbestos, DDT, glyphosate and Round up and pesticides in general.



The rules of economic game must be changed. What is needed, is an economic theory to support the concept of planet's boundaries, as the framework for sustainable production, including agricultural and food production. The market, as a major decision-making mechanism at the microeconomic level, must be complemented with cooperation at the macroeconomic and planetary level, as the dominance of private interest (corporations) in degradation of global common good and ecosystems is unacceptable. The new economic theory must solve a conflict between the microeconomic criterion and the social criterion. The former, corresponding to the microeconomic rationality, is relevant to the model of industrial agriculture, dominant in developed countries, and corresponds to the nature of a market mechanism being a driving force for this model of agriculture. In this case, the economic theory ignores what is increasingly important, namely, the externalities accompanying the agricultural production and the depletion of resources of minerals underlying industrial agriculture. The optimum of a farm determined pursuant to this criterion does not provide the social optimum. Therefore, following the social criterion (macroeconomic rationality), the state should lead to a convergence of the above-mentioned optimums by defining boundary conditions of operation of farms. To internalise the externalities, the state may use, in addition to direct market instruments, also administration and legal instruments, either in a form of standards or financial transfers. The present challenge consists in the fact that such internalisation was potentially possible under the conditions of nation states or regional economic groupings, whereas it is much more difficult under the conditions of globalisation.

The economics of farms evades the rules of conventional economic theory, i.e. classical or neoclassical economics. It is not surprising as a family farm differs from an industrial enterprise. The economics of family farms goes beyond economic relations and includes or should include non-production functions of family farms.

### **Position on the comments by Prof. Szczepan Figiel**

The major objection formulated by S. Figiel applies to the lack of distinction between family farms and individual farms. I pointed out this difference in the introduction, using the terms "family farms" and "non-family farms": "The important difference between them comes down to labour inputs. The former are mainly based on family labour while the latter – on hired labour" (ZER No 3/2019). Further on, individual farms were, in fact, treated as family farms, without clearly providing the reason which is simple – results from the availability of statistical data and problems with distinguishing family farms from among all individual farms.

Within the group of individual farms, we can identify various groups of farms, depending on the purpose of this identification. There are many criteria of identification, including hired labour. This is an important criterion, but does not need to be absolutised, just like the criterion of area determined in the Act on the agricul-

tural system (currently 300 ha)<sup>21</sup>. In the case of hiring, the issue is more complex. First of all, what kind of hiring we should take into account: permanent, seasonal or both? It seems that in the case of hiring we should limit ourselves to permanent hiring, but it must be associated with the production scale and, first and foremost, determine if there is the capitalist production relation<sup>22</sup>.

Treating individual farms as family farms does not impinge significantly on trends in family farming, except that one of these trends is the transformation of certain number of family farms into quasi-capitalist farms. Statistics show that this applies to an inconsiderable percentage of family farms. Some idea of the difference is provided by the figures contained in Table 9 (ZER No 3/2019) where the data for all individual farms and farms with hired labour dominant are summarised, taking into account farms with an area of 1 ha of UAA and more. The percentage of farms with hired labour dominant is small (2005 – 1.8% and 2016 – 1.6%) while the differences with respect to basic characteristics of an average farm in these groups are significant. The problem is also that the criterion of predominant labour input may appear insufficient and even misleading for identification of family farms. In fact, there are situations (e.g. fortuitous: spouse's decease, disease or single heirs) as hiring may dominate temporarily or within an indefinite period of time and the farm is still a family farm.

The differentiation of individual farms with hired labour dominant is significant, just like the differentiation of all individual farms. Farms with hired labour dominant are dominated by small farms both in terms of UAA and of standard output, which requires prudence in identifying non-family farms only based on the criterion of hired labour (Table 1).

Table 1

*Structure of farms with hired labour dominant by area and standard output in the years*

Utilised agricultural area (ha)	2005	2016	Standard output (thousand EUR)	2005	2016
1-5	59	16	below 8	65	18
5-25	28	39	8-25	13	13
25-50	5	21	25-50	8	11
50-100	3	13	50-100	5	25
100 and more	5	11	100 and more	9	33

Source: Developed based on the GUS agricultural structure survey of 2005 and 2016 calculated at the Olsztyn Tax Office for the purposes of the 2015-2019 Multi-Annual Programme implemented at the IAFE-NRI in Warsaw.

<sup>21</sup> And what will happen if the legislator, in his infinite wisdom, determines that this should be not 300, but 500 or 200 ha?

<sup>22</sup> I would like to mention that in the era of feudalism, of family nature was a peasant farm, but also the court, sometimes living below the level of a farm belonging to a wealthier peasant. But the court is the court, not a family farm, as determined by the political status.

The non-capitalist nature of some farms with hired labour dominant is also indicated by other data. For example, the percentage of subsistence farms amounting to 15.5% in 2005 and 2.4% in 2016, respectively; of local market farms – 19 and 14%; farms with a female user – 36 and 22%; farms with a user under 44 – 36 and 38%; farms with a user aged 65 and more – 14 and 9%. Agricultural activities, as a dominant source of income for the household in 2005 took place for 29% and in 2016 – for 73% of farms, while social benefits – in 19 and 8% farms, respectively. The group of farms with hired labour dominant is evolving towards specialisation, especially in pasture grazing (type IV) and granivores (type V). The percentage of type IV production farms in 2005 was 2.6 and in 2016 – 28.8% while of type V farms – 1.5 and 11.2%, respectively<sup>23</sup>.

From the figures quoted we may conclude on the distinction of a small group of individual (usually family) farms being quasi-capitalist large-scale enterprises. The predominant part of farms with hired labour dominant treats a farm as a lucrative business. The barrier to the development of such farms may be manifested in the scope of labour and costs of applying agricultural technology if support schemes are rationalised. The small number of quasi-capitalist farms does not cancel or even undermine the perspectives of family farms. Nevertheless, it would be advisable to analyse such farms, identifying farms with permanent and seasonal labour (in the case of groups of farms with hired labour dominant – permanent hiring in 2005 accounted for 27% of total labour inputs and in 2016 – 54%) and ignoring family farms where, in the given year and for unforeseen reasons hired labour predominated<sup>24</sup>. I would also like to add that farms with hired labour dominant are concentrated in socio-economic type A (in 2016 – 64%) and in type B (33%), the remaining 3% are mainly type D farms<sup>25</sup>.

As regards the issue of future of family farms, I have a problem with understanding the objection by Prof. S. Figiel, also in relation to the identification of socio-economic types of family (more precisely, individual) farms. I am of opinion that the identification of these types of farms is helpful in determining the perspectives (excluding the understanding of the term “perspective”). The change in the size of farms, in particular type A farms, is important, as the number of farms is associated with industrial transformation of family farms described by F. Tomczak (2004). The change in the number of farms entails land release and a possibility of development of farmer farms (subtype under type A). The transformation of family farms should include, first and foremost, changes as regards the objectives of farming

<sup>23</sup> These percentages in the whole group for type IV were 10.5 and 11.0% and for type V – 1.9 and 2.1%.

<sup>24</sup> The database could be the results of PSR 2020 or FADN data.

<sup>25</sup> I would like to recall that the group of individual farms has been divided according to the criterion of predominant source of livelihood (agricultural income or income from other sources) and predominant purpose of production (market or self-supply) into four socio-economic types: A – farmers’ farms (dominant are agricultural income and production for the market), B – two-profession farms (dominant are production for the market and non-agricultural income), C – hobby (subsistence and non-agricultural income) and D – peasant (agricultural income and self-supply).

according to the following sequence: subsistence (survival) – income – profit – welfare and the emergence of boundaries of industrialisation which, for Poland, are still distant with reference to land, but not with reference to industrial intensification. Secondly, new ecological conditions and social awareness necessitate a policy of making the development of farms sustainable (IAASTD, 2009; Zegar, 2012; Djurefeldt, 2016; Zegar, 2019) which modifies the path of industrial transformation despite the fact that market mechanisms strive for this transformation. This also applies to American agriculture (Reganold et al., 2011) which, incidentally, is not a good point of reference, just like the American countryside. The differences between agriculture and the countryside in the USA and Europe or Poland are fundamental and the USA is not a country which Europe, including Poland, is heading for<sup>26</sup>.

The point in outlining the perspectives of family farms is not precise data. Probably, the econometric model using trends in driving factors of agricultural development, assuming various political options, could bring results even with two decimals, but I do not think that its results would differ significantly from approximate data. On the other hand, the extrapolation based on two points (moments) always entails a risk of unreliability due to the randomness of values of classification criteria in the given year.

### **Summary**

Family farms, highly differentiated and in multiple forms, are a dominant sector of the economy in the world, including, in particular, less developed countries. Despite this fact, there is no single common definition of a family farm.

The issue of family farms after the turbulence in the years 2007-2008 is still a subject of vivid interest all over the world both in developed and less developed countries. In the former, due to the results of industrial transformation of agriculture and ecological and social functions of family farms. In the latter, in addition to the high share in the structure of the economy, due to problems with agricultural transformation according to the industrial model against new conditions and challenges.

These conditions are associated with environmental barriers, globalisation and growing ecological awareness. At the same time, there is a co-incidence of challenges related to food security and ecological safety. The increase in the former in an industrial way entails the decrease in the former. Practice shows that food security cannot be achieved without family farms and building the agricultural productivity on a solid foundation. This, in turn, requires including the economic system into the range designated by the environmental system. Therefore, the current corporate food system is contested to the benefit of alternative food systems.

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<sup>26</sup> The example of farmers' protests which took place in the Western European countries with farms advanced in terms of industrial technologies in 2019 (Ploeg, 2020) is salutary, but the unconditional strive for such farms in Poland, seeing advantages only and not seeing threats (Kluza (ed.), 2020) and ignoring opportunities of agroecology and in various forms of joint farming is also puzzling.

What we need in this situation, is a new Great Transformation covering the basic areas of human life and activity, including agriculture, where family farms occupy a significant place. This transformation also applies to the economic theory going beyond microeconomic categories and complementing them with social categories. And this requires getting rid of the infatuation with market fundamentalism and applying policy instruments.

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## PERSPEKTYWY GOSPODARSTW RODZINNYCH – CIĄG DALSZY

### Abstrakt

*Rodzinne gospodarstwa rolne dominują w rolnictwie, przesądzając o bezpieczeństwie żywnościowym świata, oraz mają istotne znaczenie dla bezpieczeństwa ekologicznego. Gospodarstwa te nie zostały ściśle zdefiniowane zapewne z powodu ogromnego ich zróżnicowania między regionami i krajami świata, ale też wewnątrz nich. Gospodarstwa rodzinne przechodzą wraz z rozwojem kapitalizmu transformację przemysłową (industrialną), która w krajach rozwiniętych osiągnęła wysoki stopień zaawansowania, natomiast w krajach mniej rozwiniętych dopiero się zaczyna. Nowe wyzwania i uwarunkowania rozwojowe, związane zwłaszcza z ograniczeniami środowiskowymi oraz globalizacją, a także kontestacja skutków transformacji industrialnej rodzą pytanie o uniwersalność takiej transformacji i nieuchronność podążania przekształceń rolnictwa krajów mniej rozwiniętych drogą wytyczoną przez kraje rozwinięte. Artykuł przedstawia – poza zagadnieniami pojmowania i znaczenia gospodarstw rodzinnych – kwestię perspektyw transformacji rolnictwa w ogóle i w Polsce – ze stanowiskiem wobec uwag S. Figiela.*

**Słowa kluczowe:** gospodarstwa rodzinne, transformacja industrialna, nowy paradygmat rolnictwa.

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