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Particular Forms of Management of Agro – Industrial Complex in the Sustainable Development of Agriculture

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Abstract:

In this paper it is noted that the important problem of the existing economic relations in the agrarian sphere is the choice of forms of management. The practice of reforms in agriculture has shown that more than 80% of gross output in Kazakhstan is currently produced by "households" and peasant (farmer) farms which provides further increase in the production of agricultural products namely crop production and increase its economic efficiency. Currently the agricultural sector has a tendency to small-scale production. As the situation has shown one of the main factors negatively influencing investment activity is financial instability of the majority of agricultural producers, low level of its profitability and significant risks. Factors of low profit growth of the agricultural sector are related to the peculiarities of demand for agricultural products and seasonality of production in this industry.

The analysis of the structure of gross agricultural production of the Republic of Kazakhstan by categories of farms, the returnability of agricultural production for 2012-2016 shows the impact of the price and yield of grain on the level of farm income. Proposals for further improvement of grain pricing are given.

Keywords: sustainable development; agricultural production; agricultural producers; peasant (farm) economy; price; yield; profitability

JEL Classification: Q01; Q16.

Introduction

The diversity of agricultural development goals requires an adequate approach to agricultural transformation. They should be integrated into agriculture and meet economic, social and environmental performance criteria. In this regard at the beginning of the last century N. D. Kondratiev and N. P. Makarov emphasized the duality of agrarian reforms: first it is necessary that the measures taken by the state "lead to an increase in productivity or at least would not lead to a decrease in it and secondly meet the requirements of social justice" (Kondratiev and Makarov 2017).

1. Literature Review

Private, state and other forms of ownership and economic activity are equally protected in Kazakhstan. A multi-layered economy presupposes the possibility of freely choosing the type of economic activity and the form of ownership which depends on a variety of factors: natural, economic, historical, technical and environmental but at the same time the change of the form of management will be justified if it contributes to increasing the efficiency of production. The following types of economic entities belong to the organizational and legal forms of entrepreneurial activity: economic partnerships, production cooperatives, state enterprises. The main problem of existing economic relations in the agricultural sector is the choice of forms of management. The practice of reforms in agriculture has shown that there is no "single" organizational and legal form of management that is suitable for all conditions and generally provides for an increase in agricultural production; in the conditions of development of market relations it is necessary to operate all forms of ownership and management on the basis of their equality, expansion of economic independence and economic initiative (Baidybekova 2010).

The simplest forms of organization are business partnerships created by combining the capital of several individuals. The legislation defines that a business partnership is a commercial organization that is a legal entity, divided into deposits (shares) of the founders (participants) by the authorized fund which has as its main purpose the extraction of profit.

The following forms of business partnerships have been established:

- 1) complete;
- 2) commandant;
- 3) limited liability partnership;
- 4) partnership with additional liability;
- 5) joint-stock company.

Income and losses of a full partnership are allocated between participants in proportion to their contributions to the charter fund of a partnership, unless otherwise stipulated by the constituent agreement or by agreement of the parties, the same is provided by the limited partnership.

The cooperative sector of the economy is one of the links of the single economic complex. The development of forms of ownership in the context of market relations opens up a wide scope for the revival of this democratic form of management in new areas of activity and expansion in the traditional (Chayanov 2013). A. V. Chayanov noted that the prospects for further development, the transition to the use of advanced technology and efficient methods of farming seen primarily in the development of cooperation.

Cooperation is formed and operates on the basis of certain principles that are the basic requirements compliance with which ensures its successful functioning. Over the 150-year period of the existence of cooperatives the principles of their establishment and activities are constantly being supplemented and refined. The cooperative created by the heads of the peasant (farmer) or citizens leading personal subsidiary plots, for joint activities on the production of agricultural products, based on personal labor participation and the pooling of their property shares (land plots of the peasant farms and private farms remain their property) (Adukov 2015).

The theoretical aspects of the development of cooperation in the short form presented by the four main components:

Cooperation is a form of labor organization and organizational association of agricultural producers; – the process of voluntary association and cooperation of people on the basis of common ideas, goals, interests and joint use of means of production.

Cooperative movement – the dynamics of the process and structure of cooperation, its content and form.

Distinctive features and advantages of cooperation:

- labor basis-mandatory participation of members in labor or economic activity, distribution of income and profit mainly by labor;

- equal rights of cooperative members in management – "one member - one vote";
- limited capacity of concentration of ownership among individuals;
- target function-income growth and improvement of living standards of its members;
- compliance with the mentality of the absolute majority of the rural population;
- functioning in various socio-economic formations.

The principles of cooperation:

- volunteerism and open membership; democratic control; economic participation of members; autonomy and independence; education, training and information; cooperation of cooperatives; public concern (international cooperative alliance).

- voluntary membership; mutual assistance and ensuring economic benefits for the members of the cooperative; distribution of profits and losses among the members of the cooperative taking into account their personal labor contribution; limitation of participation in the activities of persons who are not members of the cooperative; management of activities on a democratic basis; availability of information on the activities of the cooperative;

- social orientation of economic relations in cooperatives; optimal use of production potential; state regulation of the development of cooperation; respect for the interests of all participants in cooperation; a transparent relationship between the organizational structure of any business entity, that is its size, composition of divisions, branches and proportions between them are important as characterized by the level of concentration and specialization of production and has a significant impact on the efficiency of utilization of productive capacities, economic growth and the level of competitiveness of the economic entity (Imyarekhov 2009).

2. Methodology

Committee on statistics of the Ministry of national economy of Kazakhstan divided the structure of agricultural production into three categories of farms – agricultural enterprises, peasant (farmer) farms and households.

Agricultural enterprises – a legal entity or its structural subdivision engaged in the production, storage and processing of agricultural products, rendering services in the field of agriculture. Currently integrated holding-type structures have been created and are actively functioning in the Republic mainly in the grain sub complex of Northern Kazakhstan. Many grain companies also bought out grain collection points (GCP) and elevators, mills and other processing enterprises and became the largest agro-industrial companies.

A characteristic feature of agricultural holdings is the use of land (owned or leased) for the production and processing of agricultural products. In the majority of the united structures the land is used on the terms of long-term lease (49 years) with inclusion of conditional land shares of rural inhabitants in the authorized fund of farms-participants of holding.

Integrated associations in the agro-industrial complex are created as organizational and economic forms of connection of agricultural, processing, servicing enterprises and trade organizations. At the same time economic relations between the participants are built on a mutually beneficial basis with the preservation of the status of a legal entity.

Currently there are no organizational and legal forms (holdings, companies and corporations) in the Civil Code of the Republic of Kazakhstan. They do not pass state registration and do not submit full statistical reports, in practice they are guided by the current legislation and choose the existing forms: joint-stock company, limited liability partnership and associations (unions). Laws on joint-stock companies and limited liability partnerships do not take into account the peculiarities of the integration process. They do not provide for the joint operation of a set of legal entities and do not regulate the economic relations of the participants in the single technological cycle of production and sale of final products, the relationship of the investor with agricultural enterprises and owners-co-owners of conventional land shares included in the authorized capital, with local authorities, etc.

Personal subsidiary farms (PSF) of the population, collective gardens, vegetable gardens and suburban areas belong to category "economy of the population". In the PSF population today produces a significant amount

of agricultural products and this is somewhat contrary to the characteristics of their farms as subsidiary and consumer. The vast majority of them satisfy their own needs. Thus the conclusion of A.V. Chayanov is quite applicable to modern private farms that the motivation of economic activity of a peasant is not the motivation of an entrepreneur who receives as a result of investing his capital the difference between gross income and production costs but rather the motivation of a worker who works on the peculiar piecework, which allows him to determine the time and strain of his work.

Currently PSF is an important source of providing rural residents with the necessary food and for certain categories of villagers it is the main source of income. In the world practice this form of management has been developed only in countries of the former Soviet Union where there has been a universal generalization of production. This was facilitated by certain historical conditions, especially the economic policy of the socialist way of life. At the same time there is no such form of management in developed market economies. In the process of qualitative changes in the system of agrarian relations in our country especially in matters of property there is the erasing of the line between family, personal subsidiary and peasant (farmer) economy which belong to small-scale production.

PSF is a source of additional income for pensioners, the object of introduction to the work of children and adolescents of rural families. We should also not forget that the rural family is the guardian of national spiritual, cultural and everyday traditions (Anafiyeva 2017).

When developing various state programs aimed at supporting the agricultural sector of the economy private subsidiary farms remain out of sight as an independent form of management. Therefore PSF should be considered as a form of non-entrepreneurial activities for the production and processing of agricultural products, which serves to meet personal needs on the land, within the limits according to leading scientists, farmers, require legal regulation of relations arising in connection with the conduct of citizens of the personal subsidiary farm and the adoption of the Law "on personal subsidiary farms of citizens of Kazakhstan". State and other support should be provided for PSF which should be aimed at their legal protection, at the creation of infrastructure for livestock maintenance, assistance in the organization of marketing (trade), processing cooperatives, at ensuring social guarantees of owners of PSF and working members of their families (Abylgazina 2014).

The interaction of PSF and agricultural enterprises is a promising direction of development, most popular than the cooperation of PSF among themselves which is considered acceptable where the integration of PSF and agricultural enterprises is difficult (Yertazin 2015).

According to A. V. Chayanov "the Peasant economy remains viable and in unfavorable conditions, very low wages are acceptable for it which make it possible to exist in conditions that condemn to certain death" (Chayanov 2013).

Peasant farms received official recognition in 1990 on the basis of the law of the Kazakh SSR "on peasant farms". In 1998 a new law "on peasant (farm)" was adopted. In accordance with the article of this Law the peasant (farmer) economy is recognized as a family and labor Union of persons in which the implementation of individual entrepreneurship is inextricably linked with the use of agricultural land for agricultural production as well as with the processing and sale of these products. At the same time farming is a form of free enterprise based on economic benefits. The subjects of the peasant economy are individuals engaged in entrepreneurial activity without formation of a legal entity and in the absence of signs of a legal entity.

Peasant (farmer) economy independently determines the direction of its activities, structure and volume of production, grows, processes and sells products, and solves other issues related to the management of the economy. The means of production applied in such economy are acquired by farmers on own or borrowed means and also in lease under the contract. Property relations of members of the economy are regulated by the relevant rules of civil and land legislation.

The main features of the peasant (farmer) economy distinguishing it from other organizational and legal forms of agricultural enterprises are the presence in it of family and labor relations, the implementation of the activities of the economy on the personal labor of its members and joint ownership of the available means of production. Depending on the chosen form of management peasant (farmer) economy inherent characteristic only for it specific features:

- the peasant economy acts as a single-subject formation namely the carrier of certain rights and obligations;
- peasant (farm) economy can be represented in the idea of interrelated components-the property complex, land and labor which form the basis of its activities;
- peasant economy is a subject of entrepreneurial activity which gives it the opportunity to exercise certain rights and obligations established by law for entrepreneurs.

In a broad sense the peasant (farmer) economy should be seen as a multifaceted and diverse set of organizational units developing on the basis of personal and family work, personal and family forms of ownership as well as differing legal relations and the level of economic independence (Table 1).

Table 1. Classification of peasant (farm) households

Classification feature	Socio-economic type of economy
Organizational and legal form	Peasant farming Farm Special partnership
Form of ownership of the property	With joint property With common ownership With individual property
Number of families	Single-family Two-family Multi-family
Form of land use	With the right of permanent use With the right of temporary use Using leased land
Labour force employment	With full employment Part-time Part-time employment With the involvement of employees
Production orientation	Specialized Multi-industry
Technological completeness of production	Without processing With processing of products With partial processing of products
Volume of commodity production	Large Average Small

Source: compiled by authors

Farms are independent producers with full economic independence in their activities. Typically a farm is defined as a specialized high-value farm that operates on the basis of the owner's participation in the production and sale of agricultural products for specific customers. The basis of activity of farms is work of owners and members of their families mainly (Yertazin 2015). The main condition in the choice of a form of ownership and management should be the ability to produce per unit of total labor the largest number of final products. Therefore in the agricultural sector will be developed organizational and legal form of management providing further increase in agricultural production and increase its economic efficiency.

Thus agroformations (agricultural producers) can have any legal form permitted by the legislation. All forms are equal before the law and all measures of agrarian policy are equally applicable to all agricultural producers if not specified in the relevant legislation. The reformation of the domestic economy in general and the agro-industrial complex in particular is a serious test of the ability of enterprises to adapt to dynamic changes in the external environment. The problems of financing, sustainability and creditworthiness arising in agricultural enterprises are solved if they manage to streamline the process of formation of financial resources necessary for the main activity at the expense of various sources. It is essential to define a system of intra-sectoral priorities in order to concentrate material and financial resources. In this regard it is necessary to determine the theoretical aspects of financial security of market participants.

The creation of agricultural units was not focused on the needs of the market which led to a decrease in the efficiency of their production; decreased concentration of production, changed the sectoral structure of farms, decreased areas in the use of agricultural producers respectively in most cases there were small farms and peasant farms as well as reduced land use per 1 farm. According to the research Institute of agriculture and rural development about half of the agricultural enterprises (48%) have an area of arable land up to 200 hectares, 44% - up to 2000 hectares and only 8% of the enterprise - about 15 thousand hectares which once again confirms the need for enlargement of farms. Livestock production is mainly located on private farmsteads, slightly - in farms and only 10% in agricultural enterprises. On average 1 agricultural enterprise which has cattle and sheep has 336 head of cattle and 1455 head of sheep. Agricultural enterprises mainly specialize in crop production with a high share of

grain production. This corresponds to the emerging structure of sown areas where crops account for up to 80% and small areas under fodder crops cannot ensure the progressive development of livestock.

The experience of developed countries shows that in order to improve the efficiency of production in agriculture should prevail medium and large agricultural producers. Currently the agricultural sector has a tendency to small-scale production. Of the total number of agricultural entities the proportion of peasant (farmer) farms increased from 6.6% in 1990 to 95.5% in 2017.

Table 2. Structure of gross agricultural output of the Republic of Kazakhstan by categories of farms, in %

Indicators	2013	2014	2015	2016	2017
All categories of farms, including	100	100	100	100	100
Agricultural enterprise	16,5	19,4	18,8	20,6	23,2
Peasant (farmer) farms	22,9	25,5	25,8	27,4	28,3
Households	60,5	55,1	55,4	52,0	48,5

Source: compiled and calculated by authors according to Committee of Statistics of the Republic of Kazakhstan

According to The Committee on statistics more than 80% of gross output is currently produced by "households" and peasant (farmer) farms the number of which in 2017 is almost 20 times higher than legal entities of agricultural producers (table 2, table 3).

Table 3. Number of active peasant farms and operating agricultural legal entities

Indicators	2011	2012	2013	2014	2015	2016	2017
Peasant and private farms	170309	182986	164856	158583	152697	181154	180799
Current legal entities agricultural producers	7362	6945	6823	6732	6973	7558	9218

Source: compiled and calculated by authors according to Committee of Statistics of the Republic of Kazakhstan

The process of adaptation of agricultural enterprises to the new conditions of management was not painless and had features. So some rural producers didn't manage to adjust work according to laws of the market, sold out the land plots, cattle, means of production and replenished ranks of citizens. The rest of the rural producers still had to reckon with the requirements of the market economy, to rebuild their thinking, way of life and learn how to make money on their own. In the process of adaptation of agricultural enterprises to the market mechanism of management in the analysis of indicators allocated 3 periods. The first period covers the period after the acquisition of sovereignty by Kazakhstan, the beginning of Perestroika in rural areas and until 1995. During this period the majority of agricultural enterprises work unprofitable there is an outflow of financial and labor resources from agriculture. The process of adaptation is very painful. Crop and livestock production are unprofitable. The second period covers the period from 1995 to 1999. It is characterized by the emergence of positive trends in the results of agricultural enterprises, further changes in the form of ownership. Finally the third period began in 1999 and continues to the present. This period of time is interesting in terms of structural changes increasing the growth rate of crop and livestock products. Agricultural enterprises began to actively explore the market principles of management. As the situation has shown one of the main factors negatively influencing investment activity is financial instability of the majority of agricultural producers, low level of its profitability and significant risks. The factors of low profit growth in the agricultural sector are associated with the peculiarities of demand for agricultural products and the specific features of this industry. Table 4 shows that the profitability of livestock production in 2017 remained almost unchanged compared to 2013 while the profitability of crop production increased by almost 1.6 times during this period.

Table 4. Profitability of agricultural production for 2013-2017

Indicators, %	2013	2014	2015	2016	2017
Profitability of agricultural production	24,8	17,5	28,2	28,5	36,1
Level of profitability (loss) of crop production	29,7	22,4	35,3	38,7	46,6
The level of profitability (loss) of livestock production	14,3	7,6	16,6	9,9	16,8

Source: compiled and calculated by authors according to Committee of Statistics of the Republic of Kazakhstan

3. Application Functionality

Instability of grain production associated with frequent strong fluctuations in the yield of grain crops is primarily reflected in the results of financial and economic activities of agricultural units or on the sustainability of income of rural producers. Studies show that the value of household income is heavily influenced by domestic prices of cereals. The price index for agricultural products in 2016 tended to increase by almost 2.7% compared to 2014. At the same time prices for crop products increased by 20.8% including cereals by 22.2%, oilseeds decreased by 0.6%. The price of livestock products increased by only 2.3%. The price of culture depends on the demand in the domestic market, government intervention, the state of the grain market of neighboring countries. Measures to protect against price a risk of subjects of the agricultural sector is undertaken by JSC "food Corporation" which annually establishes fixed purchase prices for grain. However certain restrictions on the quality and volume of purchased grain on the part of the Corporation do not allow the majority of farms especially small farms to deliver grain and ensure the stability of their incomes. Analysis of purchase prices at elevators showed a strong variation in prices. In addition the high costs of transportation and storage of grain in elevators forced to take grain at a low price in the nearest elevator which significantly reduces the income of agricultural producers. Consider the impact of grain prices and yields on income per 1 hectare of crops (table 5).

Table 5. Influence of grain price and yield on the income level of households (per 1 hectare)

Year	The average price, the dollar/ CWT	Productivity, centner / hectare	Income, dollar
1 year	6,0	3,6	21,6
2 year	6,4	13,0	83,2
3 year	7,7	7,6	58,6
4 year	6,8	10,8	73,4
5 year	5,6	8,7	48,7
6 year	8,8	9,0	79,2
7 year	9,9	7,1	70,3
8 year	9,8	8,5	83,3
9 year	10,8	9,6	103,7
10 year	17,2	11,6	199,5
11 year	21,1	7,5	158,3
Average	10,0	8,8	89,1

Source: compiled and calculated by authors

Table 6. Linear deviations

Year	Linear deviations	Squares of linear deviations
1 year	-67,5 (21,6-89,1)	4556,3
2 year	-5,9 (83,2-89,1)	34,8
3 year	-30,5 (58,6-89,1)	930,3
4 year	-15,7 (73,4-89,1)	246,5
5 year	-40,4 (48,7-89,1)	1632,2
6 year	-9,9 (79,2-89,1)	98,0
7 year	-18,8 (70,3-89,1)	353,4
8 year	-5,8 (83,3-89,1)	33,6
9 year	14,6 (103,7-89,1)	213,2
10 year	110,4 (199,5-89,1)	12188,2
11 year	69,2 (158,3-89,1)	4788,6
	The amount of linear variance = 0,3	25075,1
	Average	2279,6

Source: compiled and calculated by authors

To determine the coefficient of variation is necessary to calculate the value of the mean square deviation.

$$V = \frac{\sigma}{\bar{X}} \cdot 100\% \quad (1)$$

$$V = 47,7/89,1 = 53,5\%$$

Variation of grain yield per 1 hectare of crops is significant and amounts to 53.5%.

Conclusion

Thus the agricultural production of the country is still small-scale the state must solve the following problems:

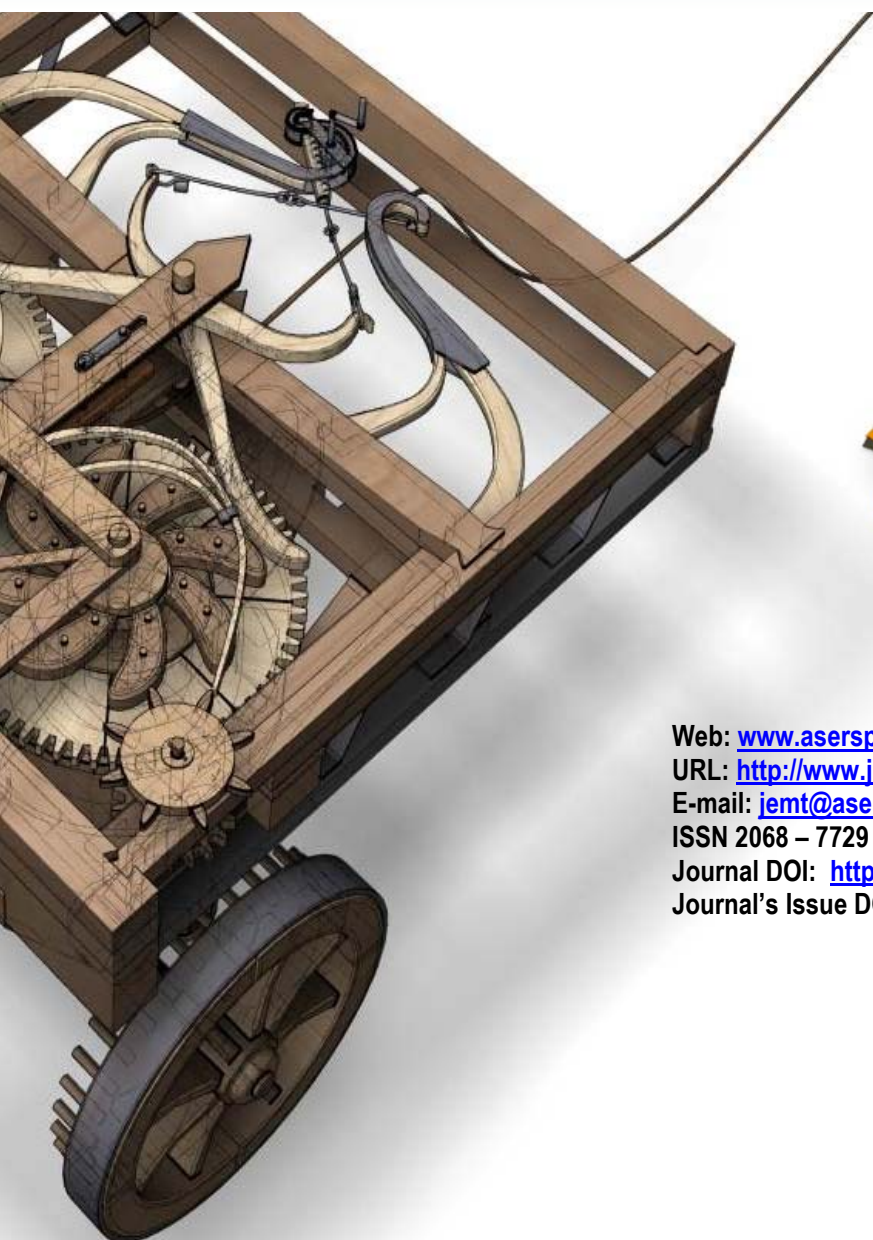
- protection of economic competition, promotion of entrepreneurship, free promotion of agricultural goods and resources (Nurumov and Aimurzina 2014);
- creation of conditions for competition in the food market to weaken the monopolistic influence on prices in agriculture, purchases must be made at market prices prevailing in a particular region (Aimurzina and Kamenova 2017);
- application of direct budget allowances per unit of sales;
- to carry out economic policy of regulation of import of agricultural products and products of the processing industry.

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