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## THE FAMILY FARM – AN INSTITUTION OF MODERN FARMING

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### Abstract

A family farm is probably the first and out of any doubt the long-lasting form of agricultural production in the history. It is studied many times from various points of view. The look at it in this paper is economic and institutional. It follows the idea that the main economic institutions are "The firm, the market and the law".

The economic nature of the modern family farm in Bulgaria is analyzed based on a field study on the problem. The family farm is viewed as a set of transactions; their critical dimensions are studied by a discrete structural analysis; efficient modes for their organization proposed; related institutional framework and variations caused by it introduced.

**Keywords:** family farm, rural institutions, economic transactions.

**JEL Classification:** Q1, Q12, Q18

### INTRODUCTION

The family has been a basic element of human society ever. Any initiatives for development start in family form. Agriculture is not an exception. It has been obvious that farming is a family enterprise. That is why the term *family farm* has not been used for a long period of time. The situation changes with an industrialization process and a need for the precise tax system.

The term is introduced in Chapter 7 of the US Code of Federal Regulations, 1943. The idea is to distinguish various types of existing farms – self-sufficient and working for the market, physical entities and corporations, and etc., for tax purpose. It gave rise the interest on the term. Most likely, the first science definition is formulated in 1944 by a professor from the University of Missouri (Johnson, 1944).

A huge number of definitions is following, describing various characteristics of the family farm: size, ownership, labour, management, subsistence, residence, source of investments, patrimony, and etc. Probably the most popular and widely accepted is coming from FAO: *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, coevolve and combine economic, environmental, reproductive, social and cultural functions* (Garner, E. and A. de la O Campos. 2014).

### THE STUDY

During the last two years, a group of researchers conducted a large study (over 190 farms) on Bulgarian agriculture. Details on it and some of its results have been already published (Bachev and Terziev, 2017). A part of it was dedicated to alternative farming - bio-dynamic agriculture, permaculture, and others (Terziev and Radeva, 2018). These were 36 organic projects and all of them cover the definition above, i.e. they are family farms. The study showed that these farmers are:

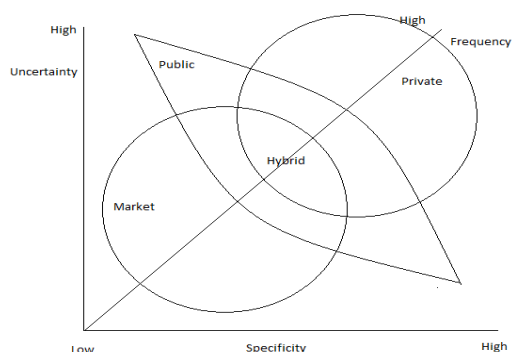
- market-oriented. They consume a part of the production but their main goal is to sell (economic function);
- concerned on the environment and apply alternative methods for cultivation, stimulation of plants and animals, storage and etc. (environmental function);
- permanently residents, bringing up their children in the farms (reproductive function);
- confident that their success depends on the well-being of the local community (social function);
- ready to disseminate their knowledge and ideas among other interested actors (cultural function).

### THEORETICAL FRAMEWORK

In our study, we follow the New Institutional Economics approach. In it (Coase, 1972; 1984):

a) a single transaction is considered as an initial unit of analysis; b) associated costs are the basic motive for business decisions; c) these costs depend on three main factors (critical dimensions of a transaction) – asset specificity, uncertainty and frequency, as well as some others – information asymmetry, behavioural characteristics of the economic agents, etc.; d) everything in the economic world happens in the boundaries of dominated institutional environment – institutions matter. All existing business form and governance mechanisms could be understood and explained by so-called *Discrete Structural Analysis* (Williamson, 1993). Such as (Fig. 1.):

- private modes (“private or collective order”) – diverse private initiatives, and special contractual and organizational arrangements. Economic agents prefer them in case of high specificity (as a guarantee against loss of transaction investments), high uncertainty (contracts are impossible), and high frequency (costly exchange);
- market modes (“invisible hand of the market”) – those are various decentralized initiatives governed by the free market price movements and market competition. They are typical for a situation of low specificity (no or low risk of transaction damages), low uncertainty (the progress of a transaction could be easily predicted), and low information asymmetry (traded good or service could be examined before the deal);
- public modes (“public order”) – those are various forms of public (community, state, international) interventions in the market and private sector such as: public guidance, regulation, assistance, taxation, funding, provision, modernization of property rights and rules, etc. Their application is connected with high specificity mainly because of the complicated character of social relations causing high transaction cost for the individual participants;



**Fig. 1.** Critical dimensions of transactions and alternative governance modes

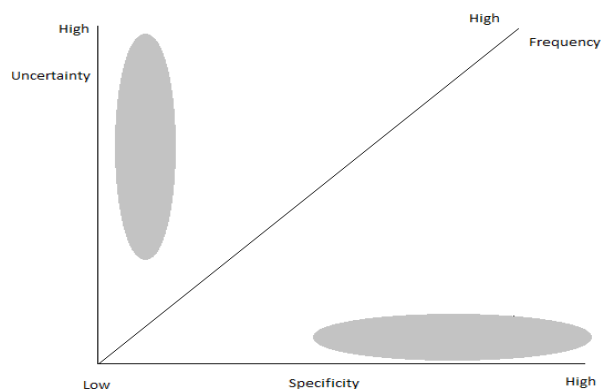
• hybrid forms – some combination of the above three like a public-private partnership, start-ups, etc.;

• institutional environment (“rules of the game”) – that is the distribution of formal and informal rights and obligations between individuals, groups, and organizations and the system(s) of enforcement of these rights and rules. People create institutions to cope with the problem of high uncertainty and improper behaviour. Tradition, reputation, good will, and etc. institutions often are the most powerful barriers against opportunism, free riding and hostilities;

### FAMILY FARMS' TRANSACTIONS

We investigated (Terziev and Radeva, 2018) twelve types of transactions of these family farms - land and long term assets supply, labour supply, machines and mechanical services, technologies and knowledge, transport, veterinary medicine services, seeds and sow materials, energy and fuel, long term assets, bank financial products, other financial resources, and marketing of the products.

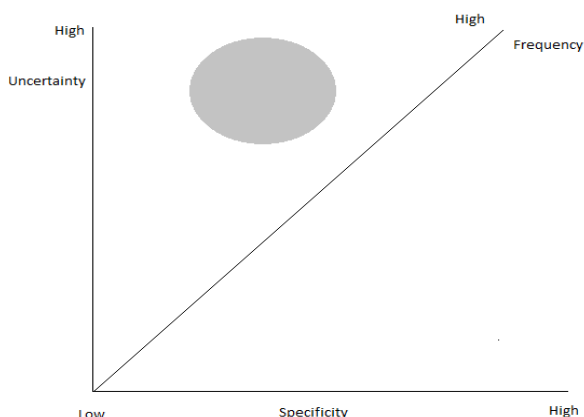
*Land supply and long term assets supply transactions* are of two types – for buying or for leasing in. According to the farmers buying transactions face various problems: a) information – to find a proper piece of land or building and its owners; b) technological – to assess the quality of land and the level of its pollution or degradation; c) juridical – searching of needed documents (often owner are not capable to do it because of advanced age or bad relations), arrangement of a deal, signing a contract. Leasing in is also hard. It faces the same problems as well as an additional one – negotiating the term (time period) of the contract and fixing guarantees.



**Fig. 2.** Critical dimensions of land and long term assets supply transactions

These transactions (fig. 2) are rare (low frequency) but farmers describe them as going in a situation of high specificity (transfer of time, efforts, and money invested in the organisation of one transaction to another if the first fails are limited) and high uncertainty (mainly by behavioural reasons). In addition – information asymmetry is high for them (any time seller or rentier has a better knowledge of the land or building before the deal).

*Labour* is a critical factor for successful organic agriculture but in a specific way. All of the interviewed family farmers declare that they rely on their own knowledge for the production. In most of the cases, the technologies are developed by themselves and in this respect – unique. That is why highly qualified labour (in traditional meaning) is not needed, even more – it does not exist. Farmers need respectable, careful, and devoted to green ideas workers. They hired labour (fig. 3) for short periods but each year (relatively high frequency), having no chance to be sure for the workers' behaviour (high uncertainty), and without any or very low spending (low specificity).

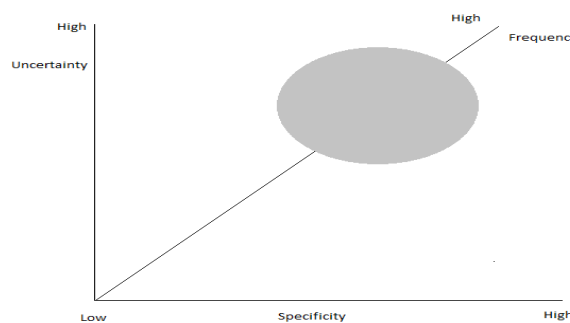


**Fig. 3.** Critical dimensions of labour supply transactions

Transactions for technologies and knowledge transfer and for seeds and sow materials supply are very similar for alternative farmers in two directions. Firstly – they define these transactions as very hard.

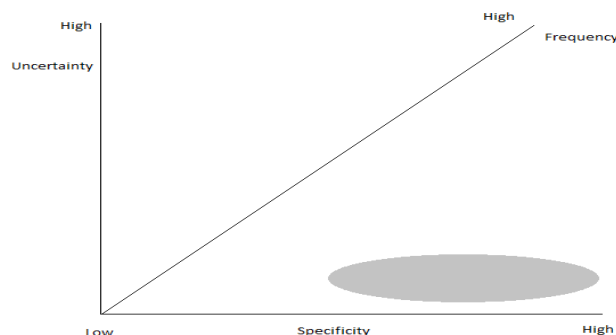
Available knowledge is rare and expensive (lack of literature and training programs in the country) as well as the seeds are. That is why, secondly, they give up of them in fact. By individual experiments year after year and by shared (in very narrow groups) experience they try to develop further their skills.

Also, most of them prefer to produce their own seeds and sow materials for the next agricultural year (fig. 4).

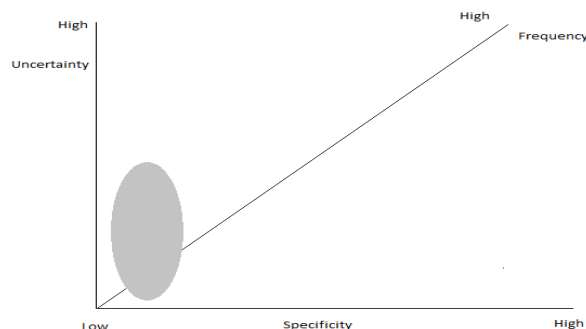


**Fig. 4.** Critical dimensions of technologies and seeds supply transactions

*Machines and mechanical services, transport, energy and fuel* form another group of similar transactions. Alternative farmers apply minimal mechanical cultivation of the soil, prefer to not transport their products, and try to not use fossil fuel. Low frequency is the main character of this group of transactions. Two also significant are information asymmetry (modern machines are complicated devices and assessment of their features for the specific needs is difficult) and behavioural problems in case of transport and storage the production (fig. 5, 6).

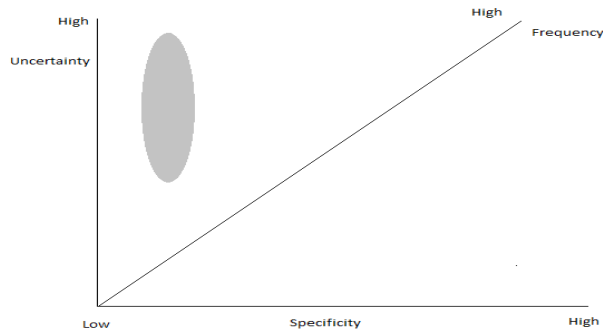


**Fig. 5.** Critical dimensions of machines and mechanical services supply transactions



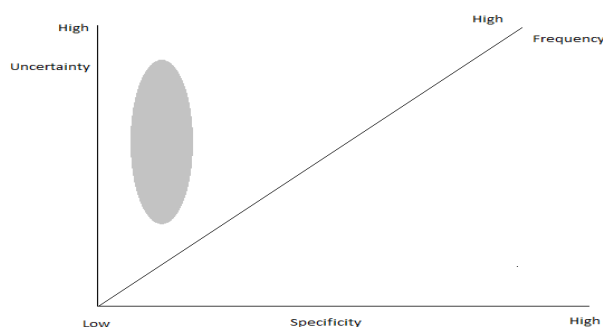
**Fig. 6.** Critical dimensions of transport, energy and fuel supply transactions

Transactions for veterinary medicine services (fig. 7) are important in livestock breeding but in a specific way again. Alternative farmers seek regular and attentive care for their animals but do not accept traditional cure (rely on the natural style of living of their animals and medical goods prepared by herbs). The veterinary doctor must understand and share their ecological ideas.



**Fig. 7.** Critical dimensions of veterinary medicine services supply transactions

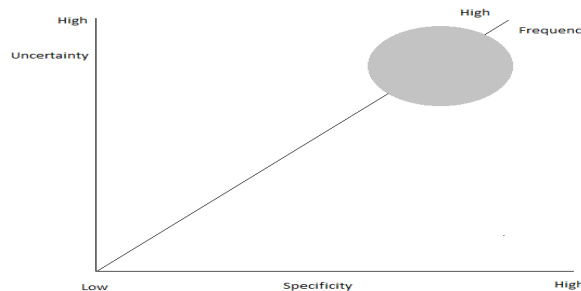
Financial supply transactions are the main concern of family farmers. They are relatively small and not highly profitable. Production processes are dynamic and depend on many out of control factors. Farmers often change their plans during the year. As the future is not predictable it is hard for them to prepare a business plan, to follow it, to keep the obligation of a contract (in case of public support programs), or to be sure for their repayments (in case of bank credit). The most significant critical dimension of financial supply transactions for alternative farmers is their high uncertainty (fig. 8).



**Fig. 8.** Critical dimensions of financial supply transactions

As it was mentioned above these farmers are not self-sufficient. They work to sell. Their output (marketing) transactions are interesting.

From one side – all interviewed farmers consider these transactions as easy. Often (even ever), demand is higher than supply. From the other side, alternative farmers usually work for permanent clients. If they lose one (or some) for them it is not easy to find new. Replacement of a buyer is hard and expensive – high specificity. From a third side, they are hardly able to guarantee stable and long lasted production (because of reasons discussed above). It means high uncertainty (fig. 9).



**Fig. 9.** Critical dimensions of output transactions

### GOVERNANCE MODES USED IN FAMILY FARMS

Bulgarian family farmers face transactions' problems every day and find a good solution by their intuition. Not surprisingly they choose proper transaction cost saving mechanisms to govern their activities (Table 1).

*Private modes.* The most used form here is the internal organisation. Farmers use this mode for various reasons. They apply specific technologies and produce specific products. Seeds with guaranteed quality for the more of them could not be found on the market. Often own production is the only chance. Also highly specific is the needed knowledge. Even sometimes it is an individual secret. Such knowledge could not be supplied from outside or it is very expensive. To follow ecological (organic) principle farmer need for a proper agricultural land and buildings, for a long period of time. Obviously using own land and buildings is the only solution. Alternative farmers hate bureaucracy – administrative or those of big organizations, including banks. That is why they prefer to mobilize own financial resources (or those of relatives and friends) instead of applying for credit or public financial support. A special case here is Crowdfunding. By its economic characteristics, it is more close to the internal organisation. We could conclude that alternative farmers internalize within the farm some of their input transactions in order to cope with the problems of high specificity (labour

and knowledge), high uncertainty (land and seeds), or to save directly transaction costs (financial products). This governance mechanism requires strong organization, enforcement power, and (more often) huge financial resources. Bulgarian alternative farmers are small and relatively poor. They have no capacity to initiate and realize sustainable private modes. But others have it. For example – national and international organizations for voluntary labour. In fact, 89% of hired labour in alternative farms is voluntary. Applicants are selected and chosen by trusted organizations which know the exact needs of the farmers. Obviously pure private mode, in this case, is expensive and almost impossible at that moment for Bulgarian alternative farmers. They could only joint existing mechanisms of this type.

*Market mode.* Farmers are not able to produce machines, fuel or vaccines. The only option is to buy these resources from the market. It is important to mention here that these are rare transactions for alternative farmers – 87% of them never use any veterinary medicine services, 33% apply only manual operations (no machines), 75% - predominantly manual labour, 13% do not use any fossil fuel, energy for 25% of the rest come from renewable sources. The situation with output transactions is different. All of the interviewed farmers declare that they produce to sell. The market is a natural canal in this case. But they use it in a specific way as it will be shown below. Summary: market mode is preferred for standardized resources (low uncertainty), and final goods (high frequency).

*Public modes.* The results of our survey show that this is the most undesired governance mode. 73% of the farmers have never received a subsidy (80% of them declare that they do not want it), no one trust in government standards, only 8% have registered themselves officially as organic producers, even they are in fact. The situation is the same for hybrid modes. Farmers of our group have neither willingness nor power to initiate such forms.

*Institutional modes.* The situation here is contradictory. From one side, farmers do not like formal institutions. Problems in the registration of the land, in access to water for irrigation or to electricity, in communication to local and central administration have faced 84% of the farmers. On the other hand, they use intensively informal institutions. Their business is based mainly on reputation and trust. As it was mentioned above, they use the market for some of their input and for the most of their output transactions. But this usage is in a special way. They insist that they need of unique resources (seeds and labour for example) and produce unique products. Try to avoid

competition and to replace it by stable, long term contacts with suppliers and buyers built upon full confidence and best faith. Thus alternative farmers solve the problems with high specificity and uncertainty, with information asymmetry and hostile official institutional framework.

## THE ROLE OF FAMILY TYPE OF FARMING

Bulgarian alternative farmers usually act rationally in their governance decisions in the same way conventional farmers do it. They follow the same (transaction costs saving) logic. But there are differences also. Some of them come from the fact that these are family farms by nature. It gives the “manager” of the farm a unique chance to save expenses choosing one or another governance mode.

*Family land and buildings.* Good relations between relatives are not easy and even impossible in some cases. But if they are in place costs for land and long term assets transactions could be saved – for finding a proper piece of land or building, for negotiations and contracting, administrative (cadastral, notarial, for court disputes), for contract enforcement, and etc. Our study shows that 87% of farmers use family land and 66% - family buildings. The term “family” in this case is used wider – including all relatives.

*Family labour.* The family work force is a reserve pool of labour used in extreme situations - sowing, seedlings, harvesting. In this respect it has advantages from production point of view. There are other advantages as well in transaction perspective. Using family labour saves costs for seeking and employing workers, for extra paying (for extra work) and social security, for monitoring and contract enforcement. Not surprisingly all observed farms use family labour.

*Knowledge and technologies transfer.* Application of alternative production technologies requires specific knowledge. It is hardly (expensively) to find it in the open market. Family and kin members know local climate, land characteristics, even (some of) technology secrets, specific needs of growing plants and animals. That is how they could save some transaction costs – mainly risk premium. One-half of the farmers in our study appreciate close relatives as an important factor for knowledge and technologies transfer.

*Family silver.* The most of our farmers are not able to keep the requirements for external financing, either bank credits or public support programmes. Financial resources of their close people are vital for them. In fact, all interviewed farmers use this source.

In the cases of land, labour, knowledge and financial transactions the family nature of the farm leads to the internal organisation (private mode). In other cases, it is a reason for going to other modes.

*Marketing.* Alternative farmers work for the market but use it in a specific way. They prefer personal contacts instead of market competition. The circle of their relative acquaintances is a *very important* source of customers for 74% of them. The situation is similar for some of the input supply transactions – mainly specific machine services.

*Local communities.* The farmers in our study rely on the development of local communities for their own success. And vice versa. They are welcome in local initiatives as family farms, not commercial enterprises. More than three fourth of them use public modes as fairs and festivals, as well as institutions - customs and traditions to arrange their output transactions.

### CONCLUSIONS

1. Family farming is a business as any other. It does not compulsory require special public financial support. Our study demonstrated that it follows common economic logic. As Adam Smith once mentioned business people need only of peace, easy taxes, and a tolerable administration of justice: all the rest being brought about by the natural course of things<sup>1</sup>.

2. The main lesson researchers and policy-makers must never forget is that the people involved in this business (both producers and consumers) are different. From a mainstream economic point of view, they could be described as non-rational and not following profit (or utility) maximization principle. But this view is wrong. Simply they have different values. If we understand and accept this we will see them as ordinary economic agents.

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<sup>1</sup> *Smith wrote the famous “1755 paper” fearing that his ideas (on invisible hand mainly), presented during his lectures at the University of Glasgow, might be plagiarized. Dugald Stewart (Smith's first biographer) quotes the article in his presentation to the Royal Society of Edinburgh in 1793 three years after Smith's death. Unfortunately, the original paper was later destroyed. For more, see Kennedy, 2005, p. 241*