AN APPROACH TO UNDERSTANDING AND ASSESSING THE GOVERNANCE EFFICIENCY OF AGRICULTURAL ENTERPRISES

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Abstract: This article incorporates the New Institutional Economy and proposes an approach for understanding and assessing the governance efficiency of farms. It corroborates that a farm is efficient if it manages all its transactions and activities in the most economical (equal or more efficient) way compared to any other organization. Moreover, farms must have a good potential to adapt to permanently changing market, institutional, technological and natural environments in order to have high (overall) governance efficiency. Nature of the problems in effective organization for the main farm transactions for securing needed factors of production and output realization is used as an indicator for farm's comparative efficiency. The analysis of survey data found that the overall level of governance efficiency of Bulgarian farms is acceptable the efficiency of 60% of them is low. There are huge differences in the level of efficiency of farms of different legal form, size, specialization and location as well as in the share of farms with different levels of efficiency in each group.[1]

Keywords: governance, efficiency, farm, transaction costs.

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1. Introduction

Despite the "rapid" development of the New Institutional Economics in recent decades (Bachev, 2004; Furuboth and Richter, 2000; Ciaian, Pokrivcak, Drabik, 2009; James, Klein, Sykuta, 2011; Sykuta and Cook, 2001; Williamson, 1996), it still studies farms mainly as a "production structure" and assesses their efficiency by means of traditional indicators such as "technical", "production", "factor", "resource", "accounting", etc. efficiency. At the same time, significant factors, affecting a farm's efficiency, such as transaction costs and capacity for adaptation to changes in (market, institutional, technological, natural, etc.) environment, are entirely ignored in the economic analysis. Subsequently, many "strange" phenomena, associated with farming development around the world, cannot be explained, such as: why in a particular country, subsector, and region there is a huge variation in the levels of "economic" efficiency of farms; why for a long period of time there exist so many highly sustainable farms with "unsatisfactory" (low) productivity and efficiency; why farming adjustments have been often associated with the transfer of resources management to "less efficient" (low productive) structures; why there are farms and firms at all, and why there are so many types of farms and agrarian organizations, etc. As a result, many "strange" phenomena related to the evolution of agriculture worldwide remain unexplained, such as: why in a given country, subsector and region there are significant variations in the levels of "economic" efficiency of farms; why have so many highly sustainable farms with "unsatisfactory" (low) productivity and efficiency existed for a long time; why adaptations in agriculture are often associated with the transfer of resource management to 'less efficient' (low-productivity) structures; why there are farms / companies and various agricultural organizations at all.

The New Institutional Economics is an evolving methodology, which allows a better understanding and assessing the efficiency of diverse forms of economic organizations (Bachev, 2004; Furuboth and Richter, 2000; Mugwagwa, Bijman, Trienekens, 2020; Sykuta and Cook, 2001; Valentinov and Curtiss, 2005; Williamson, 1996). It studies farms (not only as production, but also) as a governance structure - as a form of organization and management of agrarian transactions and minimization of transaction costs. In the last decades, in Bulgaria (Bashev, 2012a, b; Radeva, 2017; Sarov, 2017; Terziyska 2016; Bachev, 2004, 2006, 2010b; Bachev and Tsuji, 2001; Georgiev, and Roycheva, 2017; Terziev, Zhou, Terziyska, Zhang, 2018) and internationally (Ciaian, Pokrivcak, Drabik, 2009; Demir, 2016; Foster and Rosenzweig, 2022; Huy et al., 2016; Massey, Sykuta, Pierce, 2020; Mack101 et al., Mugwag, Mugwag, Trienekens, 2020; Westerink et al., 2017) there have been a number of studies incorporating this new methodology into the analysis of governance

structures in agriculture. Most of the studies on farm efficiency are at theoretical level and the few empirical studies only focus on critical factors such as the current and past (historical) transacting costs.

The aim of the article is to incorporate the achievements of the New Institutional Economics and to suggest and approbate an approach to assess the governance efficiency of Bulgarian farms.

2. Methodological approach

The New Institutional Economics studies farms and other economic organizations in agriculture as governing structures and modes for minimization of production and transaction costs and maximization of production and transaction benefits (Bachev, 2012; Bachev, 2004). It turns individual transactions into a basic unit of economic analysis, identifies diverse alternative modes for governing transactions and activity (market, contract, internal, hybrid, etc.), and assesses the efficiency of alternative (discrete) governance structures in a comparative (mainly transaction costs minimizing) way (Williamson, 1996). What is more, it proves that the efficient boundaries (size) of a firm (in our case an agricultural farm) are eventually determined by the transaction costs minimizing factors rather than the logic of the technological factors (production costs).

Modern agriculture is associated with significant transaction costs related to the necessary production factors (land, labour, financing, etc.) and to ensure their efficient supply (searching for suppliers, negotiating prices and conditions for purchase or rent, carrying out contractual obligations and seeking remedies, protection of property and produce, etc.) as well as for association membership and management of relations with other agents (finding the best partners, maintaining partnership relations, official registrations, coordination, opportunism control, organizational development, etc.), for marketing of agricultural products and services (finding the best prices and buyers, negotiating, paying fees and commissions, loss of unused production, etc.), for adaptation to the constantly changing market, institutional, technological and natural environment (keeping up-to-date and complying with environmental protection, quality, safety, and other standards, finding and implementing innovations, participating in public support programs, paying bribes and fees, etc.)

Following Coase's (1937) transaction cost economy logic, a farm is efficient if it governs all its transactions and activity in the most economical way (i.e. equally or more effectively) compared to other feasible organization(s) – (an)other farm(s), agrarian organization(s), public, hybrid, etc. legal form (Bachev, 2012; Bachev, 2004). Contrary, a farm is inefficient if (1) it is

oversized and its relative transaction costs are higher compared to those of another (alternative) organization; or (2) it is undersized and does not internalize transactions and activities that are more efficient compared to (an)other farm(s) or organization(s). In addition, if the farm's adaptation potential to permanently changing market, institutional, natural, etc. environment is good, its governance efficiency will be high since it will overcome easily (at low or no transaction cost) the existing or possible (future) transaction difficulties associated with supplies of production factors and marketing and will utilize in full its production (technological) capacity thus move to its most effective state (by means of size adjustment, alternative governance structure, etc.) Alternatively, if the farm's adaptability is low, it cannot reach an equal or more efficient state/size of its transactions compared to (an)other farm(s) and organization(s) and therefore its governance efficiency and facto productivity are low.

Farmers and other agents use a great variety of mechanisms and modes for governing their relations, transactions, and activities – free market (market prices and market competition), contractual, internal (private order), collective action (cooperation), hybrid (e.g. participation in a public program), etc. If all functional areas of a farm's governance (all transactions and activities) are associated with equal or lower costs compared to an alternative mode of governance (e.g. another farm or organization), then the analysed farm is efficient. Alternatively, if some or all functional areas of the farm's governance require higher costs compared to another form of governance (another farm or organization), then the analysed farm is inefficient.

"Rational agricultural agents (farmers, suppliers of resources and services, buyers of agricultural products, etc.) tend to organize their relationships (transactions) and activities through the most effective form(s) of governance" (Williamson, 1996). At one end of the spectrum there is a farmer who specializes only in the management of agricultural transactions and buys all necessary agricultural resources and services (production operations) from external suppliers and sells all his produce on the free market. At the other end there is a closed, self-sufficient farm, where the farmer uses only his own land, labour, savings, performs all production operations himself and consumes all the products himself. Between these two extremes, there is a wide variety of governance forms for managing transactions, farm activities and resources (farm sizes and types) aiming to exploit technological capabilities (economies of scale and size, minimizing production costs), minimizing of (market, contractual, domestic, coalition, etc.) transaction costs and maximization of production and transaction benefits (income, market positioning, overcoming unilateral dependence, etc.) The effective size and type of a particular farm will be determined by the comparative efficiency of the organization of its agricultural transactions, activities and resources compared to the organization

of the same transactions, activities and resources of (an)other farm(s) or organization(s). On the other hand, if a farm organizes its transactions, activities and resources at a higher cost compared to (an)other farm(s) or organization(s), then it will have the potential to increase its efficiency by transferring certain transactions, activities and resources to external governance (another farm, organization, free market, etc.)

In Bulgaria, there are no available statistical or other data about the structure and level of transaction costs in agriculture or about most of the dominant modes for governing agrarian transactions. Furthermore, there have been no successful attempts to collect such data in order to compare directly the total costs associated with each individual transaction of farms and other agrarian organizations since that is difficult, too costly, or practically impossible. Such a scientific challenge is also to evaluate their adaptation capability.

Our study suggests and approbates another approach to assessing the comparative transaction costs of farms. First, instead of estimating the transaction costs for each individual transaction, the transaction costs for each class of agricultural transactions are estimated - they are related to the efficient supply and management of the necessary resources (land, labour, materials, financing and innovation) and product marketing and services. The aggregate assessment of all classes of transactions is not a disadvantage of the applied method. If, for example, the management of a particular transaction fails but it is effectively replaced by (an)other management method(s) (e.g. replacing a direct bank loan with a commodity supply contract based on a joint loan), then the effective management of this specific resource, activity, etc. is ensured and the overall efficiency is achieved. Therefore, if the governance of all main functional areas of the farm (classes of transactions and activities) is effective, then both the total transaction costs of the farm and the “combination of factors of production” (production costs) are optimized, and vice versa (Bachev, 2022).

Secondly, a large scale survey has been carried out by asking individual farm managers to indicate the "best" (easy to understand, measurable and representative) quasi-indicators for the governance efficiency of farm transactions, viz. "problems related to the effective organization of the required class of transactions and activities”. For example, when a given farm faces serious difficulties in ensuring the necessary workforce or marketing (shortage, high costs, lack of long-term commitment, competition with other producers and/or imports, etc.), it means that (an)other farm(s)/company(ies) or organization(s) manage the available resources (labour, etc.) more efficiently than the analysed farm. Here, the correlation with the farm's comparative transaction costs, production costs and adaptation capability is significant. Thus, the "measurement" problems are overcome by estimating the relative costs of managing a certain class of transactions in the analysed farm in comparison with

other possible organizations (e.g. another farm, another organization, the free market, etc.) No other agent (e.g. researcher, expert, etc.) knows better than the manager of any particular farm (whose knowledge is easily acquired by means of "learning by doing") the specific production and exchange conditions of his/her particular holding, including the amount of required outside exchanges, the farm's needs for managing relationships (coalition, negotiation, etc.) with other agents, the internal needs for the combination of factors of production, the severity of problems in the governance of inputs supply and marketing, and the opportunities and restrictions for the farm's operation and development in a certain market, institutional, natural, etc. environment.

The microdata needed for assessment of the efficiency of Bulgarian farms was collected by means of a large scale survey among managers of Bulgarian farms, which was carried out with the assistance of the National Agricultural Advisory Service and the major producers' organizations in the fall of 2020 and involved 319 managers of "typical" farms of different types, production specializations, and geographical locations. These farms account for 0.42 % of all agricultural producers registered in the country and their structure approximately corresponds to the actual structure of Bulgaria's farming sector. Each manager was asked to specify the "nature of the problems in the effective organization" for every major type of farm transaction to ensure the necessary factors of production and realization of output, including "Effective supply of necessary for the farm land and natural resources", "Effective supply of necessary for the farm workforce", "Effective supply of necessary for the farm materials, equipment, and biological resources", "Effective supply of necessary for the farm financing", "Effective supply of necessary for the farm services", "Effective supply of necessary for the farm innovations and know-how", and "Effective marketing and utilization of farm's products and services". The keywords here are "effective" and "necessary" for the farm, which implies that both production and governance efficiency is achieved – the necessary for the farm resources supplied, the combination of the factors of production optimized (production costs minimized and output maximized), all products utilized or sold, all possible adaptation made, associated transacting costs minimized and transacting benefits maximized.

The surveyed managers evaluated the extent of the problems for the effective organization of each type of transactions in their farm as "Significant", "Normal" or "Insignificant". The "Significant" problems in the effective organization of a particular type of "necessary for the farm" transactions indicate that (a) the specific inputs supply, and/or combination of the factors of production, and/or the marketing and utilization of output is not carried out or governed at the effective scale (e.g. insufficient or deteriorating supply of needed resources, sub-optimal factors of production and technology, unsold or

unutilized produce, etc.); and/or (b) it is organized more costly (inefficiently) compared to other possible organization (e.g. another farm or organization). In either case, it means high transaction costs and poor (inefficient) governance. Accordingly, "Normal" problems are indicative of normal transaction costs and good governance efficiency, while "Insignificant" problems are a quasi-indicator for low transaction costs and high governance efficiency.

Furthermore, the classification as Significant also indicates that the farm's adaptability is low since neither adequate adaptation has been made nor further adaptation is possible to achieve its efficiency. Consequently, the evaluated farm's governance efficiency is considered low and the farm is unlikely to be sustainable in the long run regardless of the registered actual level of is factor productivity (e.g. high, normal or low level of "technical" efficiency of labour, land, etc., "efficiency" of costs and capital, etc.) Such a farm does not have the adequate potential for adaptation to get to the effective state of organization of (all) of its transactions utilizing its potential to increase the efficiency and carry all transactions in the most effective way (equal or better than other farms or organizations). Such a farm is not able to change its governance modes (e.g. direct marketing with long-term sales or interlinked contract) or otherwise optimize its transactions (for instance, by replacing one type of transaction and resource with another type, e.g. labour with services or mechanization), or to reduce its size and the overall size of governed transactions, activities and resources (e.g. stop using certain services or inputs). Thus, it is not efficient in governing transactions, activity, and resources, and is likely to cease to exist in the near future due to bankruptcy, takeover, merger, or another type of organizational modification (restructuring, changing its legal form to a company or a corporation, vertical integration, cooperation, etc.). Similarly, "Normal" and "Insignificant" problems correspond to good and high efficient governance of thee farm. Therefore, the assessment of the governance efficiency of farms is made taking into account neither the great variety of governance modes for each particular transaction and type (class) of transacttions in each farm nor its level of transaction costs and adaptation capability.

The qualitative assessments of the managers for the governance of major types of transactions were transformed into quantitative values, as the Insignificant was assessed with 1, the Normal with 0.5, and the Significant with 0. The quantitative assessment clearly distinguishes the analysed farms into farms that are inefficient (0), have good level of efficiency (0.5) of are highly efficient (1) in terms of their governance. For each of the agricultural holdings, an Integral Governance Efficiency Index is calculated by multiplying the quantitative value for each type of transactions. The Index of Governance Efficiency of farms as a whole and by types (specialization, location, etc.) was obtained as an arithmetic average of the individual indices of the constituent

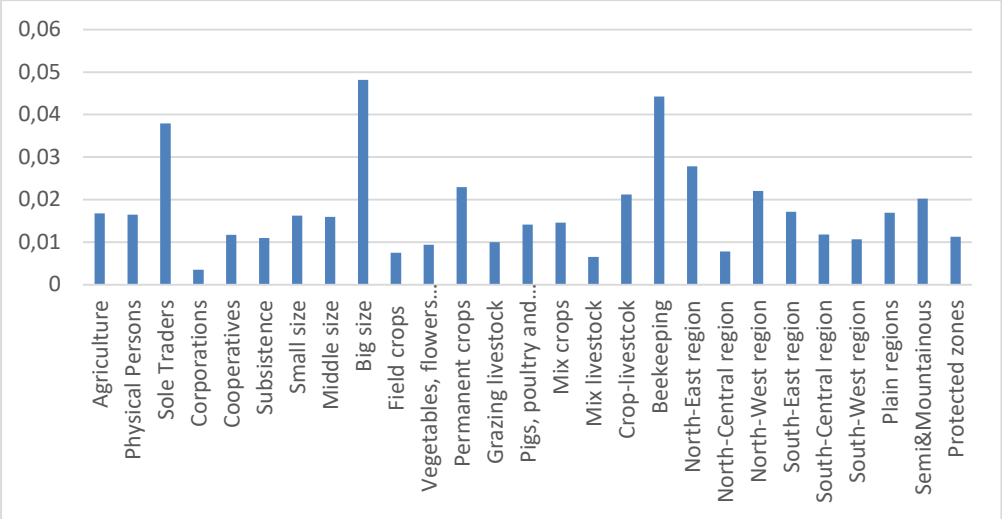
holdings. In order to determine the level of Farm Governance (and overall) Efficiency, the following benchmarks were used: Low – 0 (one or more major types of transactions are governed inefficiently), Good – from 0 to 0.094 (less than half of all major type of farm transactions are with Insignificant problems), and High – from 0.095 to 1 (more than half of all major types of farm transactions are with Insignificant problems).

3. Results and discussion

Our study has found that the level of Governance Efficiency of Bulgarian farms is Good (Figure 1). Nevertheless, the Integral Index of Governance Efficiency of the sector is relatively low (0.017). This is due to the fact that 32 % of the Bulgarian farms are with a Good level of governance efficiency and only 5% of them have High governance efficiency (Figure 2). Just above 60 % of all farms in the country are with unsatisfactory (Low) level of governance efficiency. Therefore, a significant part of the agricultural holdings in the country will likely close down in the near future due to their low efficiency and adaptability.

The discrepancy between the traditional "production function" approach and indicators for farm efficiency, such as Labour Productivity and Profitability, is quite large. This assessment is very misleading and as its shows that substantial groups of farms have superior (Good or High) levels of efficiency – 78 % and 75 %, accordingly. Therefore, the traditional approach does not provide the decision makers with an accurate representation regarding the actual efficiency and sustainability of the farms (especially of those with low and good levels of efficiency) and should be used very carefully for economic analyses.

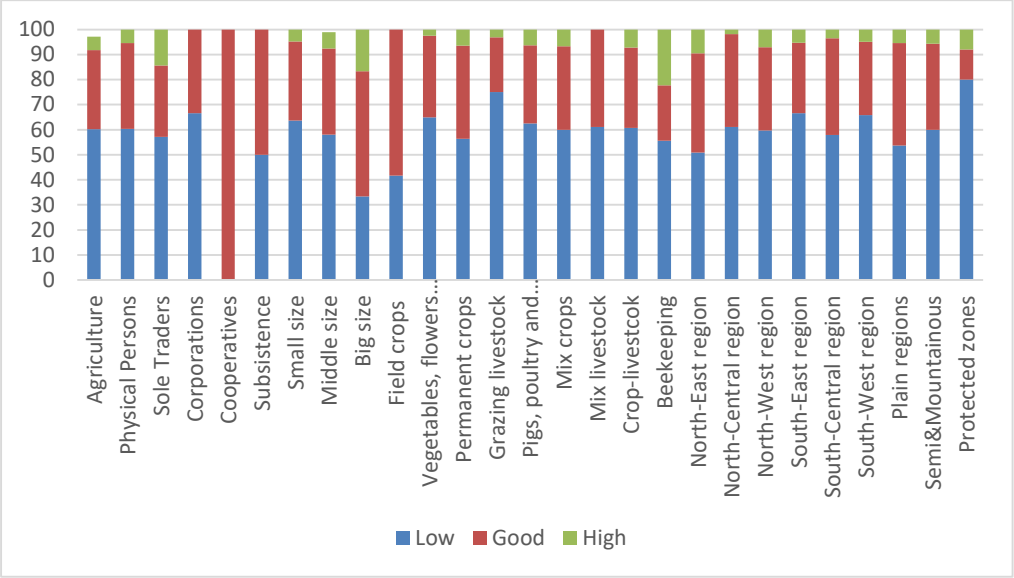
The main factors for the inferior overall governance efficiency of Bulgarian farms are their low levels of efficiency regarding the Supply of Necessary Labour Force, the Supply of Necessary Innovations and Know-how, and the Supply of Necessary Funding (observed prevailingly for 30 %, 27 %, and 21 % of all agricultural holdings in the country.) At the same time, the factors that contribute most to increasing the overall efficiency level are the Good or High efficiency in the organization of the Supply of Necessary Services, Land and Natural Resources, and Materials, Equipment, and Biological Resources.



Source: author's calculations.

Figure 1. ***Level of Governance Efficiency of Bulgarian Farms by Product Specialization and Geographical Location***

There is a huge variation in the levels of governance efficiency of the farms with different legal forms and operational size (Figure 1). The highest governance efficiency is demonstrated by the farms registered as Sole Proprietors and by those with size above the sector average. At the same time, the level of governance efficiency of corporate and cooperative farms and of "semi-market" (mainly self-sufficiency) farms is lower than the sector average. The share of all market farms with a low level of governance efficiency is significant, except the cooperative farms all of which have good governance efficiency (Figure 2). The farms used mainly for self-sufficiency and having low and good levels of governance efficiency are evenly distributed. The predominant cases of farms with high governance efficiency are registered as sole traders and large-scale land lease operators. These figures give a new idea of the extent and direction of the prospects for further restructuring of Bulgarian farms and transfer of management of resources and activities from low-efficiency farms (mostly small and unregistered farms) to more efficient farms (mostly corporate farms and cooperatives).



Source: author's calculations.

Figure 2. ***Bulgarian Farms by Size, Legal Form and Level of Governance Efficiency***

This analysis allows to identify the specific factors leading to the low governance efficiency of different types of farms. Significant difficulties (high transaction costs) in supplying the necessary labour, financing and innovation as well as in marketing the products are crucial for maintaining the efficiency of a significant number of individuals. For most sole traders, the most important factors that have a negative effect for their efficiency are the high transaction costs of providing the necessary land and natural resources, financing, innovation and know-how. For most corporations, such critical factors are the inefficiency of supplying the necessary labour, materials, equipment and biological resources and financing. Similarly, low efficiency in providing the necessary labour force is most important for small and medium-sized farms, serious difficulties in securing the necessary financing for semi-market and small farms, insufficient supply of innovation and know-how affect mostly the smaller-scale operators while marketing difficulties affect farms of all sizes. All these figures give a good idea of the critical factors limiting the efficiency and development (expansion, modernization) of different types of Bulgarian farms, and are useful for developing management strategies and support policies for different types of farms.

There is a huge variation in the levels of governance efficiency of the farms with different product specialization (Figure 1). The highest governance

efficiency is demonstrated by the farms, specializing in Beekeeping, Permanent Crops, and Mix Crop-Livestock, which is above the sector average. In addition, holdings, specializing in Pigs, Poultry, and Rabbits, and Mix Crops, are with governance efficiency close to the sector average. Lastly, farms specializing in Field crops, Vegetables, Flowers, and Mushrooms, and Mix Livestock are with the lowest level of governance efficiency, contributing most to the inferior level of the sector's efficiency. These figures give a good idea of the ongoing restructuring of Bulgarian farms and the transfer of activities and transactions outside the management of field crops, horticulture and animal husbandry.

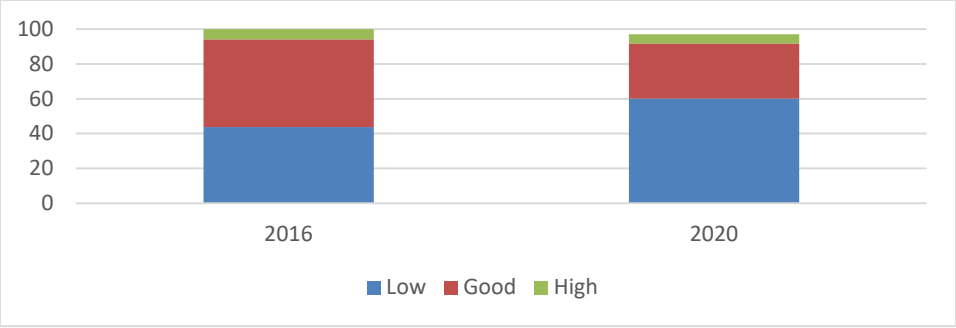
A large share of the farms with different product specialization (except the farms specializing in Field crops, which constitute the smallest but still significant segment) have low levels of governance efficiency (Figure 2). This implies that the process of restructuring the various sectors and transferring resources and activities to more efficient structures will continue rapidly. The largest share of farms with high governance efficiency are beekeeping farms. There is a huge variation in the governance efficiency for the different types of transactions for supply and marketing of Bulgarian farms with different specialization, as a significant part of all farms in each group have high costs and low efficiency for organizing the main classes of transactions.

There is also a significant differentiation in the levels of governance efficiency of farms located in the main geographical and environmental regions of the country as farms in the Northeast and Northwest regions and those located in mountainous and semi-mountainous areas have the highest levels of governance efficiency (Figure 1). In addition, most of the farms with low governance efficiency are in protected areas and territories in the South-Eastern, South-Western and North-Central regions of the country (Figure 2). The supply of the necessary labour force is not managed efficiently by a significant number of farms in the North-Central region, flat ecosystems and protected areas and territories of the country; The supply of the necessary innovations and know-how is significantly hampered in a large part of the farms in the South-Eastern and South-Western regions and protected areas and territories, while the marketing and utilization of products and services are very difficult, especially in farms in protected areas and territories (Figure 10). All these figures give some idea of the regional dimensions of transaction costs and governance as well as the "territorial" dimensions of the prospects for restructuring and modernization of farms.

4. Evolution and governance efficiency of farms

There are no systematic and representative data for comparing the evolution of the governance efficiency of Bulgarian farms. However, there is comparable data for 2016 regarding 190 "typical" farms, which is collected to assess the governance sustainability of agricultural holdings in the country (Bachev, 2018). The sample of surveyed farms is small and non-representative, and a certain number (inefficient and unsustainable) of the farms surveyed in 2016 probably did not exist in 2020. However, the applied approach is the same and the estimated levels of efficiency give an idea of the development of the governance efficiency of the farms during the period.

In 2016, the governance efficiency of Bulgarian farms is at a good level. However, the farm efficiency index is much lower than its level in 2020 - 0.006 against 0.017. There is a progressive evolution (increase) of farm's governance efficiency as a result of their effective adaptation and restructuring. This finding is in line with the statistics on the development of agricultural holdings in the country during the same period (MAFF, 2021). The share of low-efficiency farms in 2016 was much lower than in 2020, the share of farms with good efficiency was significantly higher, while the share of those with higher efficiency was approximately the same (Figure 3). During the analysed period, the share of low-efficiency farms increased by nearly 38%, while those with good and high efficiency decreased by 37% and 8%, respectively. As a result, the share of efficient farms (with good and high management efficiency) has been reduced by almost two thirds. There is a deterioration in the governance efficiency of a large number of Bulgarian farms due to the high transaction and production inefficiencies and the low adaptability to the rapidly changing market, institutional, technological and natural environment.



Source: author's calculations.

Figure 3. ***Farms with different levels of governance Efficiency in Bulgaria in 2016 and 2020 (relative share)***

This attempt to assess the governance efficiency of Bulgarian farms confirms some “well-known” facts about the governance efficiency of the farms in our country gives a new insight into critical factors for the “actual” efficiency and sustainability of farms and agricultural enterprises of various types and geographical locations. In particular, it provides an opportunity to highlight important perspectives related to the pace, factors and aspects of modernization of agricultural organizations in the country. This first-in-kind quantitative assessment of the governance efficiency of Bulgarian farms confirms the results of previous qualitative analyses on the governance efficiency of the country’s agricultural holdings in general and different types (Bachev, 2012; Bachev, 2010b; Sarov, 2017; Bachev, 2018). Last but not least, this assessment proved that the specific efficiency of an individual farm is determined by a wide range of personal, production, organizational, managerial, market, environmental and other factors resulting in largely varying levels of efficiency in each specific (in terms of legal form, size, specialization, etc.) group of farms, all of which must be carefully identified and analysed. Therefore, the "theoretical" confirmation or rejection of one or another type and form of governance or organization in agriculture is not justified.

Conclusion

This first-in-kind study has proved that the accurate assessment of a farm’s economic efficiency requires a new approach and analysis as it is one of the alternative structures for managing agricultural transactions. Moreover, it has proved the feasibility of a comprehensive quantitative assessment of the level of governance efficiency of individual farms and farm categories. Furthermore, the proposed approach allows not only to "measure" governance efficiency but also to reveal the critical microeconomic factors that compromise it in different types of farms. As a result, more realistic prospects for (legal, size, specialization, geographical, etc.) restructuring and further development of Bulgarian farms are presented. This approach could significantly help to improve farm management strategies and public support interventions and should complement the traditional analysis of “production” efficiency.

The study has found that the governance (and hence overall) efficiency of Bulgarian farms is at a good level with a significant variation in the efficiency index of farms with different specializations, legal forms, size, and geographical and environmental location. The main factors leading to inferior governance efficiency are the low levels of efficiency for the organization of supply of necessary labour, innovations, know-how, and funding. Furthermore, a

considerable number of the farms in Bulgaria have low levels of governance and overall efficiency and will most likely cease to exist in the near future.

This substantiated and approbated "new" approach must be further improved and included in the process of assessing the economic efficiency of farms as a whole and by different types. However, such assessments require a new type of farming-related microeconomic data, which is currently not available from traditional statistics and other sources. In the future, quantitative assessments should complement the broadly dominant qualitative assessments in this important area and should be used more frequently in academic research and farm governance. In addition, farm efficiency assessments should be performed regularly to identify the likely changes in farms' efficiency and long-term dynamics. Having in mind its great importance for scientific research, farm policies and farm governance, the proposed framework has to be further improved and widely applied in the economic analysis at various levels. The adequacy and representatives of this kind of assessments could be significantly improved, including internationally if the "production-oriented" agro-statistical information system in our country and the EU is modernized radically and includes information about the forms and factors of farm governance and transaction costs.

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