

Attempt To Evaluate the Impact of Governance on Agrarian Sustainability in Bulgaria

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ABSTRACT

Specific system of governance in different countries, regions, subsectors, etc., eventually determines the speed and type of socio-economic development. Despite its big academic and practical importance, in Bulgaria and other countries in East Europe, there are very few empirical studies on dominating governing structures in agriculture, and their impact(s) on agrarian sustainability. In this paper the interdisciplinary New Institutional Economics framework is incorporated, and the impact of diverse market, private, collective, public and hybrid modes of governance on agrarian sustainability at the current stage of development in Bulgaria assessed. First, the methodological framework of the study is outlined. After that dominating governing modes in Bulgarian farms of different juridical type, size, specialization, ecological and geographical location are identified, and their impacts on agrarian sustainability and its economic, social, and environmental pillars evaluated. In conclusion implications for further research, public policy improvement, and private managerial strategy formation are presented. Agricultural producers of different use quite unlike mixture of effective market, private, collective and hybrid modes for governance of their activities and relations. Individual factors and modes most contributing to improvement of agrarian sustainability at the current stage of development are: manager's personal convictions and initiatives, farms resources and innovation potential, near future profit and benefits strategies, market prices levels and dynamics, area-based EU subsidies, and informal agreements. Research on relations between the governing structure and agrarian sustainability is to continue though increasing representation, and the spectrum of specific governing modes used by farms of different type as well as assessments of the impact of institutions on agrarian sustainability and the impact of the governance at different hierarchical levels. The latter however, requires a new kind of micro and macro data, and a close cooperation between all interested parties.

Keywords: Agrarian Governance, Sustainability, Market, Private, Collective, Hybrid modes

JEL: Q13, Q12, Q18, D23, E61, H23, L14, L22, L33, L51

INTRODUCTION

Achievement of diverse economic, social, environment conservation, intergenerational, etc. goals of sustainable development greatly depend on the specific system of governance in different countries, industries, regions, communities, etc. (Furuboth and Richter, 1998; North, 1990; Williamson, 1996). Having in mind the importance of agrarian sector (in terms of employed resources, contribution to individuals and social welfare, positive and/or negative impacts on environment, etc.), the improvement of the governance of agrarian sustainability is among the most topical issues in Bulgaria and around the globe (Bachev, 2010, 2016; Bachev et al., 2016; EC, 2017; Raman, 2006; Sauvenier et al., 2005; TerzievandRadeva, 2016; UN, 1992, 2015). Nevertheless, research on forms and efficiency of the governance of

agrarian sustainability is at the beginning stage in Bulgaria (Bachev, 2010; Georgiev, 2010, Sarov, 2017), and elsewhere. In this paper interdisciplinary New Institutional Economics framework (combining Economics, Organization, Sociology, Law, Political and Behavioral Sciences) is incorporated, and the impact of diverse private, collective, public and hybrid modes of governance on agrarian sustainability at the current stage of development in Bulgaria assessed.

THE NEW INSTITUTIONAL ECONOMIC FRAMEWORK OF ANALYSIS

Maintaining and improving the social, economic and ecological functions of agriculture requires an effective social order (a "good governance") - a system of "human created" mechanisms and forms regulating, coordinating, stimulating, and controlling behaviors, actions and relations of

individual agents at different levels (Bachev, 2010). The system of governance of agrarian sustainability includes a number of distinct market, private, public, etc. modes, which manage behavior and actions of individual agents, and eventually (pre)determine the level of agrarian sustainability. Efficiency of the specific system of governance of agrarian sustainability eventually finds expression in certain level and dynamics of the social, economic, ecological and integral sustainability of agriculture as a whole or agricultural systems of different type (farm, industry, agro-ecosystem, region, etc.). Accordingly, a high or increasing agrarian sustainability means a high efficiency of the system of governance, and vice versa.

For identification and assessment of diverse market, private, collective, hybrid, etc. modes of governance and its impact on agrarian sustainability in Bulgarian agriculture, its major subsectors, in various geographical and ecological regions, as well as sustainability contribution of farms of different juridical type and size, in-depth interviews have been carried out with the managers of “representative” market-oriented farms of different kind and location. The study was carried out in the summer of 2017 and comprised 40 agricultural holdings from four administrative regions of the country. Identification of the “typical” for the particular regions agricultural farms have been made with the assistance of the major producers associations in the country, state agencies, processors, bio-certifying, and service providing organizations, and local authorities. Agricultural producers of different type have been interviewed as entire spectrum of the farms in respective regions included. The structure and the specific features of surveyed farms approximately correspond to the real structure of all farms in the studied regions.

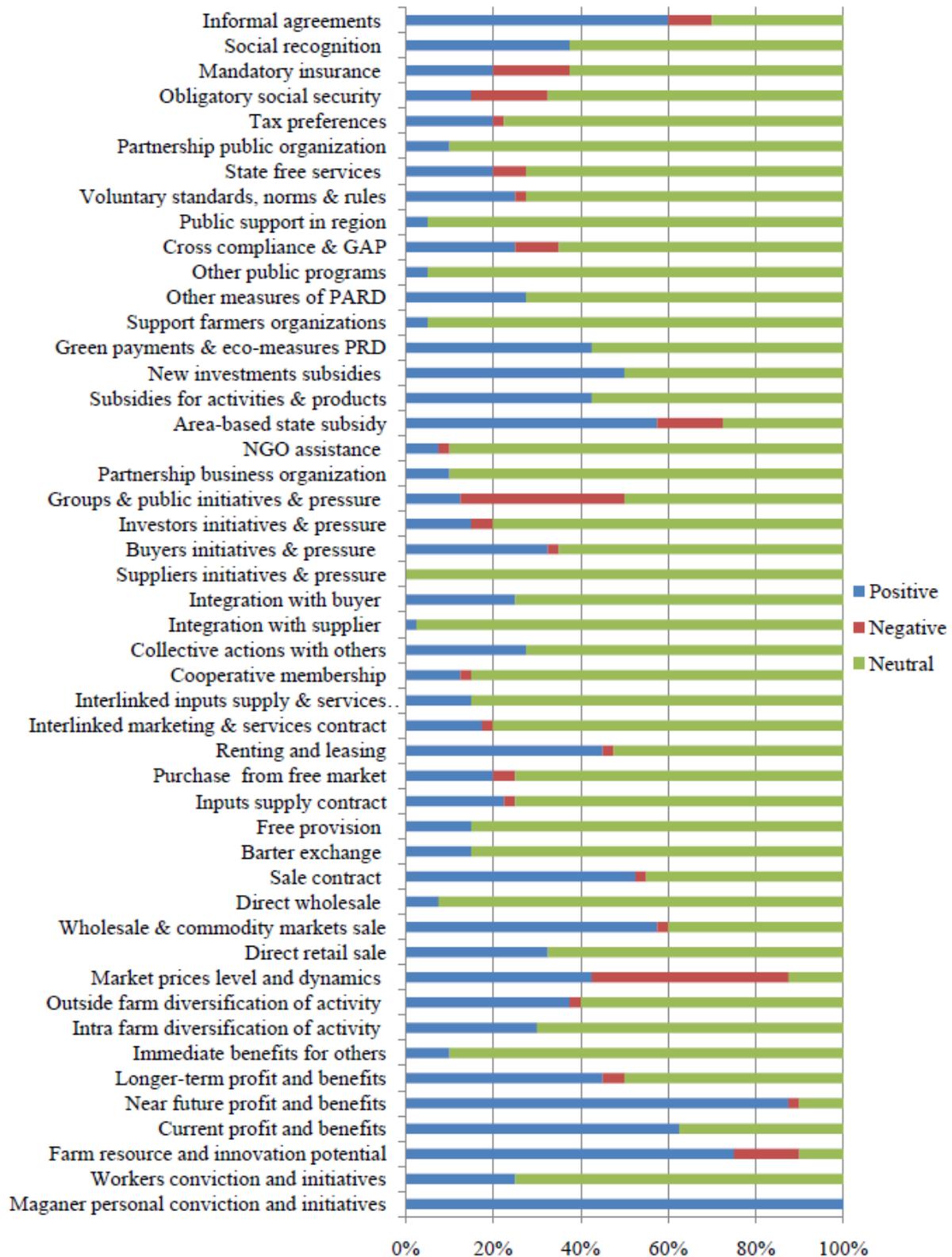
The survey comprises multiple questions associated with the usage and the impact of diverse components of governing system (personal preferences, resource endowment, specific managerial strategies, applied contractual and collective forms, participation in public support schemes, community and counterparts initiatives and pressure, etc.) on agrarian sustainability, and its social, economic and environmental aspects. Initially the managers assessed the impact of each particular governing mode as “positive”, “neutral”, or “negative”. After that, the relations between the “estimates” of the managers for the efficiency of governing modes, and the sustainability level of

respective farms are specified¹. The integral estimates are arithmetic averages of the assessments of individual farms of a particular type.

SUSTAINABILITY CONTRIBUTION OF AGRARIAN GOVERNING MODES

Our surveyed has found out that, for all managers their “own personal conviction and initiatives” are important positive factor for maintaining and improving agrarian sustainability and its dimensions (Figure 1). Understandings, skills, and targeted actions of the agrarian entrepreneurs and managers of farms of all juridical types, sizes, production specialization, ecological and geographical locations, are a key factor for accomplishing socio-economic and environmental aspects of agrarian sustainability. At the same time, merely a quarter of the managers indicates, that the “personal conviction and initiatives of workers” is a positive factor for agrarian sustainability. The latter is important for innovating enterprises of different type, which rely on and create conditions for involvement of all workers in improvement of farm activity and agrarian sustainability – selection of qualified staff, continuing training, freedom to apply and experiment initiatives, delegation of management and responsibilities, strong incentives, output based compensation, etc. However, for the biggest part of Bulgarian farms the hired labor does not have needed quality, freedom, and/or motivation and contribute little to amelioration of agrarian sustainability.

¹In order to assess the efficiency of the governance a holistic system for assessing the social, economic, ecological and integral sustainability is applied, presented in other publications (Bachev, 2016; Bachev et al., 2016).



Source: interviews with managers of farms, 2017

Figure 1. Impact of private, collective and hybrid factors, forms and strategies on agrarian sustainability in Bulgaria (percent)

Available and accessible resources and innovations are essential factors for effective and sustainable development. According to three quarters of the managers of surveyed

holdings existing “resource and innovation potential of the farm” contribute positively to agrarian sustainability and its individual aspects (Figure 1). The majority of farmers appreciate

highly the significance of that factor and believe that their holding possesses necessary human, land, material and intellectual resources for achieving socio-economic and environmental goals of agrarian sustainability. Commonly, the control on “critical” for the farm resources are secured through internal governance (acquiring ownership, permanent labor contract, etc.) or external collective or leading organization (cooperative, association, holding, etc.). More “mobile” resources are governed through long-term lease contracts, while for the “universal” assets and products it is relied on market modes.

Strategies with a different time horizon to a different extent contribute for maintaining and achieving agrarian sustainability. According to the majority of surveyed managers (60%) “current profit and benefits” are a substantial factor, which affect positively the governance of agrarian sustainability and its main aspects (Figure 1). Simultaneously, the rest significant part of the managers (37,5%) evaluate the importance of that type of strategy as neutral in relation to agrarian sustainability and its individual dimensions. The best fraction of surveyed farms (87,5%) believes that “profit and benefits in near future” are important factors favorable for sustainable agriculture (Figure 1). The majority of managers are convinced that realization of the diverse socio-economic and environmental goals of agrarian sustainability requires longer-term efforts, and therefore undertake such managerial strategies. A relatively smaller segment of the Bulgarian farms applies strategies oriented to profit and benefits in a long-term (which are actually the means for achieving and maintaining agrarian sustainability). One considerable part of all surveyed managers (45%) assess as positive for agrarian sustainability and its main aspects directing the farm activity toward “profit and benefits in a longer-term” (Figure 1). At the same time, every another farm evaluates as neutral in relation to agrarian sustainability and its aspects the strategy for profit and benefits in a longer-term. All these demonstrates that the best part of the Bulgarian farms does not direct their activities for achieving the long-term goals of socio-economic development of the sector, but are oriented toward specific goals in shorter time horizons.

Received benefits from other persons and groups from the farm activity are important (social and environmental) aspects of agrarian sustainability. Our survey has found out that, merely for 10% of interviewed managers the

“immediate benefits for other persons and groups” are a positive factor for directing of activity (Figure 1). Such objectives are predominately important for the agricultural cooperatives, for which in addition to the members and workers, benefits are particularly of significance (or at least so declared) for farm households and rural communities as well.

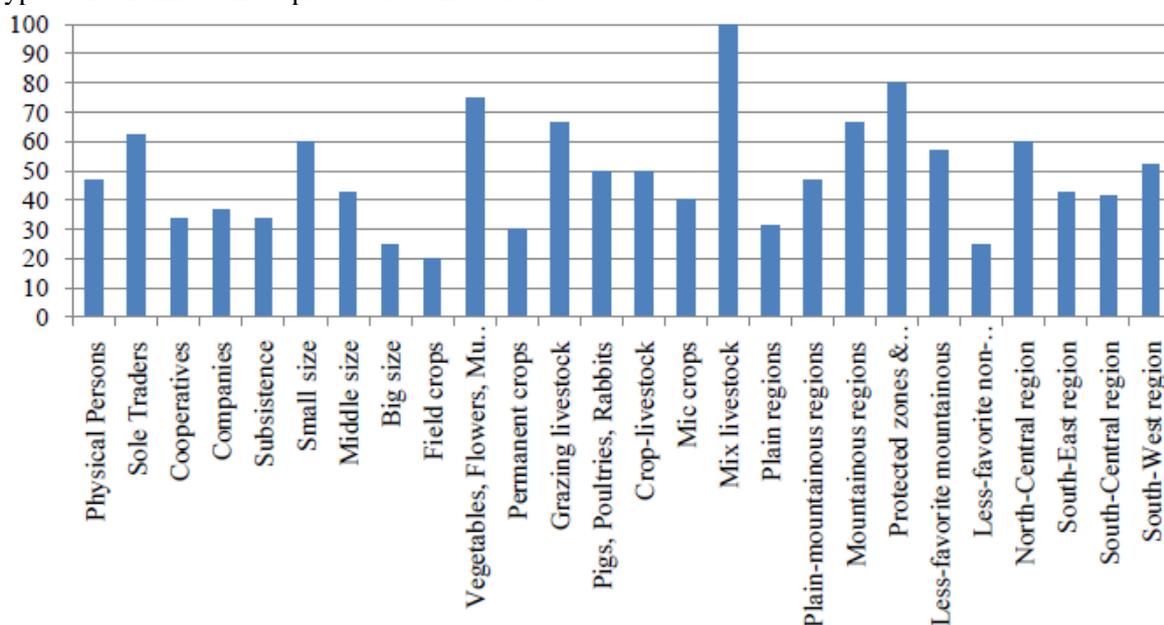
Diversification of activity is an important strategy for amelioration of socio-economic and environmental sustainability in agriculture. That mode of management of agrarian sustainability is widely practiced by the Bulgarian farmers as well. According to 30% of questioned managers they implement a strategy for “diversification of activity in the farm” affecting positively the agrarian sustainability and its aspects (Figure 1). Many farms produce several products and services for better utilization of available land and other resources, application of effective agro-technics (crop rotation) and protection of natural environment, reduction of risk from climate and market prices variation, using free machinery (providing mechanization and other services), etc. Nevertheless, most of the surveyed farms employ another more effective strategy – for specialization of activity in one or more products. For 70% of the managers the diversification of activity in the farm has no effect (neutral) on agrarian sustainability and its different aspects. A greater specialization allows exploration of economies of sizes and scopes, increasing productivity, investing in specialized skills and technologies, more efficient marketing (selling a single product in large volumes, negotiation of better prices, reputation building, establishing supply chain networks, etc.).

Diversification of activity outside of the farm is another feasible strategy for improving efficiency and elevating agrarian sustainability. It gives possibility for specialization in the farm for achieving maximum productivity (efficiency) of agrarian resources, while simultaneously it is looked for new opportunities in related to agriculture (such as processing, marketing, supply of services, agro-tourism, restaurant, eco-system services, etc.) and/or unrelated activities (other industries, services) for assuring employment, additional income, profit, risk sharing, etc. outside the farm gates. A good portion of interviewed managers (37,5%) practice a strategy for diversification of activity outside the farm and evaluate its impact on agrarian sustainability as positive (Figure 1). A good fraction of holdings diversifies into farm

produce processing (vine, dairy, etc.) or marketing (own shops, labels, trademarks, etc.), while others point out a great variety of other activities (inputs and technology supply for green houses, hotel and hospitality, transportation, mountain tourism, etc.). The majority of surveyed farms (60%) are exclusively specialized in agricultural activity, they do not practice diversification outside the farms, and assess as neutral the impact of that factor on agrarian sustainability or some of its aspects.

Market prices and competition are an important mechanism for governing of activity of various agents (resource owners, entrepreneurs, farmers, consumers, etc.). According to a significant part of the interviewed managers (42,5%) “the level and dynamics of market prices” have a positive impact on (manages, coordinates, stimulates) their activity and agrarian sustainability (Figure 1). The favorable effect of market mechanisms is appreciated to a various degree by different type of farms and producers in diverse

subsectors and regions taking advantage of their comparative advantages and competitiveness and profiting from price levels and dynamics. For the biggest part of surveyed farms (45%) the level and dynamics of market prices at the present stage of development impact negatively agrarian sustainability and its individual aspects. The majority of managers underline the negative effect of the market as a dominant mechanism for maintaining (and achieving) economic, social, and environmental goals of agrarian sustainability. The negative impact of the market prices level and dynamics on agrarian sustainability to a greatest extent affects Sole Traders and Physical Persons, farms with Small and Middle sizes (60%), holdings specialized in Vegetables, Flowers, and Mushrooms, Grazing livestock, and Mix livestock, farms located in Mountainous regions and with Lands in protected zones and territories, as well as in North-Central region of the country (Figure 3).



Source: Interviews with managers of farms, 2017

Figure 3. Negative impact of level and dynamics of market prices on agrarian sustainability in Bulgaria (percent)

Effective realization (marketing) of farm products and services is an essential factor for agrarian sustainability and for economically viable, socially stable, and environmentally friendly agriculture. In order to benefit from market opportunities and safeguard against market risks (low prices, price fluctuations, contractual asymmetry, likely opportunism, delayed payment, etc.) agricultural producers use and/or develop diverse effective

forms of marketing of farm produce. “Direct retail sale of products and services” is practiced as an effective form of marketing by 32,5% of surveyed farms (Figure 1). Those are holdings with different sizes, specialization, and location, for which direct sales are highly efficient due to superior “retail” prices, low costs for direct marketing (on farm or local farm market), low risk for opportunism, etc. Usually, those are producers with smaller sizes, having small

volume of production and sales, loyal clients in the region and/or good location (proximity to highway, resort, large consumer center), reasonable and high quality products with a big demand (fresh fruits and vegetables, lamb meat, eco-products). In some cases, agricultural produce is sold “in package” with another service and it is profited from the interlinked retail marketing – e.g. self-pick up of farm produce by client, serving of produced fresh or processed produces in own restaurant, etc.). Many of the biggest vertically integrated agricultural producers (vine growing and wine producing complexes and vineries, dairy and meat processors with own livestock, etc.) possess own brand shops for direct retail sale of final products in the region and/or big cities. Simultaneously, for the majority of Bulgarian farms (67,5%) direct retail sale output does not have significant importance for the governance of agrarian sustainability or some of its aspects.

The greatest portion of the Bulgarian farms uses other (more efficient) forms for realization of farm produce. Most of the surveyed farms (57,5%) widely practice “direct wholesale” of output and evaluate its impact as positive on agrarian sustainability (Figure 1). Those are bigger producers of different type having sufficient volumes and product standardization. A considerable fraction of all farms in the country (40%) does not apply direct wholesale or do not believe that mode is having a significant importance for agrarian sustainability and some of its aspects. The “sale on wholesale and commodity markets” is not a popular form for realization of produced output in Bulgarian farms.

The “sale contract for products and services” is another major mode for governing of marketing of farm produce. According to more than a half of the surveyed managers (52,5%) they often use a sale contract and it affects positively agrarian sustainability (Figure 1). Farms commonly deal with several buyers for securing a successful marketing and maximizing revenues. The contract for purchase, sale, or marketing is an important means for planning of realization of output and sale prices. That form is applied by commercial farms of different type, product specialization and location as primary a one year or a yield contract are used. A short-term contract form usually is a policy and requirement of big buyers (processors, food-chains, middlemen, exporters) or preferred by farmers. Very often farmers wish to preserve

freedom in order to be able to change a buyer during the next season in case of unsatisfactory (low) prices, delayed payment for product, lack of complementary (crediting, interlinked services, etc.) benefits, change in structure of activity, emergence of a favorable new partner and/or more-effective marketing channel, etc. A good part of the Bulgarian holdings (45%) does not employ the contract form for output realization and consider that mode as important for agrarian sustainability or its individual dimensions.

The majority of surveyed farms (85%) does not practice barter “exchange of products and services for other products and services” and think that governance mode has a significant importance in relation to agrarian sustainability (Figure 1).

The majority of interviewed managers (85%) does not use “free provision of resources, products, services and activities” and think they are important in regard to agrarian sustainability (Figure 1). For a relatively small portion of the farms (15%) the free provision of resources, products, services and activities is a positive factor for amelioration of agrarian sustainability. Some of the smaller size producers receive free services from other agents and organizations (farmers, cooperatives, non-governmental and international organizations, state and local agencies). Such assistance improves efficiency of the “beneficiaries” and increase agrarian sustainability in the region or subsector.

The effective governance of farms supplies with needed resources, materials etc. is an important factor for agrarian sustainability. According to the three-quarters of surveyed managers their holdings do not use special “contracts for supply of needed resources” and such a form have no importance regarding agrarian sustainability (Figure 1). Usually markets for supply with major inputs and resources in agriculture “work” well (strong competition, multiple suppliers, etc.) and it is not necessary to apply special modes of governance (guarantee) of supplies. Moreover, farmers are not big users of “external” resources and it is not necessary to develop special (contractual) forms for governing of standard supplies as commonly free markets are used when procurement needs arise. What is more, often long-term relations evolving (high frequency of deals between the farmer and the supplier), and counterparts get to know each other, and are interested in restriction of opportunistic

behavior (the bad reputation is punished easily through changing the supplier).

“Purchasing of needed resources and services from free market” is a positive factor for agrarian sustainability and is practiced by one fifth of the surveyed farms (Figure 1). Those are holdings of different type for which market governance of procurement of necessary resources and service is the most efficient. The best part of the managers (75%) believes that supplying of necessary resources and serviced though a purchase from free market is a neutral mode of governance in regards to agrarian sustainability. That implies competitive (well working) markets for supply of standardized products, which are not associated with any special benefits or disadvantages for using farmers.

The lease is a widely used and efficient form for governing of supply of land and other long-term assets in agriculture. That mode allows a rapid and cheap expansion of farm size for better exploration of possibilities for economies of scale and scope, implementation of ecological and other projects, etc. According to a big portion of the surveyed managers (45%) “renting(leasing) of needed resources” is an effective form and it affects positively agrarian sustainability and its main aspects (Figure 1). The mainpart of the biggest holdings in the country is also large tenants from numerous small land owners as lease is a major form for expansion of farms sizes in last decades. Usually, a long-term lease is practiced when highly specific investments are made in permanent crops, long-term improvements of land, construction of buildings and equipment, etc. Most frequently the lease is an additional form for governing of the land supply as an acquisition of ownership is preferred by the big investors, particularly when investments are highly specific to a land (vines, orchards, buildings and facilities, etc.) or related productions (wine production, dairy processing). In many cases however, a short-term (a year or season) rent is applied, when there is a desire to experiment in new productions, in greenhouse operations, and monoculture with annual crops (both requiring a periodical change of land plots) or due to unwillingness of landlords for long-term contracts and/or cooperative memberships (facile change of tenant if market demand for farmland is high).At the same time, more than a half of the holdings in the country (52,5%) does not rent or lease-in lands or other resources or believe that form is important for

agrarian sustainability and some of its dimensions.

Sometimes in agriculture are also applied more-complex forms for governing of relations between market agents like interlinking the contracts for inputs supply and/or marketing of farm produce with parallel reception of additional services (e.g. crediting, lending, consultations, information, assistance, purchase by a supplier, supply by a buyer, etc.). According to the majority of surveyed farms (80%) they do not use “interlinked contract for marketing with reception of services from the buyer” and such a special mode have no importance for agrarian sustainability and its aspects (Figure 1).At the same time, a considerable portion of surveyed managers (17,5%) evaluates as positive the impact of employed interlinked contracts for marketing with services from a buyer. Those are mostly smaller producers in different subsectors and regions, for which obtained complementary services from the buyers “in package” with the marketing (interest free loan, consultations, inputs supply, laboratory tests, cooling containers, transportation, etc.) are essential. These type of farms do not have own internal capability for organization of such activities and/or easy access, or necessary means for procurement of needed services from the market or other suppliers. The package of received “free” services with marketing of farm produces most frequently includes advance financing, preferential interest and credit, transportation from the farm, agronomic and veterinary consultations, quality and safety laboratory tests, training of personnel, market information, storage and cooling facilities, assistance in finding suppliers or supply of critical inputs (medicaments, forage, etc.), and so forth. Similarly, to the interlinked marketing, a segment of farms (15%) also applies “interlinked contracts for inputs supply with reception of services from the supplier”, and evaluate that mode as positive for agrarian sustainability (Figure 1). Usually those are producers of different type, subsectors and regions, for which obtained additional services “in package” with the supply are very important. The package of services most often includes: crediting, transportation, consultation, finding a buyer or purchasing of farm produce, etc.

Setting up and/or participation in various collective organizations outside the farms gates (cooperatives, associations, professional initiatives, etc.) considerably facilitates

overcoming disadvantages of pure private or market forms for governing of agrarian sustainability. Our survey has found out that the great majority of surveyed farms (85%) do not take “part in cooperatives” of any type (joint supply, marketing, crediting, logistics, lobbying, etc.) and assess such membership as essential for agrarian sustainability and its individual aspects (Figure 1). Most holdings do not consider as effective the cooperatives membership since they see no significant private benefits but only costs for membership fee, participation in activity, etc. The “failure” of collective modes in Bulgarian conditions is also a reason for the low participation of farms in joint initiatives with other agrarian and non-agrarian agents. According to the majority of interviewed managers (72,5%) “participation in collective actions with other farmers and non-farmers” do not have significant importance for agrarian sustainability, and practicing by them (Figure 1). For the remaining good portion of holdings however (27,5%) participation in diverse collective actions with other farmers and non-farmers is a positive factors contributing for improvement of agrarian sustainability or some of its aspects.

A partial or complete integration of farms in the vertical (food, supply, etc.) chain is a popular form for improving governance efficiency and the activity of related agents for sustainable development. When market prices and standard (“classical”) contracts do not work well the agrarian agents design integrated modes for governing of their relations. Our investigations have found out that only a tiny proportion of surveyed farms (2,5%) are involved in some “integration with a supplier of the farm” and evaluate that form as positive in relation to agrarian sustainability (Figure 1). “Integration with a buyer of product” is more widely used form for governing the vertical links in the sector. According to every forth of the interviewed managers they apply some form of integration with a buyer of output and that governance mode favors agrarian sustainability (Figure 1). The partial or complete integration with a buyer (processor, retailer, exporter, etc.) allows a better coordination and control of transactions between partners, guarantee the sale, avoid risk of market prices fluctuation and opportunistic behavior, and induces strong incentives for joint initiatives, cooperation, and rapid “internal” resolution of emerging disputes in a mutual interest. Such integration mostly is required by the existing strong bilateral or

multilateral assets dependency (processing capability, geographical proximity, volumes and timing of delivery, products quality specification, varieties, origin and certification, etc.) of the individual agents in the supply chain. That necessitates (strong incentives, needs, justify additional costs for) elaboration of a special form with designed mechanisms for coordination, stimulation and dispute resolution for facilitation of relations of symmetrically dependent agents. In most cases, there is a situation of competitive markets (many suppliers and many buyers), high standardization and “mass character” of produce, as well as lack of dependencies of partners’ assets in the supply chain. In other cases, effective integration of farming with processing, marketing etc. requites certain minimum quantities of product which are difficult to reach. In other instances, specific quality (variety structure, standardization of product) is required difficult to achieve by smaller producers. In all these cases relationships seller-buyer are more effectively governed through (“faceless”) market forms and market price movements (competition), standards contracts for marketing (supply) of product, and/or personal relations (high trust, gentlemen agreements, other sanctioning mechanisms) between counterparts.

Various initiatives and pressure of farms suppliers, buyers of farm produce, interests groups and public and large are all important factors for governing of agrarian sustainability in all its aspects. Our study has found out that for all surveyed farms the “initiatives and pressure of suppliers” have no or negative importance in governing of agrarian sustainability and some of its aspects (Figure 1). At the same time, for a relatively good fraction of the surveyed managers (32,5%), the “initiatives and pressure of the buyers” of farm produce (processors, traders, exporters, final consumers, etc.) is an essential positive factor for improving agrarian sustainability in all its aspects. The activity of commercial holdings of different type and location is governed by the latter initiatives and pressure. In recent years increasingly are introduced and popularized (advertised) diverse initiatives of retail chains, processors etc. aiming at improving efficiency of Bulgarian farms (“Made in Bulgaria” initiatives), and social and environmental contribution of agricultural production (“green” and “eco” initiatives, corporate “social” responsibility, sustainability movements,

organic production, etc.). They all assist, create incentives, and/or pressure on agricultural producers for modernization of activity and increasing different aspects of agrarian sustainability. At the same time, for the majority of Bulgarian farms (65%) the initiatives and pressure of buyers do not have significant importance and lead to change in agrarian sustainability.

For a comparatively small section of the surveyed farms (15%) the “initiatives and pressure of the investors” are essential positive factors for improving agrarian sustainability and its different dimensions (Figure 1). That type of (external, hybrid) governance is typical for the bigger and more (vertically) integrated farms, with a significant or entire share of the “external” investors in the ownership of agricultural holding. For instance, when a vine (and wine) complex is integrated in a Holding, they lose (governance, financial, price, etc.) “autonomy”, and their relationships with other (internal and external) counterparts are regulated by the common goals of the conglomerate (the “profit” center/s).

The initiatives and pressure of different interest groups and public at large are important factors which may direct the governance of agrarian sustainability and its individual aspects in one or another way. According to the half of the surveyed managers the “initiatives and pressure of interest groups and public at large” do not impact considerably agrarian sustainability and some of its dimensions (Figure 1). According to the good part of the surveyed farms (37,5%) the character of existing initiatives and executed pressure of interest groups and society impact negatively agrarian sustainability and some of its aspects. There are numerous cases when requirements of strong groups of (business, environmental, etc.) interests or local community are in conflict with sustainable agrarian development on account of other sectors and activity (tourism, housing construction, industry, natural parks, etc.). There are also reported frequent instances of powerful individuals or groups in or outside agrarian sphere striving to acquire ownership or management rights over significant agrarian resources in certain (high value) ecological and geographical regions. Usually smaller producers are under constant “pressure” to transfer the ownership and/or management of resources against their will and interests. The latter has great negative consequences for agrarian sustainability and some of its aspects.

Cooperation with and an assistance of farms by a business organization or non-governmental organization may contribute to enhancement of agrarian sustainability or some of its aspects. Such an involvement of a “third” party in the governance of agrarian sustainability is necessitated when pure market and private forms do not work, while a state intervention is inefficient or untimely. However, not always such a complex mode of governance of agrarian sustainability produces good results. The majority of interviewed managers (90%) assess as neutral for agrarian sustainability the “partnership with a business organization”, since the latter usually does not exist or it is not essential for the aspects of agrarian sustainability. However, every tenth holding practices some form of partnership with a business organization and believe that such kind (“profit-oriented”) partnership with an external organization have a positive impact on agrarian sustainability and some of its dimensions.

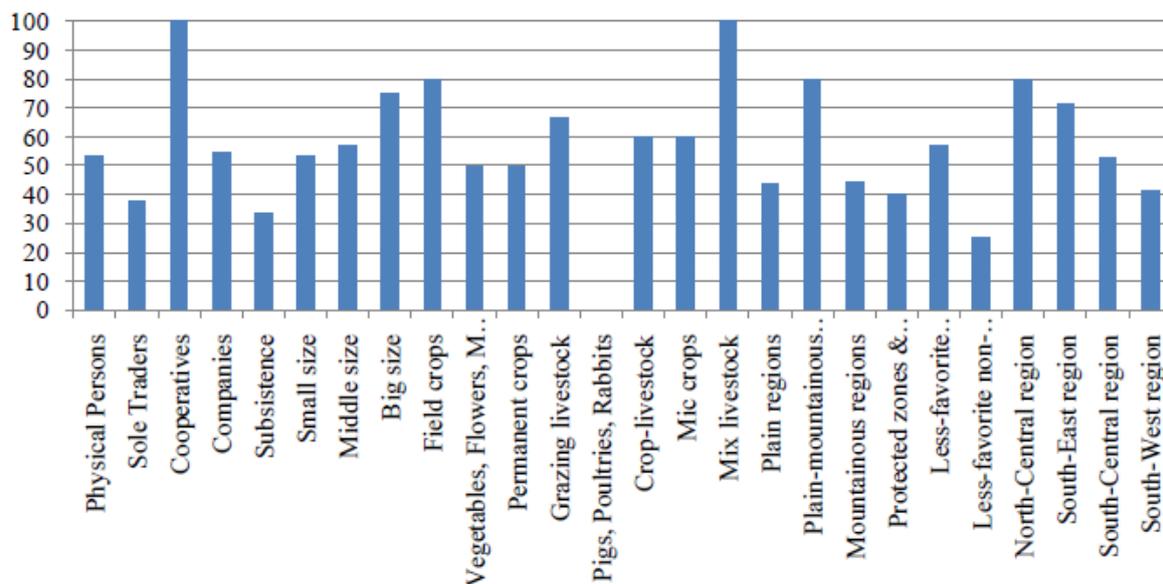
Similarly, a great majority of the surveyed farms (90%) report that “assistance by non-governmental organization” has no significant importance for agrarian sustainability since it either does not exist or the contribution of non-governmental organization toward agrarian sustainability is negligible. What is more, a tiny portion of the managers (2,5%) even suggest that “assistance” from the non-governmental organization hinders sustainable agrarian development. The latter is a consequence of the inefficient activity of existing non-governmental organizations, or of its content with directions distinct from sustainable development goals.

A public intervention in private and market sectors is a necessary and effective means for reaching the objectives of sustainable agrarian development. For example, state subsidizing is one of the main instruments for supporting agricultural producers in the European Union. Different type of subsidies to a various degree favor agrarian sustainability and its individual aspects in different type of farms, subsectors of agriculture, and ecological and geographical regions of the country. “Farmland area-based state subsidy” is a major component of the Common Agricultural Policy for supporting the income of agricultural producers. According to the majority of surveyed managers (57,5%) that type of subsidies impact positively agrarian sustainability and all its dimensions (Figure 1). That mode of public assistance aims at increasing economic and social sustainability of agriculture and rural regions and overcoming

disproportions with other sectors of economy. Along with this, reception of a single area-based payment is also related with an obligation for maintaining the land in a good agronomic condition by landowners and farmers, which improves environmental sustainability. Nevertheless, a good portion of the farms (27,5%) evaluates as neutral the effect of state subsidies for utilized agricultural land in regards to agrarian sustainability and its individual aspects. Moreover, 15% of the managers believe that this type of subsidies is a negative factor for agrarian sustainability. The good part of the farmland area based payments in the country is received by a relatively small proportion of (large) agricultural holdings and in certain subsectors of agriculture (grain, oilseeds, etc.). The latter further contribute to income disparity

of different type of farms, subsectors, and regions of the country.

Favorable impact of the state farmland area based subsidies to a various extent affects positively the farms of different juridical type, size, production specialization, and ecological and geographical location. Our study has found out that to a greatest degree the positive impact of area-based subsidizing is felt by the Cooperatives, Companies, and Physical Persons (Figure 4). Furthermore, with increasing the size of agricultural holdings also progressively grows the favorable impact of that type of public support. While in holdings Predominately for subsistence merely a third assess as positive that type of EU support, among the farms with Big sizes their share is three quarter.



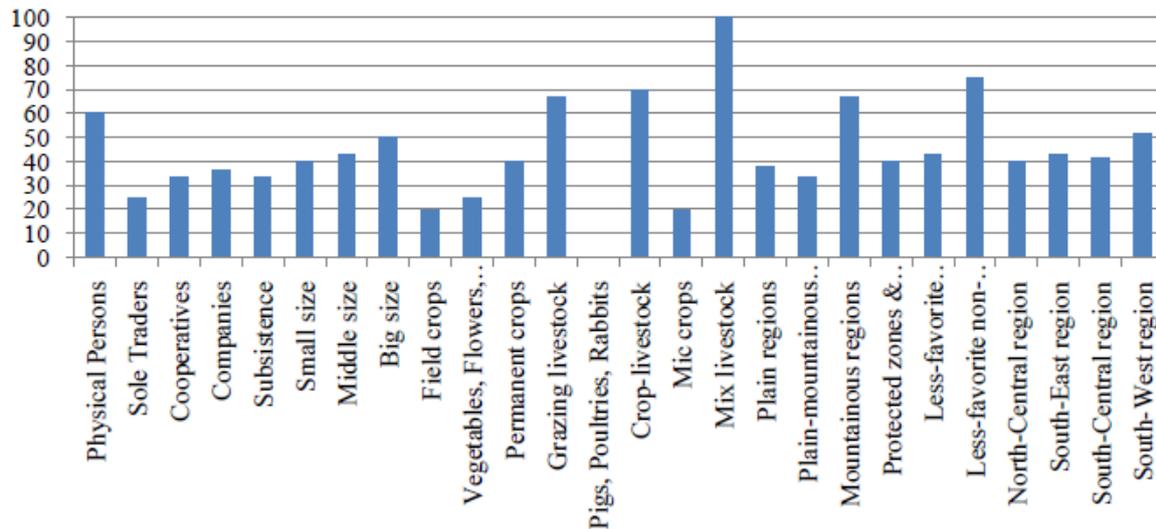
Source: interviews with managers of farms, 2017

Figure 4. Positive impact of state land-based subsidizing on agrarian sustainability in Bulgaria (percent)

There are also variations in the positive impact of the state area-based subsidies in different subsectors of agriculture. From this instrument of public support to a greatest extent take advantage farms specialized in Mix-livestock and Field crops. Among producers specialized in Permanent crops and Vegetables, Flowers, and Mushrooms every other assesses as positive the received area-based subsidies in relation to agrarian sustainability. In holdings specialized in Pigs, Poultryes and Rabbits none of the surveyed managers indicates that this type of public support favors agrarian sustainability. There is also a considerable differentiation in the positive effect of the state land-based subsidies in different ecosystems and regions of the country.

Another main form of public support is the national (top-ups) subsidizing for particular activities and products. Utilized agricultural land based subsidizing creates great differences in the incomes and effectiveness of individual subsectors and producers, which necessitates “correction” though direct subsidizing the production of certain products, grazing livestock, executed (restricted) activities, etc. According to the majority of interviewed managers (57,5%) “state subsidies for activities and products” does not affect significantly agrarian sustainability (Figure 1). For a good portion of the surveyed farms (42,5%) state subsidizing for activities and products is a positive factor for maintaining and improving agrarian sustainability or some of its elements. There is a great variation in the degree

of the public subsidizing of production among different type of farms. (Figure 5).



Source: Interviews with managers of farms, 2017

Figure 5. Positive impact of state subsidizing for activities and products on agrarian sustainability in Bulgaria (percent)

The failure of effective market and private investments in agrarian sectors is a reason for the state intervention in supply of a preferential credit and subsidies for long-term (“capital”) investments for improving sustainability. A half of the interviewed farms used “state subsidizing for new investments” and evaluate that form of public support as positive in relation to agrarian sustainability and its main aspects (Figure 1). The rest half of the holdings however, have not benefited from that mode of public support and assess it as neutral in regards to agrarian sustainability. Many instances are pointed out when public investment funds are utilized ineffectively due to the high amount of subsidies. Farms of different type to the greatest extent participated in diverse schemes for state subsidizing of new investments– Companies (81,82%) and Sole Traders (50%). The largest portion of supported by that public support instrument farms are among the groups of the Big size (87,5%) and Middle size (64,29%), as well as specialized in the Permanent crops (90%), Mix livestock (100%), and Grazing livestock (66,67%). Simultaneously, none of the holdings Predominately for subsistence and from the sector Vegetables, Flowers and Mushrooms is favored by that mode of governance of agrarian sustainability. A greater proportion of holdings located in the Plain (56,25%) and Plain-mountainous(53,33%) regions are beneficiaries of the public investment subsidies in comparison with the farms with Lands in protected zones and territories(20%) and Mountainous regions

(33,33%). A good share of the farms in South-East region (85%) and North-Central region (60%) benefit of the positive impact of that form of public intervention comparing to the holdings in the South-West (39,28%) and South-Central (41,18%) regions of the country.

The green payments and environmental measures of the Program for Rural Development (PRD) are another instrument for public support to sustainable agrarian development, particularly its environmental aspect. The greatest proportion of surveyed managers (42,5) assesses “green payments and eco-measures of the Program for Rural Development” as positive for agrarian sustainability (Figure 1). Public subsidies of that type are considered as mode of payment for services (public goods provision) and compensation of the costs of farmers for carrying out of an important social function – care for natural resources. For their part, the farms participating in that hybrid form of governance are obliged to implement certain (“good”) practices for conservation and improvement of lands, waters, landscape, natural biodiversity, etc. It is indicative that none of the interviewed farms thinks that type of public support has a negative impact on agrarian sustainability, and particularly on its environmental aspect. Nevertheless, according to the majority of holdings (57,5%) that form of public support has no significant importance for agrarian sustainability and any of its aspects. That is consequence of the fact that most farmers either do not receive such a support, or

its form and amount affect anyway agrarian sustainability and its different aspects.

Various forms of public support to farmers organizations of different type are a major component of the public intervention in agriculture and mode for increasing agrarian sustainability. That type of public support is extremely important for Bulgarian agriculture where evolution of the effective organizations of agricultural producers for correction of market and private failures considerably lag behind the needs of farmers. For predominant part of the interviewed managers (95%) existing at the contemporary stage of development in the country “state support to farmers organizations” does not assist in any way agrarian sustainability (Figure 1). Apparently envisaged instruments of the state intervention in that exceptionally important area are not used by the farmers and/or lead to actual improvement of the governance of agrarian sustainability in the country.

In Bulgarian agriculture there are also applied some other measures of the Program for Agrarian and Rural Development aiming at supporting the actions of agrarian agents for improving different aspects of agrarian sustainability. According to the great part of the surveyed managers (72,5%) “other measures of the Program for Agrarian and Rural Development” do not impact significantly the level of agrarian sustainability (Figure 1). That is subsequent of the fact that considerable number of the Bulgarian farmers either do not have practically access to that form of public support or see that intervention as an essential factor for agrarian sustainability or some of its dimensions. To a greatest extent the favorable impact of other measures of the PRD is pointed out by Companies (45,45%), holdings with Big size (50%), farms specializes in Permanent crops (60%), and located in Plain-mountainous regions (46,67%), and North-Central region of the country (80%). For the best portion of the farms in the rest groups of juridical type, sizes, product specialization, ecological and geographical situation, the favorable impact of that form of public support is relatively small or absent. As far as the remaining public programs are concerned, according to the greatest part of the interviewed managers (95%) they do not contribute in any way for agrarian sustainability (Figure 1).

Norms for good agricultural practices and cross compliance aim at directing actions of the

agricultural producers toward achieving sustainable agriculture in its three aspects – social, economic and ecological. Most surveyed managers (65%) indicate that “requirements for cross compliance and good agricultural practices” do not have substantial importance for the governance of agrarian sustainability. Many agricultural producers do not comply fully (or at all) with compulsory norms and systems of good agricultural practices, or they appreciate that such official standards contribute to agrarian sustainability. What is more, one tenth of the farms points out that mandatory requirements for cross compliance and good agricultural practice have a negative effect in regards to agrarian sustainability or some of its aspects. The latter is often due to the fact that superior “external” standards increase costs of producers (diminishing economic sustainability) without being associated with an expected positive impact on overall sustainability. In some cases, such norms do not correspond to the specific conditions of each holding and contribute to accomplishment of desired objectives for sustainable development of related farms, subsectors, ecosystems or geographical regions.

Different forms of local support by the community and/or local authority are means for supporting market, private, collective and state modes, and for correction of market, private and/or state failure(s) and improvement of agrarian sustainability in the region. According to the predominant portion of the interviewed managers (95%) “existing public support in the region” has no significant importance for agrarian sustainability and its diverse aspects (Figure 1). In many cases such support practically is missing or it is insufficient, unsustainable, or not well designed in the interest of agrarian development in the region.

Formal and informal voluntary standards, norms and rules, introduced and applied by the farmers and/or farmers organizations are new developing form for governing of agrarian sustainability. They are expression of the willingness of individuals or a group of producers to impose voluntary quality, social, ecological etc. standards, norms, rules and/or restrictions for sustainable agriculture overpassing the official norms. According to the majority of surveyed holdings (72,5%) they do not apply any “voluntary standards, norms and rules” and consider that modes as important for agrarian sustainability and some of its aspects (Figure 1). Every forth of surveyed managers assess as

positive for agrarian sustainability implementation of (participation in initiatives for) voluntary standards, norms, and rules. Those are innovative farms from different juridical type, size, product specialization, ecological and geographical location, which implement such emerging private or collective mode for governing of agrarian sustainability (or some of its aspects).

Provision of free services like training, advices, etc. by the state is an important form for public support to agrarian sector. Every fifth of the interviewed managers reports of using in the past or presently some form of “provided by the state free services (training, advices, etc.)”, and assess that mode of state assistance as a positive factor for agrarian sustainability and its dimensions (Figure 1). In recent years there have been carried out numerous trainings and consultations by the Agricultural Advisory Service and other government organizations, aiming at improving qualification and awareness of agricultural producers. In this mode smaller size holdings are mostly involved, which do not have or cannot afford to hire experts in management, finance, agronomy, etc. and rely on free state services in the area. At the same time however, the majority of the farms do not believe that provision of free services (training, advices, etc.) by the state is essential for agrarian sustainability. The latter confirms that the majority of Bulgarian farms have no access or use free state services, or evaluate the importance of (received) services as neutral in relation to agrarian sustainability and its individual aspects.

Another form for public (government) involvement in the private and collective sector for governing of agrarian sustainability is a public-private partnership. The majority of the surveyed managers (90%) do not report participating in a “partnership with community, state, international etc. organization”, nor evaluate that hybrid mode as important for agrarian sustainability (Figure 1). The latter is subsequence of the fact that in the country still there are not popular and widespread formal partnership forms of agricultural producers with a community, state and/or integrational organization.

Tax preferences of different type are popular public form for supporting certain producers, subsectors, regions, etc. The majority of surveyed holdings (77,5%) does not use “tax preferences” and/or suggest that mode is

important for agrarian sustainability and its dimensions (Figure 1).

Mandatory social security payments are an important form for public intervention aiming at improving the social position of the workers in the sector and elevating agrarian sustainability. According to 15% of the surveyed managers they strictly implement “obligatory social security payments” and believe that instrument favor agrarian sustainability, particularly its social aspect (Figure 1). Those are mostly larger cooperative and other farms, for which the social security payment of workers is a priority and evaluated as a positive factor for improving of overall efficiency. The latter type of farms is also the mostly controlled by the authorities for complying with the social security payment norms, they often strictly implement formal regulations, and perceive that mode as a part of the normal farm practice. At the same time, a good portion of the holdings (17,5%) assess as negative compulsory social security payment in relation to agrarian sustainability, and particularly for its economic aspect. These are larger farms, hiring many permanent and seasonal labors, for which the social payments take a big share in the total costs. The enhanced control and sanctions from the government agencies on big farms give less possibility to ignore regulatory requirements in the area. A good number of managers are also complaining that they are forced to hire many „unmotivated and unskilled workers“, for which they pay social securities without getting corresponding labor contribution (high costs for negotiation, training, unjustified absences from work, low working discipline, high job turnover, etc.). For the latter type of holdings, the mandatory social security payments are a significant additional cost which is not associated with relevant positive effects on agrarian sustainability.

The mandatory insurance is one of the forms of public intervention in the risk governance in agrarian sphere and for enhancement of agrarian sustainability. In agriculture, pure market forms for insuring against risk are not popular due to the lack of appropriate insurance coverages (products), high costs (premiums), frequent disputes over claims for compensation for damages, lack of tradition, etc. In many instances, the market forms are not applied due to the employment of other more effective private modes of risk management. Usually, compulsory assurance is required for participation in some of the public support measures as it is necessary to insure permanent

crops and buildings, livestock, yields, labor, etc. in projects for modernization of agricultural holdings. One fifth of the surveyed farms point out the favorable impact of “mandatory assurance” on agrarian sustainability and its aspects. Those are mainly bigger farms, which take part in different forms of public support programs requiring obligatory insurance (Figure 1). For a major part of the holdings however (62,5%) the obligatory assurance has no importance in regards to agrarian sustainability or some of its aspects. The majority of Bulgarian farms either does not practice that mode of (market) assurance or see any benefits from that form for governing of agrarian sustainability.

Social recognition of the contribution of the farmer, the owner and/or the manager of the holding is an important factor for stimulating (improving) the actions for achieving agrarian sustainability. According to a large part of the interviewed managers (37,5%) “social recognition of their contribution” is an essential regulating behavior and directing activity positive factor for improving agrarian sustainability (Figure 1). The great importance of the “social image” of the farmer and the recognition by the community in the region and country is pointed out by the innovating entrepreneurs and farmers of different kind, size, production specialization, ecological and geographical regions. That informal form of social governance of the behavior is particularly typical for agriculture, where farmers, their activities and “reputation” are well known by the professional community, related sectors and general community in a residential area, region or country. For the remaining larger portion of the holdings (62,5%) however, social recognition of the farmer’s contribution has no importance for agrarian sustainability and its dimensions.

Informal contracts between agricultural producers, farmers and suppliers, farmers and buyers, etc. are widely used in agrarian sphere. Unlike written contracts, having a legitimate power and being able to be disputed through a court system, informal agreements are governed solely by the “good will” and trust between counterparts and unwillingness to lose cooperation with a partner and/or social reputation. The greatest part of surveyed managers (60%) indicates the positive importance of the “informal agreements” in relation to the governance of agrarian sustainability (Figure 1). A significant fraction

of the relationships in the agrarian sphere in the country are still governed (more) effectively through that traditional mode between counterparts, knowing each other well and frequently trading. For a good proportion of the holdings (30%) informal agreements have no importance for agrarian sustainability. Increasingly the relationships between counterparts are governed through a formal contract since they cover rare deals, large volumes, unknown counterparts, big partners (retail chains, processors, electricity, water, etc. suppliers) and other organizations (banks, insurance companies, state agencies), for which “formal” written contracts are mandatory. Besides, existence of formal contracts (e.g. for marketing of output) very often is a precondition for application for a bank loan and some of public support programs.

Nevertheless, each tenth of the holdings believes that informal agreements in the sector impact negatively agrarian sustainability and its components. For that form is too expensive or impossible to resolve conflicts between parties in case negotiated obligations are not fulfilled or conditions of exchange change (sharp increase in prices of purchased by farm inputs or considerable decline in market prices of farm produce). Moreover, widely used informal agreements in the country are associated with development of a huge informal (grey) sector in agriculture, with unenforced quality, safety and environmental standards, unpaid taxes and social securities, juridical consultations fees, costs for contracts preparation, writing and registration, etc. All these increase production costs in the “light” sector of agriculture, and inferior competitiveness and efficiency comparing to the informal sector. Therefore, farms complying with the formal rules assess as negative for agrarian sustainability widespread application of informal agreements. Different type of holdings, subsectors and regions apply unevenly the informal agreements and evaluate as positive their role for agrarian sustainability. To the greatest extent informal agreements dominate among Physical Persons (73,33%) and firms of various kind – Sole Traders (62,5%) and Companies (63,64%). Simultaneously, relatively a small portion of the cooperative farms (16,67%) applies that mode for governing relations with diverse agents, and assess it as positive for agrarian sustainability. The smallest semi-market holdings entirely govern their relationships with other agents through informal

agreements. At the same time, farms with Middle sizes to the least extent (50%) use contract of the latter type. Informal agreements are most popular in subsectors Mix livestock (100%), Permanent crops and Mix crop-livestock (by 80%). Farms applying at least informal agreements and assessing them positively are among Field crops (20%) and in Vegetables, Flowers, and Mushrooms (25%). Informal contracts to the biggest degree are employed by the holdings in Mountainous regions (88,89%), while in the Plain regions to smallest extent. The South-West region of the country is the leader in terms of the proportion of farms (73,21%) practicing informal agreements, while fewer number of farms in the South-East region (42,86%) evaluate as positive that type of governance of relations. The structure and the scope of informal agreements in different type of farms, subsectors of agriculture, type of ecosystems and regions of the country give also some tentative insight for the evolution of the informal sector in agrarian sphere at the present time.

Identification of the links (correlation) between the level of agrarian sustainability in individual farms and the importance (efficient, "positive" impact) of diverse private, contractual, collective and hybrid modes of governance for these holdings, allows to determine the real efficiency of the specific governing modes for improving agrarian sustainability in the country. For most of implemented governing forms there exist a strong correlation between the positive estimates of the managers for the impacts on agrarian sustainability, and the archived good (and high) level of agrarian sustainability in the corresponding farms. Thus, preferred and employed by the farms governing forms are critical and (most likely) their choice by the managers to a certain extent actually contribute to achievement of a higher agrarian sustainability in surveyed holdings. Effectiveness of individual governing modes is as following: personal conviction and initiatives of the farmer (92,5%), personal conviction and initiatives of workers (100%), profit and benefits in the present time (92%), immediate benefits for other persons and groups (75%), diversification of activity in the farm (83,33%), direct retail sells of products and services (84,62%), sale on wholesale and commodity markets (100%), marketing contract for products and services (95,24%), barter exchange of products and services (100%), free provision of resources, products, services and activities

(83,33%), interlinked supply contract with services by the supplier (100%), participation in joint actions with other farmers and non-farmers (100%), integration with the buyer of produce (100%), partnership with a business organization (100%), state subsidies for activities and products (88,24%), state subsidies for new investments (100%), green payments and eco-measures of the PRD (94,12%), state support to farmers organizations (100%), other measure of the PARD (100%), participation in other public programs (100%), existing public support in the region (100%), partnership with community, state, and integrational organization (100%), and social recognition of the contribution (93,33%).

For the rest of analyzed governing forms used by the surveyed farms there is no clear relation between the superior levels of agrarian sustainability and the managers' assessments on sustainability impact of a particular mode. In all these cases, preferred by the managers governing forms do not lead to expected results (due to novelty, a short period of implementation, inefficiency in terms of sustainability), or manifested "joint (cumulative, complementary, contradictory) effect" with other employed governing modes. It is also likely that the managers' estimates are not precise and represent the impact of a particular governance form on farm private efficiency rather than the real impact on agrarian sustainability (overall social efficiency).

CONCLUSION

Our empirical study has just been a first attempt to identify the complex links between the governing forms employed by the Bulgarian farms and the level of agrarian sustainability in the country. It made it possible to identify the mechanisms and modes of governance mostly used by the agricultural producers, and assess their impact on agrarian sustainability as a whole, and in different subsectors, geographical and administrative regions, (agro)ecosystems, and type of farming enterprises. We have found out that in the specific socio-economic, institutional and natural environment agricultural producers of different juridical type, size, specialization, and location use quite unlike mixture of effective market, private, collective and hybrid modes for governance or their activities and relations. Individual factors and modes which most contribute to improvement of agrarian sustainability at the current stage of development in the country are:

managers' personal convictions and initiatives, farms resources and innovation potential, near future profit and benefits strategies, market prices levels and dynamics, area-based EU subsidies, and informal agreements.

Nevertheless, evolution of the system of agrarian governance and the level of agrarian sustainability depends on various economic, political, behavioral, demographic, technological, international, natural etc. factors. Individual, joint and spillover effects of all these factors are to be accounted for and assessed in further research in that new area. Particularly, it is important to incorporate into analysis and assess the impact of the formal and informal components of institutional environment which are critical and eventually determine agents' behavior and level of agrarian sustainability. Besides, always there is a certain "time lag" between the "improvement" of the system of governance, and the positive, negative or neutral impact on agrarian sustainability, and its economic, social and environmental aspects. All these factors are to be studied in such assessments as estimates also made on the "dynamics" of the impact over a longer time horizon.

Research on the relations between the governing structure and the (level and dynamics of) agrarian sustainability is to continue through expansion of the number and representation of surveyed holdings, and the spectrum of the specific governing modes used by the farms of different type as well as assessments of the impact of institutions on agrarian sustainability. What is more, applied methods are to be enriched in order to specify better the complex relations between the agrarian governance and sustainability. Further more, modes of governance at higher hierarchical levels (sector, national, transnational) have to be specified and their separate and/or complementary impact on agrarian sustainability evaluated.

Having in mind the importance of comprehensive assessments of the impacts of governing system on agrarian sustainability, and the enormous benefits for farm management and agrarian policies, this type of studies are to be expanded and their precision and representation increased. The latter however, requires a close cooperation between all interested parties, and participation of farmers, agrarian organizations, local and central authorities, interest groups, research institutes and experts, etc. Moreover, the precision of estimates has to be improved,

and besides on the estimates of farm managers to incorporate other relevant information – experts and stakeholders' assessments, monitoring, report, statistical, etc. data, studies on "actual" (rather than declared) behavior of various agrarian and non-agrarian agents, and associated "effects" on agrarian sustainability, etc.

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