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THE IMPACT OF THE INSTITUTIONAL ENVIRONMENT ON AGRARIAN SUSTAINABILITY IN BULGARIA

The specific system of governance is a critical factor, which to a great extent (pre)determines the type and speed of development in different countries, industries, regions, communities, etc. This article applies the New Institutional Economics framework (which is interdisciplinary and combines Economics, Organization, Sociology, Law, Political and Behavioral Sciences) and assesses the specific effects of the major components of the “external” institutional environment on the agrarian sustainability level in Bulgaria in different administrative, geographical and ecological regions, subsectors of agriculture and farms of various juridical type and size.

Keywords: institutional environment; governance; agrarian sustainability

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

Keeping in mind the importance of the agrarian sector, the assessment and the improvement of the governance of agrarian sustainability is among the most topical theoretical and practical issues at the contemporary stage (Bachev, 2012, 2013, 2014; Sarov, 2017; Bachev, 2010, 2010a, 2016; Bachev et al., 2016; Raman, 2006; Terziev and Radeva, 2016). However, there are still no sufficient comprehensive empirical studies on the impact of the institutional environment on agrarian sustainability in Bulgaria and abroad. The latter is a consequence of the “newness” of that problem, the lack of statistical and other information, the inadequacy of the traditional economic methods of analysis in that area, etc. Subsequently, the economic analyses do not give a full insight into the “driving” factors of socio-economic development and the possibility to effectively assist public policy and individual and collective actions in order to achieve sustainable development.

Research Methodology

Maintaining the social, economic and environmental functions of agriculture requires an effective *social order* (a “good governance”) - a system of mechanisms and forms for the regulation, coordination, stimulation and control of the behaviors, actions and relations of the individual agents at the different levels (Bachev, 2010). The system of governance of agrarian sustainability includes a number of *principle* mechanisms and modes, which manage the behavior and actions of individual agents, and eventually predetermine the level of agrarian sustainability including: the *institutional environment* (“the rules of the game”) - that is, the distribution of formal and informal rights and obligations between individuals, groups and generations, and the system(s) of enforcement of these rights and rules (North, 1990); the

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market modes (“the invisible hand” of the market) – those are various decentralized initiatives governed by the free market price movements and market competition; the *private modes* (the private or collective order) – those are diverse private initiatives and special contractual and organizational arrangements; the *public modes* (public order) – those are various forms of public (community, state, international) interventions in the market and private sector, such as: public guidance, regulation, assistance, taxation, funding, provision, modernization of property rights and rules, etc.; the *hybrid modes* – some combination of the above three like a public-private partnership, etc.

Agricultural producers (farms) are major agents in the system of governance of agrarian sustainability. In order to identify the specific modes of governance of agrarian sustainability, in 2017, in-depth interviews were carried out with the managers of 40 farms of different types and locations. The assistance of the major producers’ associations, state agencies, processors, bio-certifying and servicing organizations, and local authorities was used for the identification of the agricultural farms that are “typical” for a particular region. The survey is comprised of multiple questions associated with the impact of the major elements of the socio-economic, institutional and natural environment on the socio-economic, environmental and integral sustainability of the surveyed holdings. Initially, the managers assessed the impact of each component of the institutional environment as being either “positive”, “neutral”, or “negative”. After that, the relations between the “estimates of the managers” for the impacts of the elements of the external environment and the sustainability level of the respective farms were specified.¹ The integral estimates are arithmetic averages of the assessments of the individual farms of a particular type.

Results and Discussion

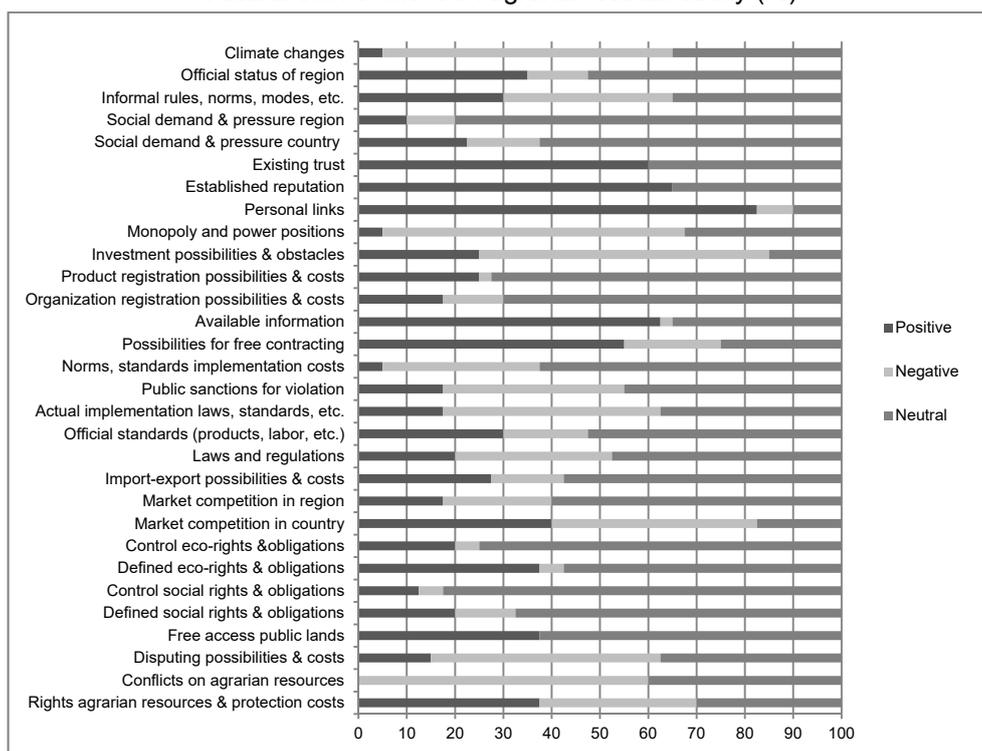
Our survey has proved that, for the majority of the interviewed agricultural producers (37.5%), “the provided rights over the agrarian resources and the costs for the protection of private rights” have a positive impact on multiple aspects of agrarian sustainability (see Figure 1)². According to the majority of the farmers, the existing private rights and the costs for their protection are of primary importance for the improvement of economic sustainability. The system of private property rights has a high economic significance since it creates incentives for investment and the effective utilization of resources. For many managers, the dominating structure of rights and rules in the sectors, modernized according to the EU standards, positively impacts the social and environmental aspects of agrarian sustainability as well. Furthermore, for almost every third of the surveyed farms the existing private rights over the agrarian resources and the (high) level of the costs for their protection and exchange have a rather negative effect on the different aspects of agrarian sustainability.

¹ The framework applied for assessing the socio-economic, environmental and integral sustainability level is presented in details in another publication (Bachev et.al. 2016)

² All figures are based on own calculations of survey data collected from the managers of farms in 2017.

Figure 1

The impact of the major elements of the socio-economic, institutional and natural environment on agrarian sustainability (%)

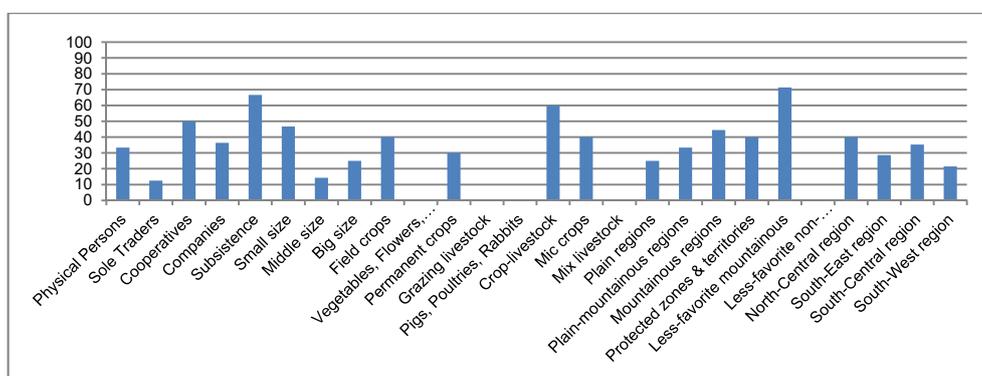


The negative impact of the structure and the costs associated with the rights over agrarian resources affect farms of various types (see Figure 2). The only exceptions are the holdings specializing in vegetables, flowers and mushrooms, pigs, poultry and rabbits, grazing livestock and mix livestock breeding, as well as those located in less-favored non-mountainous regions. All these farms usually use a smaller amount of own or rented lands, have access to the usage of public meadows and pastures and have no need to purchase or lease agricultural lands in large amount or other intellectual agrarian products. Holdings, which are engaged in intensive deals over the exploitation of the scales and scopes of farmlands with numerous land owners, or use ownership as a collateral for loans (cooperatives, field crops and mix crops production), are affected to a greater extent by the negative consequences of the imperfect institutional framework (the identification of property rights) and the costs for the protection and transfer of private rights. This restricting element of the institutional environment is particularly crucial for farms with smaller sizes, which lack the potential (negotiation power, sufficient staff, access to lawyers,

etc.) typical of the large business enterprises. The negative impact of the existing structure and the possibilities for the protection of private property rights is particularly strong for holdings located in mountainous regions, where agrarian resources are limited and dispersed across large areas. The same applies to a good portion of the farms in less-favored mountainous regions and those with lands in protected zones and territories, because they are influenced by the negative impact of that component of the institutional environment due to the multiple restrictions on the utilization of resources in relation to the (special) status of such areas.

Figure 2

The negative impact of the provided rights over the agrarian resources and the costs for the protection of the private rights over agrarian sustainability (%)



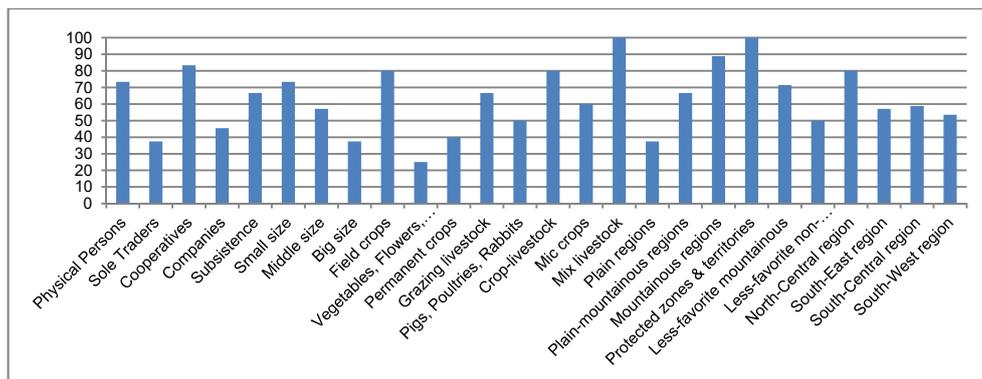
Many different types of producers also report having high costs for the protection of their resources and output, due to constant thefts of property and yields. A good number of holdings are forced to provide permanent security for their yield, which additionally makes the production more expensive or turns managers, owners and their families into guards. There are many instances when privately owned animals destroy the harvest of other farmers and it is very difficult to punish offenders, because it is very difficult to identify the offenders with certainty, so that they can be legally prosecuted. In other instances, wild animals destroy sow, permanent crops and/or yield. However, such cases are not a matter of assault on property caused by persons, but rather a need (costs) arises for managing natural risk. For 30% of the surveyed farms the rights over agrarian resources and the costs for their protection are of no importance for the aspects of agrarian sustainability.

According to 60% of the surveyed farms, the “existing conflicts over agrarian resources” negatively impact the different aspects of agrarian sustainability, while according to the rest of the surveyed farms they have no major effect on them (see Figure 1). The conflicts usually obstruct the efficient distribution and sustainable exploitation of agrarian resources and are related to significant costs for their prevention and resolution. That factor usually considerably diminishes economic

sustainability and sometimes environmental sustainability, and occasionally social sustainability. Different conflicts over agrarian resources have varying effects on the sustainability of different subsectors, regions, and types of farming organizations (see Figure 3). Such conflicts are commonly associated with the strong interests in the acquisition of ownership and/or utilization of certain limited agrarian resources by individual agents, farms, related and unrelated businesses, powerful groups, etc. In certain cases there are strong conflicts, related to the strategies of some large groups for the “legitimate” acquisition of major resources (lands, facilities, enterprises) from smaller producers through various unlawful schemes (applying pressure, unfair competition, severe conditions for crediting, lawsuits and even causing bankruptcy). There are many instances of conflicts, caused by not defined or poorly defined rights (of ownership, direction, utilization, etc.) over certain resources or by their “public” (good) character, as is the case with new technologies, state and municipal pastures and lands, water sources, ecosystem services, critical infrastructure, etc.

Figure 3

The negative impact of the existing conflicts over agrarian resources on agrarian sustainability (%)



Conflicts over agrarian resources negatively affect the cooperative farms and the holdings of physical persons to the greatest extent. The adverse impact of this factor is felt to a lesser degree by the various types of firms that possess or use more efficient mechanisms for the prevention and/or effective overcoming of existing conflicts with other agents. Despite that, a good number of sole traders and companies evaluate that conflicts over agrarian resources negatively impact agrarian sustainability. The negative impact of conflict over agrarian resources increases along with the reduction of farm size, and it is typical for small and middle-sized holdings, as well as for semi-subsistence farms. Furthermore, a considerable portion of the large farms also indicate that such conflicts diminish agrarian sustainability. The conflicts over agrarian resources influences the sustainability of mix livestock farms, field crops producers, mix crop-livestock farms, grazing livestock breeders and mix crops

producers to the greatest extent. The negative impact of conflicts, associated with agrarian resources is the most pronounced in mountainous regions and in farms with lands in protected zones and territories, and to a lesser extent in the plain regions of the country. The latter is a consequence of the fact that the amount of agrarian resources in the mountainous regions is relatively limited and all related conflicts severely affect their sustainable development. The negative impact of that factor is expressed to a greater extent in the North-Central region, in comparison with the south regions of the country.

According to a big part of the interviewed managers, the “real possibilities and costs of disputing rights and contracts through legal means” negatively affect agrarian sustainability (see Figure 1). That is a consequence of the fact that the legitimate means for the resolution of disputes and conflicts are in reality “impossible”, not accessible or too expensive to use for the significant portion of agrarian agents. For example, many surveyed agricultural producers complain from the delayed payment of purchased produce by big buyers, processors and/or food chains, or the untimely provision of subsidies, compensations or assistance by the responsible state agencies. Many instances are reported, when it is too expensive or practically impossible to enforce legitimate rights on certain resources or activities through legal means, due to how not working, slow or costly the public system of identification, enforcement, disputing and provision of rights is to use by individual agents. In all these cases, the agricultural producers who are unilaterally dependent upon certain buyers and/or state institutions are harmed, being unable to enforce their legitimate rights over resources and activities, nor to get compensation for realized losses or missed benefits.

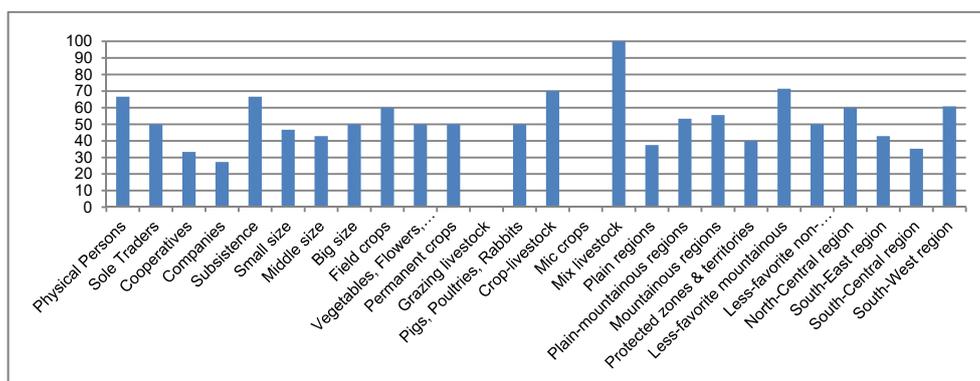
When the costs of private contracts are enormous, agents replace the most effective form for governing of agrarian sustainability with a less efficient but “safer” mode for safeguarding their investments and interests – through restrictions on deals and relationships with market agents, the personification of trade, the weaker cooperation with external agents, the complete integration of transactions, targeting short-term benefits and solely own profit, etc. The possibilities and costs of disputing rights and contracts through legal means positively impact different aspects of the agrarian sustainability of only a small portion of holdings. According to a relatively big portion of the surveyed farms, the possibilities and associated costs are neutral with regard to sustainability. These figures indicate that for the majority of Bulgarian holdings the official system for disputing the rights and contracts either works well, or they possess (use) other informal and more-effective mechanisms for the protection of their rights and contracts – good relations, privileged and/or powerful positions, personal connections, assistance from a third party, unlawful modes, etc. Some holdings do not need to use the official system of conflict resolution at all due to the lack of interest or conflicts with other parties over resources and obligations – small amount of owned or used resources, absence or small number of contractual relations, etc.

The possibilities and costs of disputing rights and contracts through legal means have a negative effect on agrarian sustainability according to two thirds of physical

persons and for every other sole trader, for one third of the cooperatives, and for just above a quarter of the companies (see Figure 4). It is apparent that the last two types of farming enterprises possess greater possibilities for covering the (often high) costs associated with the protection of private rights and contractual obligations. At the same time, a significant number of the smaller holdings and the biggest farms feel the adverse impact of that factor. This is due to the high costs of a “unit of contestation”, the lack of experience, capability, possibilities, low frequency, etc., or due to the significant overall costs for multiple disputes as a result of the scale of activity, employed resources and contractual relations with other parties. That factor adversely affects all or the predominant part of the holdings specialized in mix livestock, mix crop-livestock and field crops. One in every two farms specialized in permanent crops, pigs, poultry and rabbits, or in vegetables, flowers and mushrooms report negative impacts. For all the holdings specialized in grazing livestock and mix corps, the possibilities and costs of disputing rights and contracts through legal means are a positive or neutral factor.

Figure 4

The negative impact of the possibilities and costs of disputing rights and contracts through legal means on agrarian sustainability (%)



Among the various ecosystems exposed to the negative impact of the possibilities and costs of disputing rights and contracts through legal means, the farms in less-favored mountainous regions and plain-mountainous regions are affected the most. The holdings located in the South-West and North-Central regions of the country are the ones that suffer the most due to the inefficiency of the existing system, while the farms in the South-Central region are affected to the least extent. The existing regional differentiation of the impact of that factor is determined by the different levels of efficiency of the formal system of the disputing of rights in each region, the specific structure (and efficiency) of the informal institutional environment and the modes of governance, as well as the different needs, challenges, contractual structure, accumulated experience and internal capability of the different farms.

A significant part of the surveyed holdings report that the “free access to public lands” is an essential positive factor for agrarian sustainability, from an economic perspective, as well as from a social and environmental perspective (see Figure 1). At the same time, none of the managers assesses that such an access has a negative impact on agrarian sustainability. Despite that, many small producers in mountainous and other regions complain that the public lands are not always distributed fairly. Many instances are reported of large state and municipal pastures and meadows, for which huge public subsidies are received, being allocated to individuals and groups “with connections”. Such modes decrease the social efficiency, although they may not necessarily change (and could even increase) the economic and/or environmental sustainability of land use. In many residential areas there are no sufficient municipal pastures and that creates serious problems for the sustainable development of many small-scale livestock breeders. In certain regions, the land and other resources with free access are not utilized sustainably due to their overuse (more than the allowed number of livestock on a pasture, the uncontrolled collection of wild plants, snails, etc.) or underuse (lack of care for public resources due to the absence of owners).

To the greatest extent, the favorable impact of such an institutional organization (free rather than restricted or no access to public lands) on agrarian sustainability is reported by physical persons and subsistence farms, companies and small-sized farms, all farms specialized in grazing livestock and mix livestock, as well the majority of the mix crop-livestock holdings. The positive impact of that factor is confirmed by the farms, located in mountainous regions, in less-favored non-mountainous regions, and most farms in the South-East region. This is due to the fact that mostly holdings with small size specialized in grazing livestock located in the mountainous regions of the country take advantage of such a good opportunity to the greatest extent. In these regions private agricultural lands are limited and there are large pastures and meadows, which are widely provided for use to local farmers.

According to one fifth of the interviewed farm managers, the “defined social rights and obligations” at the current stage of development have a positive impact on agrarian sustainability, and particularly on its social aspect (see Figure 1). The favorable impact is pointed out by the majority of cooperative farms, in which social goals are principally an essential priority for their overall activity. The positive impact on agrarian sustainability is also pointed out by other big employers (firms), which believe that the social rights of workers are to be respected, and that secured workers are also more economically productive and more ecologically efficient. However, for the majority of the farms the social rights and obligations formally defined by the institutional environment do not have any impact on agrarian sustainability. That is a consequence of the fact that many formal norms and standards related to social rights, labor conditions and payment, etc., are not well respected or controlled in agriculture. For a good fraction of the farms, the legally defined social rights and obligations have a negative impact on agrarian sustainability. Principally, bigger holdings and major employers are forced to comply to a greater extent with the official norms for contracting, working conditions, wage payments, insurance,

social security, etc. These farms are subject to considerable public subsidizing and along with that to a stricter control and sanctions by the state agencies for noncompliance with the various (quality, social, environmental, etc.) standards.

For some managers, the “new” social obligations which arise from the modernization of the legislation are associated with additional costs and diminishing economic efficiency, and with that of the overall sustainability of the sector. On the other hand however, the greater portion of the interviewed managers believe that the “efficiency of controlling social rights and obligations ” is a neutral factor for agrarian sustainability and its individual aspects (see Figure 1). That is due to the fact that the implementation and enforcement of social rights and obligations in the sector (similarly to other sectors in the country) is not at a good level and has no real impact on sustainability and its social aspect. At the same time, a good portion of the holdings assess the impact of the effective control over social rights and obligations as positive. That is a consequence of that fact that a stricter control significantly improves the status-quo and leads to the implementation of otherwise “good” social standards and norms, which were introduced after the country’s accession to the European Union. At the same time, for a relatively small fraction of the farms, an “improved” control on the strict implementation of social rights and obligations is undesirable, because it would considerably increase the costs of production and negatively affect sustainability.

According to the more significant part of the interviewed farm managers, the “defined eco-rights and obligations” have a positive effect on agrarian sustainability, particularly on its environmental aspect, and eventually contribute to enhancing the social and economic dimensions of sustainability as well. The favorable impact of this factor is assessed equally by holdings of different juridical type, specialization, size, geographical and ecological location. A big number of agricultural producers receive public subsidies, which require compliance with the modern eco-standards and norms. There are also special measures for assisting agro-ecology and organic production, which impose even higher environmental standards. Numerous norms and standards for the protection and exploitation of natural resources as a whole or in certain regions are introduced, which are obligatory for owners of agrarian resources, agricultural producers and the industry, residents, visitors, etc. Only a tiny section of the surveyed farms indicate that the structure of the regulated eco-rights and obligations is a negative factor for agrarian sustainability. The latter is consequence of the fact that the adaptation of the holdings to the requirements of the new environmental rules in the sector is associated with additional costs or considerable loss of benefits. At the same time, the majority of interviewed managers believe, that the defined eco-rights and obligations are not important for agrarian sustainability. Very often agricultural producers are not very familiar with; nor do they implement the new eco rules and norms due to the lack of means, no capability of adaptation or weak (practically impossible, too expensive, politically unacceptable) control by the state bodies. In other instances, the provided rights for profiting from eco-activities and products do not allow obtaining any market and contractual bonuses. Some holdings, which are certified for organic production, mostly sell

their output at normal market prices without receiving the necessary bonus for organic produce.

Moreover, three quarters of the surveyed farms do not think, that the “efficiency of the control over eco-rights and obligations” is of significant importance for agrarian sustainability, and for its environmental aspect in particular (see Figure 1). The reason for the latter is the fact that the permanent control on eco-standards in a geographically extensive and multifaceted sector like agriculture is relatively weak (or practically impossible), violations are easily hidden, often disputed or difficult to prove (through expertise, court, etc.), while sanctions for noncompliance are insufficient to induce mass pro-environmental behavior. On the other hand however, the manager of every fifth holding believes that the improved efficiency of the control over eco-rights and obligations in the past years favorably affects agrarian sustainability and its environmental dimensions. These are mostly larger producers, who understand the mandatory standards for quality, ecology, protection of nature and biodiversity, etc., well and try to comply with them. These holdings strive to preserve (and improve) the quality of the utilized natural resources, since they are controlled by the state bodies to a greater extent, and they are the ones that suffer the most from the detected violation and sanctions. Some producers also think that the “production” pressure of the sector on the environment is not strong due to the low application of fertilizers, crop protection chemicals, intensification of activity, etc. Relatively few farms indicate that the efficiency of the control over eco-rights and obligations negatively affects agrarian sustainability. Those are producers who are either unconvinced (unaware) of the meaning of effective eco management, or disinterested in the latter (due to advance age, part time involvement of farming, practicing a short-term lease of others’ resources, negative impacts on third parties, etc.), or have no financial or expert capabilities to carry out the necessary eco-activities within the needed scale and terms. For them the improved public control is an “obstacle” for the sustainable development of their holdings, since it is associated with additional costs for eco-actions, payments of penalties for violations, bribes to controlling authorities, etc. Often, accurate information about the real (eco)state is not presented in order to trade on markets and/or participate in public programs, professional and other organizations, as the shortage of efficient “external” control (quality, integral crop protection, pollution, waste management, etc.) favors that.

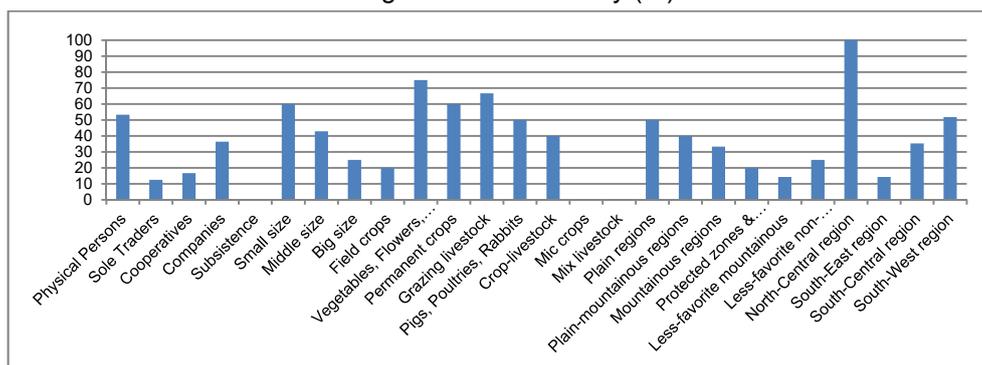
A big portion of the interviewed holdings report that the “existing market competition in the country” positively impacts agrarian sustainability and its aspects (see Figure 1). Bulgaria is a small country and many bigger farms compete successfully with local and international producers on a nationwide scale. However, for the majority of the interviewed managers the type and character of the market competition in the country is a negative factor for agrarian sustainability. Many farmers believe that there are no favorable conditions for loyal competition between foreign goods and domestic producers. The reasons for this are the following: the policies for trade liberalization (including with countries outside of the EU), the bad regulations and/or control of illegal import, the domination of large buyers (food chains, processors,

exporters, middlemen, etc.), the wide informal (shadow) sector in the country, the unequal public support to different subsectors of agriculture and types of producers, etc. Many farmers report, that the severe market competition leads to the compromising of the social and environmental aspects of agrarian sustainability in order to maintain economic vitality. Examples are also given for missing or undeveloped markets for certain products in agriculture (such as lucerne, silage, manure), as well as for the lack of short or long term agrarian credit, etc. In the latter cases, producers look for private ways for dealing with the issues – own production, contraction of activity, free provision, barter or combine exchanges, illegal waste disposal, contracts for chemicals supply interlinked with crediting, etc. Another reason for that problem in the country is the fact that the more complex and (often) more efficient market forms as alternatives for the competition with the current prices (such as future deals, forecasting and waiting for “high” prices, long-term contracts, vertical integration, etc.) are still underdeveloped. That is a consequence of the insufficient experience, the lack information, the superior costs (harvest storing, contracting), the uncertainty and risk for the holdings, etc. For a relatively small portion of the farms market competition in the country is a neutral factor for agrarian sustainability. Those are mainly smaller size producers, semi-subsistence farms or farms with unique produce and guaranteed marketing, which have no serious competition on a local scale and do not compete with the big players.

To the greatest extent the adverse effect on agrarian sustainability is felt by physical persons, small-sized holdings, producers specialized in vegetables, flowers and mushrooms, grazing livestock, permanent crops, pigs, poultry and rabbits (see Figure 5). The latter categories of holdings and subsectors are the ones that suffer the most from the intensification of competition in the country over the past several years.

Figure 5

The negative impact of the existing market competition in the country on agrarian sustainability (%)



The existing nationwide market competition is a negative factor with regard to agrarian sustainability for every other farm situated in the plain regions of the country,

for all holdings in the North-Central region, and for more than a half of the farms in the South-Central region. The adverse effect impacts sole traders and cooperatives, big farms, holdings specialized in field crops and located in less-favored regions, as well as ones with lands in protected zones and territories to the least degree. All these types of farms, production subsectors and ecological regions are with superior comparative advantages for the realization of economies of scale and scope in production and marketing, with good competitive and negotiating positions, established reputations and effective marketing channels. Moreover, these holdings, productions and regions also enjoy the biggest public support – subsidies for areas of utilized lands, agroecology, less-favored regions, etc. According to the majority of the surveyed agricultural producers, the “existing market competition in the region” is a neutral factor in relation to agrarian sustainability and its aspects. The little importance of the local competition is caused by the fact that many of the producers work for national and international markets and/or supply giant commercial chains and processors. Competition at the local level occurs between a limited numbers of small producers over a restricted number of local buyers, and here, the relations are “governed” by personal, rather than market connections – a high level of trust, clientalisation, high frequency of deals between the same partners, etc. Simultaneously, for a good proportion of the interviewed managers, the market competition in the region is a negative factor for agrarian sustainability, and particularly for its social and environmental dimensions. The latter is mostly typical in the regions with intensive production, high population density, and for smaller-sized commercial holdings.

What is more, many of the interviewed managers indicate the lack of sufficient qualified and low skilled workers in the sector as one of the main factors obstructing development at present. The latter demonstrates that the local markets do not work well and do not lead to an increase in the prices, nor to the “satisfaction” of the existing demand for hired labor. Consequentially, the farms do not expand to effective sizes, or important agro-technical and other activities are not implemented on an effective scale, or more expensive modes of governance are applied (such as a permanent labor contract, purchase of external services, leasing out of “idle” resources, etc., instead of using a contract for seasonal employment). Many managers also complain from the shortage of financing in agriculture, which is indicative of the fact that the loan markets do not work well at the local and the national level (unattractiveness, high risk, long pay back periods, etc., in the sector). Often, farmers sell their output and/or get their supply from agents in other (often remote) regions, because local suppliers and buyers are not reliable.

On the other hand, a good portion of the surveyed farms indicate the positive impact of market competition in the region. A well working local market provides opportunities for numerous smaller producers in the region to realize their comparative advantages both in relation to the producers (products) in other regions of the country and in terms of imported goods – lower prices, higher quality, freshness, authenticity of origin, fast and guaranteed supplies, product marketing that comes as a “package” with a service (farm visit, protection of nature, personal consultation, etc.). Superior

competitiveness allows local farms to not only maintain their economic vitality, but to also improve their social and environmental functions.

The majority of the surveyed holdings do not directly take part in export or compete directly with imported goods, and for them the “possibilities and costs for import and export” are a neutral factor for agrarian sustainability (see Figure 1). The majority of managers evaluate the existing possibilities and costs for import and export as positive. Those are mostly larger producers in export oriented or related agricultural subsectors, for which the possibilities for effective participation in international trade additionally improve some or all aspects of agrarian sustainability in the country. At the same time however, for 15% of the holdings, the good opportunities and low costs for import and export (“globalization”) are a negative factor diminishing competitiveness, destroying national production and producers, and having not only socio-economic but also environmental consequences.

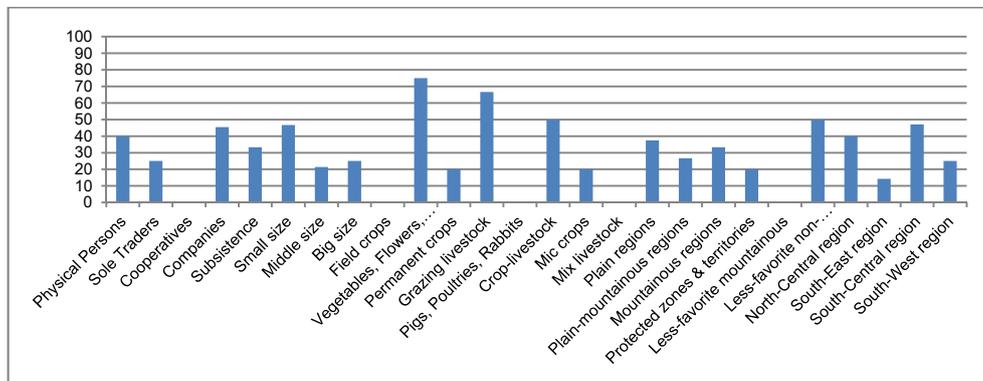
According to the majority of the interviewed managers, the existing “legislative and regulatory arrangements” in the country do not have any effect on agrarian sustainability or its aspects (see Figure 1). The latter means that either the system of laws and formal regulations does not aim at improving agrarian sustainability, or that the extent of implementation and enforcement of the system of laws and rules contributes to the achievement of the goals of sustainable agrarian development. Many of the interviewed managers confess that they apply for different types of subsidies only to get public support, and after that they destroy the subsidized crops. Obviously, such kind of public “assistance” has no particular benefit for agrarian sustainability and the program objectives (besides creating temporary employment). A good fraction of the farms assess the impact of the legislative and regulatory settings in the country on agrarian sustainability as negative. Numerous farmers complain that the multiple regulations of the Ministry of Agriculture and Food are difficult to study, not published on time, with a very short period for the examination, preparation and application for support or complying with regulations, while the sanctions for violation are significant. The latter means that the existing laws and regulations do not stimulate or regulate the activity of the main agents in the sector (farm managers, owners of agrarian resources, agrarian bureaucracy, users of agricultural produce and services) well. In some instances, they even obstruct the realization of the socio-economic and environmental aspects of agrarian sustainability. There are many examples for delayed payments of subsidies, compensation, etc., by the state agencies, creating enormous difficulties for the different types of producers. For merely one in every five of the interviewed managers the contemporary legislative and regulatory arrangements contribute (impact positively) to accomplishing agrarian sustainability.

Most affected by the adverse impact of the legislative and regulatory framework are the physical persons and companies, the small-sized holdings, and those specialized in vegetables, flowers and mushrooms, grazing livestock, mix crop-livestock, as well as farms located in the less-favored non-mountainous regions, and the North-Central and South-Central regions (see Figure 6). The legislative and regulatory settings do not have an adverse effect on agrarian sustainability in

cooperatives and holdings, specialized in field crops, pigs, poultry and rabbits, mix livestock, and farms in less-favored mountainous regions. The negative impact is smaller for the sole traders, the mid-sized and big-sized holdings, and in subsectors of permanent crops and mix crops, located in the plain-mountainous regions, and with lands in protected zones and territories. The legislative and regulatory framework affects the agrarian sustainability of the farms in the South-East and South-West regions of the country to the least extent.

Figure 6

The negative impact of the existing legislative and regulatory arrangements on agrarian sustainability (%)



According to more than a half of the interviewed farmers, the existing system of “formal standards for products, labor, etc.” in the country has no impact on agrarian sustainability and its socio-economic and environmental aspects (see Figure 1). That is a consequence of the fact, that the dominating system of formal standards is not directed toward the realization of the diverse goals of agrarian sustainability when it comes to the greater part of agricultural producers, due to bad design, mismatch between practical needs and/or inferior practical implementation. At the same time however, 30% of the surveyed farm managers believe that the official standards for products, labor, etc., support sustainable development and are a positive factor for achieving agrarian sustainability and its main aspects. The introduction and control of the modern standards of the European Union for the quality and safety of the products, the conditions and assurance of labor, the protection of natural resources, cross-compliance, etc., contribute to the improvement of the agrarian sustainability in the country. The latter concerns mostly larger producers and major market players, having greater capability, strong interests and financial means to introduce new standards and meet the market and institutional requirements. That also concerns the better part of the holdings receiving public subsidies and participating in various support programs, since they are a subject of constant and stricter control by different agencies. For a good portion of the holdings, the adaptation

to novel quality, environmental, labor, etc., standards is too expensive, technically not feasible, desirable or necessary, and leads to negative consequences in regard to agrarian sustainability. Those are smaller-sized holdings, with a lower capability (expertise, finance) for adaptation, in less developed regions of the country, owned by older entrepreneurs. Those types of farms suffer greatly from the enhanced control on the precise compliance with the modern standards performed by the state authority, due to the high costs for adaptation and complicated bureaucratic procedures, the impossibility or big losses from paying penalties, bribes, etc.

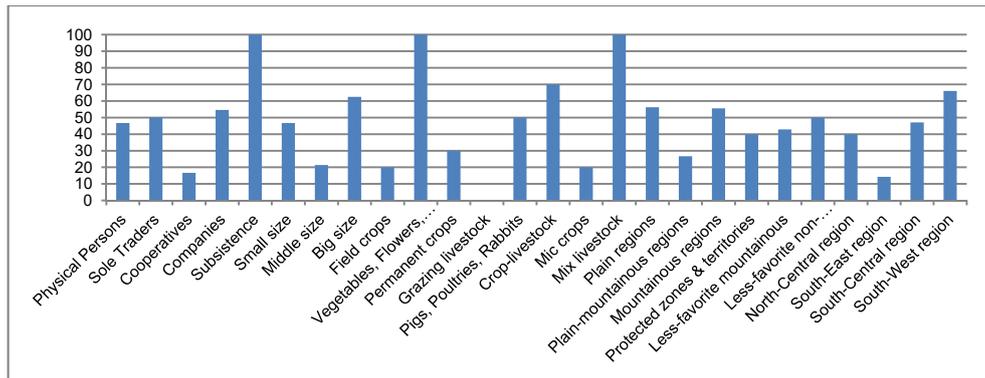
The entire legislation in Bulgaria was “harmonized” with that of the EU and high standards for quality, safety, environment protection, animal welfare, etc., were introduced in the pre-accession period. Despite that, a big part of the otherwise good laws and regulations does not work well due to bad implementation by the state and private agents, the insufficient control and lack of efficient mechanisms for stimulation and/or punishment. It is not by accident that the majority of the managers report that the “real implementation of laws, standards, etc.” in Bulgaria is a negative factor for agrarian sustainability (see Figure 1). The biggest fraction of the farmers believe that there is no supremacy of the law and/or laws, and that the rules do not apply equally to everyone in the sector and/or equally well in all regions of the country. There are also some managers, according to whom the “good” enforcement of certain laws and rules is not associated with real improvements of the individual aspects of agrarian sustainability, due to the inferior (not corresponding to the needs, costly for agents, cumbersome, etc.) regulatory system. A significant part of the interviewed managers assess the impact of that factor as neutral. In many cases, the “good” laws and standards that exist on paper are in fact “not implemented” or are applied incompletely. That consequently leads to the nonfulfillment of the expected results for the amelioration of the diverse aspects of agrarian sustainability. The smallest portion of managers suggests that the real implementation of laws, standards, etc., is effective, and that it contributes to the improvement of the socio-economic and environmental aspects of agrarian sustainability. Those are producers, subsectors and regions, where the formal laws and rules are applied and controlled comparatively well, and that in turn leads to the enhancement of sustainability. The small share of farms that gave this answer also gives some insight into the (insignificant) number of agricultural holdings in the country, in which the official rules, standards, norms, etc., are implemented and controlled well.

The negative impact of the (low) “efficiency” of the system of the actual application of laws, standards, etc., is faced to the greatest extent by companies, sole traders, physical persons, small-sized and big-sized holdings, producers specialized in vegetables, flowers and mushrooms, mix livestock and mix crop-livestock (see Figure 7). Cooperatives, mid-sized farms, holdings specialized in grazing livestock, field crops and mix crops, and permanent crops are affected by the adverse impact of that factor to a lesser degree. While only a small portion of the farms in the plain-mountainous regions and in the South-East region of the country report the negative impact, a comparatively greater portion of agricultural producers in the plain and mountainous

regions, and in the South-West region are affected by the adverse consequences of that imperfect institutional organization.

Figure 7

The negative impact of the extent of the real implementation of laws, standards, etc., on agrarian sustainability (%)



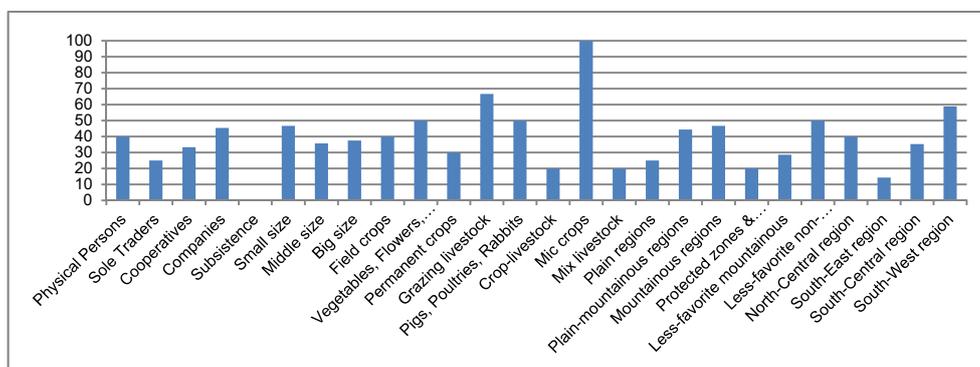
The bigger part of the interviewed managers do not think that the “existing public sanctions (fines, punishments) for violation” affect the activities and actions of agents for maintaining and/or increasing agrarian sustainability and its aspects in any way (see Figure 1). That is a consequence of the fact that the existing system of sanctions does not provoke adequate behavior for the amelioration of agrarian sustainability due to insufficient sanctions or inefficient organization (weak control, monitoring, lack of correlation between sanctions and outcome of activity, slow procedures, etc.). At the same time, only a tiny portion of holdings suggest that the system of public sanctions for violation “work well” and lead to positive results in regard to the elevation of agrarian sustainability. A big proportion of the managers evaluate the impact of the character and the size of the public sanctions for the violation of agrarian sustainability as negative. Superior and adequate sanctions are associated with increasing costs for the prevention of likely violations and/or payments for actual violations, without however always leading to the improvement of agrarian sustainability or its specific aspects.

The negative impact of the public sanctions for violation is felt to the greatest extent by the physical persons and companies, while it affects only a small portion of the sole traders and cooperatives (see Figure 8). The latter two kinds of farms either have fewer or more minor violations (less frequent and smaller sanctions) or the payment of the sanctions affects the overall outcome of their activity to a lesser extent (a tiny share of sanctions in the total costs, high return on costs from the payments of sanctions compared to the benefits). The adverse effect of the public sanctions for violation is greater for smaller-sized holdings and farms specialized in grazing livestock, mix crops, vegetables, flowers and mushrooms, pigs, poultry and rabbits. Farms with mix livestock and mix crop-livestock are impacted by the system of public sanctions for violation to a lesser extent. The latter either make less

violations (a high compliance with public norms and standards), or their violations are more difficult to detect and effectively punish, or the implemented sanctions are not proportional to the received benefits from breaking the rules. Farms located in mountainous and plain-mountainous regions as well as in less-favored non-mountainous regions experience the negative effect of the public sanctions to the greatest extent. Most of the farms located in the South-West region of the country report the negative impact of the public sanctions for violation on agrarian sustainability, while it is felt by the least number of farms located in the South-East region.

Figure 8

The negative impact of the existing public sanctions (fines, punishments) for violation on agrarian sustainability (%)

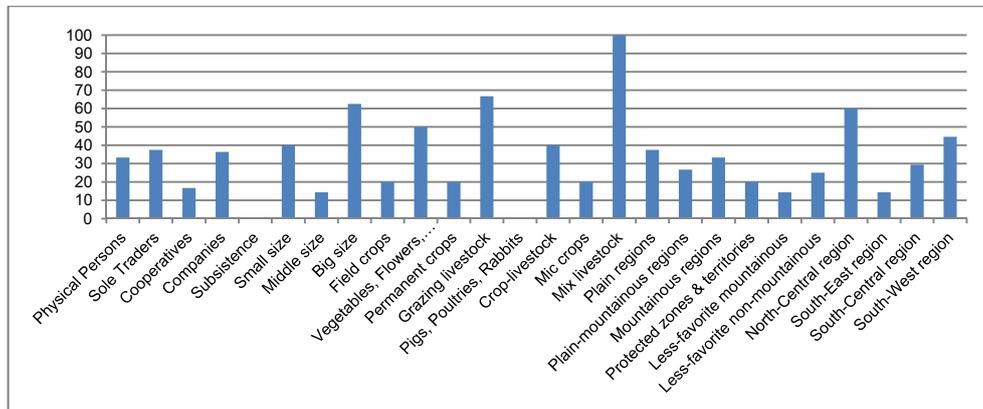


According to the majority of the interviewed managers the level of such costs has no effect on agrarian sustainability (see Figure 1). Therefore, the costs for the adaptation to the regulatory requirements are not important for maintaining or increasing agrarian sustainability, or in other words, the actual agrarian sustainability level does not depend on the effective amount of such costs. At the same time, merely 5% of all holdings believe that the real costs for the implementation of formal and informal norms, standards, etc., have a positive impact on agrarian sustainability. However, for a relatively good portion of the farms, the growing amount of costs for the adaptation to the constantly evolving formal requirements of the institutional and market environment, as well as the existing informal rules, are a negative factor for agrarian sustainability. Farms have high additional costs for complying with novel standards for the quality, safety, ecology, etc., of the EU, with the voluntary or compulsory “codes of behavior” of the various professional organizations, purchasing industries, commercial chains, consumer associations, etc. The study and implementation of the various laws, norms, etc., in the agrarian sphere is also associated with enormous costs for individual producers. Farmers also have significant costs for “complying” with the informal rules (informal standards of buyers, bribe payments, doing “favors”, “presents” to protectors etc.).

The amount and character of the costs for the implementation of formal and informal norms, standards, etc., have the strongest adverse effect on agrarian sustainability according to the managers of different types of firms – sole traders and companies (see Figure 9). The negative impact of these costs is felt to least extent by the cooperatives. These costs are a negative factor according to the majority of the big-sized holdings, which follow the formal rules more strictly, interact with external agents and institutions, and have higher absolute and relative costs of that type.

Figure 9

The negative impact of the costs for the implementation of formal and informal norms, standards etc., on agrarian sustainability (%)



The negative impact is felt more strongly by the farms specialized in mix livestock, grazing livestock, and vegetables, flowers and mushrooms. In all these subsectors the size of the farms is relatively small, while the costs for the adaptation to the new standards of the EU, the market counterparts and the nonmarket agents is extremely high. These costs have the least amount of negative impact on highly standardized and mechanized productions such as farms specialized in pigs, poultry and rabbits, field crops, permanent crops and mix crops. The costs for the implementation of formal and informal norms, standards, etc., have a greater negative impact on the farms located in the plain regions of the country and the North-Central region.

According to more than a half of the surveyed farms, the existing “possibilities for free contracting” are a positive factors for agrarian sustainability, predominately for its economic aspects, and to a lesser extent for its social and environmental aspects (see Figure 1). The positive impact of that factor is pointed out by the managers of different types of farms, as it gives them real freedom to negotiate the conditions and prices of exchange, which is of crucial importance for their effective and sustainable development. At the same time however, one in every five of the

surveyed farms indicates that the “possibilities for free contracting” negatively affect agrarian sustainability or its individual aspects (mostly the economic one). That concerns commercial holdings of various juridical type, size, production specialization, and locations, all of which suffer from the “free contracting” with counterparties. Many of the different types of Bulgarian farms are characterized by a high level of asymmetry (a strong dependency) in their contractual positions in regard to the dominant buyers and/or sellers of agricultural produce and services – large, semi-monopolistic or monopoly suppliers of materials, energy, water, credits, etc. Agricultural producers have no real possibility to choose a partner and negotiate prices, terms of payment, amount of damages, etc., in their relations with suppliers and buyers. At the same time, the farms are not able (too expensive) or willing (lack of alternative supplier or buyer) to protect their interests through legal means and therefore they constantly suffer as a result of the “provided freedom”. The interviewed managers also point out many examples of contract violations by public (state, municipal, international) bodies which adversely affect agrarian sustainability. For instance, often the negotiated subsidies are not transferred on time or in the required amounts, the contracted terms are not followed through by the local and state authorities, etc. Disputing such “contracts” through a third party (court, etc.) is too expensive or undesirable for the individual producers, due to the high specificity, low efficiency, huge costs and bureaucratic procedures, as well as the likelihood for subsequent “punitive actions” by the state body providing the public services (and sanctioning). According to a quarter of the surveyed managers, the existing possibilities for free contracting are of no importance to agrarian sustainability.

According to the majority of the surveyed managers, the “available information on prices, markets, innovations, etc.” has a positive impact on agrarian sustainability and its different aspects (see Figure 1). The favorable effect of the system for the provision of information for the effective governance of agrarian sustainability is indicated by all the different types of agricultural producers. The different kinds of holdings (large, small, individual, group, specialized, not specialized, etc.) have unequal information needs and possibilities for access to (collection, purchase, etc.) and processing (skills, qualification, available experts, etc.) of diverse information. Despite that however, all of them point out the fact that the external environment works well and that the information they possess leads to the improvement of agrarian sustainability or some of its aspects. Only 2,5% of the surveyed farm managers believe that the available information on prices, markets, innovations, etc., is not sufficient or is misleading, and is therefore a negative factor for agrarian sustainability. Simultaneously, a good portion of the agricultural producers evaluate the importance of the available information on the process, markets, innovations, etc., in relation to sustainable development as neutral. Some of these holdings (small, subsistence, extensive, etc.) have no great information needs, while others have no access to information (from media, advisory and training system, consultants, etc.) that is beneficial to the management of their multifunctional activity. Our survey has also found out that many farm managers have insufficient or no reliable information

for important parameters related to agrarian sustainability in the region or in the area of their farms, such as: the extent of the erosion and pollution of the soils, the quality of the ground waters, protected species, biodiversity, etc.

According to the majority of the surveyed farms, the existing “possibilities and costs for the registration of enterprises, associations, and organizations” at the present stage have a small impact on agrarian sustainability or its main aspects (see Figure 1). That means that according to most of the surveyed managers there are no formal institutional restrictions or high costs and difficulties related to the registration of various private and collective modes for governing their activity and relations, managing relations with the market and with private agents, and lobbying for public support. All these different types of farmers assess the possibilities and costs for the registration of the private and collective organizations of agricultural producers as “normal”. Another reason is the fact that the majority of Bulgarian farmers rarely participate in a formal registration of any business or other forms (firms, joint ventures, cooperatives, associations, etc.). A relatively small fraction of the interviewed managers indicate that the existing possibilities and associated costs for the registration of farms, associations and organizations favorably affects agrarian sustainability. That group includes managers-innovators looking for new organizational forms for improving the activity and actively (and frequently) taking part in procedures for the formal registration of various organizational formations. Many of these entrepreneurs have accumulated experiences in such activity, or use the help of qualified specialists for carrying out formal registrations, and therefore their expenses and efforts are not big. A good number of the surveyed farms believe that the existing possibilities and costs for the registration of farms, associations, and organizations negatively affect agrarian sustainability. Those are usually smaller producers with little experience in formal procedures and/or little capability to hire expensive specialists (consultants, lawyers, etc.), for which the related institutional restrictions (bureaucratic procedures, high costs of resources and timing, etc.) are an obstacle to improving agrarian sustainability.

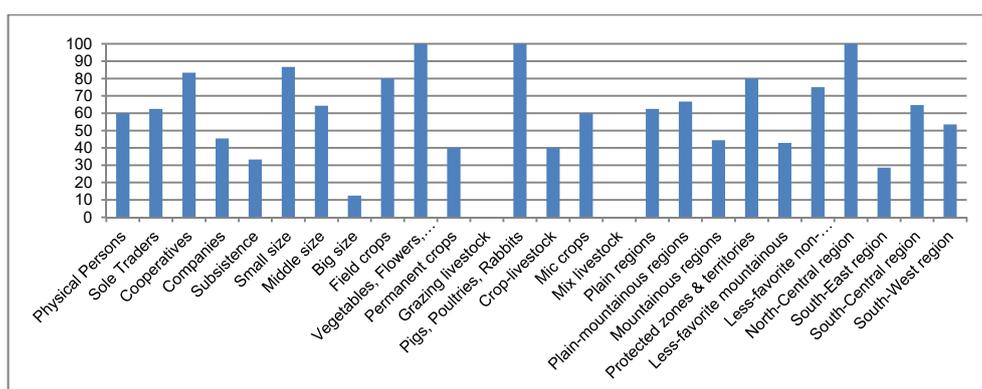
For the majority of the surveyed holdings, the institutionally determined possibilities (freedom, restrictions) and costs for the registration of products, origins, activities, etc., have no significant impact on the governance of agrarian sustainability (see Figure 1). That is a consequence of the fact that most Bulgarian farmers do not formally register new products, origins, trademarks, etc., and therefore think that the available possibilities and the related costs are important in regard to agrarian sustainability. At the same time, for one in every four of the interviewed managers, the existing “possibilities and costs for the registration of products, origins, activities, etc.” have a favorable impact on agrarian sustainability and its individual aspects. These are predominately entrepreneurs who are very familiar with and use the formal procedures for the official registration of special products, origins, technologies, etc. In line with the introduction of the EU legislation in Bulgaria, private agents and/or farmers organizations are gradually starting to apply the European practices in the field of the registration and protection of agrarian

intellectual property (protected products, denominations, origins, bio certification, eco-products and services, etc.). These innovations give new opportunities for increasing the efficiency of private and collective initiatives and investments, while the lack of bureaucratic obstacles and/or costs associated with their registration enhance agrarian sustainability. Only a tiny proportion of the surveyed holdings assess the impact of the existing possibilities and costs for the registration of products, origins, activities, etc., on agrarian sustainability as negative. According to some entrepreneurs, the existing institutional restrictions and costs prevent the effective registration of novel products, origins, activities, etc. That is a result of the inferior financial capabilities for the payment of fees, wages, bribes, etc., the insufficient experience and/or expertise for such activity, the lack of qualified personnel or the practical difficulties, associated with the complicated, incomplete and/or vague bureaucratic rules and procedures. The respondents also point out examples when the lack of compulsory certification for certain activities is a factor for the widespread dissemination of products, which are inauthentic to their declared origin and quality.

A quarter of the surveyed farm managers evaluate the impact of the “possibilities and obstacles for investment” at the current stage of development of Bulgarian agriculture as positive (see Figure 1). For a relatively small portion of the farms the possibilities and obstacles for investment in the operating environment are neutral factors which neither stimulate nor deter the improvement of agrarian sustainability. For the majority of the producers however, the real possibilities and obstacles for investment in the agrarian sphere obstruct agrarian sustainability and its aspects. For most Bulgarian farms, the socio-economic and institutional environment does not provide favorable opportunities for finding investment resources or sufficient incentives for investment activity for increasing economic, social and/or environmental sustainability in the sector.

Figure 10

The negative impact of the existing possibilities and obstacles for investment on agrarian sustainability (%)



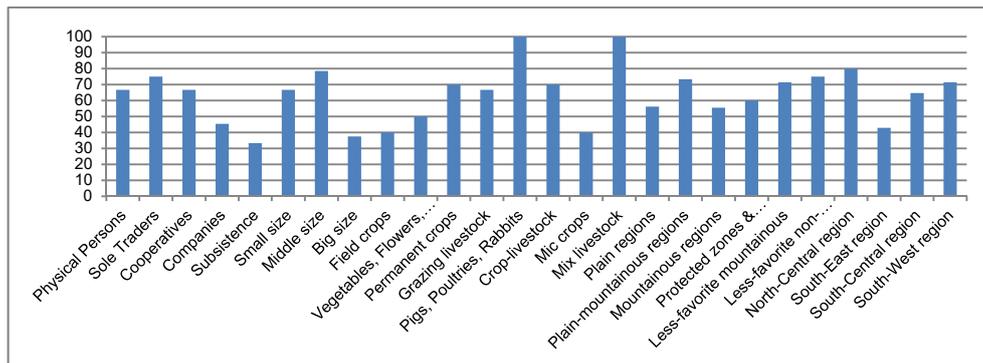
The existing possibilities and obstacles for investment deter agrarian sustainability the most in cooperatives, small-sized holdings, farms specialized in vegetables, flowers and mushrooms, as well as ones specialized in pigs, poultry and rabbits, farms with lands in protected zones and territories, and farms located in less-favored non-mountainous regions, as well as those located in the North-Central region of the country (see Figure 10). On the other hand, the specific socio-economic and institutional environment has a smaller adverse effect on the investment activity of companies, big-sized farms, holdings specialized in grazing livestock and mix livestock, and those situated in mountainous regions, less-favored mountainous regions, and in the South-East region of the country.

Our survey has proved that, for the majority of the managers of agricultural holdings, the “existing monopoly and power positions” negatively affect agrarian sustainability and its individual aspects (see Figure 1). Merely 5% of all farms assess the actual situation in regard to the monopoly as being favorable for agrarian sustainability. Such holdings are commonly contractually or completely integrated in some structures with “power” positions and benefit from the monopoly positions of that mode. A significant portion of the managers evaluate the presence of a monopoly and its effects on agrarian sustainability as neutral. Such farms either trade on competitive (working well) markets with many sellers and buyers, or most of their relationships are carried out with local and predominately small buyers and/or sellers (absence of monopoly).

All the different categories of holdings, subsectors of agriculture and regions of the country suffer from the negative impact of the existing monopoly and power positions (Figure 11).

Figure 11

The negative impact of the existing monopoly and power positions on agrarian sustainability (%)



The adverse effect of the monopoly and power positions has the greatest impact on the agrarian sustainability of sole traders, mid-sized holdings, farms specialized in pigs, poultry and rabbits, mix livestock, permanent crops, farms located

in the plain-mountainous regions, less-favored mountainous and non-mountainous regions, and in the North-Central and South-West regions. On the other hand, the negative effect of monopoly and power positions in regard to agrarian sustainability affects companies, big-sized farms and those predominately for subsistence, holdings specialized in field crops and mix crops, and the ones located in the mountainous regions and the South-East region to a comparatively lesser degree.

In the present conditions of Bulgarian agriculture, the traditional “personal connections” are still reported as an important positive factor for agrarian sustainability by the greater majority of the interviewed managers (see Figure 1). The favorable effect of personal connections on agrarian sustainability is indicated by all the different types of farms, subsectors of agriculture, and in the different regions of the country. Personal contacts between close acquaintances, relatives, associates, etc., dominate not only in the governance of commercial relations (different types of deals), but also in the various “relations” with public (state, municipal, non-governmental, etc.) organizations, as well as in the participation in collective initiatives and/or different types of organizations (marketing, procurement, eco-management, lobbying for public support, etc.). For one tenth of the holdings the personal connections have no importance in the governance of relationships with other agents and in regard to agrarian sustainability. Those are mainly large commercial farms, for which market (prices, competition, trade conditions) rather than personal factors are essential for choosing a partner for exchange and coalition. A comparatively small part of the interviewed managers indicate that the domination of personal connections in the Bulgarian agrarian sphere is a negative factor for the amelioration of agrarian sustainability and its individual aspects. That type of governance is frequently associated with the privileged and sometimes unlawful “inclusion” in public support programs or access to major public resources by certain groups and individuals with “good connections” with authority at a national, regional and/or local level.

According to the majority of the surveyed managers, the established reputation has a positive impact on the governance of agrarian sustainability and its main aspects (see Figure 1). The favorable effect of that factor is equally reported by farms of different juridical type, size, production specialization, geographical and ecological location. None of the holdings that took part in the survey believe that the information for building a (good, bad) reputation hinders agrarian sustainability. At the same time however, for a good fraction of the surveyed holdings, the established reputation is not a factors that affects agrarian sustainability. The governance of the diverse aspects of agrarian sustainability often require relations with new partners, for which there is usually no reliable reputation information (new business, regional, or country players, etc.). Therefore, agrarian agents use other “faceless” mechanisms for controlling the quality and protecting the interests in the form of recommendations, bets, joint investments, short-term contracts, taking additional risk for higher benefits, etc.

According to the majority of the interviewed managers, the “existing trust” at the contemporary stage of agrarian development has a positive impact on agrarian

sustainability and its main aspects (see Figure 1). The high trust has a favorable effect on sustainability according to the managers of the different types of farms, from the different subsectors of agriculture, in the different geographical and ecological regions of the country. In the agrarian sphere and in the rural communities a great portion of the relations are between agents, who have known each other well for a long-period of time, and who have developed trust, reputation and personal connections with one another. Namely, such informal mechanisms (trust, good reputation, personal connections, mutual interest to avoid and/or find a quick resolution to disputes and conflicts, etc.) effectively govern a significant part of the activity and determine the behavior of the majority of participating agents to a great extent. Subsequently, a great portion of the agreements in the sector are based on informal contracts, governed by the “high trust” and the “good will” of the parties. At the same time, none of the respondents indicates that the extent of trust is a negative factor for agrarian sustainability. That is indicative of the fact that those who base their relations on such (informal) mechanisms feel that it’s a contributing factor for the governance of agrarian sustainability or its aspects.

Nevertheless, according to a considerable fraction of the surveyed holdings, the existing social trust is a neutral factor for governing agrarian sustainability. At the present stage the agrarian agents increasingly have to trade with unknown partners from other regions and/or countries without being able to use traditional interpersonal forms, based on good knowledge, personal connections, “punishment” through the formation of a bad reputation, etc. What is more, achieving or maintaining agrarian sustainability often requires long-term efforts and the involvement of a big number of participants (“collective actions”) across vast territories. The latter gives possibilities for opportunistic behavior on the part of some or most of the participants, which often leads to the failure of common projects. Many examples are also presented when excessive trust in a given partner(s) in bilateral or multilateral deals leads to failures, nonfulfillment of agreements, unrealized objectives and significant losses for certain parties. That is why more efficient forms for governing agrarian sustainability in the agrarian sphere, such as formal contracts and agreements, market competition, the assistance of a third party, dispute resolution through the court system, etc., are increasingly necessary.

The majority of the interviewed managers believe that the “social needs and pressure on a national scale” at the current stage have no substantial impact for achieving or maintaining agrarian sustainability or any of its aspects (see Figure 1). Besides, 15% of the holdings even think that social needs and pressure have a negative effect on agrarian sustainability and its social and/or environmental dimensions. A good proportion of the managers however hold the opinion that the evolution of social needs, the demand for the products and services of the agrarian sector and pressure from interest groups, government, non-governmental and international organizations and the public at large have a positive significance for the realization of agrarian sustainability. Such novel national needs and “pressure” direct (assist, stimulate, sanction) the efforts of a considerable portion of the

agricultural producers to achieve the socio-economic and environmental objectives of sustainable development. Those are predominately the bigger commercial farms, which are sensitive to market demand for certain products and services from the consumers on a national and/or international scale, whose purpose is a socially responsible, environmentally friendly, etc., agriculture. There are also numerous good examples of progressive models, introduced by young entrepreneurs who react to new trends in social needs, introducing original initiatives or join novel national or international "movements" for sustainable agriculture (organic agriculture, permaculture, etc.).

As far as the "social needs and pressure in the region" are concerned, for the better portion of the interviewed managers, they are mostly a neutral and even a negative factor (see Figure 1). For every tenth farm however, the social needs and pressure in the region are a positive factor for agrarian sustainability, but not so much for its economic aspects or, increasingly, for its environmental and/or social aspect. That is the opinion, mainly, of the smaller holdings which meet local demands and are forced to take into account (more strictly) the various needs of residents and visitors of the region.

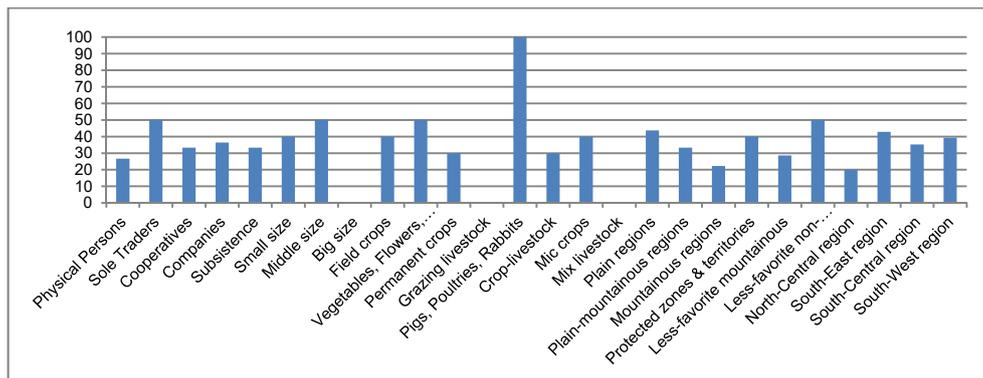
According to 30% of the surveyed managers, the "informal rules, norms, modes, etc." positively impact agrarian sustainability and its main aspects (see Figure 1). Traditionally, a great variety of informal rules, norms and forms (contracts, agreements, norms, etc.) dominate within the agrarian environment, which greatly determine the relations and behavior of agrarian agents. In the conditions of a poorly working system of formal institutions, the agrarian agents widely use such informal rules and diverse modes for the organization and management of their entire activity. For a fraction of the holdings they also assist in the improvement of agrarian sustainability or its individual aspects. A significant part of the managers assess the impact of the informal rules, norms, modes, etc., on agrarian sustainability as neutral. Along with the development of the system of formal rules and markets and the improvement of the control and enforcement of formal standards, norms, etc., through legal means, the formal institutions (greatly) replace the informal ones in governing the relations and behavior of a tiny fraction of the agrarian agents. At the same time however, a good portion of the holdings argue that domination of the informal rules, norms, forms, etc., has an adverse effect on agrarian sustainability. A dual system of formal and informal structures in the sector punishes those who comply with the laws and regulations and favors those who violate them. There is still no effective system for the implementation and enforcement of laws standards and regulations in the country, and as a result, informal (even illegal) forms of carrying out activity, conflicts resolution, assets acquisition, access to public resources and support funds, etc., are widely applied. That impedes the evolution of the effective (formal) structure for governing agrarian sustainability and each of its aspects.

All categories of farms, subsectors of agriculture and regions of the country are exposed to the adverse effect of the informal modes of governance (see Figure 12). The only exceptions are the big farms and the holdings specialized in grazing

livestock and mix livestock. In the latter groups the informal institutions “work well” for assisting or not disturbing the agrarian sustainability and its aspects. Sole traders, mid-sized farms, holdings specialized in pigs, poultry and rabbits, vegetables, flowers and mushrooms, farms located in the plain regions, and in the South-East region are affected to the greatest extent by the negative impact of the widespread application of informal rules, norms and modes. On the other hand, a relatively smaller share of the physical persons, cooperatives, holdings predominately for subsistence, farms specialized in permanent crops and mix crop-livestock operations, those located in the plain regions, and in the North-Central region have evaluated the application of informal rules, norms, modes, etc., as negative. The official rules and forms dominate in these groups of holdings, subsectors and regions, while the informal rules either are not employed or their implementation is neutral or more efficient (cheap, favorable) for the participating agents.

Figure 12

The negative impact of the existing informal rules, norms, forms, etc., on agrarian sustainability (%)



According to the bigger fraction of the surveyed holdings, the “official status of the region” is not essential for agrarian sustainability since they are not located in such regions or their location does not give them any benefits, or it is associated with additional costs (see Figure 1). Nevertheless, according to a good portion of the interviewed managers the region’s official status is a positive factor for agrarian sustainability or some of its aspects. That equally concerns farms of different juridical types, sizes, production specialization, ecological and geographical location. Usually when a farm is located in a favorable (resort, more developed, border, etc.) region this gives it a number of socio-economic advantages, such as: superior prices, guaranteed marketing, diversification in related and other activities (restaurant, hotel, ecosystem services, tourism, etc.). On the other hand, if the location of the holding is in a special (rural, less-favored, protected zones and territories, etc.) region, this gives it opportunities for participation in various public support schemes

and leads to the improvement of agrarian sustainability. Nevertheless, for a good proportion of the farms, the special status of the region has a negative impact on agrarian sustainability or its individual aspects. The affiliation of a farm to such a region most often is associated with numerous comparative disadvantages (low productivity, superior costs, remoteness from markets, restrictions on the utilization of resources and certain activities, etc.), which are not compensated through public support forms and eventually hamper agrarian sustainability or some of its aspects.

The analysis of the relationships between the level of agrarian sustainability in the farms and the importance that the managers give to the individual elements of the external environment and the governing modes also make it possible to evaluate the actual efficiency of the different governing mechanisms and modes for improving agrarian sustainability in the country. In regard to most of the components of the external institutional, market and natural environment, there is no strong correlation between the good and high levels of sustainability and the (positive or negative) assessments of the managers of the impact of the corresponding factors on agrarian sustainability. The only exceptions are the “free access to public lands”, the “established reputation” and the “existing trust”, where the farms with a positive estimate for the impact of these factors also demonstrate superior levels of agrarian sustainability. Apparently, for the rest of the elements of the external environment, the farms adapt to the conditions for achieving agrarian sustainability, independent of the favorable or adverse impact of the considered factors.

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The present empirical study on the impact of the diverse elements of the socio-economic, market, institutional and natural environment on agrarian sustainability is the first of its kind and it made it possible to identify and assess the factors of the “external” environment that have the greatest effect on agrarian sustainability in the country, and in individual subsectors of agriculture, in different geographical and administrative regions, (agro)ecosystems and types of farming enterprises. Nevertheless, the evolution of the system of governance and the level of agrarian sustainability depends on various economic, political, behavioral, demographic, technological, international, natural etc., factors, as well as on the dominating market, private, collective, public, etc., modes of governance applied by the agents. The separate and joint effects of all these important factors are to be accounted for and assessed in further research in this new area. Besides, there is always a certain “time lag” between the “improvement” of the system of governance and the change in agents behavior, and their positive, negative or neutral impact on the state of agrarian sustainability and its individual aspects. All these factors are to be the subject of further studies, as estimates can also be made on the “dynamics” of their impact over different periods. In addition, the precision of the estimates must be improved and, along with the assessments of the farm managers, it should incorporate other relevant information – expertise, studies on the “actual” behavior of various agrarian agents and its associated “effects”, reports, statistical and other data.

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