

Territorial Dimensions of Governance Sustainability – The Case of Bulgarian Agriculture

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Abstract

This article suggests a holistic framework for assessing the “forth” governance pillar of agrarian sustainability in Bulgaria. The newly elaborated approach is “tested” in a large-scale study for assessing the governance sustainability at national, territorial and farms levels. Multiple Principles, multi-criteria and multi-indicators assessment indicates that the Overall Governance Sustainability of Bulgarian agriculture is at a “Good” but very close to the “Satisfactory” level. Besides, there is a considerable differentiation in the level of Integral Governance sustainability of different agro-regions and farming systems in the country. Furthermore, the individual indicators with the highest and lowest sustainability values determine the “critical” factors enhancing and deterring the particular and integral Governance sustainability of national, territorial and farming systems of Bulgarian agriculture.

Keywords: Governance sustainability; Assessment; Agriculture; Agro-regions; Farming systems; Bulgaria.

1. Introduction

The need to include “the fourth” governance pillar in the concept for understanding and the system of measurement of sustainability is increasingly justified in academic literature [1-16] as well as finds place in the official documents of government, international, private, etc. organizations [17-19]. Nevertheless, the building of the system for assessing the “new” governance aspect (pillar) of agrarian sustainability is still a “work in progress”.

In Bulgaria, there are few studies on governance sustainability in general [7] and in agrarian sector in particular [20]. Most sustainability assessments of agro-systems are three-pillar’s including national, sectoral, ecosystem, regional and farm levels [21, 22]. There are very few assessments on governance sustainability of agriculture focusing mostly on national, (sub)sectoral and farm levels [23, 24]. Practically there are no comprehensive assessments of the governance sustainability at territorial agro-ecosystem and agro-region level. At the same time, recent studies found out a great variation in the efficiency of the specific governance systems in principal agro-ecosystems and administrative (agrarian) regions of the country [4, 25].

This paper tries to fill the gap and assess the governance sustainability of Bulgarian agriculture at territorial level.

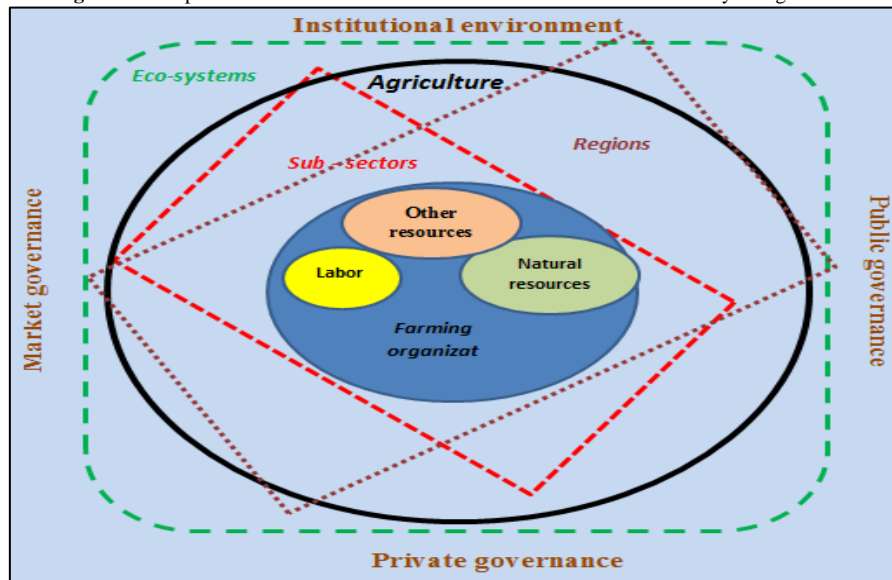
2. Study Method and Data

Sustainability of agriculture is a “system characteristic” and has to be perceived as “ability to continue over time” [26, 27]. It characterizes the ability (internal capability and adaptability) of agriculture to maintain its managerial, economic, social and environmental functions in a long period of time. Agrarian sustainability has four major aspects (“pillars”) which are equally important and have to be always accounted for – governance sustainability, economic sustainability, social sustainability, and environmental sustainability.

The “governance sustainability” characterizes the ability of agriculture to maintain and improve its governance functions [20]. It is related to the efficiency rather than continuity of the specific system of governance in an evaluated agro-system (national, subsector, ecosystem, regional, farming enterprise, etc.). Accordingly, a “good governance” means a superior governance sustainability, while a “bad” (inefficient) governance corresponds to inferior governance sustainability.

Maintaining multiple functions (sustainability) of agriculture requires an effective social order - a system of diverse (governing) mechanisms and forms regulating, coordinating, stimulating, and controlling the behavior, actions and relations of individual agents at various levels – farm, local, regional, national, transnational, global [3]. The system of governance includes a number of district components all of which have to be included in the sustainability assessment - *institutional environment* (“rule of the game”), *market* modes and mechanisms (“market order”), *private* modes and mechanisms (“private order”), and *public* modes and mechanisms (“public order”) (Figure 1).

Figure-1. Components and Levels of Assessment of Governance Sustainability in Agriculture



Source: author

Agriculture consists of many agro-systems – from individual “farming plot”, a “farm enterprise”, an “agri-ecosystem”, an “agro-region”, up to a “national”, “European” and “global”. In this study we focus on the assessment of the (governance) sustainability of Bulgarian agriculture at national level as well and for principle agricultural systems in the country – main type of farming organizations, major subsectors of agriculture, general kinds of agro-ecosystems, and all administrative (agro) regions (Figure 1). The farm is the lowest level, where the management and organization of agricultural activity (and sustainability) is carried out, and where all aspects of the agrarian sustainability are “realized” and could be feasibly assessed [26]. That is why the farm (agro-system) is the first level of agrarian (economic, governance, integral, etc.) sustainability assessment.

In order to identify the individual indicators for assessing the (governance) sustainability of Bulgarian agriculture a hierarchical system of well-determined Principles, Criteria, Indicators, and Reference Values for each Aspect (Pillar) of sustainability is elaborated¹. Detailed justification of that *new* approach, and the ways and criteria for selection of sustainability Principles, Criteria, Indicators and Reference Values are presented in other publications by Bachev [21], Bachev [4], and Bachev [21], Bachev, *et al.* [20].

The *Governance Sustainability Principles* are “universal” and relate to the multiple functions of the agriculture representing the states of the sustainability, which is to be achieved. For the “specific” contemporary conditions of Bulgarian (and European Union) agriculture following five principles related to the generic (five) mechanisms and modes of governance are identified: “Good legislative system”, “Democratic management”, “Working agrarian administration”, “Working market environment”, and “Good private practices”.

The *Governance Sustainability Criteria* are precise standards for each of the Principle representing a resulting state of the evaluated system when the relevant sustainability Principle is realized. For the contemporary conditions of the Bulgarian agriculture 20 Criteria for assessing diverse aspects of the governance sustainability are specified. For instance, for the Principle “Good legislative system” four Criteria are selected: “Harmonization with the European Union policies”, “Extent of the European Union policies implementation”, “Beneficiaries’ satisfaction of the European Union policies”, and “Policies effects”.

The *Governance Sustainability Indicators* are quantitative and qualitative variables of different types which can be assessed in the specific conditions of the evaluated agri-system allowing measurement of compliance with a particular Criterion. The set of Indicators provides a representative picture for the agrarian sustainability in all its aspects. For assessing the Governance sustainability of the Bulgarian agriculture at micro (farm) and macro (sectoral, regional, eco-system, etc.) levels a system of respectively 22 and 26 Indicators are specified. For instance, for the Criteria “Policies effects” an Indicator “Level of subsidies comparing to the average for the sector” is selected for farm level, as well as two Indicators for the aggregate (sectoral) level – “Coefficient of subsidies distribution from Pillar 1” and “Coefficient of distribution of investment support comparing to share in Net Value Added”.

The *Governance Sustainability Reference Values* are the desirable levels for each Indicator according to the specific conditions of the evaluated agro-system. They assist the assessment of the sustainability levels giving guidance for achieving (maintaining, improving) particular aspect and the overall agrarian sustainability. Most of the Reference Values show the level(s), at which the long-term sustainability of agrarian Governance sustainability is “guaranteed” and improved. Depending on the extent of the Reference value achievement the evaluated agro-system may be with a “high”, “good”, or “low” sustainability, or to be “unsustainable”. For instance, agrarian system with a higher than the sectoral public support (level of subsidies) is more sustainable then others as far as “Policy effects” are concerned, and vice versa.

Very often individual Indicators for each Criterion and/or different Criteria, and Principles of sustainability are with unequal, and frequently with controversial levels. That significantly hardens the overall assessment requiring a

¹ That approach is adapted from Sauvenier, *et al.* [28].

transformation into “unitless” Sustainability Index and integration of estimates. Diverse quantitative and qualitative levels for each indicator are transformed into a Index of sustainability (ISi) applying appropriate scale for each Indicator [4].

The Integral Index for a particular Criterion (SI(c)), Principle (SI(p)), and Aspect of sustainability (SI(a)), and the Integral Sustainability Index (SI(o)) are arithmetic averages of the Indices of composite Indicators, Criteria and Principles. The Integral Sustainability Index for a particular Criterion (SI(c)), Principle (SI(p)), and Aspect of sustainability (SI(a)), and the Integral Sustainability Index (SI(o)) for evaluated agro-system is calculated applying “equal weight” for each Indicator in a particular criterion, of each Criterion in a particular Principle, and each Principle in every Aspect of sustainability.

For assessing the level of Governance and Integral sustainability of agro-systems in Bulgaria the following scale, defined by the leading experts in the area are used: Index range 0,81-1 for a “High” level of sustainability; Index range 0,50-0,8 for a “Good” level of sustainability; Index range 0,26-0,49 for a “Satisfactory” level of sustainability; Index range 0,06-0,25 for an “Unsatisfactory” level of sustainability; Index range 0-0,05 for “Non-sustainable” state.

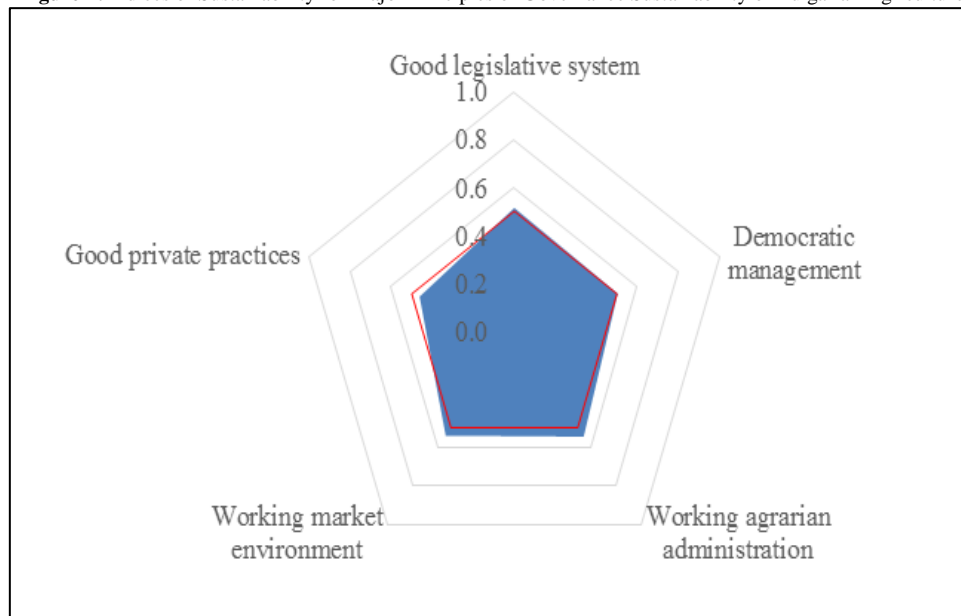
Elaborated holistic framework for assessing the Governance sustainability of Bulgarian agriculture is tested using 2018 survey data from the managers of 104 “typical farms” of different juridical type, size, and locations. The structure of surveyed farms approximately corresponds to the real structure of farms in different categories in Bulgaria. The composite (Aspect and Integral) Sustainability Index of each evaluated agri-system is calculated as an arithmetic average of the Indices of relevant farms belonging to that system.

3. Results and Discussion

A multiple indicators assessment of the Governance sustainability level of Bulgarian agriculture indicates that the Index of Overall Sustainability is 0,51 - this represents a close to the lower (“Satisfactory”) but still a “Good” level of Governance sustainability of the sector.

Analysis of individual Indexes for the primary sustainability Principles, Criteria, and Indicators allows identifying individual components contributing to the Governance sustainability of this important sector of Bulgarian economy. For instance, the Governance sustainability of Bulgarian agriculture is relatively low because the Index for the Principle “Good Private Practices” is at “Satisfactory” level (0,46) and compromises the Pillar’s Integral sustainability (Figure 2). Moreover, Indices for “Good Legislative System” and “Democratic management” are quite low and at the border with the “Satisfactory” level - 0,5 and 0,51 accordingly. At the same time, Indices for the Principles “Working agrarian administration” (0,55) and “Working market environment” (0,54) are highest and contribute most for elevating (ensuring) the Governance Sustainability of the sector.

Figure-2. Indices of Sustainability for Major Principles of Governance Sustainability of Bulgarian Agriculture

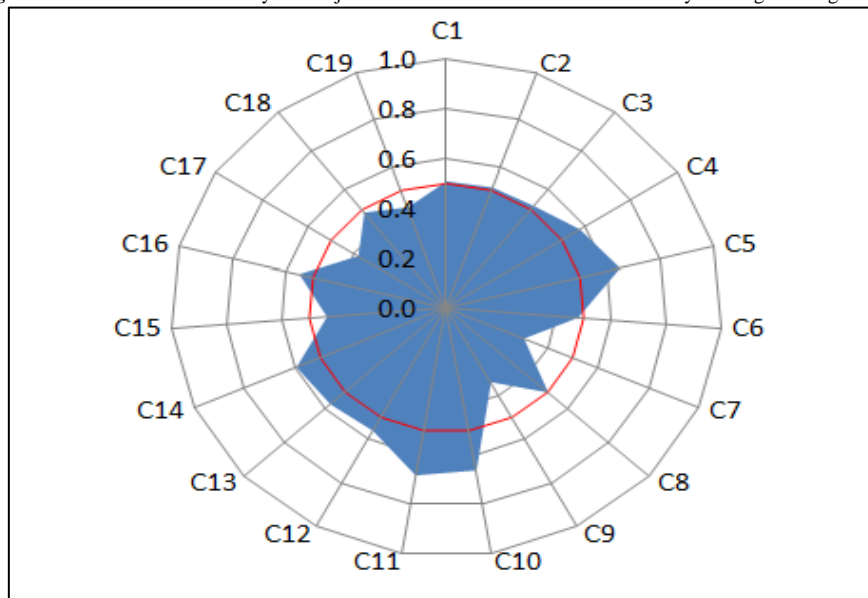


Source: author’s calculation

In depth analysis of the levels of the individual Criteria and Indicators further specifies the elements that enhance or reduce country’s agricultural Governance sustainability. For instance, the insufficient “Good Private Practices” is determined by the low “External control” (over management) (0,38), weak “Contracts enforcement” (0,49) and inferior “Informal system efficiency” (0,43) (Figure 3).

Similarly, despite that the Integral Index for “Democratic management” Principle is at a “Good” level, Indices for two criteria (policies) “Impact” and “Stakeholder participation in decision-making”) are quite low at satisfactory territory. Likewise, “Working agrarian administration” seems “Good” but “Access to administrative services” is actually very low (0,34) at “Satisfactory” sustainability level. The same is true for the “Working market environment” which is “Good” while Index for the Criteria “Resource concentration” reviles low sustainability (0,43).

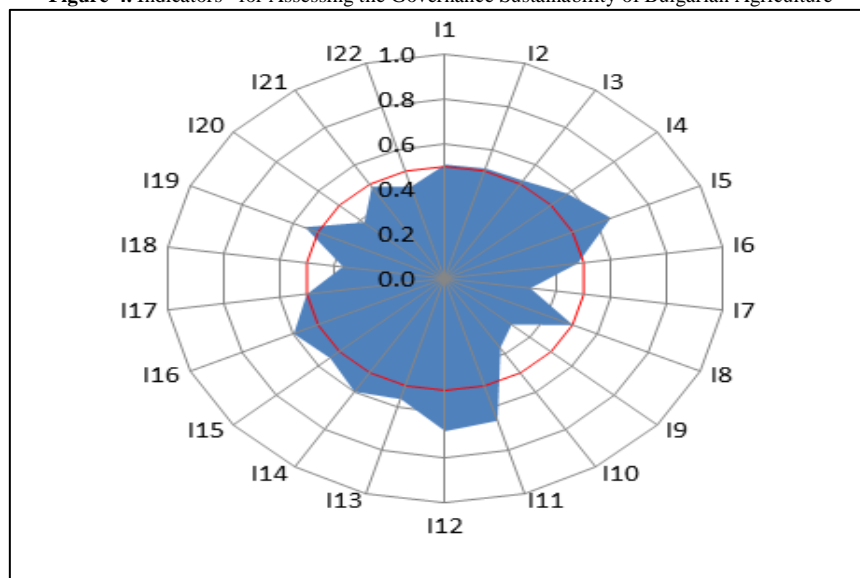
Figure-3. Indices of Sustainability for Major Criteria* of Governance Sustainability of Bulgarian Agriculture



*C1-Extent of policies implementation; C2-Extent of beneficiary satisfaction of EU policies; C3-Policies effects; C4-Representation; C5-Transparency; C6-Impact; C7-Stakeholder participation in decision-making; C8-Minimum costs of using; C9-Access to administrative services; C10-Information availability; C11-Quality of services; C12-Market access; C13-Free competition; C14-Competitive allocation of public resources; C15-Resource concentration; C16-Regulation implementation; C17-External control; C18-Contracts enforcement; C19-Informal system efficiency
Source: author’s calculation

Individual sustainability Indicators give precise information about the specific factors determining one or another values of a particular Criteria. For example, ineffective “Access to administrative services” is determined accordingly by the insufficient “Agrarian administration efficiency” (0, 31) and undeveloped “Administrative services digitalization” (0, 37) (Figure 4). Likewise “Satisfactory” sustainability for the “Resource concentration” is a consequence of the (low) “Possibility for lands extension“(0, 37).

Figure-4. Indicators* for Assessing the Governance Sustainability of Bulgarian Agriculture



*I1-Extent of CAP implementation; I2-Extent of beneficiary satisfaction of EU policies; I3-Subsidies distribution; I4-Representativeness of state and local authorities; I5-Access to information; I6-Subsidies in Income; I7-Farmer’s participation in decision-making; I8-Acceptability of legal payments; I9-Agrarian administration efficiency; I10-Administrative services digitalization; I11-Extent of awareness; I12-Administration service costs; I13-Market access difficulties; I14-Market competition; I15-Prices negotiation possibilities; I16-Extent of competitive allocation of public resources; I17-Lands concentration; I18-Possibility for lands extension; I19-Extent of regulations implementation; I20-Management Board external control; I21-Extent of contract enforcement; I22- Level of informal system efficiency.
Source: survey with farm managers

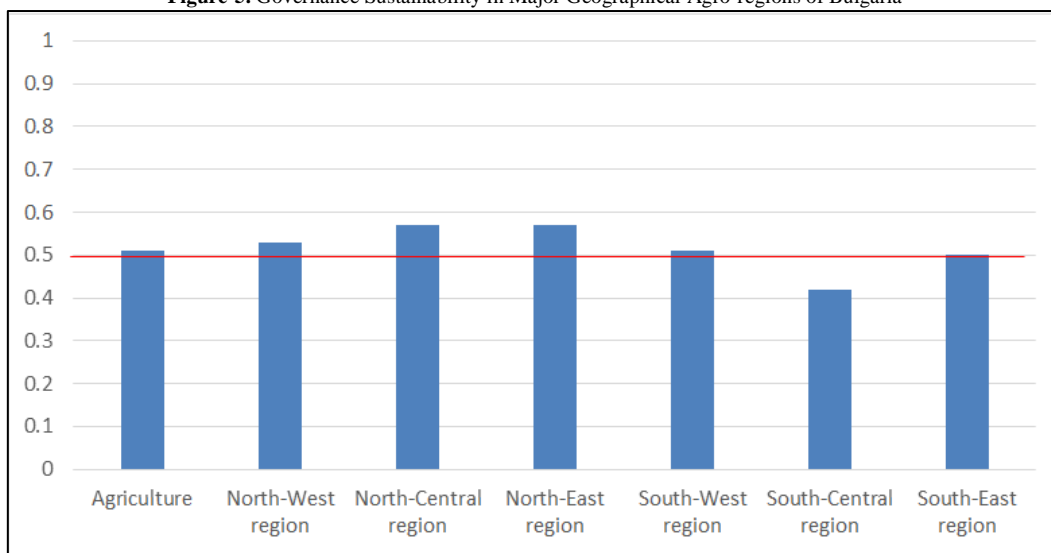
The low values for the Indicators help identify specific areas that require improvement through adequate changes in the institutional environment, public policy, modernization of agrarian administration, collective actions and/or management strategies. At the current stage of the development the most critical for increasing the Governance sustainability of country’s agriculture are progressive improvements in following directions: “Farmer’s

participation in decision-making” (0,31), “Agrarian administration efficiency” (0,31), “Administrative services digitalization” (0,37), “Possibility for lands extension” (0,37), “Management Board external control” (0,38), “Level of informal system efficiency” (0,43), “Subsidies in Income” (0,48), “Extent of contract enforcement” (0,49), “Acceptability of legal payments” (0,5), and “Lands concentration” (0,5).

The higher levels of certain Indicators show the absolute and comparative advantages of the Bulgarian agriculture in terms of good governance and sustainable development. At the current stage of development, the most prominent of these include: “Representativeness of state and local authorities” (0,58), “Market competition” (0,6), “Extent of competitive allocation of public resources” (0,6), “Access to information” (0,65), “Extent of awareness” (0,66), and “Administration service costs” (0,68). Nevertheless, the top value(s) of the Governance sustainability Indicators in Bulgarian agriculture is relatively low. Therefore, there is a great potential for improvement of governance efficiency and further elevate the Governance and Overall sustainability.

The analysis of the Governance sustainability of different agro regions and farming systems of Bulgarian agriculture shows that there is a great variation in the sustainability level (Figure 5).

Figure-5. Governance Sustainability in Major Geographical Agro-regions of Bulgaria

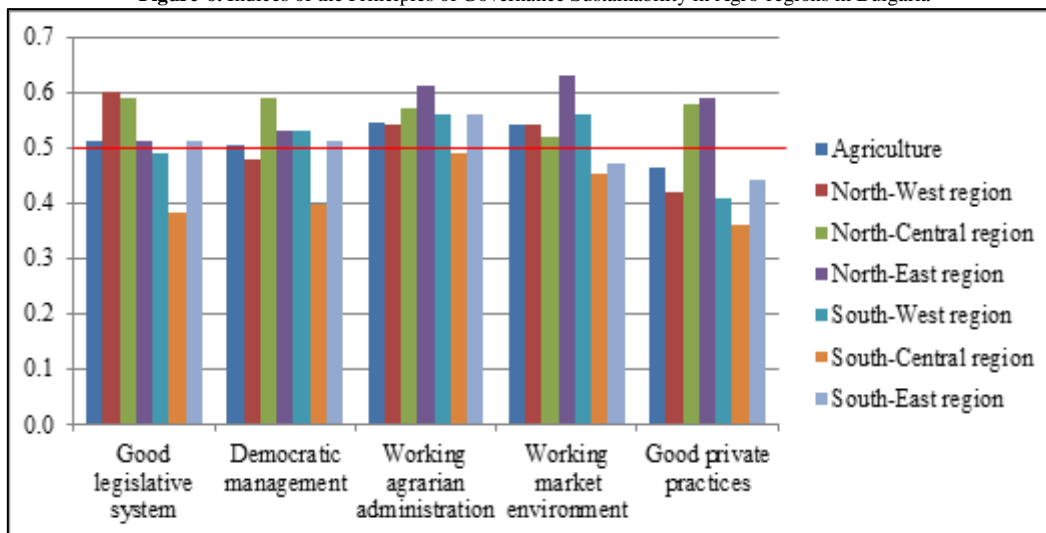


Source: Survey with farm managers

The Principle of the Governance sustainability “Good legislative system” dominates in the “North-West region” (0,6) and “North-Central region” (0,59), while in the “South-Central region” (0,38) and “South-West region” (0,49) it is only applied “Satisfactorily” (Figure 6).

The Principle of “Democratic management” is the best realized in the “North-East region“ (0,53) and “South-West region” (0,53), and insufficiently in the “South-Central region” (0,4) and “North-West region” (0,48). The Principle “Working agrarian administration” is effectively applied in the “North-East region“ (0,57) and “North-East region” (0,61). Simultaneously, that Principle is “Satisfactory” applied in the “South-Central region” (0,49). Similarly, the Principle “Working market environment” are highly regarded in the “North-East region” (0,63) while in the “South-Central region” (0,45) and “South-East region” is inferior (0,47). Finally, the “Good private practices” are the best carried out in the “North-Central region” (0,58) and “North-East region” (0,59) while in the three south regions of the country they are enforced “Satisfactorily” (0,41, 0,36, 0,44 accordingly).

Figure-6. Indices of the Principles of Governance Sustainability in Agro-regions in Bulgaria

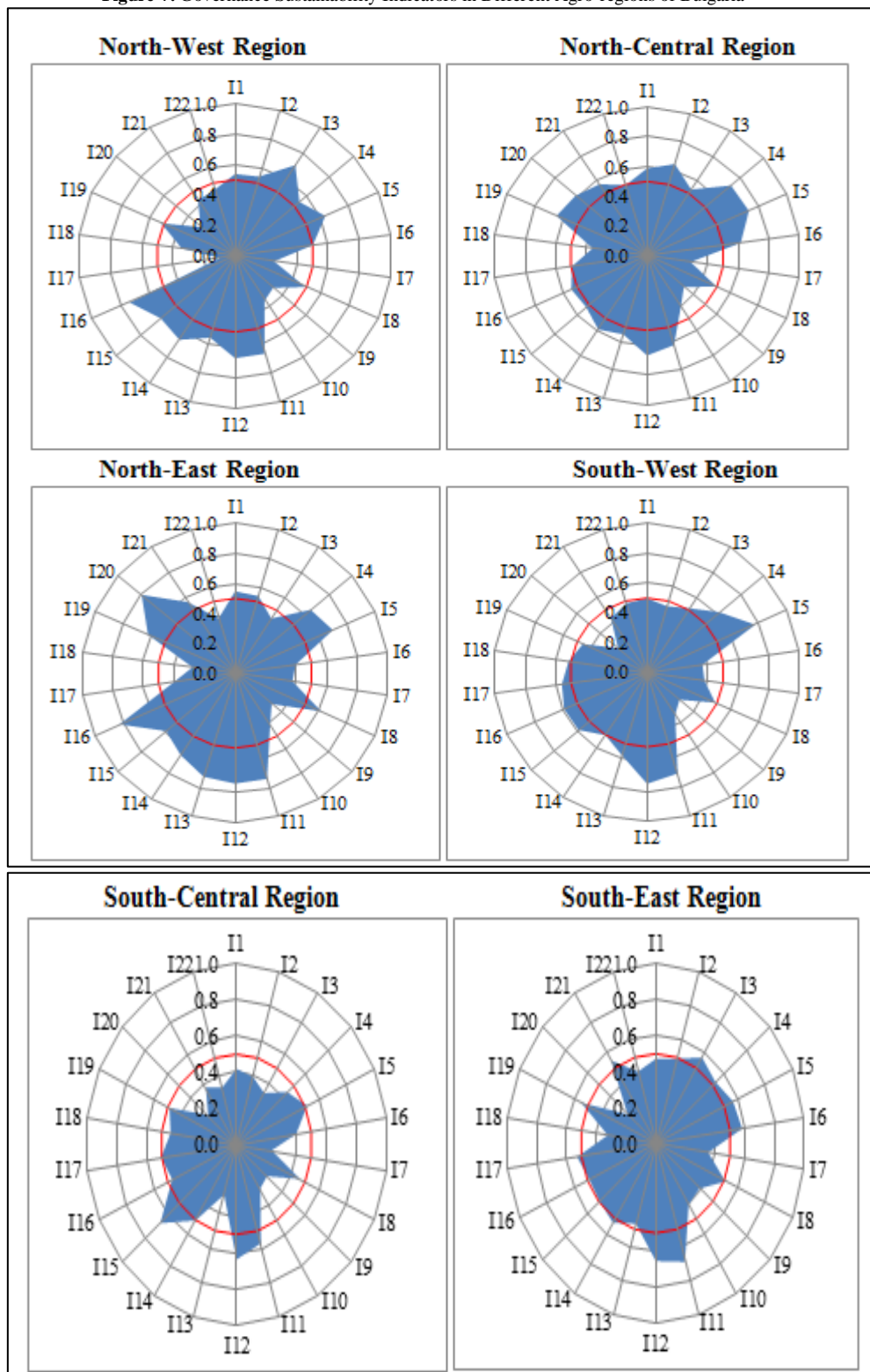


Source: Survey with farm managers

Further analysis of the sustainability level for the individual Indicators allows “complete” unpacking the “critical” factors enhancing and/or decreasing the Governance sustainability of each agro-region and type of farming organization.

There is a big variation in the levels of the Governance sustainability indicators across the territory of the country. In the “North-West Region” the highest value of sustainability is for the Indicators: “Extent of competitive allocation of public resources” (0,74), “Subsidies distribution” (0,71), “Extent of awareness” (0,67), “Administration service costs” (0,67), “Market competition” (0,66), “Prices negotiation possibilities” (0,63), and “Access to information” (0,63). At the same time, in this agro-region the Governance sustainability is “Satisfactory” for a number of Indicators: “Agrarian administration efficiency” (0,32), “Possibility for lands extension” (0,34), “Administrative services digitalization” (0,35), “Extent of contract enforcement” (0,44), “Level of informal system efficiency” (0,46), “Acceptability of legal payments” (0,49), quite low for the “Management Board external control” (0,29), and even “Unsatisfactory” for the “Farmer’s participation in decision-making” (0,25) (Figure 7).

Figure-7. Governance Sustainability Indicators in Different Agro-regions of Bulgaria



Source: Survey with farm managers

The Governance sustainability of agriculture in the “North-Central Region” is very “Good” in respect to: “Access to information” (0,73), “Representativeness of state and local authorities” (0,72), “Administration service costs” (0,67), “Extent of regulations implementation” (0,65), “Extent of beneficiary satisfaction of EU policies” (0,64), “Subsidies in Income” (0,62), “Extent of awareness” (0,62), and “Management Board external control” (0,62). Simultaneously, the governance system in this agro-region works only “Satisfactory” in regards to the “Farmer’s participation in decision-making” (0,29), “Agrarian administration efficiency” (0,32), “Possibility for lands extension” (0,36), “Administrative services digitalization” (0,41), and “Lands concentration” (0,49).

The agrarian Governance sustainability in the “North-East Region” demonstrates a superior (“High”) level for the “Extent of competitive allocation of public resources” (0,82) and it is on the border with the highest level for the “Management Board external control” (0,8). The governance efficiency is also quite “Good” in several other directions: “Extent of awareness” (0,74), “Administration service costs” (0,74), “Market access difficulties” (0,72), “Access to information” (0,7), “Market competition” (0,65), “Representativeness of state and local authorities” (0,65), “Extent of regulations implementation” (0,62) and “Acceptability of legal payments” (0,61). Nevertheless, the Governance sustainability of agriculture in that region is at “Satisfactory” level for several key areas: “Agrarian administration efficiency” (0,31), “Farmer’s participation in decision-making” (0,38), “Level of informal system efficiency” (0,38), “Lands concentration” (0,4), “Subsidies in Income” (0,4), “Administrative services digitalization” (0,42), and “Subsidies distribution” (0,44), and especially low for the “Possibility for lands extension” (0,28).

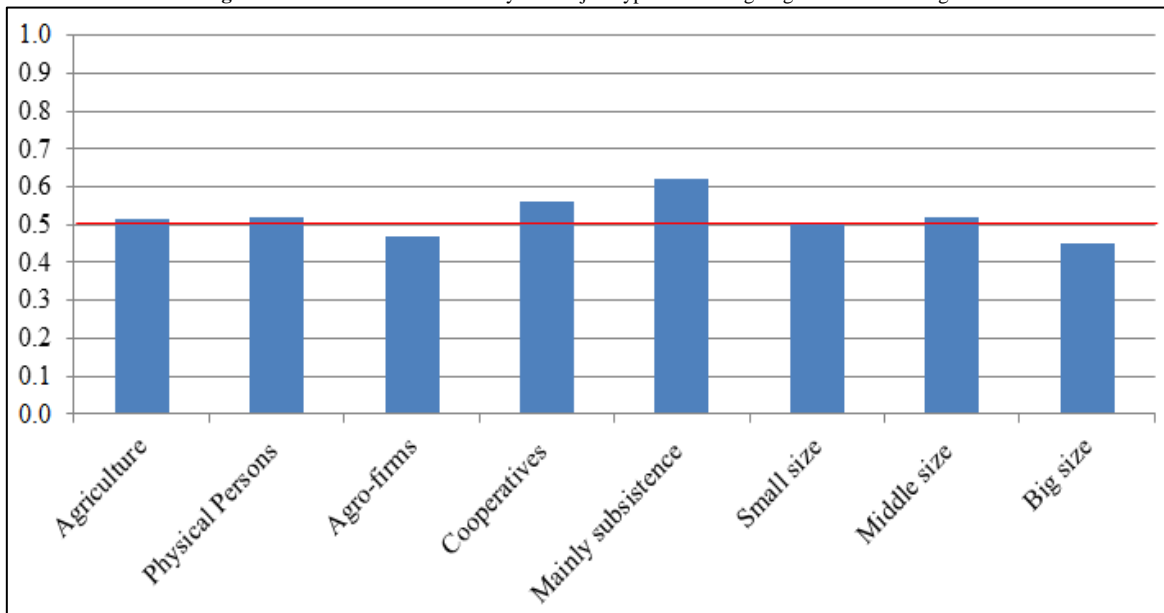
Agriculture in the “South-West Region” is with a very “Good” Governance sustainability for the Indicators such as: “Access to information” (0,77), “Administration service costs” (0,75), “Extent of awareness” (0,71) and “Representativeness of state and local authorities” (0,62). On the other hand, for many indicators the Governance sustainability of this agrarian region is at “Satisfactory” level: “Administrative services digitalization” (0,34), “Subsidies in Income” (0,36), “Farmer’s participation in decision-making” (0,38), “Extent of contract enforcement” (0,43), “Extent of beneficiary satisfaction of EU policies” (0,46), “Extent of regulations implementation” (0,46), “Level of informal system efficiency” (0,48), and “Acceptability of legal payments” (0,49). What is more, the efficiency of the governance system in that region’s agriculture is close to the “Unsatisfactory” level for the “Agrarian administration efficiency” (0,28), and “Unsatisfactory” for the “Management Board external control” (0,25).

The “South-Central Region” agriculture is only in solid “Good” territories for two Indicators - “Administration service costs” (0,64) and “Prices negotiation possibilities” (0,67). At the same time, the Governance sustainability of the sector is at “Satisfactory” level for numerous Indicators: “Level of informal system efficiency” (0,33), “Subsidies distribution” (0,34), “Extent of contract enforcement” (0,38), “Extent of beneficiary satisfaction of EU policies” (0,39), “Subsidies in Income” (0,4), “Extent of CAP implementation” (0,42), “Representativeness of state and local authorities” (0,44), “Possibility for lands extension” (0,44), “Acceptability of legal payments” (0,46), “Extent of competitive allocation of public resources” (0,47), and “Extent of regulations implementation” (0,49). Furthermore, the Governance sustainability of agriculture in this region is close to the “Unsatisfactory” level for the “Agrarian administration efficiency” (0,27), “Administrative services digitalization” (0,29) and “Market access difficulties” (0,29). On the top of that, the Governance sustainability of region’s agriculture is “Unsatisfactory” in terms of “Farmer’s participation in decision-making” (0,24) and “Management Board external control” (0,25).

Finally, the Governance sustainability of the “South-East Region” agriculture is with relatively “Good” Indicators only in respect to the “Administration service costs” (0,66) and “Extent of awareness” (0,69). In many other areas the Governance sustainability of this agrarian region is at “Satisfactory” level like: “Possibility for lands extension” (0,32), “Farmer’s participation in decision-making” (0,35), “Agrarian administration efficiency” (0,39), “Administrative services digitalization” (0,41), “Level of informal system efficiency” (0,42), “Extent of CAP implementation” (0,47), “Market access difficulties” (0,47), “Extent of beneficiary satisfaction of EU policies” (0,49), and “Extent of competitive allocation of public resources” (0,49). What is more, for the “Management Board external control” (0,25) the Governance sustainability is at “Unsatisfactory” territory.

The system of governance of Bulgarian agriculture does not impact equally farms with different juridical type and size of operations. The Governance sustainability of agriculture is the highest for the “Semi-market” (“Mainly subsistence farms”) and “cooperative” (“Cooperatives”) sectors – the Integral Governance Sustainability Index for these type of farming organizations is much higher than the sectoral average - 0,62 and 0,56 accordingly (Figure 8). Other main juridical type of farms like “Physical Persons” and the “Middle size” farming enterprises also have higher than the average Governance Sustainability Index (0,52). Therefore, all these four types of farming organizations contribute to the greatest extent to increasing (maintaining) the “Good” Governance sustainability of Bulgarian agriculture.

Figure-8. Governance Sustainability for Major Type of Farming Organizations in Bulgaria



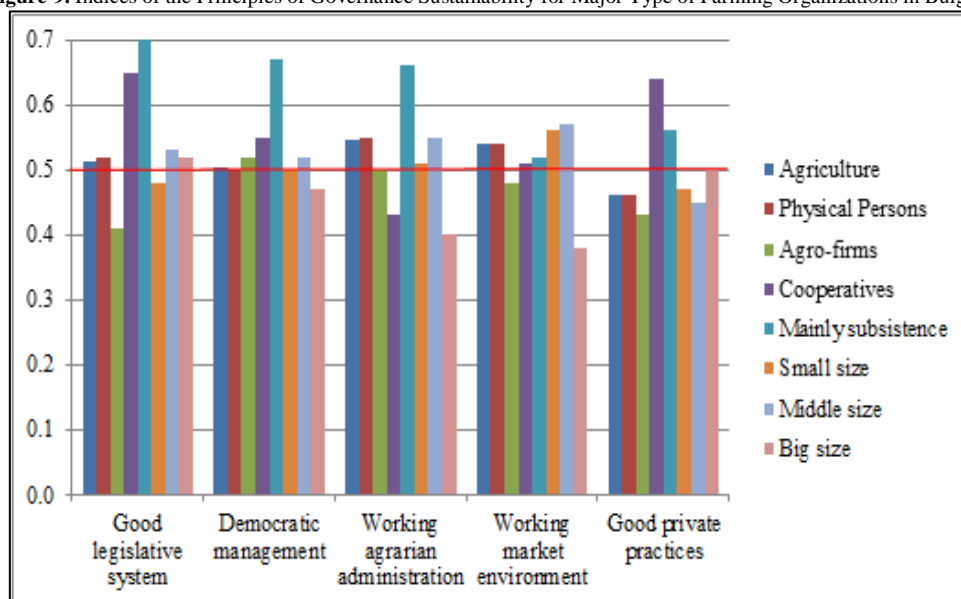
Source: Survey with farm managers

At the same time, for the “Small size” farms the Governance sustainability is below the national one and at the border with the “Satisfactory” level (0,5). Furthermore, for the “Agro-firms” and “Big size” farming enterprises the Governance sustainability is at “Satisfactory” level - 0.47 and 0.45 accordingly. Consequently, these major type of farming enterprises diminish to the greatest extent the overall Governance sustainability of country’s agriculture.

The main Principles of the Governance sustainability are applied (“work”) differently in relations to various type of Bulgarian farms. The Governance Sustainability Principles “Good legislative system”, “Democratic management” and “Good private practices” the most favorably affect the “Cooperatives” and “Mainly subsistence” farms (Indices of Sustainability accordingly 0,65 and 0,7; 0,55 and 0,67; 0,64 and 0,56) (Figure 9). The Governance Sustainability Principle “Working agrarian administration” is the most effectively implemented in regards to “Mainly subsistence” holdings (0,66), “Physical Persons (0,55) and Middle size farms (0,55). The Governance Sustainability Principle “Working market environment” is more favorable for the “Middle size” (0,57) and “Small size” (0,56) farms.

On the other hand, the individual Principles for the Governance sustainability of agriculture are worse applied in and adversely impact different type of farms. The Sustainability for the “Good legislative system” Principle is at “Satisfactory” level for the “Agro-firms” (0,41) and “Small size” farms (0,48). The sustainability Principle “Democratic management” is at “Satisfactory” level only for the “Big size” farming enterprises (0,47). Implementation of the Principle “Working agrarian administration” is inferior (“Satisfactory”) for the “Big size” farms (0,4) and “Cooperatives” (0,43); the sustainability Principle “Working market environment” does not work well for the “Big size” farms (0,38) and “Agro-firms” (0,48); and “Good private practices” are not applied sufficiently and badly affect “Agro-firms” (0,43), “Middle size” farms (0,45), “Physical Persons” (0,46), and “Small size” holdings (0,47).

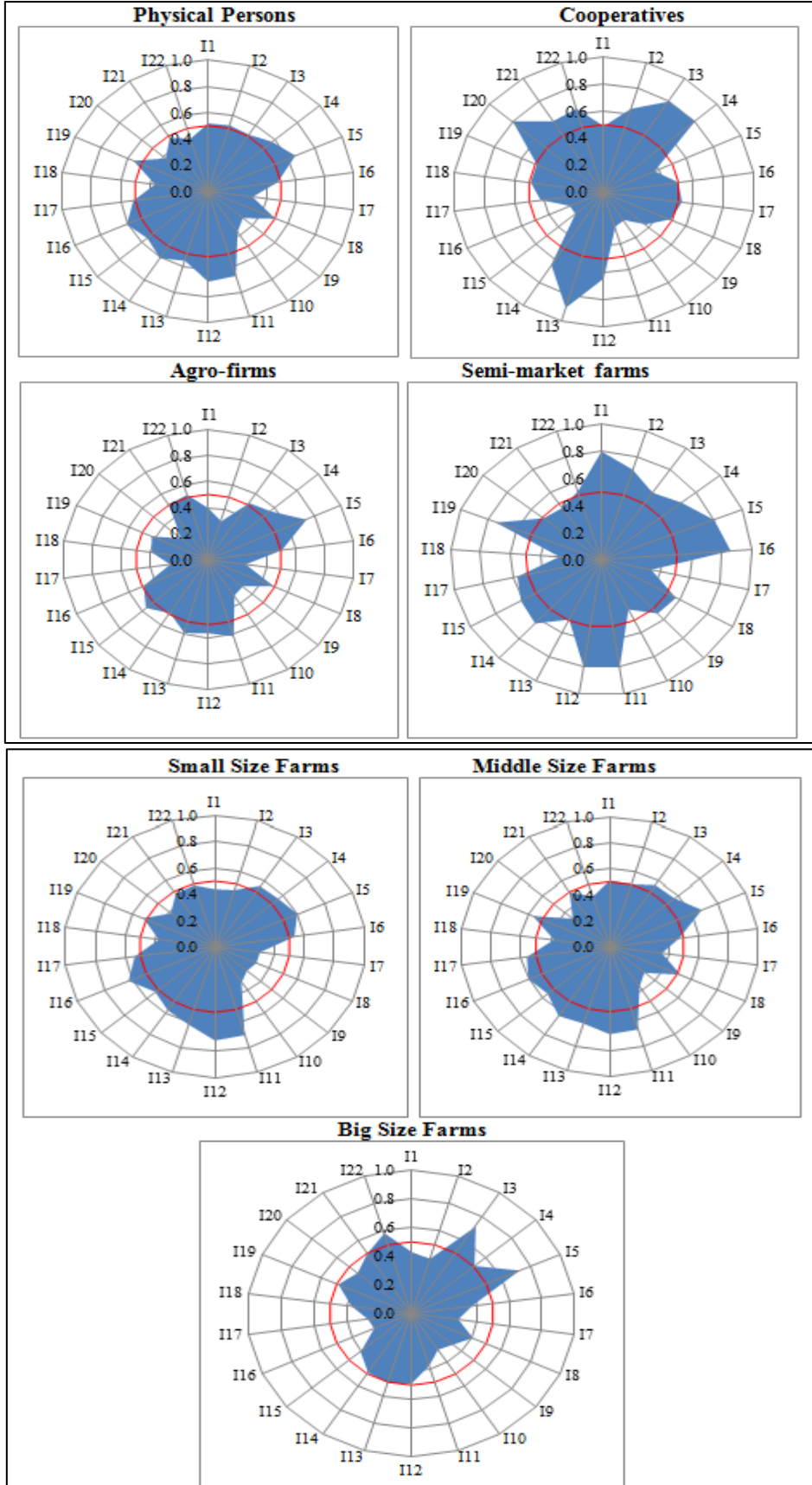
Figure-9. Indices of the Principles of Governance Sustainability for Major Type of Farming Organizations in Bulgaria



Source: Survey with farm managers

The Governance sustainability of agriculture carried out in the farms of “Physical Persons” is very “Good” in terms of: “Administration service costs” (0,69), “Extent of awareness” (0,67), “Access to information“ (0,65), “Market competition” (0,61), and “Extent of competitive allocation of public resources” (0,61) (Figure 10). At the same time, the governance system for this farms work only “Satisfactory” in respect to “Farmer’s participation in decision-making” (0,31), “Agrarian administration efficiency” (0,31), “Administrative services digitalization” (0,37), “Possibility for lands extension” (0,37), “Management Board external control” (0,38), “Level of informal system efficiency” (0,42), “Subsidies in Income” (0,48), and “Extent of contract enforcement” (0,48).

Figure-10. Impact of (Contribution to) Governance Sustainability Indicators of Major Type of Farms in Bulgaria



Source: Survey with farm managers

The Governance sustainability of agriculture in the cooperative sector (“Cooperatives”) is quite “High” for the “Market access difficulties” (0,9). The Cooperative farms also are in very favorable (“Good”) but at the border with the “High” level) situation for three Indicators: “Subsidies distribution” (0,8), “Management Board external control” (0,8), and “Representativeness of state and local authorities” (0,8), as well with a very “Good” level for several other areas – “Extent of contract enforcement” (0,63), “Extent of beneficiary satisfaction of EU policies” (0,65), “Administration service costs” (0,65), “Market competition” (0,65), and “Level of informal system efficiency” (0,65). Simultaneously, the Governance sustainability for the cooperatives agriculture is “Satisfactory” for the “Access to information” (0,37), “Agrarian administration efficiency” (0,37), “Lands concentration” (0,43), “Extent of CAP implementation” (0,49), “Acceptability of legal payments” (0,49), “Possibility for lands extension” (0,49), and “Extent of regulations implementation” (0,49). What is more, the Governance sustainability in the area of “Extent of awareness” (0,27) is very close to the “Unsatisfactory” level while for three Indicators it is “Unsatisfactory” – “Administrative services digitalization” (0,25), “Prices negotiation possibilities” (0,25), and “Extent of competitive allocation of public resources” (0,25).

The Governance sustainability in “Agro-firms” is only relatively “Good” for the “Access to information” (0,74) and “Extent of awareness” (0,61). On the other hand, for numerous Indicators the level of agrarian Governance sustainability in corporate sector is “Unsatisfactory”, namely “Extent of beneficiary satisfaction of EU policies” (0,31), “Agrarian administration efficiency” (0,31), “Administrative services digitalization” (0,33), “Extent of CAP implementation” (0,39), “Possibility for lands extension” (0,39), “Extent of regulations implementation” (0,43), “Acceptability of legal payments” (0,49), “Market competition” (0,49), and “Extent of competitive allocation of public resources” (0,49). Furthermore, the level of governance efficiency is very close to the “Unsatisfactory” level for the “Farmer’s participation in decision-making” (0,26) and “Lands concentration” (0,27), and it is “Unsatisfactory” for the “Management Board external control” (0,25).

Diverse aspects of the Governance sustainability of agriculture carried out in farming organizations of different size is also characterized with a great variation. In the “Semi-market” sector (Mainly Subsistence farms) it is “High” for the “Subsidies in Income” (0,86) and “Extent of awareness” (0,81), and at the border with the superior level for the “Extent of CAP implementation” (0,8), “Access to information” (0,8), “Administration service costs” (0,8). The Governance sustainability for this major type of farming organizations is also very “Good” in terms of “Extent of regulations implementation” (0,75), “Extent of beneficiary satisfaction of EU policies” (0,7), “Representativeness of state and local authorities” (0,68), “Market competition” (0,65), “Prices negotiation possibilities” (0,61), and “Subsidies distribution” (0,6). At the same type, the Governance sustainability in the huge “semi” market sector of Bulgarian agriculture is at “Satisfactory” level for the “Farmer’s participation in decision-making” (0,34), “Administrative services digitalization” (0,41), “Extent of contract enforcement” (0,46), “Market access difficulties” (0,49), and “Management Board external control” (0,49), and quite low for the “Possibility for lands extension” (0,28).

The Governance sustainability in Bulgarian small scale agriculture (“Small Size Farms”) is very “Good” in regards to “Administration service costs” (0,72), “Extent of awareness” (0,7), “Extent of competitive allocation of public resources” (0,63), “Market access difficulties” (0,62), and “Access to information” (0,6). On the other hand, the Governance sustainability in that dominant sector of agriculture is at “Satisfactory” level in multiple directions - “Farmer’s participation in decision-making” (0,3), “Acceptability of legal payments” (0,3), “Administrative services digitalization” (0,33), “Possibility for lands extension” (0,38), “Management Board external control” (0,39), “Extent of CAP implementation” (0,44), “Extent of beneficiary satisfaction of EU policies” (0,45), “Extent of contract enforcement” (0,48), “Level of informal system efficiency” (0,49), being particularly low for the “Agrarian administration efficiency” (0,28).

The Governance sustainability of agriculture in the “Middle Size Farms” is quite “Good” for the “Access to information” (0,68), “Administration service costs” (0,67), “Extent of awareness” (0,66), “Market competition” (0,63), “Market access difficulties” (0,62) and “Extent of competitive allocation of public resources” (0,6). Simultaneously, the sustainability is “Satisfactory” in several key areas – “Agrarian administration efficiency” (0,31), “Management Board external control” (0,33), “Farmer’s participation in decision-making” (0,36), “Administrative services digitalization” (0,37), “Possibility for lands extension” (0,38), “Level of informal system efficiency” (0,4) and “Subsidies in Income” (0,47).

Finally, the Governance sustainability of agriculture in the large scale enterprises (“Big Size Farms”) is favorably “Good” in respect to two areas - “Subsidies distribution” (0,72), and “Access to information” (0,72). However, for many indicators the Governance sustainability for this type of farming organizations are at “Satisfactory” level – “Administrative services digitalization” (0,3), “Agrarian administration efficiency” (0,33), “Subsidies in Income” (0,37), “Possibility for lands extension” (0,37), “Extent of awareness” (0,38), “Extent of beneficiary satisfaction of EU policies” (0,4), “Acceptability of legal payments” (0,41), “Prices negotiation possibilities” (0,41), “Extent of CAP implementation” (0,43), “Management Board external control” (0,43), “Possibility for lands extension” (0,37), “Administration service costs” (0,49), “Market competition” (0,49), “Extent of regulations implementation” (0,49). Moreover, the Governance efficiency for this large “subsector” of Bulgarian agriculture is close to or at “Unsatisfactory” level for the “Extent of competitive allocation of public resources” (0,25), “Lands concentration” (0,27), and “Farmer’s participation in decision-making” (0,29).

4. Conclusions

Multiple Principles, Criteria and Indicators assessment of the Governance sustainability of Bulgarian agriculture indicates that the Overall Sustainability is at a “Good” but very close to the “Satisfactory” level. Besides, there is a

considerable differentiation in the level of Integral Governance sustainability of different agricultural sub-sectors. What is more, the individual indicators with the highest and lowest sustainability values determine the “critical” factors enhancing and deterring the particular and integral Governance sustainability of evaluated agro-system. Having in mind the importance of holistic assessments of this kind for improving the agrarian sustainability in general, and the Governance sustainability of agriculture in particular, they are to be expanded and their precision and representation increased. The later requires improvement of the precision through enlargement of surveyed farms and stakeholders, and incorporating more “objective” data from surveys, statistics, expertise of professionals in the area, etc.

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