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Effects of EU CAP implementation on Bulgarian farms

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Abstract. This paper assesses impacts of EU CAP implementation on Bulgarian farms of different type and specialization. First, a framework for assessing the CAP effects on farms is presented. Next, an evaluation is made of the impacts of CAP on: economic results and income of farms; production and governance efficiency of farms; level of competitiveness of farms; and economic, social, and environmental sustainability of farms. Finally, factors for improvement of CAP impact on farms in the country are identified.

Key words: impacts of EU CAP, income, efficiency, competitiveness, and sustainability of farms

Introduction

The question of evaluation of the effects of EU CAP implementation is among the most topical for analysts, farmers, investors, politicians, academicians, and public at large (Agrosynergie; Bartolini *et al.*; Elsholz and Harsche; Latruffe *et al.*; Manrique *et al.*; OECD; Sckokai and Moro; Schmid and F.Sinabell; Xueqin and Lansink). Despite that there are no comprehensive assessments of up to date impact of CAP and its individual instruments on Bulgarian farms of different type.

This paper assesses the real impacts of EU CAP implementation on Bulgarian farms of different type and specialization. First, a framework for assessing the CAP effects on farms is presented. Next, an evaluation is made of the impacts of CAP on: economic results and income of farms; production and governance efficiency of farms; level of competitiveness of farms; and economic, social, and environmental sustainability of farms. Finally, factors for improvement of CAP impact on farms in the country are identified.

I. Framework for assessing effects of EU CAP implementation of agricultural farms

State of research in the area

In recent years there have appeared a numerous publications on multiples effects of CAP on agricultural farms in the countries of EU (Bartolini *et al.*; Elsholz and Harsche; Latruffe *et al.*; Manrique *et al.*; Xueqin and Lansink; OECD). Studies focus on impact of CAP reforms and individual mechanisms (market support, direct payments, subsidies etc.) on: farms income (Agrosynergie; Elsholz and Harsche), technical efficiency of farms with particular specialization (Xueqin and Lansink), farms investment and products (Sckokai and Moro), managerial efficiency of farms (Latruffe *et al.*), farms with different specialization (Manrique *et al.*), farms innovation adaptability (Bartolini *et al.*), farms labour demand (Schmid and Sinabell) etc.

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Assessments are based on regression models for estimation of real effect of (a particular instrument of) CAP on investigated farms (Elsholz and Harsche; Latruffe *et al.*; Xueqin and Lansink), stimulation models for likely development of farms as a result of undertaken CAP reforms (Bartolini *et al.*; Sckokai and Moro; Manrique *et al.*), and/or expertise with leading experts in the area (Agrosynergie). Assessments comprise effects on farms in individual countries (Manrique *et al.*; Xueqin and Lansink), or a comparative analysis is made of impact of CAP on farms with particular specialization (Latruffe *et al.*), from different regions of a particular country (Elsholz and Harsche; Bartolini *et al.*), or in a group of EU states (Xueqin and Lansink).

Despite many suggested and applied approaches there is not widely accepted framework for adequate assessment of impact of CAP on diverse aspects of farms activity.

In Bulgaria, practically there are no comprehensive assessments on real effects of CAP implementation on farms as a whole and of different type. Before country's accession to EU an attempt was made to assess likely impact of CAP on development of farms (Kaneva *et al.*). Probable effects of new policies on incomes, efficiency and sustainability of farms of different type and specializations were estimated. A recent study on farm competitiveness also tried to evaluate the impact of some CAP instruments on farms of different kind and specialization (Koteva *et al.*).

Framework of analysis

This study focuses on effects on agricultural farms from implementation of various instruments of CAP introduced since January 2007 (Figure 1) including:

- common market of agrarian and food products – access to enormous market, trade liberalization, intensification of competition, common policies toward third countries;
- system of new standards (for quality, hygiene, safety, environmental protection, animal welfare etc.) and restrictions (milk quotas, use of natural resources etc.);
- area-based direct payments and national top-ups;
- support measures of the National Strategic Plan for Agrarian and Rural Development 2007-2013г. (NPARD);
- mechanisms of market support of different sub-sectors.

The analysis embraces public support and effects of CAP implementation on farms as a whole and on farms of different type:

- with different juridical status – physical persons, cooperatives, firms of different type (Sole traders, Companies etc.);
- with different size – small, middle size, big;
- with different specialization – field crops, vegetables, permanent crops, grazing livestock, pigs, poultry and rabbits, mix crops, mix livestock, and mix crop-livestock.

An assessment is made on effects of CAP implementation on:

- economics results of farms activity – income, financial capability etc.;
- change in production and governance efficiency of farms;
- level of competitiveness of farms;
- economic, social, and environmental sustainability of farms.

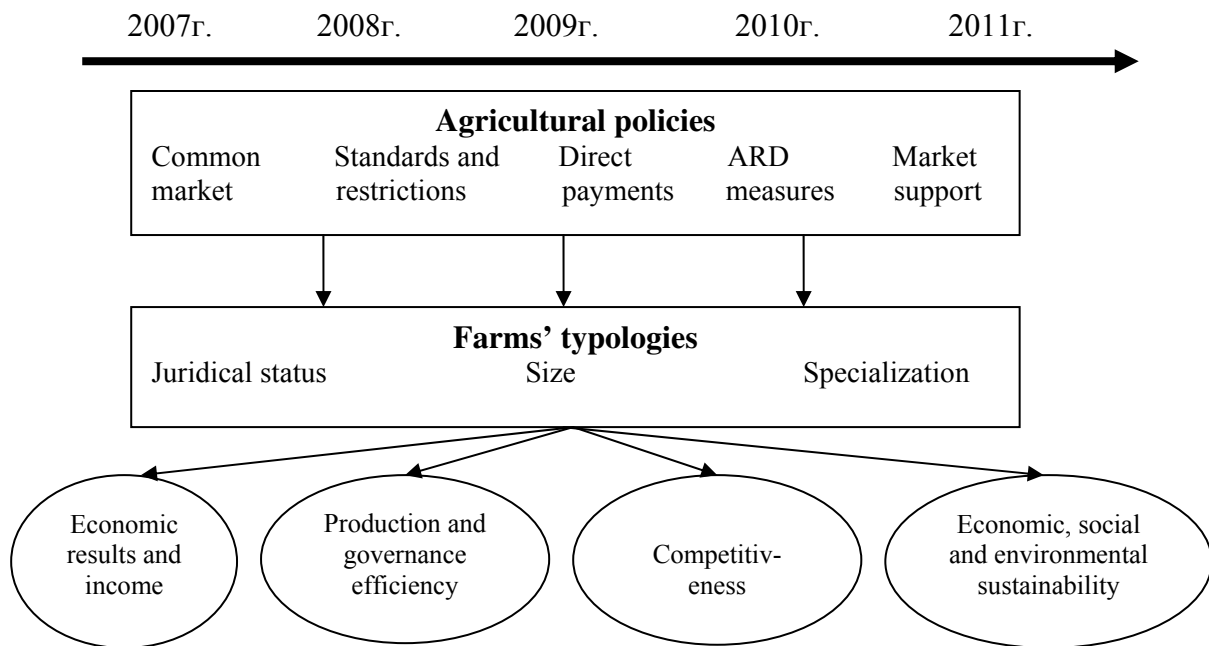
The study covers the period of CAP implementation in the country from the beginning of 2007 until 2011.

For evaluation of CAP effects following criteria are used:

- extent of public support;
- contribution to economic results and income of farms;
- contribution to farms production and governance efficiency;
- contribution to farms competitiveness;

- contribution to economic, social and environmental sustainability of farms.

Figure 1. Scope of assessment of CAP impacts on Bulgarian farms



For each criterion one or more indicators are used to assess the level of contribution of CAP or its particular instrument. When that is possible an assessment of the private effect of a particular policy (instrument) is made – e.g. change in farm income as a result of direct payments, national top-ups, other subsidies etc. When it is not possible to separate the private effect of a specific instrument, an overall impact of policies on farms is assessed – e.g. change in income and profitability as a result of the combine result from new market opportunities, higher standards and restrictions, direct subsidies and market support.

Assessment is based on available information from MAF and NSI, original 2010 survey data (around 200 farms of different type), and 2011 expertise with the leading 13 Bulgarian experts on farm structures and policies.

II. Overall impact of CAP implementation on different type of farms

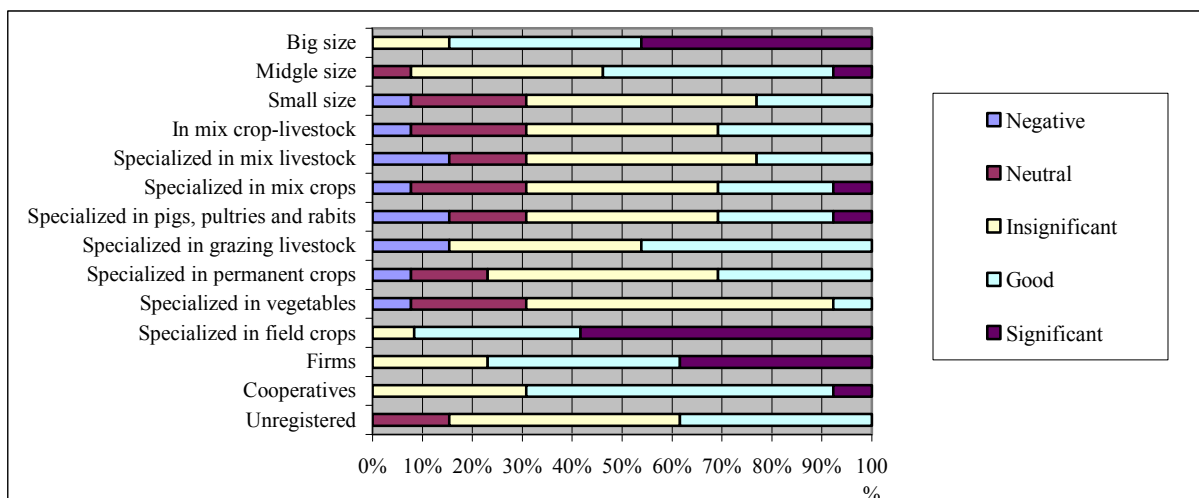
Effects on farms income

According to the experts the overall impact from implementation of various mechanisms of CAP (common market, market intervention, new standards, direct payments, support from NPARD, export subsidies) on incomes of different type of farms is multidirectional. Majority of experts estimate that CAP effect on income of cooperatives, firms, middle and large size farms, and farms specialized in field crops is *good* or *significant* (Figure 2). What is more, most experts evaluate CAP impact on middle sizes farms and cooperatives as *good*, while that on firms and big farms is *significant*.

On the other hand, the biggest part of experts assess as *insignificant* the impact of CAP on unregistered farms, small holdings, and farms specialized in vegetables, permanent crops, and mix livestock. Furthermore, a good part of experts estimate as *neutral* or even *negative*

CAP effect on small farms, and specialized in vegetables, permanent crops, grazing livestock, pigs, poultry and rabbits, mix crops, and mix crop-livestock farms.

Figure 2. Impact of CAP on income of Bulgarian farms

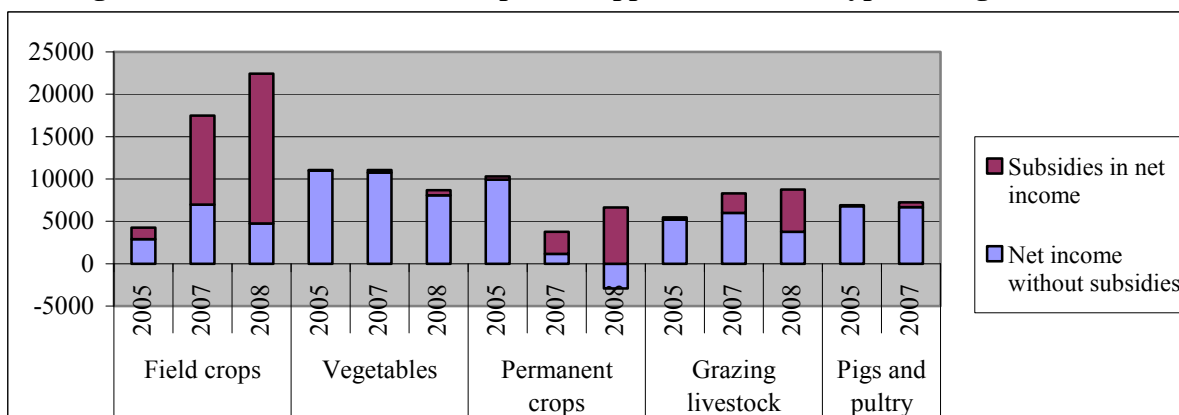


Source: expertise with leading experts, 2011

Available data also proves that the bulk of public subsidies go to few number of large farms (agri-firms and cooperatives) specialized in field crops. At the same time, many effective small-scale farms receive no or only a tiny fraction of public support. For instance, despite it increased number only 24% of all farms received area based payments, and merely 6% of cattle holdings, 4% of sheep and pig holdings, and 3% of poultry farms (MAF). Moreover, less than 7% of beneficiaries get the lion share (more than 80%) of direct payments. Similarly, due to restrictive criteria, unattainable formal requirement, high costs for participation, and widespread mismanagement (and corruption) the new public support under NPARD is not effectively utilized and benefits a small portion of farms (Bachev, 2010). All these further foster the income disparity in different type of farms.

Nevertheless, CAP subsidies are becoming an important part of the net income of farms specialised in filed crops, permanent crops and grazing livestock (Figure 3). Furthermore, subsidies accounts for the major and increasing part of the net income of large farms – 89% (42% in 2007) and 83% (75% in 2007) for farms with 8-40 ESU and above 40 ESU accordingly (MAF).

Figure 3. Evolution of income and public support of different type of Bulgarian farms



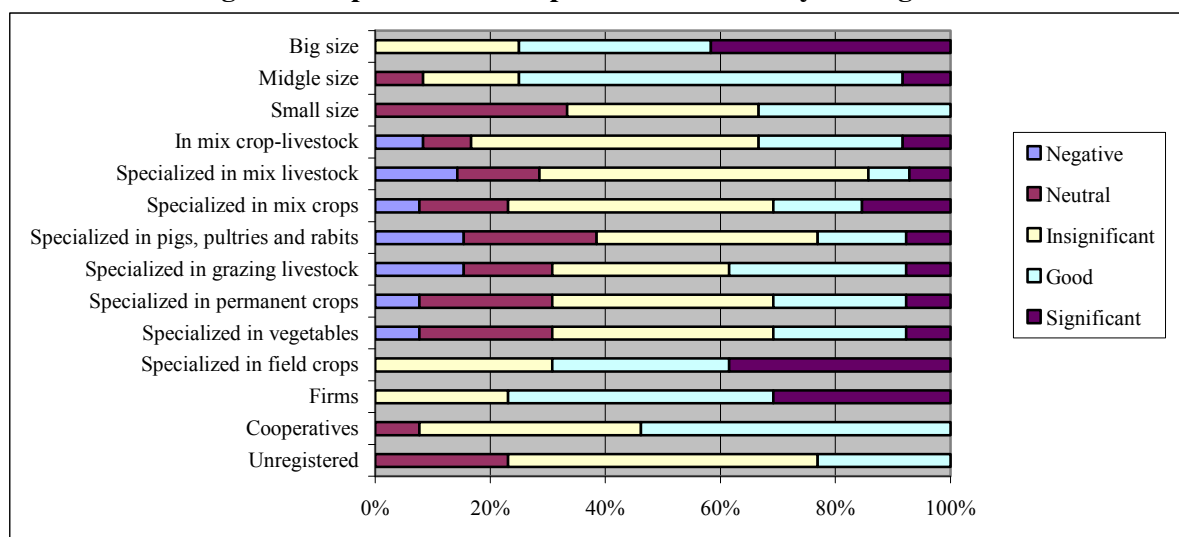
Source: MAF, Agro-statistics

Effects on farms efficiency

The overall impact of CAP on efficiency of farms of different types is also unequal.

According to the majority of experts effects of CAP on *production efficiency* of middle sized holdings and cooperatives is *good* (Figure 4). The impact on firms, big size farms, and farms specialized in field crops, is estimated as *good* or *significant*.

Figure 4. Impact of CAP on production efficiency of Bulgarian farms



Source: expertise with leading experts, 2011

On the other hand, most experts assess as *insignificant* the effect of CAP on production efficiency of unregistered farms, and holdings with mix livestock, mix crops, and mix crop-livestock. For the rest type of holdings, the impact of CAP is evaluated as *insignificant* or even *negative* in relation to production efficiency of farms.

Dynamics of the main indicators of economic efficiency also demonstrate that there is a positive impact of CAP implementation on profitability, land and labor productivity, and income per farm and utilized land of farms specialised in filed corps (Table 1). For farms specialised in vegetables, permanent crops, and livestock, the evolution of production efficiency indicators is rather negative.

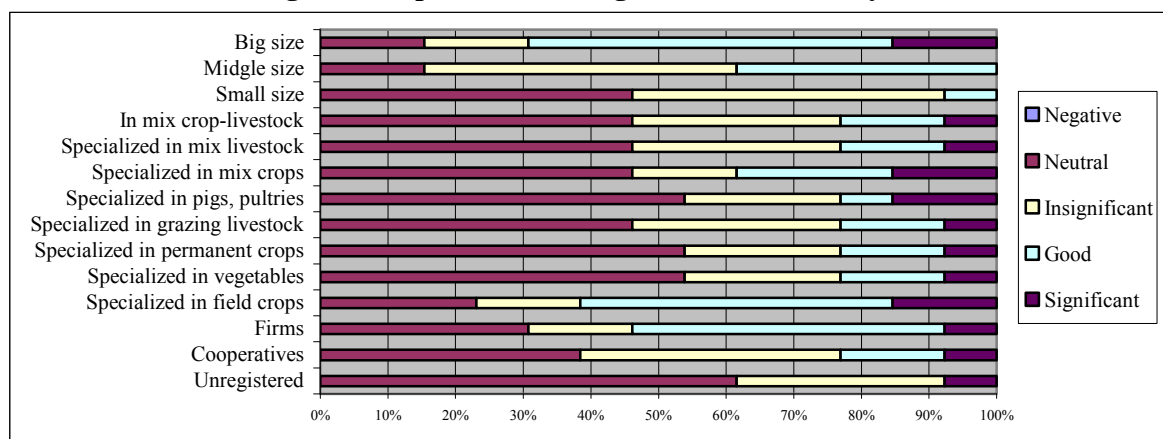
The biggest number of experts estimate that the overall impact of CAP implementation on the *governance efficiency* of large farms and the farms specialized in field crops is *good* (Figure 5). For middle size farms that impact is defined as *insignificant* or *good*. Most expects assess the CAP effect on governance efficiency of unregistered holdings, and farms specialized in vegetables, permanent crops, and pigs, poultry and rabbits as *neutral*, and for the rest type of farms as *neutral* or *insignificant*.

Table 1. Evolution of economic efficiency of Bulgarian farms

Indicators	Field crops			Vegetables			Permanent crops			Grazing livestock			Pigs and poultry		
	2005	2007	2008	2005	2007	2008	2005	2007	2008	2005	2007	2008	2005	2007	2008
Profitability	10,9	33,6	30,6	12,2	8,7	5,64	12,2	8,7	5,64	49,6	42,3	38,07	28,1	12,3	6,91
Land productivity	37	55	78	210	188	253	210	188	253	123	94	109	557	646	466
Labor productivity	9780	17077	21704	14170	11362	14994	14170	11362	14994	4406	6300	7042	7689	10336	7527
Net Income/farm	4273	17467	22432	10295	3780	3733	10295	3780	3733	5484	8284	8759	6920	7251	3606
Net Income/UAA	8	26	34	35	25	22	35	25	22	86	61	66	334	239	116

Source: Mladenova , 2011

Figure 5. Impact of CAP on governance efficiency of farms



Source: expertise with leading experts, 2011

Assessment of the governance efficiency of different type of (unregistered, cooperative, firm) farms during transition and EU integration requires detailed qualitative analysis which was done in our previous publication (Bachev, 2010). Changes in market and institutional environment associated with CAP introduction (enhanced competition; high quality, safety, environmental etc. standards; available public support) affect the internal comparative and absolute potential of principle type of farming organisation to economise on transaction costs and benefit from adaptation to evolving environment. Moreover, a number of CAP measures aim at enhancing (certain aspects of) managerial efficiency of (certain type of) farms – e.g. "Semi-subsistence farming ", "Setting up producer groups ", "Provision of farm advisory and extension services", public eco-contracts etc. Nevertheless, the progress of implementation of specific measures has been slow while the number of affected farms insignificant.

Our study has found out that different types of farms still have unequal potential for adaptation to new order ("rules of the game") associated with the EU integration and CAP implementation. The analysis of the *level of adaptability of farms* in CAP conditions shows that more than a quarter of farms are with a low potential for adaptation to *new state and EU quality, safety, environmental etc. standards*, almost 37% are less adaptable to *market demand, prices and competition*, and every other one is inadaptable to *evolving natural environment* (warning, extreme weather, droughts, floods, etc.) (Table 2).

Table 2. Share of farms with different level of adaptability in Bulgaria (percent)

Type of farm	Adaptability to:								
	market			institutions			nature		
	low	good	high	low	good	high	low	good	high
Unregistered	51,72	48,28	0,00	31,03	68,97	0,00	37,93	55,17	6,90
Cooperatives	34,62	65,38	0,00	23,08	71,15	5,77	61,54	36,54	0,00
Firms	0,00	66,67	33,33	22,22	22,22	55,56	22,22	44,44	33,33
Field crops	41,18	54,90	3,92	21,57	64,71	13,73	54,90	41,18	3,92
Crop-livestock	38,46	61,54	0,00	38,46	61,54	0,00	38,46	61,54	0,00
Mix crops	25,00	75,00	0,00	16,67	83,33	0,00	58,33	25,00	16,67
Mix livestock	0,00	100,00	0,00	0,00	100,00	0,00	0,00	100,00	0,00
Grazing livestock	100,00	0,00	0,00	0,00	100,00	0,00	0,00	100,00	0,00
Pigs and poultry	100,00	0,00	0,00	0,00	100,00	0,00	0,00	100,00	0,00
Permanent crops	25,00	75,00	0,00	37,50	62,50	0,00	50,00	37,50	0,00
Vegetables	0,00	66,67	33,33	33,33	33,33	33,33	0,00	66,67	33,33
All farms	36,67	60,00	3,33	25,56	65,56	8,89	50,00	43,33	5,56

Source: interviews with farm managers, 2010

Similarly, to the past, mostly bigger farms participate in public support programs because they have a superior managerial and entrepreneurial experience, available resources, possibilities for adaptation to new requirements for quality and other standards, potential for preparing and winning projects, etc. Therefore, CAP support measures benefit exclusively the largest structures and the richest regions of the country, and do not contribute to decreasing economic and eco-discrepancy between farms, sectors, and regions (Bachev 2010).

Detailed analysis of the diverse *factors* diminishing governance efficiency indicates that the *significant problems* in the *effective marketing of products and services*, and in the *effective supply of needed innovation and know-how*, are the most important for the good part of farms. Apparently, considerable portion of farms have no (internal) adaptation potential to overcome that type of problems and will be inefficient (unsustainable) in a longer run².

The serious (unsolvable) problems associated with the *marketing* are critical for a considerable section of agri-firms, and farms specialized in mix crop-livestock, and permanent crops. The severe problems in the *effective supply of needed innovation and know-how* are most important for the cooperatives, mix crop-livestock, and vegetable farms. Furthermore, great difficulties in *effective supply of needed land and natural resources* face a quarter of farm specialized in vegetables and permanent crops. Harsh problems in *effective supply of needed labor* are critical only for grazing livestock holdings. Big difficulties in *effective supply of needed inputs* experience a good fraction of unregistered holdings, and farms specialized in vegetables, permanent crops, and mix crop-livestock production. Significant problems in *effective supply of needed finance* are reported by a main part of unregistered holdings, and farms specialized in grazing livestock, mix crop-livestock, and permanent crops. Finally, substantial difficulties in *effective supply of needed services* are common for a big section of unregistered holdings, and farms specialized in permanent crops and mix crop-livestock operations.

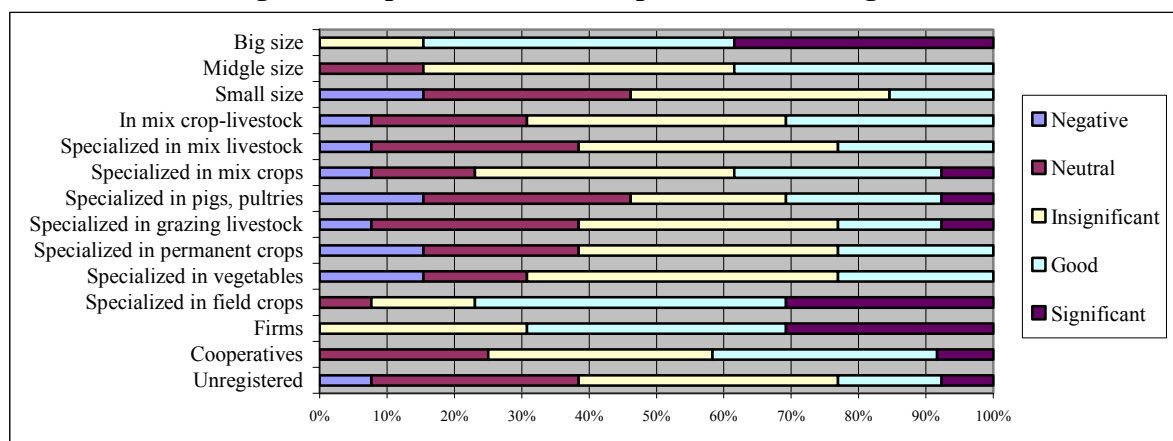
Effect of farms competitiveness

Most experts assess the overall impact of CAP on competitiveness of firms, big size farms, and farms specialized in field crops as *good* and *significant* (Figure 6). Effect of competitiveness of mile size farms, and holdings specialized in vegetables is determined as *insignificant* or *good*.

The assessment on the level competitiveness of commercial farms in the condition of CAP has found out that the majority of farms are with a *good* and *high* competitiveness (Figure 7). Nevertheless, more than a fifth of all farms are with a *low* level of competitiveness.

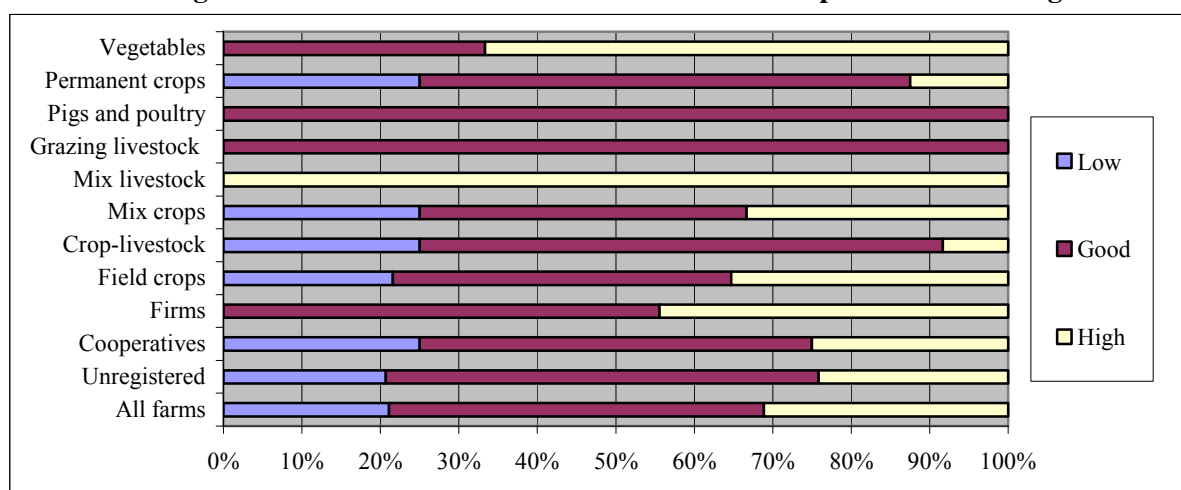
² These farms either have to restructure production (change specialization), or reorganize farm (new governance), or will disappear in near future.

Figure 6. Impact of CAP on competitiveness of Bulgarian farms



Source: expertise with leading experts, 2011

Figure 7. Share of farms with different levels of competitiveness in Bulgaria



Source: interviews with farm managers, 2010

Furthermore, different types and kinds of farms are with *unequal* competitiveness. Diverse *agri-firms* (Sole traders and Companies) are with good competitive positions and the portion of enterprises with high competitiveness is particularly big. On the other hand, a quarter of *cooperatives* are with insufficient competitiveness. Most of the highly competitive farms are specialized in *mix livestock* and *vegetables*. For all other groups of specialization, the farms with a good competitiveness comprise the greatest share in respective groups. In *mix crop-livestock*, *mix crops* and *permanent crops* every fourth farm is non-competitive.

The majority of surveyed *unregistered* holdings are with a good level of competitiveness, and around 24% of them are highly competitive. At the same time, more than a fifth of all *unregistered* farms are not competitive. *Unregistered* holdings with a different specialization are with unequal competitiveness. Most highly competitive farms are in *vegetables*, *field crops*, and *mix livestock* productions. On the other hand, a half of the holdings in *permanent crops*, a third of all farms in *mix crops*, and 29% of *mix crop-livestock* operators are with a low level of competitiveness.

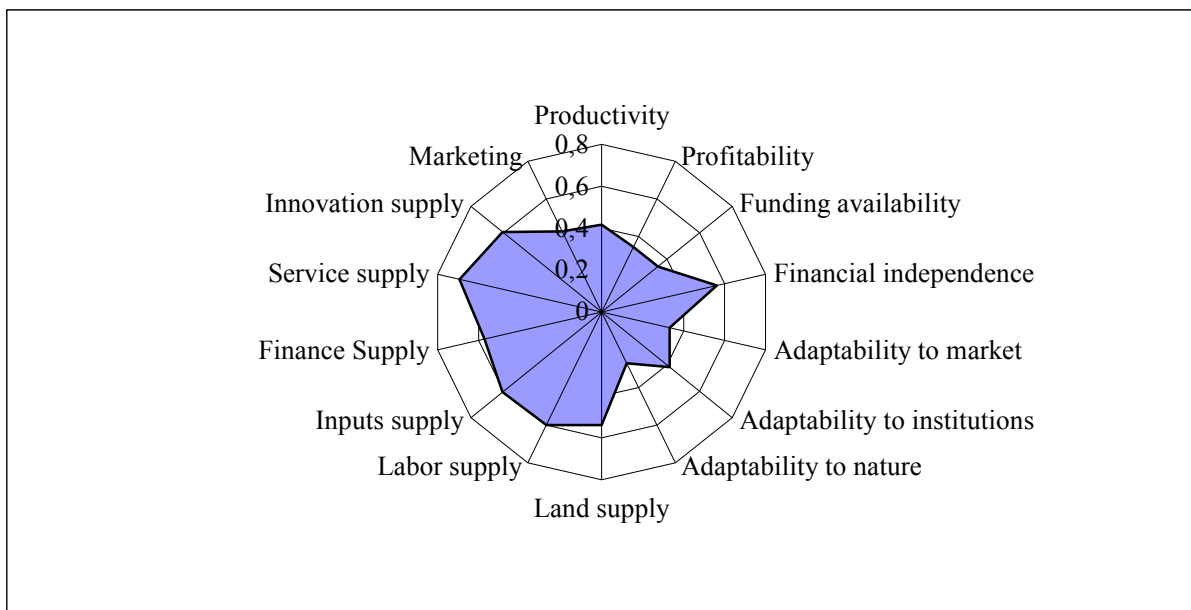
A half of surveyed *cooperatives* are with a good level of competitiveness, and a quarter of them are highly competitive. At the same time, one out of four *cooperatives* is not competitive. The *cooperatives* with a diverse specialization are with different level of competitiveness. Most of the highly competitive *cooperatives* are in *permanent crops* and *mix*

crops. At the same time, a significant number of cooperatives in field crops and mix crops are with a low level of competitiveness.

All surveyed *agri-firms* are with a good or a high competitiveness. What is more, a significant number of these farms (44%) are highly competitive. Nevertheless, while three-quarter of the firms in field crops are with high level of competitiveness, all firms in mix crops and permanent crops are with a good competitiveness, and vegetables producers are equally divided in good and high competitive groups.

The analysis of different *aspects* of farms competitiveness shows that the farms' low productivity, profitability and funding availability, and insufficient adaptability to market, institutional and natural environment, and serious problems in financial and innovation supply and in marketing of products and services, all contribute to the greatest extend to decreasing the overall level of farms competitiveness (Figure 8).

Figure 8. Importance of individual elements of farm competitiveness in Bulgaria



Source: interviews with farm managers, 2010

The analysis of different components of the competitiveness of *unregistered* holdings indicates that the low productivity, profitability, and funding availability, along with the insufficient adaptability to changing market, institutional and nature environment, and the severe problems associated with marketing of products, are mostly responsible for diminishing the competitiveness of these farms. On the other hand, the higher efficiency in supply of factors of production and the lower dependency from outside funding, enhance the overall competitiveness of unregistered farms.

The analysis of different elements of the competitiveness of *cooperatives* shows that the low productivity, profitability, financial availability and independency, together with the insufficient adaptability to market, institutional and nature environment, and the difficulties associated with finance, land and innovation supply and marketing mainly affect the reduction of competitiveness of cooperatives.

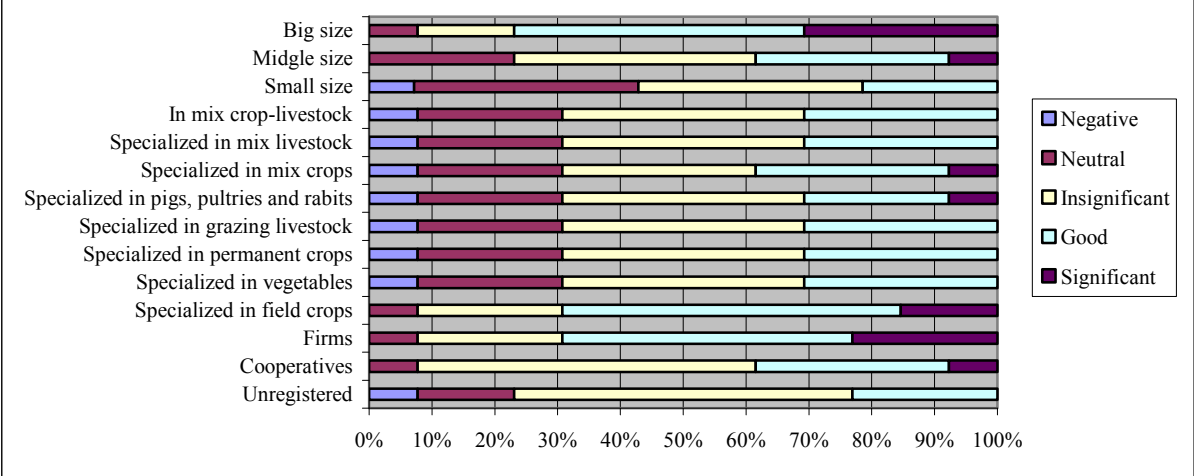
The analysis of individual factors the competitiveness of *agri-firms* exposed that the low productivity, profitability, funding availability and independency, and the serious problems in labor and land supply and marketing, greatly contribute to decreasing firms competitiveness. On the other hand, the high adaptability of firms to evolving market and institutional

environment, and their considerable efficiency in finance, innovation and service supply raise the overall competitiveness of these farming enterprises.

Effect on sustainability of farms

According to experts the impact of CAP implementation on economic, social and environmental sustainability of large farms, firms, and farms specialized in field crops is *good* or *significant* (Figure 9). The overall effect of CAP on sustainability of other type of farms is estimated as *insignificant* or *neutral*.

Figure 9. Impact of CAP on economic, social and environmental sustainability of farms



Source: expertise with leading experts, 2011

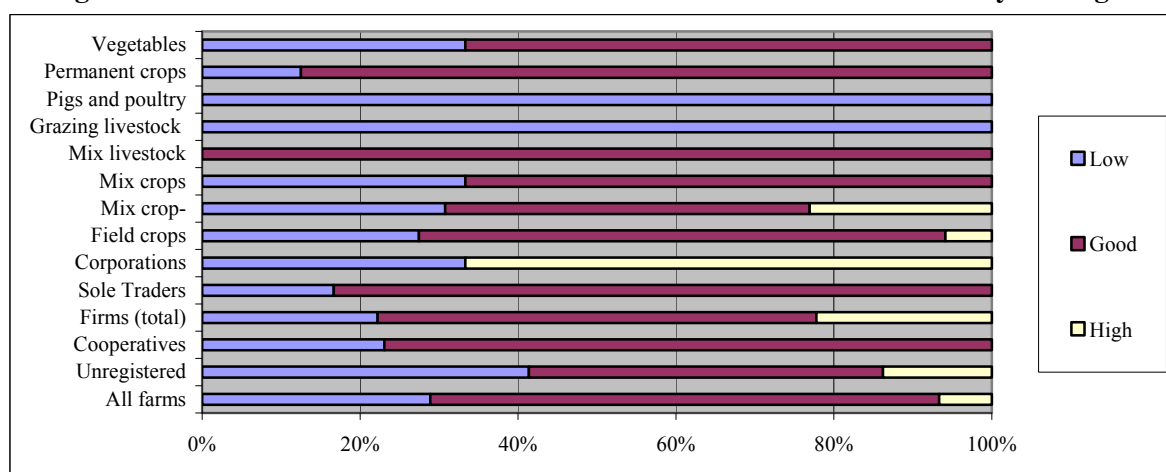
Process of restructuring of farms has been intensified in years before and after country’s accession to EU (Table 3). There has been a constant decrease in the number of unregistered farms as a result of labor exodus (competition with other farms or industries, retirement, emigration), organizational modernization (change in type of enterprises), increasing market competition (massive failures and take-overs), and impossibility to adapt to new institutional requirements (standards) for safety, quality, environmental preservation, animal welfare etc. Similarly, despite the positive impact of CAP on some cooperatives, the efficiency of these organizations has been diminishing considerably in relation to other modes of organization. Consequently, a big amount of cooperatives ceased to exist in recent years. On the other hand, there has been a “boom” in the number of agri-firms which are taking over the land management from cooperatives.

According to 29% of farm managers, their *farm medium-term sustainability* is estimated as low. The share of unregistered holdings, grazing livestock, and pigs and poultry farms with a small sustainability is the biggest (Figure 10). On the other hand, less that 7% of all farms “forecast” a high mid-term sustainability. A particular type of firms – the *companies*, is the only exception among surveyed farms, and two-third of these enterprises envisages being highly sustainable in years to come.

Table 3. Evolution of different type of farms in Bulgaria

	Unregistered	Cooperatives	Agro-firms	Total
Number of farms				
2005	515300	1525	3704	520529
2010	350900	900	6100	357900
Share in number (%)				
2005	99,0	0,3	0,7	100
2010	98,0	0,25	1,7	100
Share in farmland (%)				
2005	33,5	32,6	33,8	100
2010	33,5	23,9	42,5	100
Average size (ha)				
2005	1,8	584,1	249,4	5,2
2010	2,9	807	211,6	8,5

Source: Ministry of Agriculture and Food

Figure 10. Share of farms with different levels of medium-term sustainability in Bulgaria

Source: interviews with farm managers, 2010

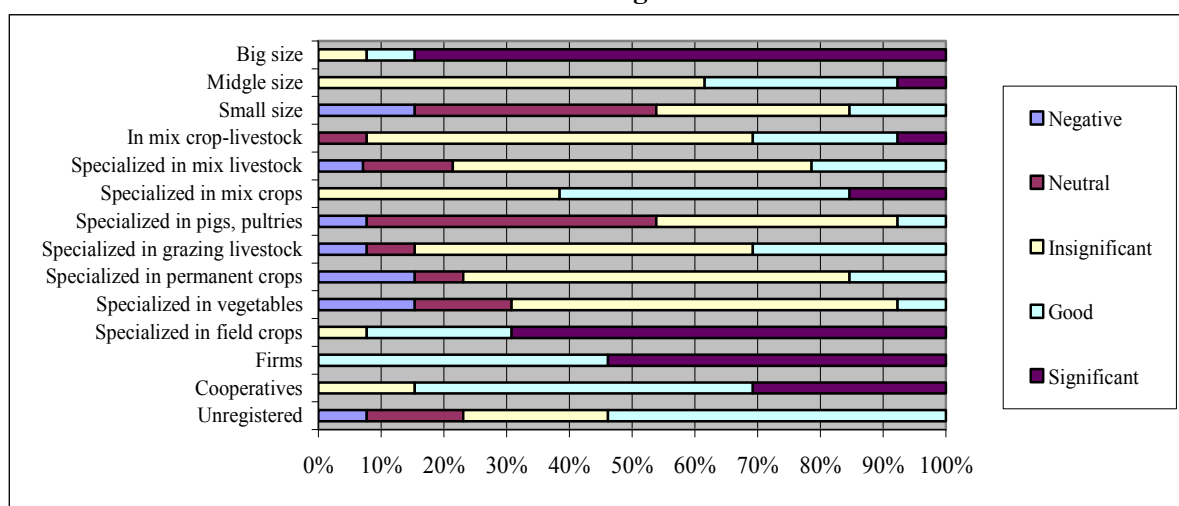
CAP implementation tends to improve the eco-performance of commercial farms. There is “eco-conditionality” for participating in public programs. In addition, direct payments are inducing farming on previously abandoned lands, and improve eco-situation. Furthermore, there is huge budget allocated for special eco-measures and the number of farms joining agri-environmental programs gradually increases. CAP measures affect positively the environmental sustainability particularly of large business farms and cooperatives (Bachev 2011). These enterprises are under constant administrative control (and punishment) for obeying new eco-standards, strongly interested in transforming activities according to new eco-norms (making eco-investments, changing production structures), and realizing economies of scale and scope from participation in special agro-environmental measures. On the other hand, many small and (semi) subsistence holding can hardly meet new eco-standards and stay in the gray and informal sector. The later is particularly true for numerous livestock holdings most of which do not comply with EU standards for quality, safety, animal welfare and eco-performance.

III. Impact of individual CAP measures on farms of different type

Effect of direct payments and national top-ups

According to the greatest part of experts the effect of EU direct payments and national top-ups on economic results and income of big farms, farms specialized in field crops, and firms is *significant* (Figure 11). Impact on economic results and incomes of unregistered farms and cooperatives is estimated as *good* by most experts. Most experts assess as *insignificant* the effect of these payments on economic results and incomes of middle size farms, and farms specialized in vegetables, permanent crops, grazing livestock, mix crops, mix livestock, and mix crop-livestock. At the same time, most experts evaluate as *neutral* or *negative* the impact of direct payments on economic results and incomes of small holdings, and farms specialized in pigs, poultry and rabbits.

Figure 11. Impact of area-based direct payments and national top-ups on economic results and income of Bulgarian farms

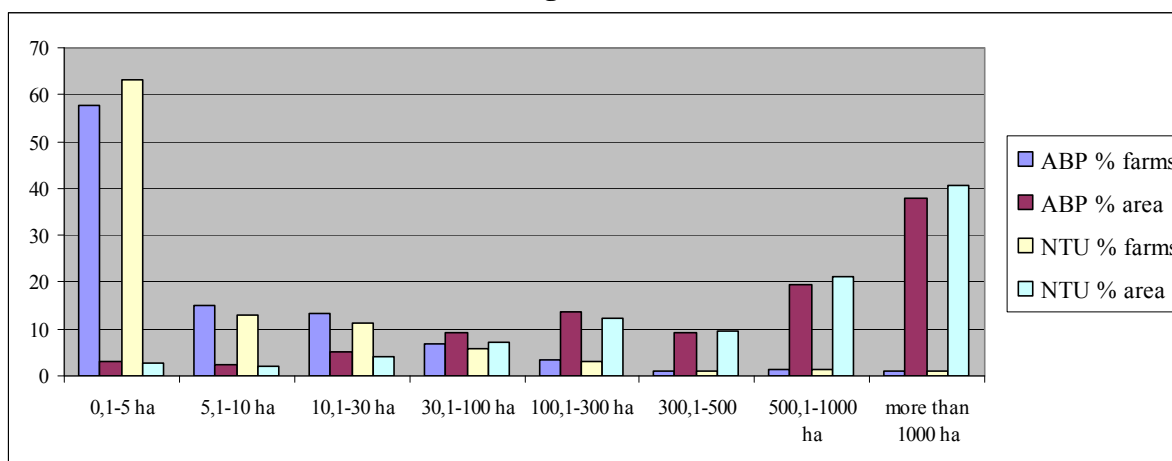


Source: expertise with leading experts, 2011

In fact, the greatest share of beneficiaries for area-based payments and national top-ups are small farms (up to 5 ha) but they receive a tiny share of all subsidies (Figure 12). On the other hand, around 2% of all beneficiaries touch 60% of the public payments.

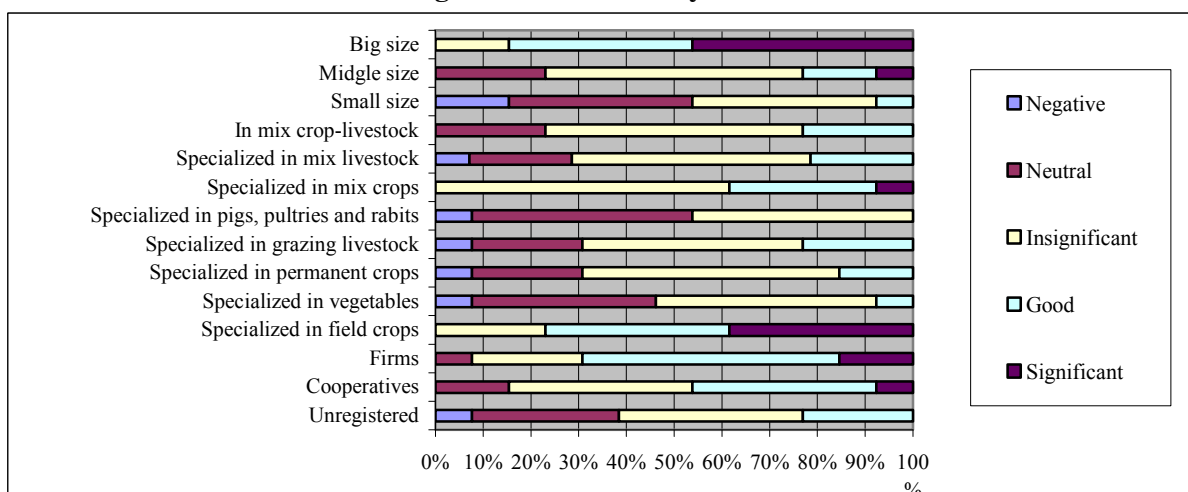
According to majority of experts, the effect of EU direct payments and national top-ups on production and governance efficiency of farms is *good* or *significant* only for large farms, firms, and farms specialized in field crops (Figure 13). On the other hand, the best part of experts estimate as *insignificant* or *neutral* the impact of direct payments and national top-ups on production and governance efficiency of unregistered and cooperative farms, small and middle size holdings, and farms with specialization different from filed crops.

Figure 12. Distribution of beneficiaries for area based payments and national top-ups in Bulgaria (2008)



Source: MAF, State Fund "Agriculture"

Figure 13. Impact of area-based direct payments and national top-ups on production and governance efficiency of farms

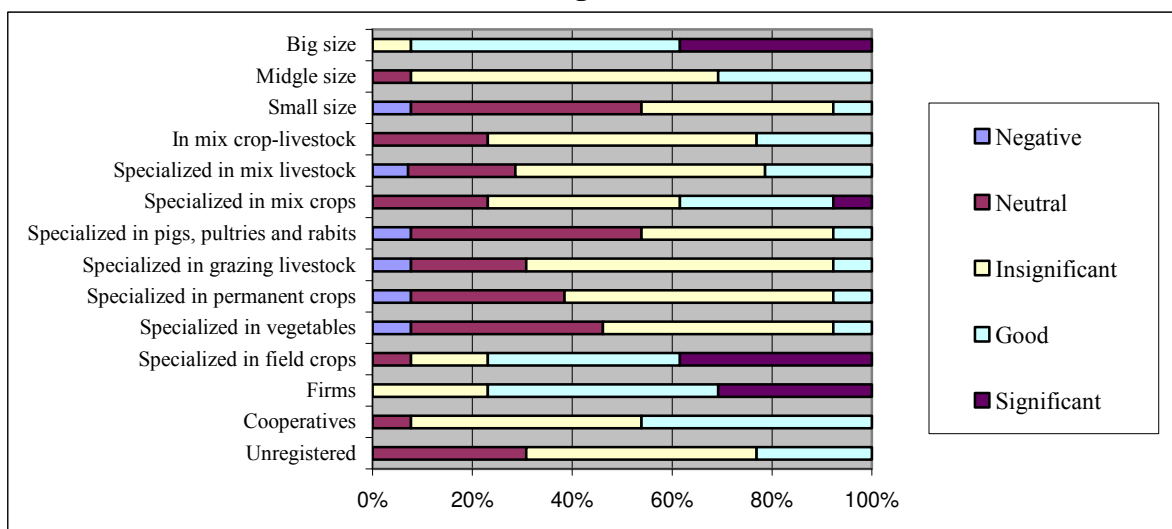


Source: expertise with leading experts, 2011

According to most of experts the effect of EU direct payments and national top-ups on *competitiveness* of farms is *good* or *significant* only for large farms, firms, and farms specialized in field crops (Figure 14). Majority of experts assess as *insignificant* or *neutral* the impact of direct payments and national top-ups on competitiveness of unregistered and cooperative farms, small and middle size holdings, and farms with specialization different from field crops.

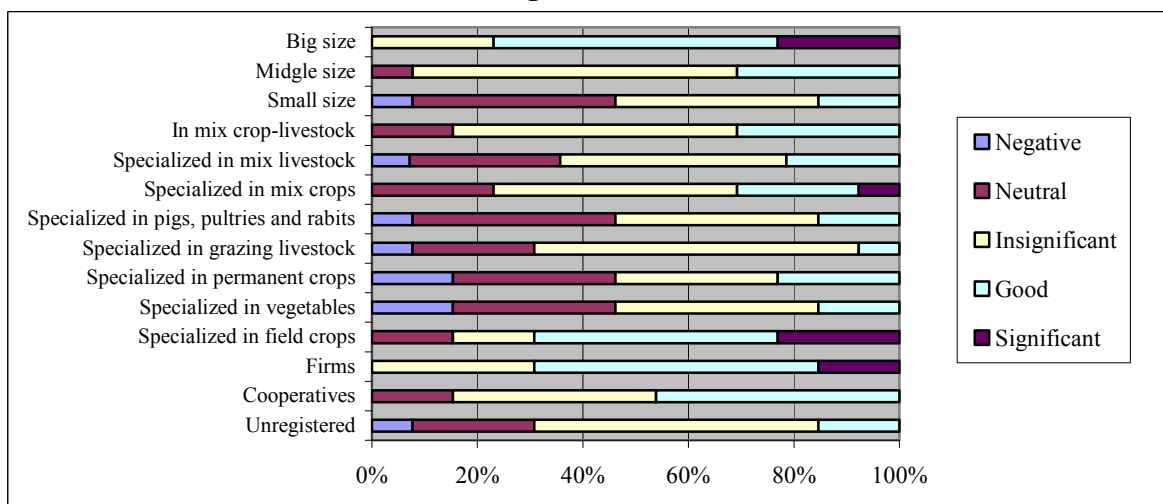
According to most of experts the effect of EU direct payments and national top-ups on *economic, social and environmental sustainability* of big farms, firms, and farms specialized in field crops is *good* or *significant* (Figure 15). At the same time, the majority of experts assess as *insignificant* or *neutral* the impact of direct payments and national top-ups on sustainability on the rest type of holdings. Nevertheless, almost a half of experts believe that direct payments have *good* effect on economic, social and environmental sustainability of cooperatives.

Figure 14. Impact of area-based direct payments and national top-ups on competitiveness of Bulgarian farms



Source: expertise with leading experts, 2011

Figure 15. Impact of area-based direct payments and national top-ups on sustainability of Bulgarian farms



Source: expertise with leading experts, 2011

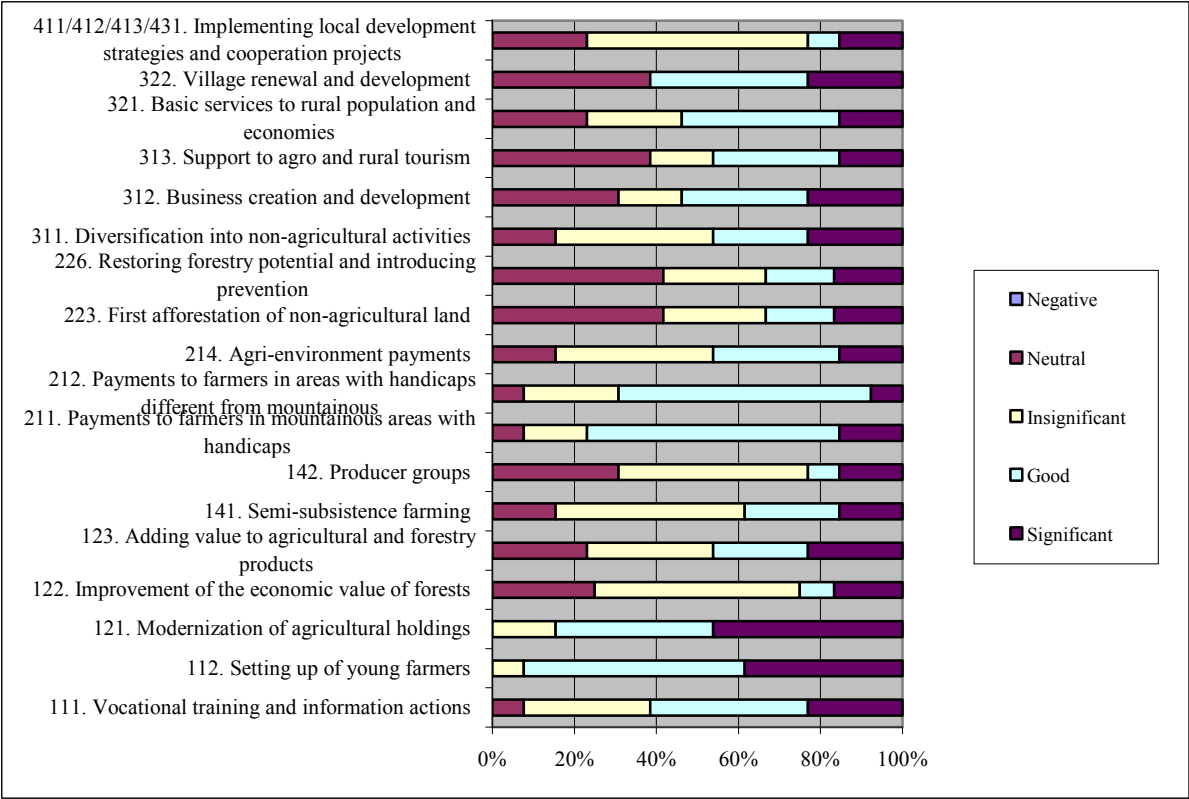
Effect of support measures of the NPARD

Implementation of individual measures of NPARD has got unequal effect on farms in the country. According to majority of experts impact of measures associated with payments for less-favored areas in mountainous and non-mountainous regions (211 and 212) is *good* (Figure 16). What is more, most experts estimate that measures “Modernization of agricultural holdings” (121), “Setting up of young farmers” (112), “Village renewal and development” (322), and „Basic services to rural population and economies” (321) are with *good* or *significant* impact in relations to agricultural farms.

On the other hand, impact of all other measures is evaluated by experts as *neutral* or *insignificant*. Furthermore, around a half of experts assess as neutral the effect on farms in the country of measures “Producer groups” (142), “Improvement of the economic value of

forests” (122), “Semi-subsistence farming” (141), and “Implementing local development strategies and cooperation projects” (411/412/413/431).

Figure 16. Impact of NPARD support measures on Bulgarian farms



Source: expertise with leading experts, 2011

In 2007 no public payment was made for projects associated with NPARD measures but area based payments for regions with handicaps. The progression in implementation of public support since 2007 has been very slow and far behind the targets (Table 5). While measures “Setting up of young farmers” and “Payments to farmers in regions with handicaps” have been quite successful, the number of approved projects in other areas are insignificant and the amount of actually funded projects even smaller. The bulk of public contracts and funding mostly go to a limited number of farms while many effective small-scale holdings get no or only a fraction of the public support (Bachev, 2010).

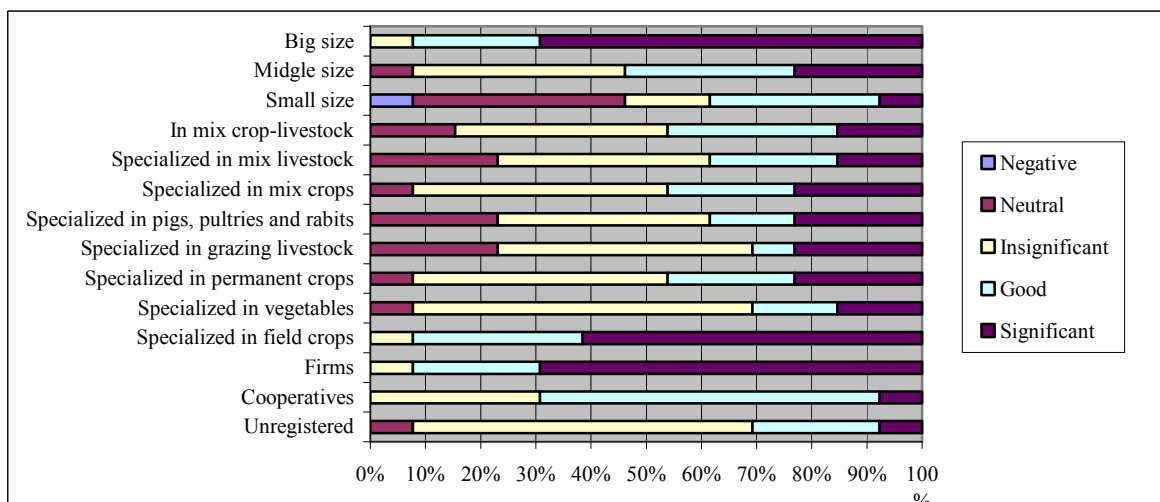
Table 4. Progress in implementation of 2007-2013 NPARD in Bulgaria

Measures	December 31, 2008		December 31, 2009		August 23, 2010	
	Approved projects	Funding 000 Euro	Approved projects	Funding 000 Euro	Approved projects	Funding 000 Euro
111 Vocational training and information actions	0	0	0	0	15	764
<i>% target</i>	0	-	0	-	na	-
112 Setting up of young farmers	461	10616	2261	53009	4085	102125
<i>% target</i>	11.25	-	55.20	-	99.73	-
121 Modernization of agricultural holdings	365	60933	1502	156169	1920	247476
<i>% target</i>	6.77	6.27	27.86	16.09	35.62	25.49
122 Improvement of the economic value of forests	0	0	0	0	0	0
123 Adding value to agricultural and forestry products	0	0	0	0	36	23829
<i>% target</i>	0	0	0	0	5.81	4.41
141 Semi-subsistence farming	0	0	0	0	708	5310
<i>% target</i>	0	-	0	-	3.37	-
142 Producer groups	0	0	0	0	0	0
143 Providing advice and consultation in agriculture	982	2	2525	779	6621	2132
<i>% target</i>	3.62	-	9.30	-	24.38	-
211 Payments to farmers in mountainous areas with handicaps	24026	23882	26104	41978	26104	na
<i>% target</i>	40.04	-	43.50	-	43.50	-
212 Payments to farmers in areas with handicaps different from mountainous	10017	7562	10785	12137	10785	na
<i>% target</i>	100.17	-	107.85	-	107.85	-
214 Agri-environment payments	1120	4839	1781	5034	1781	na
<i>% target</i>	2.80	-	4.45	-	4.45	-
223 First afforestation of non-agricultural land	0	0	20	610	37	2320
<i>% target</i>	0.00	-	1.00	-	1.85	-
226 Restoring forestry potential and introducing prevention	0	0	18	848	23	1107
<i>% target</i>	0.00	-	0.90	-	2.30	-
311 Diversification into non-agricultural activities	0	0	0	0	4	425
<i>% target</i>	0	-	0	-	0.09	0
312 Business creation and development	0	0	0	0	88	13832
<i>% target</i>	0	-	0	-	2.09	-
313 Support to agro and rural tourism	0	0	0	0	0	0
321 Basic services to rural population and economies	0	0	72	123461	123	197446
<i>% target</i>	0.00	-	4.77	-	8.15	46.19
322 Village renewal and development	0	0	144	81208	156	89771
<i>% target</i>	0.00	-	18.00	-	19.50	43.07
431-32 Implementing local development strategies and cooperation projects	0	0	0	0	103	8461
<i>% target</i>	0	-	0	-	7.92	-

Source: Ministry of Agriculture and Food

According to experts' estimates, the *impact of support for "Modernization of agricultural holdings" (Measure 121) on farms* of different type is quite multidirectional. Most of them assess, that the effect from the support of this measure is *significant* in relation to firms, farms with big size, and holdings specialized in field crops (Figure 17). What is more, almost all experts evaluate the effect as *good* or *significant* as far as these type of farms are concerned. Most experts also evaluate the impact of that support measure in cooperatives as *good*. Impact of that measure on middle size farms is also assessed as *good* or *significant* by majority of experts.

Figure 17. Impact of support measure 121 “Modernization of agricultural holdings” on Bulgarian farms



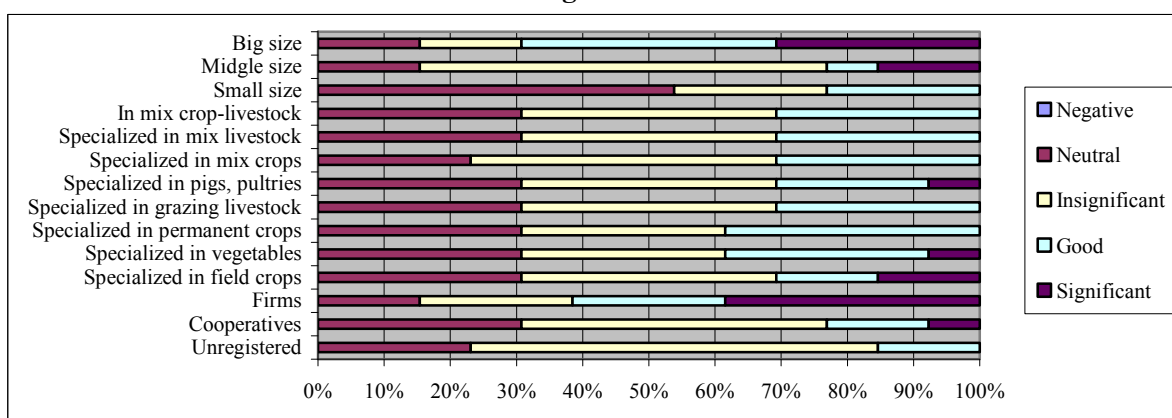
Source: expertise with leading experts, 2011

On the other hand, most experts evaluate the impact of measure 121 on farms specialized in vegetables as *insignificant*, and on the rest of farms as *neutral* or *insignificant*. The biggest number of experts determines as neutral the impact of analyzed measure on farms with small size.

The data for funded projects also demonstrate that the greatest share of them belongs to the field crops (87%), followed by wine (1,2%) and permanent crops (1,04 %), while public investments for the milk sector represent only 0,7% (MAF 2010).

According to most of the experts the *impact of support measure for “Adding value to agricultural and forestry products” (Measure 123) on farms* is good or significant only for farms with large size and the firms (Figure 18). As far as the effect of that measure on other type of farms it is defined as *neutral* or *insignificant*.

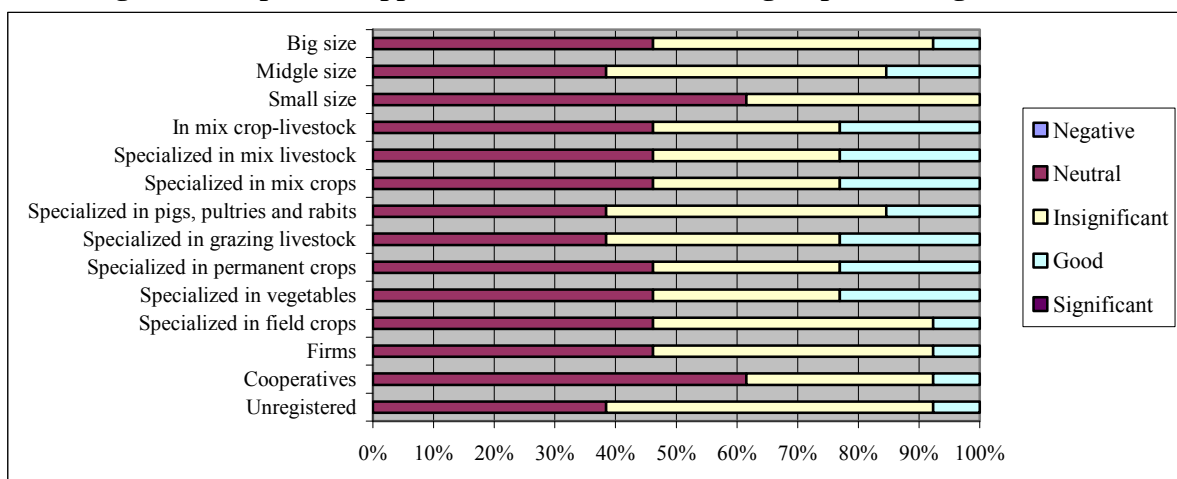
Figure 18. Impact of support measure 123 “Adding value to agricultural and forestry products” on Bulgarian farms



Source: expertise with leading experts, 2011

Most experts evaluate the *impact of support measure „Producer groups” (Measure 142)* on all type of farms as *neutral* or *insignificant* (Figure 19).

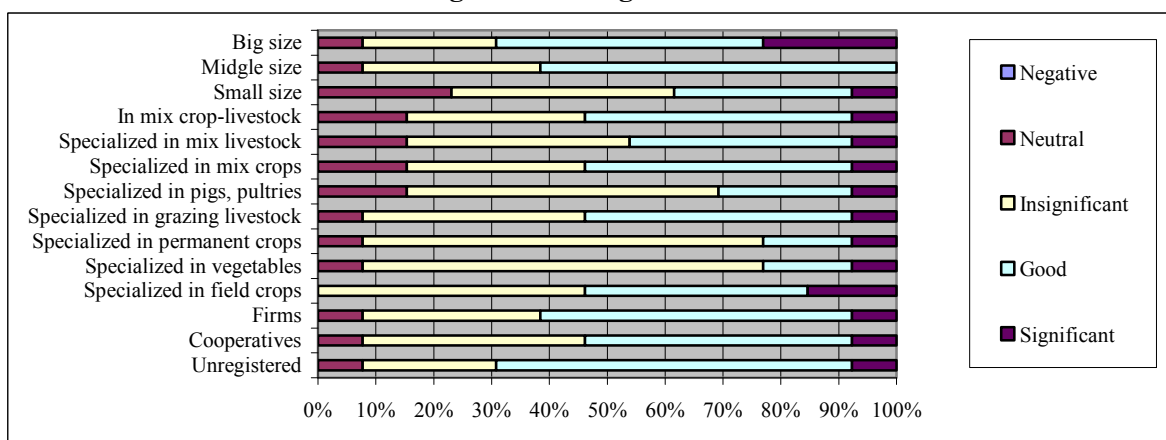
Figure 19. Impact of support measure 142 “Producer groups” on Bulgarian farms



Source: expertise with leading experts, 2011

The impact of “Payments for farms in less-favored mountainous regions” (Measure 211) is assessed by the majority of experts as *good* and *significant* for farms of all juridical types, farms with middle and big size, and farms specialized in field crops, grazing livestock, mix crops, and mix crop-livestock (Figure 20). As far as the effect of support under that measure on small farms, and farms specialized in vegetables, fruits, pigs, poultry and rabbits, and mix livestock, it is estimated as *insignificant* or *neutral* by most experts.

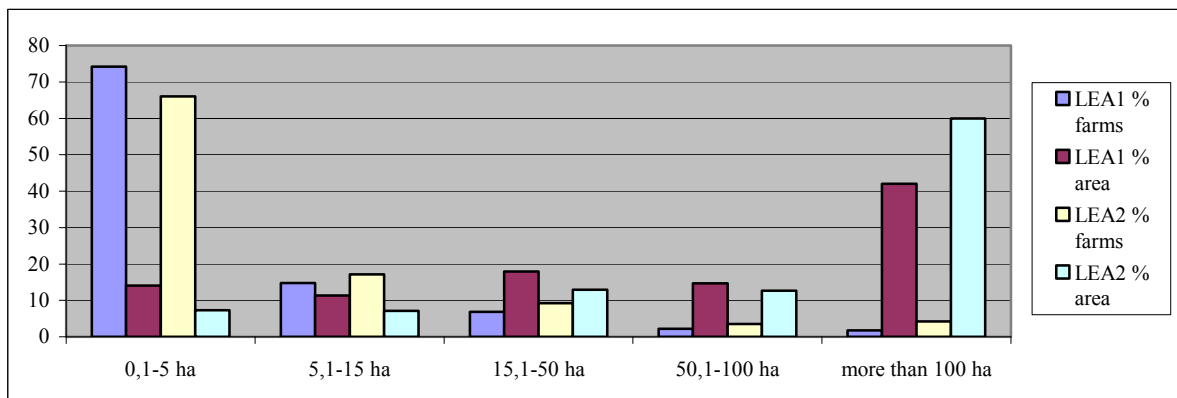
Figure 20. Impact of support measure 211 “Payments for farms in less-favored mountainous regions” on Bulgarian farms



Source: expertise with leading experts, 2011

The data for supported farms indicates that most of them are small scale holdings (Figure 21) as the number, area, and support to farms less than 50 ha increased for 2007-2009 by 16%, 10% and 22% accordingly (MAF). Nevertheless, around 2% of the biggest farms manage more than 57 % of supported by the measure area.

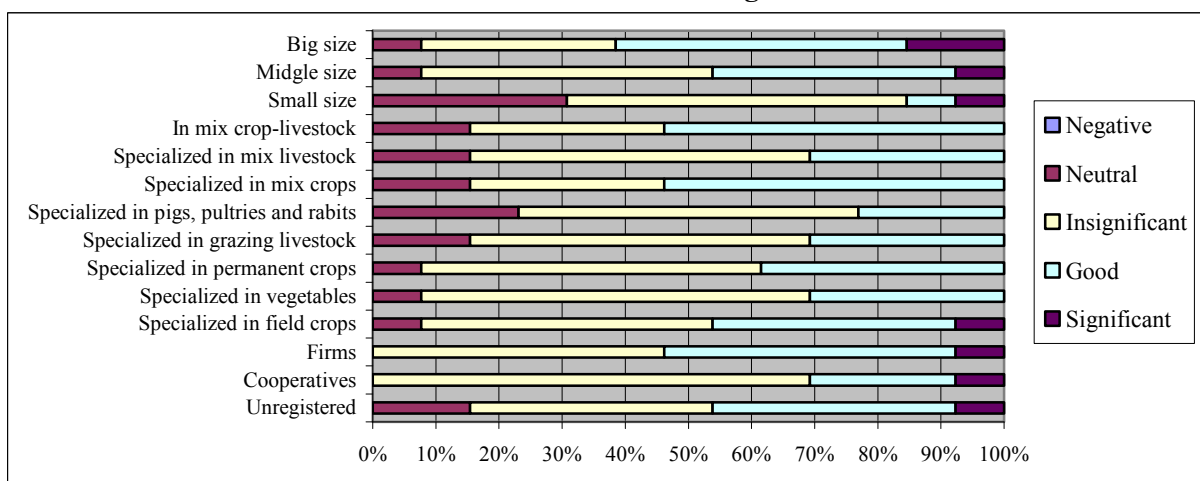
Figure 21. Distribution of beneficiaries for payments for less-favored areas in Bulgaria (2008)



Source: MAF, State Fund “Agriculture”

As far as effect of “*Payments to farmers in areas with handicaps different from mountainous*” (Measure 212) is concerned, it is estimated by most experts to be *good* or *significant* for firms and farms with big size (Figure 22). For mix-crops and mix crops-livestock farms impact of these payments is assessed as *good* by most experts. According to majority of experts the impact of payments of that type on cooperatives, and specialized in vegetables farms, is *insignificant*. Around a half of expert evaluate as insignificant the effect of these payments on holdings with small size, and farms specialized in permanent crops, grazing livestock, pigs, poultry and rabbits, mix livestock, and filed crops. The impact of payments of this type on unregistered farms is estimated by most experts as *neutral* or *insignificant*.

Figure 22. Impact of support measure 212 “ Payments to farmers in areas with handicaps different from mountainous” of Bulgarian farms

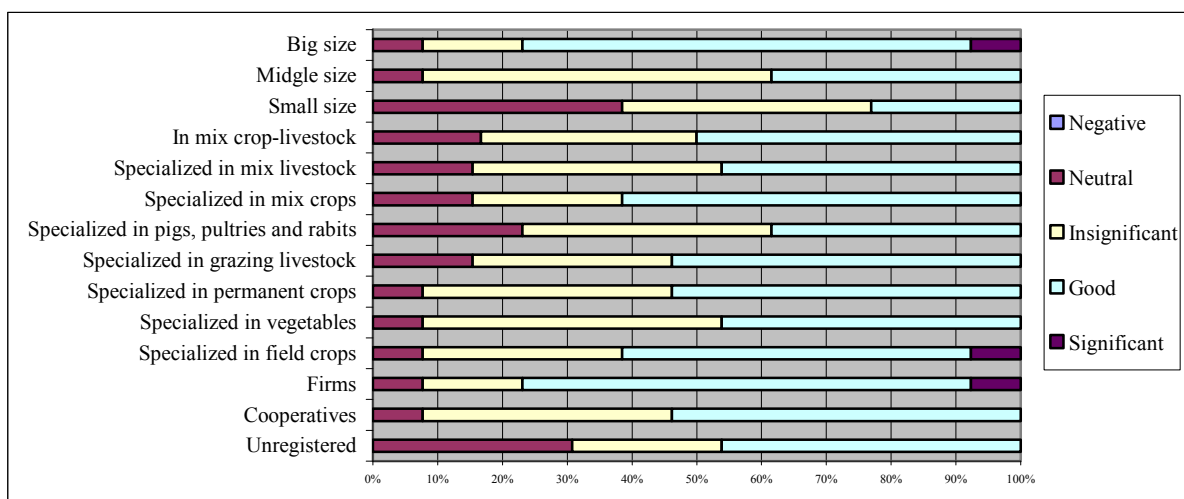


Source: expertise with leading experts, 2011

The data for supported farms shows that most of them are small scale holdings (Figure 21) as the number and area of supported farms less than 50 ha increased for 2007-2009 by 15% and 10% accordingly (MAF). Nevertheless, a little more than 2% of the biggest farms manage more than 60 % of supported areas under that measure.

The impact of “Agri-environment payments” (Measure 214) on farms, farms with large size, and farms specialized in mix-crops is evaluated by most experts as *good* (Figure 23). More than the half of experts also suggests that there is a *good* effect of that type of payments on cooperatives, and farm specialized in field crops, permanent crops, and grazing livestock. The impact of agri-environmental payments” on farms with middle size is estimated as *insignificant* by more than the half of experts. As far as other types of farms are concerned, the effect of these payments is assessed as *neutral* or *insignificant* by most experts.

Figure 23. Impact of support measure 212 “Agri-environmental payments” on Bulgarian farms



Source: expertise with leading experts, 2011

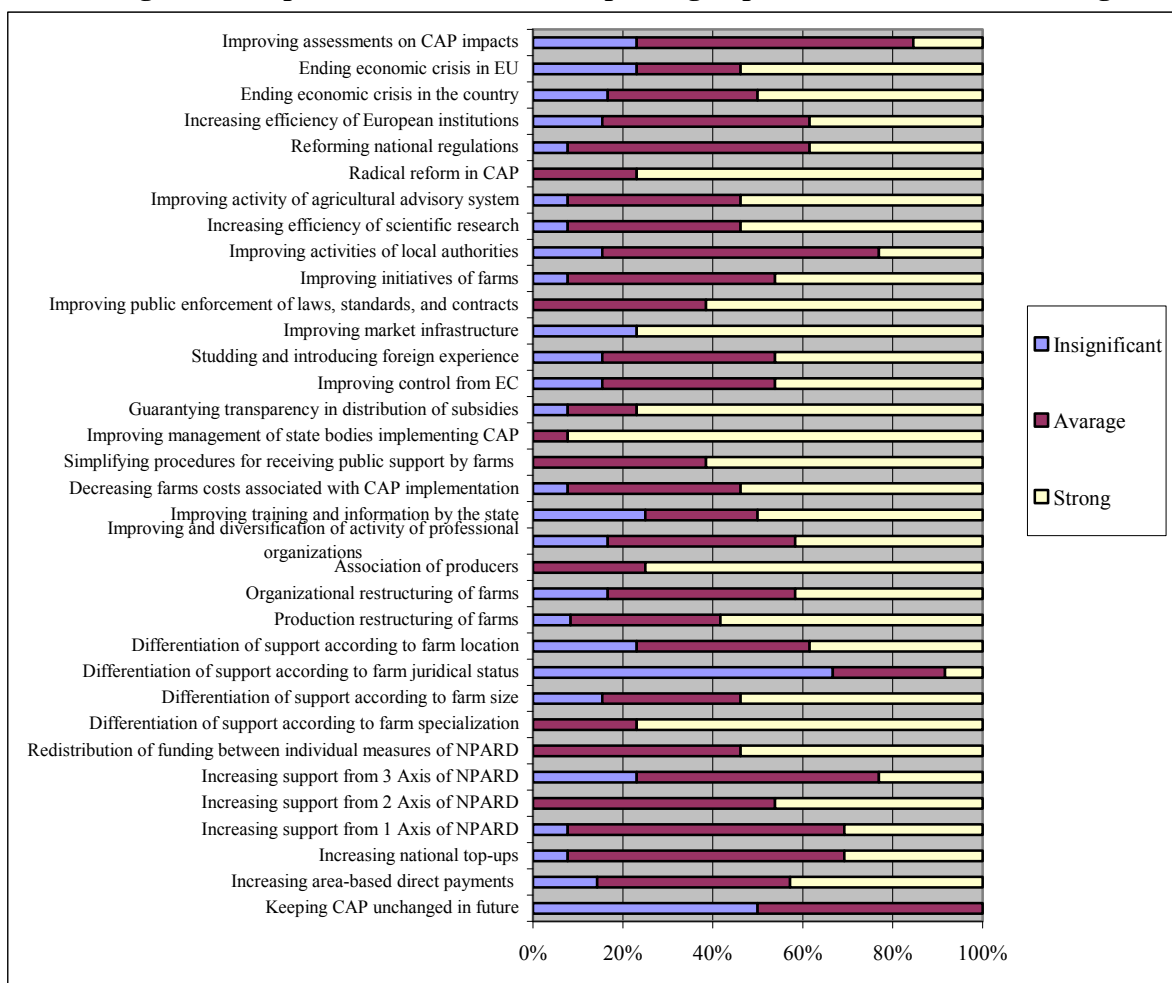
III. Factors for improvement of EU CAP impact on agricultural farms

The experts assess the importance of diverse factors, which could contribute to improvement of CAP impact on Bulgarian farms. To a great extent the experts are unanimous that the *most important* factors for improvement of CAP effects on farms are “improving management of state bodies implementing CAP”, “differentiation of support according to farm specialization”, “guarantying transparency in distribution of subsidies”, “improving market infrastructure”, and “radical reform in CAP” (Figure 24).

Most experts also believe that *very significant* factors for improving CAP impact on farms are “association of agricultural producers”, “simplifying procedures for receiving public support by farms”, and “improving public enforcement of laws, standards, contracts”. More than a half of experts also assess as factors with big significance “redistribution of funding between individual measures of NPARD”, “differentiation of support according to farm size”, “production restructuring of farms”, “decreasing farms costs associated with CAP implementation”, “increasing efficiency of scientific research”, “improving activity of agricultural advisory system”, and “ending economic crisis in EU”.

Furthermore, majority of experts evaluate “increasing national top-ups”, “increasing support from 1 Axis of NPARD”, “improving activities of local authorities”, and “improving assessments on CAP impacts”, as factors with *average importance* for improving CAP impact on farms in the country. On the other hand, merely “differentiation of support according to farm’s juridical status” is determined as *insignificant* factor for improving CAP impact on farms.

Figure 24. Importance of factors for improving impact of CAP on farms in Bulgaria



Source: expertise with leading experts, 2011

As far as other factors are concerned, there is not unanimity among experts for the extent of their importance. Nevertheless, it is obvious that “keeping CAP components unchanged in the future” is ranked as a factor with *insignificant or average importance*. Similarly, “increasing area-based direct payments”, “increasing support from 2 Axis of NPARD”, “improving initiatives of farms”, “reforming national regulations”, “increasing efficiency of European institutions”, and “ending economic crisis in the country”, are rather factors with *average and big significance* in relations of improvement of CAP impact on farms.

Conclusion

There is a considerable shortage of reliable data for assessing the real effect of CAP implementation on Bulgarian farms. Assessment is additionally impeded by the short and unequal implementation of individual CAP measures as well as the complicated relations between policy introduction and the diverse aspects of farms’ evolution.

Undertaken expertise and farms survey let making the first attempt for a comprehensive assessment of real effects of CAP implementation on farms in the country. They give a tentative picture for impacts of EU integration and CAP implementation on the farms of different type and specialization.

Nevertheless, official (agri-statistics, FADN etc.) as well as special farm survey data are not entirely representative for (all type of) farms. Therefore, they have to be read carefully especially for the short period of CAP implementation. Similarly, experts estimates on individual issues are not with equal importance. For one part of the questions there is a great unanimity of experts, and their assessments are sound for making explicit conclusions. For instance, impact of direct payments is good or significant on incomes, efficiency, competitiveness and sustainability of large scale farms, firms, and holdings specialized in field crops. For another part of the questions, assessments of experts are controversial or strongly stratified as for the impact of some measures of NPARD on farms. In these cases it is impossible to make definite conclusions for CAP effects on the bases of the carried out expertise.

Furthermore, often it is extremely difficult to separate the specific impact of individual element of policy on each characteristic of farms. For instance, the farms dynamics is habitually (not a private) result of an individual measure of NPARD but rather a common result of implementation of numerous measures. Moreover, the evolution of incomes, efficiency, competitiveness, and sustainability of farms is frequently caused by other unaccounted factors like personal characteristics of the farm manager (entrepreneurship, experience and training, networks), stage in the farm life-cycle, demographic and regional specificity etc.

Despite all this shortcomings the expertise is an efficient method for assessing impact of CAP on farms. In the conditions of lack of sufficient and reliable first-hand data, non-perfect methods of analysis, and practical difficulties associated with the assessment, that method is widely used for evaluating impact of CAP in EU countries. Therefore, experts' assessments should be used in the next stages of assessment of effects of CAP implementation in the country. In addition, analysis is to incorporate the assessments of farm managers for "felt" impacts of various instruments and the CAP as a whole.

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