NATIONAL POLICIES RELATED TO FARMING STRUCTURES AND SUSTAINABILITY IN BULGARIA

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Abstract

This paper presents the dominating farming structure in Bulgaria on the eve of EU accession, and evaluates recent policies for farm and agricultural income support, and assesses likely consequences of CAP implementation on farming structures and sustainability.

We demonstrate that a specific farming structure dominates in the country consisting of numerous subsistence and small farms; and few large farms, cooperatives, and agro-firms; and widely used informal, vertically integrated, and mix forms. Public support to farming has been in an increase in recent years but is still far bellow the European level. Besides, only a fraction of farms benefit from some form of public support most of them being large farms, cooperatives, and tobacco producers. Farming is still an important income source for a good part of population. However, there is a significant gap in the monetary income in the large and some smaller-scale (intensive) enterprises, and the great majority of farms. Besides, development programs contribute less to agrarian and rural sustainability, and to decreasing divergence between richer and poor regions of the country.

Assessment of likely short-term impact of the CAP implementation in Bulgaria shows that it will increase sustainability of farms bringing net financial benefits, enhancing competitiveness, and improving environmental performance. However, the chief beneficiary from the direct payments and other support measures will be the biggest farms in the most developed regions of the country. CAP programs will also give new possibility for extending activities of existing forms and bring to a life new organizational arrangements. All that will create more employment and income opportunities, and revitalize agrarian and rural economy. On the other hand, some effective smaller-size and family structure and livestock farms will have no or limited access to EU funding. Consequently, income and performance gap between farms of different types, sub-sectors and regions will widened unless special supplementary measures ("coupled" with production and regions) are taken. Besides, CAP will likely support "ineffective" and non-market modes (such as part-time and subsistence farming, production cooperatives), and therefore raise their sustainability and delay further restructuring.

Last but not least important, there will be significant difficulties for introducing CAP and EU standards which will require more costs than in other countries, and will be associated with some time lag until "full" implementation, and would not involve less commercialized and subsistent farming.

Key words: farms structures, support to farms, impact on CAP implementation on farm sustainability

INTRODUCTION

An unprecedented transformation has taken place in Bulgarian agriculture since 1990. Previous farming structure has been reorganized, and markets liberalized, and new type of public support introduced, and institutional framework modernized according to European standards. Negotiations for joining the EU have been successfully completed and date for country's accession set for 2007. There has been a growing interest among local and international policy makers, farmers and economic agents, and public at large, in likely impact of implementation of CAP on farming structures and sustainability in the country.

This paper presents the dominating farming structure in Bulgaria on the eve of EU accession, and evaluates recent policies for farm and agricultural income support, and assesses likely consequences of CAP implementation on farming structures and sustainability.

OVERVIEW OF FARM STRUCTURES AND AGRICULTURAL INCOME

Current farming structure

According to the last agricultural census there are 680000 agricultural holdings in Bulgaria[1]. In addition, there are numerous unaccounted subsistence farms in the country.

Nearly all of the agricultural holdings utilize some farmland (Table 1). Land management is concentrated in a small number of large farms bigger than 100 ha. Around 3900 of such enterprises (less than 0.6% of farms) use 76% of the Utilized Agricultural Area (UAA) covered by the census. At the same time more than a half million holdings (77% of surveyed farms) are smaller than 1 ha and utilize under 7% of the farmland.

Table 1 Number, legal status, and utilized agricultural area of farms in Bulgaria

Holding type	Agricultural holdings		Agricultural area		Average
	Number	Share	ha	Share	UAA (ha)
1. Holdings with UAA total	668000	98.24	2901800	100	4.34
Belonging to physical persons	661340	97.26	877000	30.22	1.33
Belonging to sole traders	2976	0.44	340500	11.73	114.42
Agricultural cooperatives	1992	0.29	1168400	40.26	586.55
Farming companies	1339	0.20	469900	16.19	350.93
Partnerships etc.	353	0.05	46000	1.59	130.31
2. Holdings without UAA	12000	1.76	0	0	0
Total (1 plus 2)	680000	100	2901800	100	4.27

Source: MAF, Agricultural Holdings Census in Bulgaria'2003

Three type farms dominate in Bulgarian agriculture since the beginning of transition now – unregistered farms, agricultural cooperatives, and agri-firms. Different types of farms are with dissimilar size; and share in agrarian recourses and output; and product specialization and commercialization; and level of efficiency.

The majority of agricultural holdings are not registered enterprises ("physical persons") belonging to an individual, family or informal partnership. Almost 98% of these farms are smaller than 5 ha having an average size of 0.65ha. The remaining fraction (16400 farms) are bigger operators averaging 27.8 ha and accounting for 52% of the UAA of physical entities. The unregistered farms manage less than a third of the UAA and carry out the best part of vegetables (87%), tobacco (73%), flowers (62%), natural meadows (83%), and vineyards (50%) in the country. Besides, they produce a great variety of farm products being an important mode for food (self) supply of households. During the last several years the number of unregistered farms has decreased while their average size and share in the overall UAA increased.

Less than 1% of the agricultural holdings are legal entities registered under the Trade Law or the Law for Cooperatives as Sole Traders, Limited Companies, Partnerships, and Agricultural Cooperatives (Table 1). The Production Cooperatives manage the greatest share of all UAA and they have the biggest operational size. They grow a half of cereals (wheat, burley) and oil crops (sunflower), and a major part of corn, orchards and vineyards in the

[1] "Agricultural holding" is defined as an independent farming business meeting one of the following criteria: manages 0.5 ha of utilized agricultural land; or 0.3 ha of arable land; or 0.2 of natural grassland; or 0.1 ha of vegetables, berries, orchards, vineyards, nurseries, tobacco, hops, seed and seedlings, flowers, essential oil crops and medicinal crops, mushrooms, etc.; or 0.05 ha crops under glass; or 1 cow; or 1 buffalo-cow; or 2 cattle; or 2 buffaloes; or 1 breeding sire; or 1 sow; or 5 pigs; or 5 ewes; or 2 she-goats; or 2 beasts of burden; or 50 laying hens; or 100 chicks for fattening; or 30 other poultry species; or 10 she-rabbits; or 10 bee families; or 1 000 quails or other species (MAF).

country. Most cooperatives are essential service (and food) provider to subsistent and small farms, and their members. A number of them diversify activities into possessing and marketing, and apply "business like" governance - profit-making orientation, close-membership policy, joint-ventures with other organizations etc. At the same time, a significant portion of coops have been experiencing serious economic problems in recent years. Since 1998 the average size of cooperatives has shrank by a fifth and 40% of them bankrupted or ceased to exist. Cooperated farmland has been "taken over" by other (primarily subsistence and small) farms or left unutilized, and coops share in overall UAA diminished.

The Agro-firms are commonly large specialized enterprises comprising nearly 30% of the total UAA. They are mainly in grain (wheat, sunflower) production but there are also good examples in fruit, grape, greenhouse, essential oil plants, mix (crop-livestock), and vertically integrated (farming-processing-marketing) activities. The number of agro-firms has doubled since 2000 and their share in UAA augmented. These farms increasingly incorporate new kind of activities and involve novel type of organizations (including ventures with non-agrarian and foreign capital). Newly established agro-firms are generally with smaller size and in less land using productions. Consequently, there has been almost a two-fold reduction in the average UAA by that group of farm enterprises.

The livestock holdings account for a considerable part of all farms in Bulgaria (Table 2). More than a quarter of agricultural holdings have a milk cow, and every third has goats and pigs, and more than 30% breed sheep. Most livestock farms are "non-professional" small-scale breeders. Apart from household consumption many of these farms sell-out a fraction of the output to consumers or processors. Share of farms with more than 10 animals is insignificant (Figure 1). Only country's pig, poultry, and to a certain extend buffalo productions are characterized with higher concentration and market-orientation.

Table 2 Number and size of livestock holdings in Bulgaria (November 1, 2004)

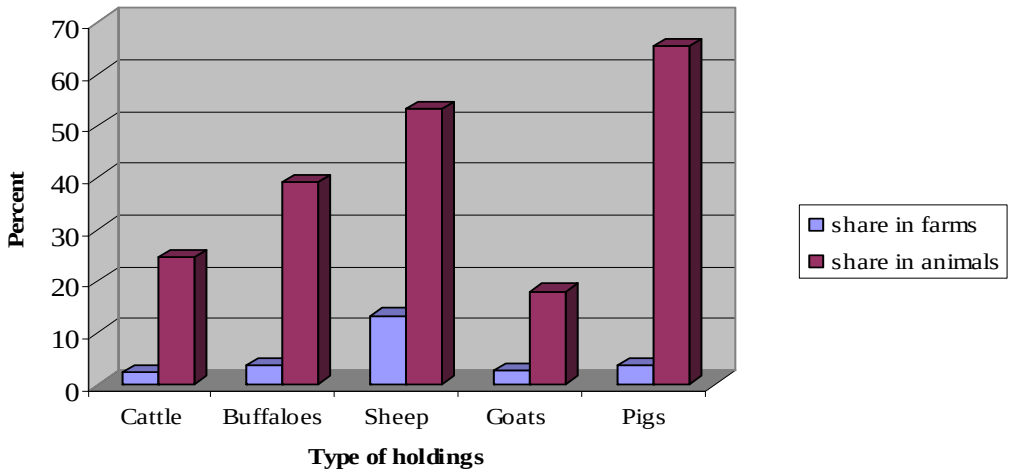
Type of holdings	Livestock holdings		Number of animals	Animals per farm
	Number	Share in all farms		
Cattle total	193600	28.47	671600	3.47
Incl. Milk cows	179800	26.44	379500	2.11
Water buffaloes - total	1700	0.25	8000	4.71
Incl. Buffalo cows	1600	0.24	4100	2.56
Sheep - total	209100	30.75	1692500	8.09
Incl. Ewes	205700	30.25	1351200	6.57
Goats - total	226700	33.34	718100	3.17
incl. She-goats	222100	32.66	578500	2.60
Pigs - total	226600	33.32	931400	4.11
Incl. Sows	34000	5.00	75900	2.23

Source: MAF 2005

Over 90% of animals are bred in farms belonging to physical persons. Less than 2% of agricultural holdings (almost all of them unregistered farms) have no UAA but breed animals. Those are entirely specialized livestock enterprises which account for 38% of poultry, 27% of pigs, and 3% of cattle, sheep and goats in the country.

During the last several years there has been a reduction in number of livestock holdings in all groups (with exception of pig breeders). That has been coupled with an increase in overall livestock heads. Progressive changes in size of livestock farms have taken place which has been particularly great for water buffaloes, sheep, and cattle - enlargement with 38%, 28% and 20% accordingly.

Figure 1 Share of livestock holdings with more than 10 animals in Bulgaria (2004)



Source: MAF 2005

Hence, a specific and quite different from the EU and new member states structure has formed and sustaining in Bulgarian farming. It consists of a huge number of subsistence and small farms, production cooperation in a large extend, and unprecedented concentration of land management and some livestock operations in few big farms. The biggest and most intensive farms are mainly located in the richest and favorable regions (North-East, North-Central, and non-mountainous parts of South-Central and South-Eastern) while smaller farms are dispersed throughout the country. The agrarian governance is also characterized with widespread use of personal and informal forms, and vertically integrated and interlinked (e.g. inputs and/or credit supply against marketing) organizations, and mix modes with participation of non-agrarian and foreign capital.

This farming structure puts some specific challenges for application of the CAP in Bulgaria. Firstly, administrative costs for full implementation and control of policies to a big number of small farms will be much higher than in other countries. Consequently, compliance with the CAP standards will be uneven between farms and regions. Besides, there will likely be some formal size restrictions for participating in public support programs and thus limit their impact to a certain portion of farms. Next, that will require more complex organization associated with necessity to fine-tune policy instruments to the specific needs of various types of farms and agrarian organizations (contractual arrangements, informal modes, alliances etc). Finally, assessment of impact of "common" policy on farms of different type and size, diverse goals and composition of share (and stake)holders, unlike structure of activity, and specific local (natural, economic etc.) environment would be much more complicated.

Agricultural income

Agriculture is a significant income source for a great part of population. There are 335 thousands full-time employed in the sector which accounts for 11.5% of the workers in the country (Table 3). In addition, almost 1 million Bulgarians are involved in farming on a part-time base and use it as a "supplementary" income source. The estimates in Annual Work

Units (AWU)[2] show that agriculture comprises more than 26% of the overall employment in the country. Labor contributed by part-time workers reaches 53% of AWU of the sector. One-fifth of farming AWU is provided by individuals identifying themselves as unemployed.

Table 3 Workforce in Bulgarian agriculture

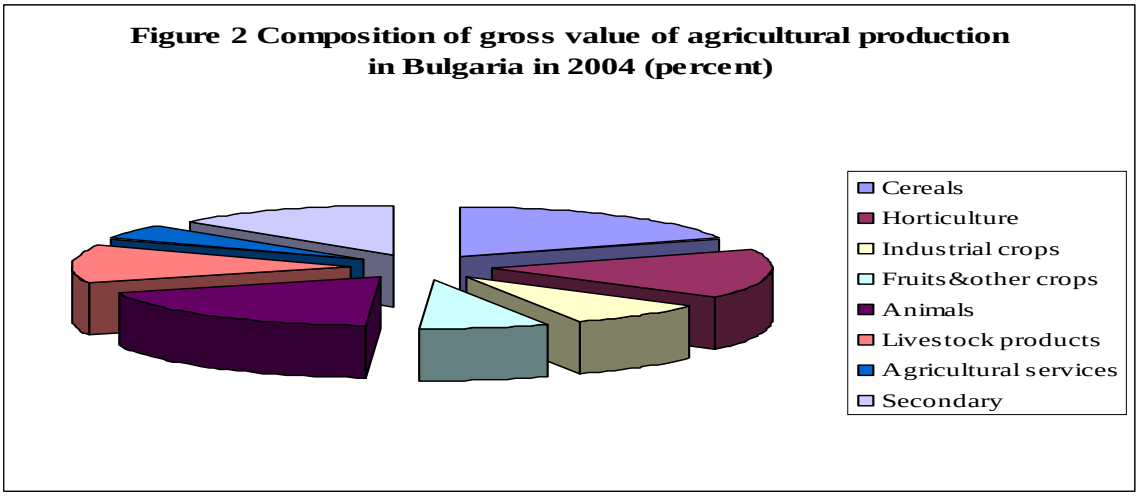
Family workforce including the farmer			Non family workforce				Workforce	Labor input
Total	Of which		Permanently employed			Seasonal workers & outsourced services	Total	Total
	Full time	Part-time	Total	Of which				
				Full time	Part-time			
'000 people	'000 people	'000 people	'000 people	'000 people	'000 people	'000 AWU	'000 people	'000AWU
1283	292	991	50	43	7	28	1333	770

Source: MAF, Agricultural Holdings Census in Bulgaria'2003

The best portion of fully and partially employed in agriculture are in unregistered farms. These enterprises rely predominately on family labor. The major employers are large farms, cooperatives, and agro-firms. However, hired labor is insignificant part of the workforce in faming as 90% of the overall AWU is supplied by family labor.

The Gross Value of Agricultural Production (GVAP) in 2004 amounts 3436.9 millions euro. The biggest contributors are cereals, horticulture, milk, industrial crops, pig, and poultry productions (Figure 2). A significant amount of that value comprises income for compensation of family and hired labor, and for managerial entrepreneurship. For 2000-2004 the shares of the Net Value Added (NVA), and the Net Operating Surplus (NOS), and the Entrepreneurial Income (EI) in GVAP are accordingly 44.3%, 41.8%, and 40.6%.

Figure 2 Composition of gross value of agricultural production in Bulgaria in 2004 (percent)



Source: National Statistical Institute, 2005

The yields and quality variations, and changes in production structure and costs, and farm-gate price fluctuations, all they cause a great variation in the share of farm income, and its absolute and relative level in different years (Table 4).

The wages of hired labor in agriculture have been in increase but their level rests far below the national average. NVA per workforce, and NOS and EI per family worker are

[2] 1 AWU is equivalent to the hours worked by a single fulltime worker within one year. For Bulgaria that is 1856 hours or 232 man-days (MAF).

lower than the general wage level. The part-time and subsistence farming has been a major contributor to overall household income since the beginning of transition now. Despite the fact that "household farm" weight has been progressively decreasing it still brings a good share in overall income of Bulgarian households. In 2003 it reaches 18.2% of the total and 2.8% of the monetary income of households. For rural households these levels are much higher comprising 37.9% and 8.5% correspondingly. In less-developed regions farming is often the single income source for the population.

Table 4 Indicators for agricultural income in Bulgaria (euro, percent)*

Indicators	2000	2001	2002	2003	2004
Share of Net Value Added in GVAP	44.85	45.78	41.76	43.87	45.38
Share of Net Operating Surplus in GVAP	40.91	43.30	38.52	42.57	44.04
Share of Entrepreneurial Income in GVAP	40.75	43.08	38.19	39.73	41.09
Average wage of hired labor in agriculture	1109.50	1138.65	1179.55	1239.37	1346.74
Share in average wage of whole economy	80.55	77.33	74.64	73.90	73.47
Net Value Added per workforce in agriculture	1066.91	1282.33	1139.00	1078.70	1169.95
Net Operating Surplus per family workforce	1078.73	1212.79	1050.85	1046.83	1135.38
Entrepreneurial Income per family workforce	1074.55	1206.77	1041.65	976.86	1059.50
Net Value Added per AWU	1968.42	2311.18	1971.79	1867.41	2025.38
Net Operating Surplus per family AWU	1995.06	2428.72	2021.34	2013.59	2183.92
Entrepreneurial Income per family AWU	1987.33	2416.66	2003.63	1879.02	2037.97
Net Value Added per holding	1973.54	2223.40	2232.77	2114.57	2293.44
Net Operating Surplus per holding	1800.23	2102.83	2060.00	2052.08	2225.68
Entrepreneurial Income per holding	1793.25	2092.39	2041.93	1914.94	2076.93

** based on National Statistical Institute data*

On the other hand, levels of NVA per AWU, and NOS and EI per family AWU have been higher than national average wage level. However, dynamic of these indicators neither follows the evolution of costs of living nor the general growth of salaries in other industries.

Levels of NVA, NOS, EI per agricultural holding are also unstable in different years. Besides, there exists significant dissimilarity in income generation (and distribution) in different type of farms. As a rule larger and highly specialized enterprises and some intensive smaller-size holdings (e.g. fruits, off season vegetables) make substantial NOS and EI. On the other hand, small farms, and some vegetable and milk producing holdings often hardly break-even. Finally, cooperatives tend to focus on GVAP and non-for-profit operations (services and benefits to members) and compensation for workers, most of them having little or no income for distribution as rent and dividends.

According to the 2003 census the average farm income is 1920 Euro. The greatest part of holdings has income level bellow 2400 Euro while few of the biggest farms contribute a half of the standard margin of the sector (Table 5).

Table 5 Income groups, farms size, and contribution to standard margin in Bulgaria

Income groups (Euro)	Share of farms (percent)	Average UAA (ha)	Share in country's standard margin (percent)
Less than 2400	92,4	0,69	34
2400 - 19200	7	6,23	16
More than 19200	0,6	398,72	50

Source: MAF, Agricultural Holdings Census in Bulgaria'2003

Unlike in the EU and most of new member states agriculture is still a substantial income source for a good part of Bulgarian population. For a long time of economic hardships farming has been the only form for productive use of otherwise non-tradable household recourses (restituted farmland and assets, “free” family labor etc.). Business (profit making) organizations have developed but they coexist with a great less or non-commercialized sector – cooperatives, subsistence and mix farms, farming as a favorite leisure time occupation etc.

Distinct from most European countries the average agricultural income per AWU is higher than the wage level in the whole economy. However, there is huge income disparity between farms of different types, sub-sectors, and regions. In general, income level in most of Bulgarian farms is much lower than relevant levels in EU, and new member countries, and in neighboring countries. All that will require a mix use of the CAP and other (social, development, regional etc.) policies to tackle with persisting socio-economic problems in rural areas (high unemployment, big disparity of income level, huge differences in living standards and social conditions etc.).

EVALUATION OF POLICIES FOR FARM STRUCTURES AND SUSTAINABILITY

Special Accession Program for Agricultural and Rural Development

The Special Accession Program for Agricultural and Rural Development (SAPARD) has been a major support instrument for Bulgarian farming in recent years. The broad goals for its implementation are set by the 2000-2006 National Plan for Agriculture and Rural Development (NARDP). NARDP aims at modernizing, and improving efficiency and competitiveness of farms and food processing according to EU standards; and sustainable development of rural regions in lines with leading ecological practices; and creation of alternative employment in rural areas and new incentives for younger farmers; and diversification of economic activities and building of modern rural infrastructure etc. Half of the investments for carrying out SAPARD projects come as subsidies, out of which 75% are from EU and the rest from the national budget.

Up to date 10 measures for implementing SAPARD have been accredited: Measure 1.1 "Investment in agricultural holdings"; Measure 1.2 "Improvement of processing and marketing of agricultural and fishery products"; Measure 2.1 "Developments and diversification of economic activities, creation of opportunities for multiple activities and alternative income"; Sub-measure 1.2.1 "Wholesale Markets"; Measure 1.4 "Forestry, afforestation of farmlands, investments in forest holdings, processing and marketing of forest products"; Measure 1.5 “Establishment of producers' organizations”; Measure 2.2 “Renovation and development of villages, preservation and conservancy of rural heritage and cultural traditions"; Measure 2.3 “Developments and improvement of rural infrastructure"; Measure 3.1 “Improvement of vocational training”; and Measure 4.1 “Technical assistance”.

Until the middle of 2005 as much as 1910 projects have been approved with total investments of 768.8 million euro and 381.3 million euro of eligible subsidies. There has been a significant increase in the number and average size of projects since the launch of SAPARD. By the end of May 2005 more than 50% of the projects were successfully completed and subsidies paid to beneficiaries. Almost all funded projects (but 3 small one) cover Measure 1.1, 1.2, and 2.1 (Table 6). SAPARD investments and subsidies progressively take a good share in the Gross Value Added (GVA) of the sector.

The impact of SAPARD on Bulgarian farming is considerable having in mind the scope of the Program (for 2000-2006 EU annual grant of 52.124 million euro), and deficiency

of agrarian credit and investment resources in the country [3]. Both publicized experiences and formal assessment show that successful projects have contributed a great deal to modernization and efficiency of implementing farms.

Table 6 Number and size of completed SAPARD projects in Bulgaria (euro)

Year	Indicators	Measure 1.1.	Measure 1.2.	Measure 2.1.	Total	Project size	Share in GVA
2001	projects	8	1	0	9	210455	
	investments	1605792	288303	0	1894096		0.11
2002	projects	81	12	4	97	279425	
	investments	17480898	9280607	342685	27104190		1.69
2003	projects	224	45	19	288	253826	
	investments	40246818	31343898	1511089	73101806		4.77
2004	projects	294	73	80	447	306160	
	investments	54073943	71205163	11574328	136853434		8.29
2005*	projects	102	30	31	164	380647	
	investments	18879414	37516293	6008238	62426163		n.a.
Total 2001-2005	projects	709	161	134	1004	300157	
	investments	132286865	149634265	19436341	301357471		3.63**
	subsidies	66143431	74817132	9718170	150678733		1.82**

Source: MAF ** until end of May 2005* *** for 2001-2004*

Despite its original direction to support all prospective farms the majority of SAPARD projects have been granted to larger and highly commercialized enterprises. The bulk of funded projects under Measure 1.1. has been for high and rapid pay-off investments such as cereals (63%) and machinery (83%). Complicated bureaucratic procedures, and massive paper work and formal requirements, and enormous efforts and costs for preparing, wining, and carrying out projects (for putting together proposals, related inspections, finding money-lenders, lobbying, bribes payments etc.), all they let only a small fraction of Bulgarian farms have access to SAPARD. Up to date only 0.1% of farms have got support to their investment by that program most of them being firms and cooperatives located in more developed regions of the country[4]. In fact, SAPARD has been mainly accessible for the richest, most powerful, large-scale, and as a rule "less needy" farms and organizations[5]. Besides, SAPARD resources have not been appropriate to support (and induce) huge capital investments necessary for modernization of outdated or deficient farm assets and rural infrastructure in the country.

Projects selection criteria equally put some limits for application of the best part of farms – e.g. obligation to find out funding and complete project before receiving any subsidy; requirement to match subsidy with 50% own financing; prerequisites to have past farming history and certain amount of livestock (at least 15 milk cows, 100 milking sheep and/or water buffaloes, 30 pigs); compulsory non-income generation investments (e.g. in animal welfare, environment preservation etc.); necessity to present future marketing contracts for 50% of processed outputs; age restrictions etc. Besides, the uniform criteria for farms in all regions of the country and excluding some prospective areas of activity, both put additional restrictions for application of many farms.

[3] Since 1998 share of agrarian credit in portfolio of commercial banks is bellow or on 2% level (BNB).
[4] Under Measure 1.1 portion of agro-firms and cooperatives in funded projects is 64% and 23% while 7.7% of all agro-firms, 2.3% of cooperatives, and only insignificant number of unregistered farms got funding from the program. Few projects are in less-developed regions: South-West, North-West, and mountainous parts of the country (Interim Assessment of SAPARD Program in Bulgaria, MAF, 2004).
[5] Assessment reviles that majority of beneficiaries under Measure 2.1. are non agricultural companies.

Last but not least important, SAPARD has not practically addressed important aspects of farm and rural sustainability such as social and economic cohesion, environmental issues, water management, animal welfare, preservation of biodiversity etc. Therefore, a substantial improvement in management and organization of SAPARD (and future agrarian and rural development programs) is to be undertaken which is to: introduce new measures associated with farm and rural sustainability; and reduce disparity between farms, sub-sectors and regions; and enhance transparency and efficiency of project selection and control; and increase accessibility for prospective small and middle-size farms; and decrease direct and hidden costs for participants etc.

State Fund Agriculture

Until recently the State Fund Agriculture (SFA) has been the major instrument for government support to farm structures. SFA provides targeted credits and subsidies for all type of farms producing for market. Its short-term finance lines include targeted credits and subsidies for major productions and activities. Since the beginning of transition the Government intervention in short-term finance supply has been a critical factor for carrying out the most important production operations of larger commercial farms. In recent years there has been a significant shift in the policy associated with a considerable increase in targeted subsidies and a sharp reduction of short-term crediting (Table 7). Although overall level of intervention (short term credit plus targeted subsidies) is almost unaffected the change in structure of support (namely the form of direct subsidies) is appreciated by producers. As a whole that form of aid reaches minor number of producers and its share in GVAP is low.

Table 7 Support to Bulgarian farms from State Fund of Agriculture (euro, percent)

Indicators	2000	2001	2002	2003	2004	2004/2000
1.Investment credit						
Number of projects	614	229	135	897	298	48.53
Total amount	19856531	17519928	6429123	23135446	4755014	23.95
Project average size	32340	76506	47623	25792	15956	49.34
Share in GVA	0.59	0.47	0.18	0.71	0.14	
2.Short-term credit						
Number of contracts	3635	3258	3381	n.a.	n.a.	
Total amount	15267687	13198233	12521028	6378366	1732768	11.35
Share in GVAP	0.94	0.73	0.78	0.42	0.10	
3.Targeted subsidies						
Number of contracts	6506	6265	8141	16415	16191	248.86
Total amount	5405378	9688316	12585050	22134848	18406508	340.52
Share in GVAP	0.33	0.54	0.79	1.44	1.11	
Total amount (2+3)	20673065	22886549	25106078	28513214	20139276	97.42

Source: MAF

SFA also provides credit and subsidies for long-term investments of market-oriented farms through 3 specific programs (“Crop production”, “Livestock husbandry”, and “Agricultural machinery”) and 2 sub-programs (“Alternative Agriculture in the Rhodopi Mountain”, and “Agriculture Development in Northwestern Bulgaria”). Different types of schemes have been used giving opportunity to match to the specific situation and needs of applying farms (resource endowment, stage of development, project size, priority areas) and employing different modes of funding ("with money and at the risk of SFA", "with money of SFA and at the risk of commercial banks", subsidizing interest rate and/or investments, providing explicit guarantee from SFA).

In recent years investment credit has been targeted at small and medium-size producers, and at less developed regions in order to improve farmers access to direct subsidy schemes and capacity to apply for SAPARD. Indeed a major portion of funded projects has been proposals coming from unregistered farms[6] and the average size of projects has been getting smaller (Table 7). Besides, almost a half of the investments have gone to projects in two less developed regions of the country (2004). Nevertheless, the relative share of farms supported by SFA and its part in GVA is not considerable. Moreover, complicated procedures, and high costs for participating farms, and impossibility for application by informal partnerships, and widespread mismanagement and corruption, all they have prevented the relatively smaller (and most needy) farms to get access to SFA programs. Last but not least important, after the "pick" in 2003 both number of funded projects and amount of provided credits have been substantially cut down.

Support to tobacco producers

A special state program provides support to tobacco producers in the country. All registered tobacco farms are allocated quotas for production, and receive tobacco seeds free of change, and have minimum farm-gate prices (differentiated according to type, origin and class of tobacco) guaranteed by the Government, and get premium for marketed tobacco, and obtain targeted premium for high quality produce.

There has been some increase in purchase prices of major type of tobacco in recent years (Table 8). However, the policy has been to slow price growth in order to enhance competitiveness of exported products. Compensation of producers for the rise in inputs costs is done by augmenting level of the premium. Besides, the targeted premium is progressively extended to stimulate production of high quality tobacco.

Table 8 Public support to tobacco producers in Bulgaria (euro, percent)

Indicators	2000	2001	2002	2003	2003/2000
Buy in price Oriental type	1.62	1.72	1.60	2.00	124.05
Buy in price Virginia type	1.29	1.41	1.22	1.37	106.35
Buy in price Burley type	0.94	0.99	0.97	0.99	104.89
Premium per kg	1.05	0.70	0.96	1.00	95.87
Registered tobacco producers	46579	47784	60076	62789	134.80
Share of supported producers	91.52	89.21	85.79	67.71	
Subsidies to producers	33447692	40667134	59552211	61667936	184.37
Subsidy per producer	954	1397	1155	1450	152.04
Share of subsidies in output*	41.69	40.49	43.86	45.70	

Source: MAF ** GVAP plus premiums*

Since 2000 the number of registered tobacco producers has been on increase. A good share of tobacco farms has received direct subsidies in kind of premiums. There has been a sizable raise in the overall amount of subsidies paid to producers. Subsequently, that public intervention added more than 50% to the monetary income of beneficiary farms. The initial great share of subsidies in the sectors' output has even slightly increased in recent years.

The majority of tobacco producers are small-scale family farms located in areas with low opportunities for alternative farm and off-farm income. Therefore, that program contributes significantly to increasing incentives for production of high quality tobacco and sustaining farming in some of the less-developed regions of the country.

[6] In different years the share of unregistered farms, agro-firms and cooperatives in SFA funded investment projects has been between 68-87%, 12-26%, and 4-6% accordingly (MAF).

Other instruments

In recent years there has been further harmonization of the national support policy with the EU legislation. For instance, the Law for Intervention in Markets of Agricultural Products has been adapted which is based on EU regime for interventions in the sector "Field cultures" and market for slaughterhouse produce. However, actual Government actions have been entirely focused on protecting consumers though reducing and stabilizing prices (e.g. along "wheat - flour – bread chain")[7] rather than increasing farmers' income.

Legislation for granting export subsidies for processed and unprocessed agricultural products has been also introduced. Consequently, for the first time in 2004 export subsidies of 1.5 million euro were paid for cheese from sheep and cow milk, lamb meat, caned fruits and vegetables, eggs for consumption, and domestic rosters and hens. That positively affected the demand for respective products and eventually influenced (stabilize) the income of producers.

In addition, there have been a number of initiatives of the Ministry of Labor and Social Policy supporting individuals and farms: "Employment though Support of Business"; "Micro-credit Guarantee Fund"; "Preservation of Yield 2005"; "Increasing Employment and Qualification in Apiculture"; "Agricultural Producers"; "From Social Payments to Employment"; "Overcoming Poverty". These programs have given some assistance to participating few individuals and farms in getting access to preferential credit, starting up or extending farming activities, obtaining grants and other payments etc. Nevertheless, due to the projects small scope (less-developed regions, jobless individuals, subsistent farms), insufficient and unsustainable support (short term, limited funds), unachievable requirements (necessity to have own farmland and assets, mandatory insurance on the expense of participants) their overall impact on farming structures have been insignificant.

Regional dimensions

Estimates on the Aggregate Level of Support to Agriculture in Bulgaria demonstrate that until recently it was very low, close to zero or even negative (OECD, 2000). There has been considerable progress in public aid to agrarian sector since 2000. However, overall support to farms rests very little, and much below the level in EU and other countries in the region. Only a small proportion of farms benefits from some form of public assistance (price guarantee, preferential credit, or various sort of targeted subsidies and grants). The majority of Bulgarian farms are either unsupported or obtain insignificant public back up. Hence they are exposed on direct market pressure and compete successfully with heavily subsidized foreign rivals on domestic and international markets alike. Furthermore, there are strong incentives to get "additional" CAP support by all farms as far as costs of acquisition (registration, paper work, compliance with restrictions) are smaller than anticipated net benefits.

What is more, the general institutions and infrastructure essential for the effective farming and rural development have not been built in the country: public system for enforcement of Laws, regulations, and contracts does not work well; often public support programs are not governed effectively and in the best interest of legitimate beneficiaries, and they bring about bigger disproportion between farms of different types, sub-sectors and regions; newly established system for agrarian extension does not serve majority of farms and include rural development issues; privatization of irrigation system has not been

[7] E.g. increasing fees for quality control of exported cereals, temporary ban on wheat and flour exports, trading wheat from State Reserve, duty free flour import, all they have been applied in recent years.

completed; badly needed system for agrarian insurance has not been introduced; crucial agrarian and rural infrastructure (wholesale markets, irrigation, roads etc.) has not been modernized; public support for initiating and developing farming associations has not been given; multifunctional role of agriculture has not been recognized and specific standards for environmental protection, animal welfare etc. set up.

All that has delayed the modernization of Bulgarian farms comparing to EU (quality, environmental etc.) standards and progress made in other transitional countries. For instance, renovation of outdated machinery, orchards, vineyards etc. has been very slow; fertilizer compensation of extracted nitrogen, phosphates and potassium has been extremely low[8]; large-scale operators apply monoculture and do not comply with biodiversity norms; significant farmland is not properly maintained or abandoned; most livestock farms hardly meet EU standards; structural, sectoral and regional differences have been broadened etc. All that will have serious negative implications for the long-term sustainability of considerable number of farms in years to come (Bachev, 2005).

IMPACT OF CAP IMPLEMENTATION ON SUSTAINABILITY OF FARMS

Assessment problems

Assessment of impact of any complex policy is difficult and requires appropriate approach, indicators, and data. The task is even harder when a preliminary evaluation is to be made on likely (future) consequences of implementation of a new policy in entirely new socio-economic, institutional etc. environment. Evaluating possible impact of the CAP on sustainability of farm structure is even more complicated since: first of all, CAP aims achieving various and sometimes controversial objectives - support farms, protect consumers, preserve environment, respect animal etc. According to the specific local priorities these different aspects of the CAP will have dissimilar "weights", and therefore implemented, enforced, and supported (toped up) unequally among countries[9]. Consequently, a farm will have quite different level of sustainability depending on the specific institutional environment, and straight comparisons of farm indicators between countries or individual regions within a country will not be precise all the time.

Secondly, efficiency of carrying out a "common" policy is quite unlike in various countries because of the different administrative capacity and ability to carry out reforms (diverse readiness, experience, and corruption of bureaucracy); and dissimilar level of participation and compliance (awareness, acceptance, practical involvement, voluntary initiatives) by farmers etc. Hence the feasible (most realistic) rather than overoptimistic scenario for pace of implementation of policy instruments is to be always taken into account.

Third, CAP is usually applied along with other (national, sectoral, regional etc.) policies with supplementing or multiplying impact. Furthermore, changes in farms sustainability often depends on other factors such as the overall growth of economy, development of markets and competition, efficiency of private and collective actions, evolution of informal institutions etc. All that makes it extremely difficult to separate the proper effect of a particular policy on farms.

Forth, agrarian sustainability is among the most discussed issues by policy makers, scientists, interest groups, and public at large. Nevertheless there is no universal agreement on its content, and criteria and indicators for assessment (Hansen, 1996). Moreover, farm

[8] 85%, 11.5% and 1.8% respectively (2004 Agrarian report, MAF).

[9] Socially acceptable norms for usage of labor, plant and livestock, land and other environmental resources, all they could differ even between various regions of the same country. In EU countries there exist a big variation in levels and extend of enforcement of agri-environmental standards.

sustainability has numerous economic, social, institutional, environmental, inter- and intra-generational etc. dimensions. Thus it can not be correctly understood without analyzing larger economic, social, ecological etc. structures[10]. Besides, overall sustainability of farm is not a simple "sum up" of sustainability levels of different components but often depends on (critical) element with the lowest sustainability level. What is more, various farms have quite different goals (profit making, income generation, non-for-profit activities, servicing members, self-sufficiency etc.). Therefore, their sustainability could not be properly measured with few simple (universal) indicators such as productivity, income, dependency from subsidies etc.

Fifth, impact of the CAP arrives over a longer period of time. What is more, CAP also changes along with the evolution of (global, European, local) institutional environment and farm structures. Therefore, assessment of farm sustainability is not one-time affair (but rather a current process), and any estimates based on a short-time frame and static (historic) data will not be accurate. Besides, it is to be considered different scenario for CAP modernization and levels of farms adaptation to evolving market, institutional, natural etc. environment.

Finally, there exists no system providing appropriate and reliable farm level data in Bulgaria which makes any analysis of farms sustainability extremely challenging matter.

Likely consequences of CAP implementation on farm structure and income

Country's accession to the EU and implementation of the CAP will give new opportunities for the Bulgarian farms. Just EU funding which agriculture will receive from 2007 on will be 5.1 times higher than the overall level of present support to farming. More specifically short-term CAP impact on farm structure is to be expected in following directions: firstly, it will introduce and enforce a "new order" (regulations, quality and safety standards, protection against market instability, export support etc.)[11] which will eventually intensify agrarian transactions and increase their efficiency. Further integration and opening up of markets will enhance competition and let Bulgarian farms explore fully their comparative advantages (low costs, high quality, specific character of produces; innovation potential etc.). That will lead to expansion of export and presence at growing internal market.

Secondly, a significant part of farms will start receiving direct payments[12]. During 2007-2009 all farms will get a single payments according to amount of utilized agricultural land[13]. Depending on the Government decision for the minimum size of UAA for supporting a farm (which could be from 0.3 ha to 1 ha) the direct payments will be somewhere between 69-74.2 euro per ha in 2007, 82.8-89.1 euro per ha in 2008, and 96.8-104.1 euro per ha in 2009. Besides, farms may get additional payments from the national budget[14]. Consequently from 153640 up to 668000 and more farms will be eligible for direct payments.

Having in mind the current state of support (low or none) the direct payments will augment the level of farm sustainability through increasing general (net) income or preventing its possible reduction. Moreover, direct payments will improve environmental performance of

[10] For instance, the high sustainability of part-time and subsistent farming could be hardly explained without considering superior household and rural economies; environmental aspects of farm sustainability are usually displayed at a larger eco-system, regional etc. scale, and so forth.

[11] EU funds allotted for market support for 2007-2009 accounts for 388 million euro (MAF).

[12] From EU for direct payments there will be available 200.3 millions, 240.4 millions, and 281 millions for 2007, 2008 and 2009 accordingly, which corresponds to 25%, 30%, and 35% of the EU-15 level of direct payments for relevant year. Phasing will continue until complete balancing in 2016.

[13] There is a possibility for extension of Single Area Payment Scheme until 2011 (MAF).

[14] Bulgaria will be in position to add the direct payments from the national budget up to 55% from the EU level of direct payments in 2007, 60% in 2008, 65% in 2009, and by 30% over the applicable levels of the relevant year since 2010 (MAF).

farms since they will be coupled with mandatory requirements for "keeping farmland in good agricultural and environmental condition". Direct payments could even induce usage of some less-productive and presently abandoned lands, and provide new income in certain less-favorable and mountainous regions of the country.

However, that public support will benefit unevenly different type of farms as a little more than 3% of farms (large farms, cooperatives, and agri-firms) will touch more than 85% of the subsidies. Many effective small-scale operations (horticulture, green-house etc.) will receive no or only a tiny fraction of the direct payments. The problem will be extremely perceived by tobacco producers who currently enjoy a high level of support. Besides, specialized livestock farms will not be eligible to get any payments under that scheme. Above and beyond, the bulk of subsidies will go to the more developed regions where the biggest farms and UAA are located. All these will foster disparity in income and efficiency among different farms, sub-sectors and regions, and would require some sort of (coupled with production and region) aid to maintain income level or compensate certain producers.

On the other hand, this mode will support otherwise "inefficient" structures (small-scale, part-time, and cooperative farms) and non-market forms (such as subsistence and cooperative farming). As a result the relative sustainability of these farms will increase - small scale-operations will become viable; cooperatives will be able to pay rent; subsistence farming will turn to be more profitable etc. Besides, direct payments will tend to move up farmland price and rent, and thus enlarge the costs for land supply in the biggest farms[15]. At the same time small-scale operators (which are mainly organized on owned land) will retain entire subsidies and see their income increased. Subsequently transformation of land management to the most effective forms as well as restructuring of farms will be delayed[16]. What is more, the EU funds will be effectively used to subsidize directly the consumption (food self-supply) of a good part of Bulgarian population.

Third, significant funds for rural development will be available from the EU exceeding 4.7 times the relevant current level[17]. This amount of resources will let more and relatively smaller farms to get access to public support scheme and invest in modernization of their enterprises. Furthermore, new important activities will be effectively financed such as diversification of farming; commercialization of local products; renovation of villages and infrastructural development; agri-environment protection and animal welfare; support for less-favored areas and regions with environmental restrictions; afforestation of farmland; restructuring of semi-market holdings; Community standards; food quality; producers' organizations etc. All that will let carrying out essential for agriculture and rural areas activities - commercialization and diversification of farming, introduction of organic farming, maintaining productivity of and biodiversity on currently abandoned farmland, revitalizing mountainous agriculture etc. That will bring additional income for farmers, and create new employments in rural area, and enhance overall performance and sustainability of individual farms. Besides, it will extend the activity of some of the existing structures (cooperatives, group farms, firms) which could specialize in new functions such as environmental preservation, maintenance of farmland etc., and see their long-term sustainability increased.

Nevertheless, if actual system of governance (prioritizing, management, control, assessment) of public programs does not change the funds will continue to benefit exclusively the largest structures and the richest regions of the country; and more abuses will likely take place; and CAP support will not reach majority of farmers and contribute to diminishing socio-economic divergence between regions. In addition, some of the terms of specific

[15] Currently a half of UAA in unregistered farms and 90% in legal entities is leased land (MAF).
[16] That is not necessarily bad as far as keeping extensive and family character of farming is concerned.
[17] For 2007-2009 are envisaged 733 million euro plus resources from the EU Structural Funds (MAF).

contracts for environment and biodiversity preservation, respecting animal welfare, keeping tradition etc., all they are very difficult and expensive to enforce and dispute. In Bulgarian conditions the rate of compliance with these standards will be even lower because of the lack of readiness and awareness, insufficient control, ineffective court system, low transparency, domination of "personal" relations and bribes etc. Correspondingly we could expect that more farmers than otherwise would enroll will wish to participate in such scheme (including the biggest polluters and offenders). Subsequently, the outcome of implementation of that sort of instruments would be less than the desirable level. In order to avoid probable misuse of funds more efforts is to be invested in increasing farmers and publics understanding, and in assisting voluntary actions of producers and interest groups.

Forth, CAP will modernize farms structures through expanding the variety of contractual arrangements and organizational innovations in agrarian sector - specific sort of contracts, new type of producers associations, spreading vertically integrated modes etc. Moreover, special forms will gradually emerge allowing agrarian and rural agents to take advantage of the large public programs - specializing in project preparation, management, and execution; investing in "relations capital" or "negative" entrepreneurship; forming modes for lobbying and farmers' representation; developing formal coalitions for complying with eligibility criteria for public support (e.g. minimum farm size for direct payments, membership requirements for producers organizations etc.).

CAP will also contribute to foster restructuring of commercial farms according to modern market, technological, and institutional standards. Farming will be increasingly characterized with domination of larger and highly effective (competitive) enterprises which will concentrate the activities in all major sub-sectors. At the same time the process of restructuring of the great part of Bulgarian farms will not be positively affected. Less effective small and subsistence (cooperative and individual) farms will continue to persist and even benefit from the public support.

Only 15% of farm managers are under 45 whereas 40% of them are older than 65. Also more than a half of employed in agriculture are in pre-retired or retired age. That puts serious restrictions on effective farm adjustment and enlargement (low investment activity and entrepreneurships, limited training capacities, no alternative employment opportunities etc.). Besides, there will be huge exodus of farm managers and labors in near future, and additional measures are to be taken to attract new comers (successors and others).

Furthermore, prospects for changing "high sustainability" of small-scale and subsistence farming is mostly determined by the overall development of the economy, and increasing non-farm employment and income opportunities. However, it is less likely to have significant positive changes in that respect (unemployed rate is above 12% reaching in rural areas to 14.6%). At the same time this type of farming (especially miniature "domestic" livestock operations) will hardly be able to meet the EU quality, veterinary, phito-sanitary, environmental, animal welfare etc. standards. On the other hand, it will be practically impossible (costly or politically undesirable) for the authority to enforce the official standards in that huge informal sector of the economy. Therefore, these less effective structures will continue to exist in years to come.

Fifth, costs for respecting requirements of the special agri-environmental programs by different farms (direct expenses, lost income etc.) will vary considerably and they will have unequal incentives to participate. Having in mind the voluntary character of most of the CAP support instruments we should expect that the biggest producers of negative agrarian externalities (large polluters and non-compliant with modern quality, agronomic, biodiversity, animal welfare etc. standards) will stay outside of these schemes. On the other hand, small contributors will like to join since their related costs would be insignificant comparing to received net benefit. Moreover, Government is less likely to set up high performance

standards because of the strong internal political pressure from farmers and possible outside problems with EU control (and sanctions) on compliance. Therefore, CAP implementation will probably have a modest positive impact on environment in Bulgaria.

Lastly, there will be "practical" difficulties for introducing CAP in public and private sector alike – information and technical deficiency, lack of staff and experience, enormous initial costs (registrations, paper work, formalizing relations with landlords, preparing project proposals etc.). Thus we are to expect some time lag until "full" implementation of the CAP depending on pace of building effective capacity as well as training of (acquiring learning by doing experience by) administrative staff, farmers, and other agrarian and rural agents.

CONCLUSIONS

A specific farming structure dominates in Bulgaria from the beginning of transition now consisting of numerous subsistence and small farms; and few large farms, cooperatives, and agro-firms; and widely used informal, vertically integrated, and mix forms. General support to farming has been in an increase but is still far bellow the European level. Besides, only a fraction of farms benefit from some form of public support most of them being large farms, cooperatives, and tobacco producers. Farming is still an important income source for a good part of population. However, there is a significant gap in the monetary income in the large and some smaller-scale (intensive) enterprises, and the great majority of farms. Besides, development programs contribute less to agrarian and rural sustainability, and to decreasing divergence between richer and poor regions of the country.

Assessment of likely short-term impact of the CAP implementation in the country shows that it will increase sustainability of farms bringing net financial benefits, enhancing competitiveness, and improving environmental performance. However, different farms and regions will gain unequally from the CAP introduction. The chief beneficiary from the direct payments and other support measures will be the biggest farms in the most developed regions of the country. CAP programs will also give new possibility for extending activities of existing forms and bring to a life new organizational arrangements (partnerships, joint ventures, association etc.). All that will create more employment and income opportunities, and revitalize agrarian and rural economy. On the other hand, some effective (smaller-size, family) structure and livestock farms will have no or limited access to EU funding. Consequently, income and performance gap between farms of different types, sub-sectors and regions will widened unless special supplementary measures ("coupled" with production and regions) are taken. Besides, CAP will likely support "ineffective" and non-market modes (part-time and subsistence farming, production cooperatives), and therefore raise their sustainability and delay further restructuring.

Research on likely and actual impact of the CAP on farm structures in new and prospective member countries is to continue applying modern western methodologies including achievements of the institutional analysis. Assessment framework should include multi-disciplinary efforts in order to identify the specific economic, institutional, behavioral, cultural, historical etc. factors affecting sustainability of different farms. Next, impact of the CAP on different economic, social, environmental, inter-generational etc. aspects of farms sustainability is to be clarified and assessed. Furthermore, intersectoral approach is to be incorporated into analysis, and net impact on farm, and household, and rural economy evaluated.

Research on governing modes of agrarian and rural sustainability in the specific East-European conditions is to be extended as well. That will let identify the critical factors in each country and suggest directions for improving management of the CAP, and other programs and forms of public intervention. It will also help design appropriate support

policies for prospective market, private and hybrid modes, and thus accelerate the overall restructuring of the economy.

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