

## DELIVERABLE 6.2

### "Development of small-scale farming in Bulgaria"

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<b>WP leader for this deliverable</b>	<b>UNIKENT</b>
<b>Partners involved</b>	<b>UNWE, UNIKENT</b>
<b>Document status:</b>	<b>Final version</b>
<b>Due date of deliverable:</b>	
<b>Date:</b>	<b>September 2010</b>

<b>Dissemination level</b> (see DoW p. 27-30)		
<b>PU</b>	Public	<input checked="" type="checkbox"/>
<b>PP</b>	Restricted to other programme participants (including the Commission Services)	<input type="checkbox"/>
<b>RE</b>	Restricted to a group specified by the consortium (including the Commission Services)	<input type="checkbox"/>
<b>CO</b>	Confidential, only for members of the consortium (including the Commission Services)	<input type="checkbox"/>

<sup>1</sup> The author gratefully acknowledges financial participation from the European Community under the Sixth Framework Programme for Research, Technological Development and Demonstration Activities, for the Specific Targeted Research Project "SCARLED" SSPE-CT-2006-044201.

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### **Abstract**

The current farm structures are result of long process of evolution and specific conditions in all countries. In the world agriculture we can define three main types of agriculture structures: agribusiness, family farm type of production structures, village kind production structures.

### **Executive Summary**

From the historical point of view at the beginning of 90 years of the last century the process of transformation from centrally planned economy to market oriented one started. As a result of complicated, expensive and time consuming procedures of land property rights restitution, the agricultural land become highly fragmented and small scale farms dominated in agricultural production system in Bulgaria. The main characteristics of Bulgarian agriculture at that period were: radical land reform, liquidation of former productive co-operatives, dismantling of command economy in the sector and strong control on farm prices and foreign trade with agricultural and food products. The major factors having impact on agricultural structures and their market behaviour could be described as follows: land reform, unstable macroeconomic situation in the country, state of agricultural markets and agricultural financial support for farm activity.

Unstable legal base for land reform and slow speed of the process of restitution of land particularly at the first years of transition have had direct impact on land fragmentation and farm structures. Unstable macroeconomic situation in the country, high inflation rate and sharply increasing unemployment rate and as a result drop in real income of the population had led to an increase in importance of the agricultural sector as social safety net for the Bulgarian society, but also contributed to the increase of the importance of small scale farming.

Both, under developed agricultural markets and strong control on farm and food prices as well as on foreign trade, also have had indirect impact on farmer's choice of type of farming and on their behavior.

Financial institutions considered agricultural sector as a sector with a high risk and at the first decade of transition the State Fund "Agriculture" (SFA) was the main and in some cases the only institution providing credits to farmers. It also has to be considered that SFA practically started its activity since 1996, i.e. much later than the structural reform in the sector.

Subsistence farming in Bulgaria has an important role for development of the rural areas. This type of farming is well represented in all regions in Bulgaria and in its development two periods can be observed. In the beginning of transformation their number rapidly increased. With the stabilisation of economic situation in the country the number and the average size of small farms declined especially of farms between 0,5 and 1 economic size unit.

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This document is part of a research project funded by the 6<sup>th</sup> Framework Programme of the European Commission. The project coordinator is IAMO, represented by Prof. Dr. Gertrud Buchenrieder (buchenrieder@iamo.de).

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## LIST OF ABBREVIATIONS

ESU	European Size Units
NUTS	Nomenclature des Unités Territoriales Statistiques
SCARLED	Structural change in agriculture and rural livelihoods

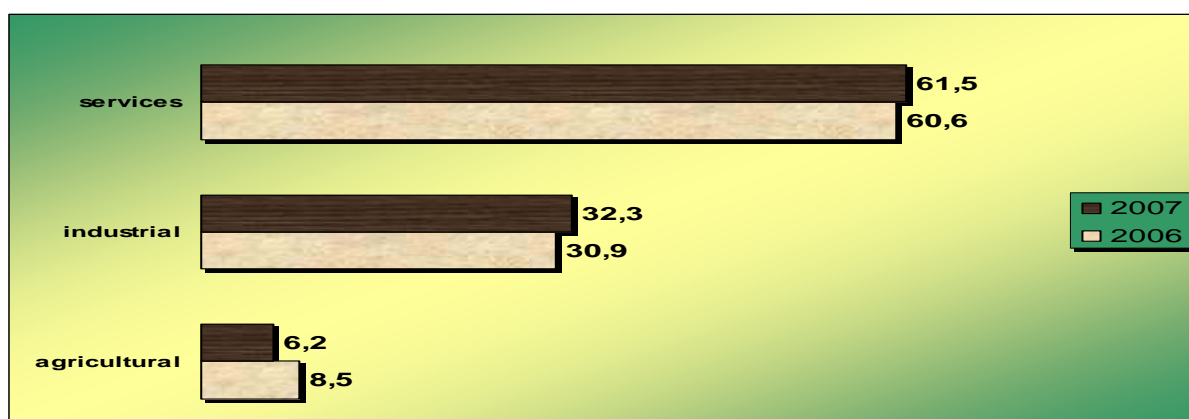
## 1 INTRODUCTION

The Republic of Bulgaria is situated in the South East part of Europe and it has a total territory of 111 000 km<sup>2</sup>. The utilised agricultural area is about 5.3 million hectares or 48% of the country territory.

The agricultural sector is one of the most important sources for income for rural population of Bulgaria. These define agrarian sector as one of the priority areas for sustainable development for rural areas. To analyze the sector we should get in mind that:

In 2004 agricultural GDP increase in rural areas is much lower than the average for the country (4.5% related to 6%). The agricultural Gross Value Added (GVA) dropped by 1.9% and its share in the GVA declined to 8.5%. In 2007- the first year of the country's membership in the EU is characterized with stability growth of the basic macroeconomic indicators. The GVA in the country in 2007 making a real growth of 6.3% compared to GVA achieved in 2006 (figure 1).

**Figure 1 Structure of the economic sectors with regards to GAV for the period 2006 - 2007 in percents**



Source: NSI<sup>2</sup>

The rural areas are highly depended of agricultural development. The share of agricultural activities in these areas is 50% higher than on average for the country and almost all farm activities are concentrated in rural areas.

From the historical point of view at the beginning of 90<sup>th</sup> the process of transformation from centrally planned economy to market oriented one started. As a result of complicated, expensive and time consuming procedures of land property rights restitution, the agricultural land become highly fragmented and small scale farms dominated in agricultural production system in Bulgaria. The main characteristics of Bulgarian agriculture at this period were: radical land reform, liquidation of former productive co-

<sup>2</sup> The data for 2007 are preliminary

operatives, dismantling of command economy in the sector and strong control on farm prices and foreign trade with agricultural and food products. The major factors having impact on agricultural structures and their market behaviour could be described as follows:

- Unstable legal base for land reform and slow speed of the reform have had direct impact on farm structures.
- Under developed agricultural markets and strong control on farm and food prices as well as foreign trade have had indirect impact on the choice of type of farming and direct impact on farmer's behaviour.
- Financial institutions considered agricultural sector as a sector with a high risk and at the first decade of transition the State Fund "Agriculture" was the main and in some cases the only institution providing credits to farmers.
- Labour involved in agricultural sector could be characterized by low education, deteriorated age structure and as a result low income.

All this factors have influenced the choice of type farms.<sup>3</sup>

In last 10-15 years there are many studies (Mishev 2003, Kanchev&Doichinova 1996, 2005) analyzed the current state and reasons behind the variation of agricultural structures in Bulgaria and existence of large number of small farms cultivating relatively small share of agricultural land and a small number of large farms cultivating the largest share of land and producing the high share of gross agricultural output. The same situation is observed in some other CEECs countries. As a results Bulgarian agriculture is characterized by a dualistic structure (MAF 1996-2008), comprising the market-oriented sector of commercial farms on one hand and small-scale subsistence farming on the other.

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<sup>3</sup> Mishev (2001), (2003), Saris (1999), Kopeva, D. and Mihailov, D. (1999): Agrarian Reform, Regional Development and Business Opportunities in Regions with Ethnically Mixed Populations, Institute for Market Economy, Sofia, Bulgaria.

## 2 STRUCTURE OF AGRICULTURAL HOLDINGS

The current farm structures are result of long process of evolution and specific conditions in all countries. In the world agriculture we can define three main types of agriculture structures:

- Agribusiness structures
- Family farm type of production structures
- Village kind production structures

Agribusiness structures are large and technologically developed companies. As business units they are in a position to invest capital in agricultural activity. Their production is nearly 100% market oriented. These kinds of structures are well represented in counties with good agricultural conditions and liberal agricultural policy- as an example - Brazil, Argentina and etc.

Family farm type of production structures combine from one side production of primary products for the market and from the other side, part of the output remained for self consummation. Further the people involved in that structures prefer either a village lifestyle (generally in developed countries) or have chosen farming as a livelihood survival strategy (in less developed countries and countries in transition).

Village kind production structures are typical for the less developed and developing countries. Their leading motivation is to produce food for self consummation, and only the surplus (if any) is sold on the market.

Some authors /Dirimanova 2003, Kopeva 2005, Mikhailov 2002/ divided the structures before and after the reform occurred in Bulgaria. Before the reform the structures are divided into the APK<sup>4</sup>, farms, agricultural cooperatives, agricultural state farms, machine stations and other private organizations. Since the reform and eradication of many of the structures, they are transformed into:

Large agricultural enterprises

- Cooperatives
- Landowners involved with non-agricultural activities
- Small farms

This division is rather vague, because here are some mixed indicators and classification of each species described from farms can fall into more than one group. In confirmation of this, examples can be given with large agricultural enterprises, which can quite successfully take the form of a cooperative, but also can be as landlords, dealing with non-agricultural activities.

In the empirical study of the structures in the agricultural sector in Bulgaria /Jean-Pierre Gern, 2003/ farm holdings are divided into two broad groups. The first group shall be held by cooperatives and large industrial farms, specializing in the cultivation of cereals, pigs and poultry complexes. The second group is represented by small micro-farms, represented by Sole traders, registered and unregistered producers.

Other authors /Atanassova, Kostadinova, Zhelyazkova, 2006/ determine the farm as a business enterprise in the agricultural sector. It is characterized as a system with input and output, which are in continuous interaction with the external environment. As input in this

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<sup>4</sup> Agricultural producing complex



system they consider buying inputs /fertilizers, chemicals, and other production factors/ and as output - production sales. Thus described the holding of one country affects the exit part of the environment and the entry is influenced by environment.

Farm is a primary form of organization in agriculture /Boeli, 2004/. Owner is described as an individual farmer which assumes the risk in production and marketing of products. Mostly the family is involved in the working process. Tony Dzhongenel, 2003 determine the production structure as a unit, which is in continuous interaction with internal and external structure. The exterior includes the main economic institutions, including institutions engaged in research on demand, supply, processing of agricultural products. According to the author this definition is typical not only for farms engaged in agricultural activity, but to any other kind of business, regardless of the field of activity.

According to the systematic approach /Stankov, 1997/ the farm enterprise is seen as a system of interrelated elements for joint action to achieve common goals. The various branches of economy are subject to the requirements of leading industry and to build according to his needs. The author defines farms as a system of production factors in combination. He considers the farm system as input-output system, as the entrance is characterized by the features of a buyer of inputs needed for production, and output - production sells. By this definition, farm holding have the same features as any enterprise. In addition to the definition of Stankov, it may be added that the inherent characteristics of the firm holding are subject to existing market mechanisms and natural climate factors. Zvi Lerman, David Sedik, Nicholas and Alexander Pogachov Gorcharov in 2006 on a project in the Leibniz Institute of Agricultural Development in Central and Eastern Europe, do research in the field of agrarian reform in Ukraine. For purposes of the project, the authors also define farms as farm enterprises.

For the purpose of the study, led by Kathin Happe /2004/, the term farm is defined as a production structure, based on several factors: economic, cultural, historical, geographical and technical. Conclusions made in the study show that farms cannot be studied only from static point of view.

Bulgarian authors /Doichinova & Kanchev, 1996/, use different terminology: partly commercial farms, which most often are family farms, but unlike the foreign authors did not classify farms according to the amount of resources put into use, but according to a number of other indicators, such as labour involved in production, land use, legal status and others. According to the same authors small farms are flexible, rapidly responsive structures that easily adapt to the surrounding environment. One could say that this is a positive feature of small farms.

According to the European Commission there is no difference between the farm and farm holding. Definition of a farm is given in Regulation 1782/2003 establishing common rules for direct support schemes under the CAP. According to the Regulation "holding" means all production units managed by one farmer that are within the same Member State.

"Agricultural holding" according to MAF census of agriculture in Bulgaria is an independent techno-economic unit, subject to a government, producing farm production and meeting certain criteria. This definition is used for statistical purposes. Just as in the European Regulation, the definition is too general. This is to enable all different types of farms with their specific characteristics to be covered by the definition of holding. It can also be noted that the regulation does not distinguish between farm and farm holding, thus allowing comparison of farms among the EU countries.

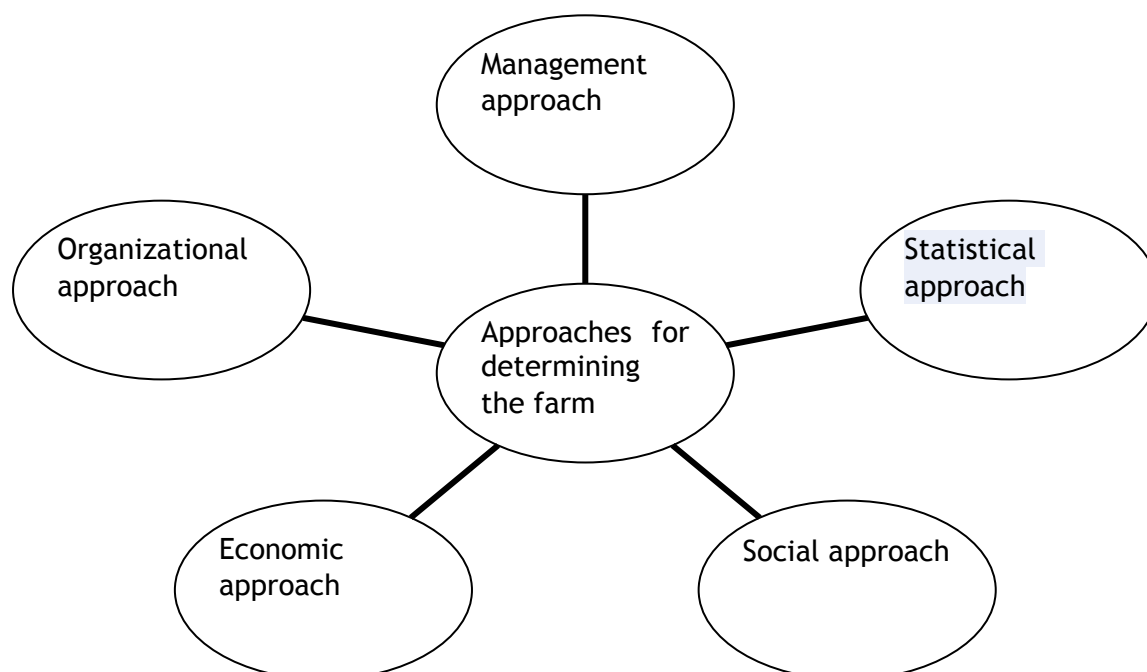
Petkov and Valchev /2003/ consider also the characteristics of farms and their development based on economic conditions and environments in which they operate. According to the authors term "economic environment for agricultural activity" may be considered as "agrarian economic relations", as relations of ownership of land and other

means of agricultural production.

According Bashev /2005/ production structures in agriculture are divided primarily of unregistered farms, agricultural cooperatives and agricultural companies. This division remains unclear and incomplete, since there are no criteria according to which farms are allocated to any one of the groups.

Based on the literary, approaches for determining the small farms can be summarized in the following figure:

**Figure 2 Approaches for determining the small farms**



Source: adapted model by Stoyanova 2004

According to economic approach, the small holdings are considered as operators, characterized by flexibility, dynamism and more adaptivity than to the external environment;

The management approach defines small farms as kind of business that is independently managed by its owners personally and characterized by a high degree of motivation of staff;

Social approach relies on the type of employment. According to it small farms are those which provide employment for family members and no staffs outside the household is used; Organizational approach defines small farms as a business unit with a simplified management structure in which the owner assumes all risks associated with its operation.

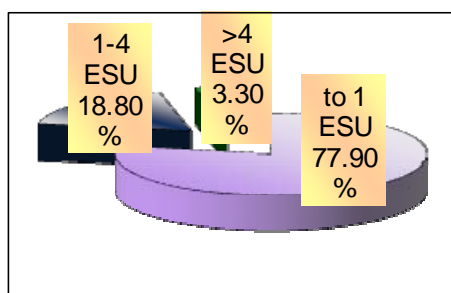
Another definition of farm is used by Misheva & Peneva /2009/. According to them the most important characteristic of a farm (they use term individual farm holding) is land, which can be used for building agricultural infrastructure such as boreholes, wells, irrigation canals, barns, warehouses, and the house.

Existing farms in Bulgaria are characterized by great diversity in terms of organizational forms, the administration and structure of production. According to data from the last sample done by the Ministry of Agriculture and Food in 2007 the main characteristic of farm structure in the country is a large number of very small farms from one side and the other small number of large market oriented farms.

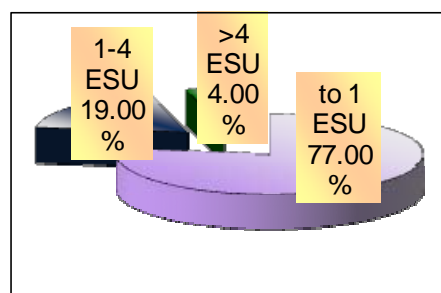
According to the economic size of holdings in Bulgaria (figure 2), the largest group is the group with size up to 4 economic units which we called small farms (more than 96%). Further desegregation of this group shows that 77.9% of total number of holdings are in size up to 1 economic units (consider below as subsistence farms) followed by farms having economic size 1 - 4 economic units (considered below as semi-subsistence farms) figure 2. As seen from the figure practically no changes have appeared over the period of 2005-2007.

**Figure 3 Distribution of holdings by economical size - 2005 and 2007**

2005



2007



Source: MAF 2005<sup>5</sup>, 2007

Another indicator under which the agricultural holdings could be analysed is the share of sales in the total production of a farm. The structure of holdings by the share of sales is shown in table 2. As seen from the table nearly 70% of agricultural holdings sell less than 50% of their output and only some more than 3% sell all the output. There is no substantial development of farms from this point of view over the period 2005-2007, but it has to be mentioned that some slight increase in the share of farms selling less than 50% of the output is observed.

<sup>5</sup> [http://www.mzgar.government.bg/StatPazari/Agrostatistika/pdf/Publication\\_FSS\\_2005\\_pdf/1\\_FF5\\_2005-TABLES-REVIEW-1-General\\_characteristics.pdf](http://www.mzgar.government.bg/StatPazari/Agrostatistika/pdf/Publication_FSS_2005_pdf/1_FF5_2005-TABLES-REVIEW-1-General_characteristics.pdf)

**Table 1 Structure of holdings by the share of sales in production for the 2004/2005 crop year and 2006/2007**

	2005			2007		
	Sales less than 50%	Sales between 50% and 99%	100%sales	sales less than 50%	Sales between 50% and 99%	100%sales
BULGARIA	68,8%	27,6%	3,6%	69,8%	26,9%	3,3%
North-West	85,3%	13,5%	1,2%	86,1%	12,4%	1,5%
North Central	82,0%	16,2%	1,9%	71,3%	25,4%	3,4%
North-East	64,2%	32,2%	3,6%	67,7%	27,9%	4,3%
South-East	75,8%	19,5%	4,8%	70,8%	26,9%	2,3%
South Central	52,4%	42,3%	5,3%	50,7%	43,4%	5,9%
South-West	76,8%	20,5%	2,7%	82,2%	16,4%	1,4%

Source: Agricultural census in Bulgaria 2005, 2007

The small scale farms in Bulgaria are subsistent and semi subsistent farms. According to Ordinance of Ministry of Agriculture and Food semi subsistence farms in Bulgarian are those types of farms which consume more than 50% of their total production for self consumption and are not larger than 4 ESU. The table above prove that the small scale farms dominate in all regions in the country, and the average is 68.8% of all farms in Bulgaria in 2006. In 2007 the number of those farms increased by approximately 1% and reached 69.9%.

### 3 STATE OF SMALL SCALE FARMS AND THEIR ROLE IN RURAL AREAS

In the last years in agricultural literature runs a large discussion about spread and role of type 'small scale farms' and their feature and development. Kostov & Lingard (2004), Mishev (2001) considered that small scale farms are subsistence and semi subsistence farms. They characterized them as traditional type of farming, which has small size (land, animals), village type, and low income, used old technologies, and also does not use labour out of family. However Kostov and Lingard do not reject their role especially the support to the family budget, from the point of view of the share of production from these farms particularly in the new EU member states (they produce a large part of agricultural production, as an example milk production is collected by small scale farmers, which have to 5 cows per farm).

#### 3.1 Indicators for classification of farms

The indicators usually used to distinguish different types of farms are agricultural land, legal status, level of commodity, the use of wage labour, economic size, etc.

One of the most commonly used indicators for classification of farms is the amount of agricultural land used by a farm. In many countries, this is still the only indicator according to which farms are classified. According to this criteria, farms are divided into three groups: small, medium and large farms. Each country sets its own minimum size of farms for their entry into a specific group. Because of this it has to be mentioned that in different countries, holding classified as small farms for its size in one country could fall to another group in another country, thus creating difficulties in comparing them between countries.

But it has to be mentioned that based only on land used farms could not be correctly classified since even small farm size, can produce a large amount of output. For this reason classification of farms should be done on the basis of combination of indicators that would provide a clearer picture of the farms and their characteristics.

Another indicator used for classification of farms is the share of sales. This criterion makes the comparison of farms belonging to one group among different countries possible. But it has to be noted that from dynamic point of view this classification is unstable due to the changes in prices and in demand of agricultural products on different markets. This can substantially distort the actual state of the studied farm. Also in the aspect of time, knowing the characteristics of agriculture and its dependence on climatic factors the same farm with the same specialization and productivity can fall into different groups.

Increasingly, many authors (Mishev, Kanchev, Doichinova, Buchenrieder, David and others) in different years have used for division of holdings the level of production and the share of sales to the market. By this criterion, the farms are subsistence, semi-subsistence and commercials. According to Kanchev & Doichinova (2005) small scale farms are farms belonging to the first two groups (subsistence and semi- subsistence farms), but they use different terminology: commodity farms and semi-commodity farms (or farms partly producing for internal consumption). Generally the share of market sales used as criteria for allocating to farms in these two groups differs by countries, which again makes the international comparison difficult.

According to farm labour force, the farms are divided into those that provide full employment and those that provide partial employment. Naygal Swan /2008/ uses the same criteria for classifying the farm holdings. He explains the existence of small farms with partial employment in the agricultural sector and the best way used by household to

combine the free time the family members with the additional income that could be earned.

On the basis of criteria labour used, farms are divided into under-utilized family labour and farms that hire additional workers with full wage labour. Here there is one feature of the organization of labour resources needed to achieve the targeted agricultural activities. From this point of view an interesting phenomena is observed in Bulgaria. Small farms give their land to the cooperative for cultivating, but instead of receiving rent, they receive "land use", which fully or partially cultivated by the cooperative, with or without additional charge.

Another indicator is land ownership. Farms are divided into full owners or those who handle only their own land and farm holdings that rent land.

According to the criteria proportion of household's income received from agricultural activities, farm households are divided into two groups: households for which income from farm is a major source of income and households for which income from farm is a supplementary source of income. Usually if the share of income is under 50% it is considered as supplementary source income and if it is over 50% - major source of income.

Another criterion, used by the Bulgarian MAF for statistical purposes, is the legal status of farm. According to it farms are divided into:

- Agricultural holdings of natural persons
- Sole traders
- Cooperatives
- Corporates
- Associations and other

Also, due to the specifics of the agricultural sector, farms can be divided depending on which type of produce grown by the simplest division is:

- Establishments primarily engaged in crop
- Farms engaged mainly in livestock
- Farms with predominantly mixed crop
- Mixed livestock farms with predominantly
- Mixed farms

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A SWOT analysis done to farms in Bulgaria shows:

Strengths:

- favourable soil and climatic conditions for production of various products;
- rich tradition in the production of several agricultural products and processed products;
- Good image of the Bulgarian agricultural products /food/ in Central and Eastern Europe;
- Presence of significant production capacity in the food industry;
- Proximity to major export markets;
- Rich, diverse and preserved nature in rural areas;
- Built settlement network, including but relatively well-developed road, housing and communications infrastructure;
- Multiple channel viable rural communities with rich historical and cultural traditions;
- A functioning system of research, teaching and consulting units.

Weaknesses:

- fragmentation of land ownership;
- fragmentation of holdings;
- lack of preparedness for small producers to cooperation;
- Lack of equity and loan capital;
- Amortized logistical base / lead to low labour productivity and poor economic performance /;
- Insufficient economic knowledge and managerial skills, incl. Development of alternative activities;
- Low education and qualification level;
- inefficient and unsustainable use of natural resources: soil erosion, pollution, derelict land;
- Adverse demographic structure in most rural areas;
- Heavily dependent on agriculture in rural economy;
- lack of preparedness of local communities for self-organization and participation in the management of EU funds;
- Amortized basic infrastructure in rural areas - no sewage, waste treatment.

Possibilities:

- Expanded access of Bulgarian producers to the EU market;
- Increasing interest in organic product in the EU in the world and in Bulgaria;
- Improve financial and market positions as a result of the entry of foreign investment;

- 
- Creation of jobs outside agriculture;
  - Positive change in attitude towards the countryside as a place to live, rest and recreation;
  - Development of decentralization;
  - Penetration of new technologies in agriculture;
  - Stable and predictable macroeconomic environment;
  - Expanded access to EU funds;
  - Development of communications / roads, information technology /.

**Threats:**

- Increased competitive pressures on the domestic market;
- Formation of production structures, unable to ensure sustainable development of agriculture;
- Loss of competitive advantage as a result of rising labor and land;
- Launch of the investors who do not aim to develop and expand production;
- Global climate change and drought;
- Deepening of the differences in the development of urban and rural areas;
- Limited capacity of the national budget to co-finance the activities of EU funds.

### **3.2 Model of small scale farms**

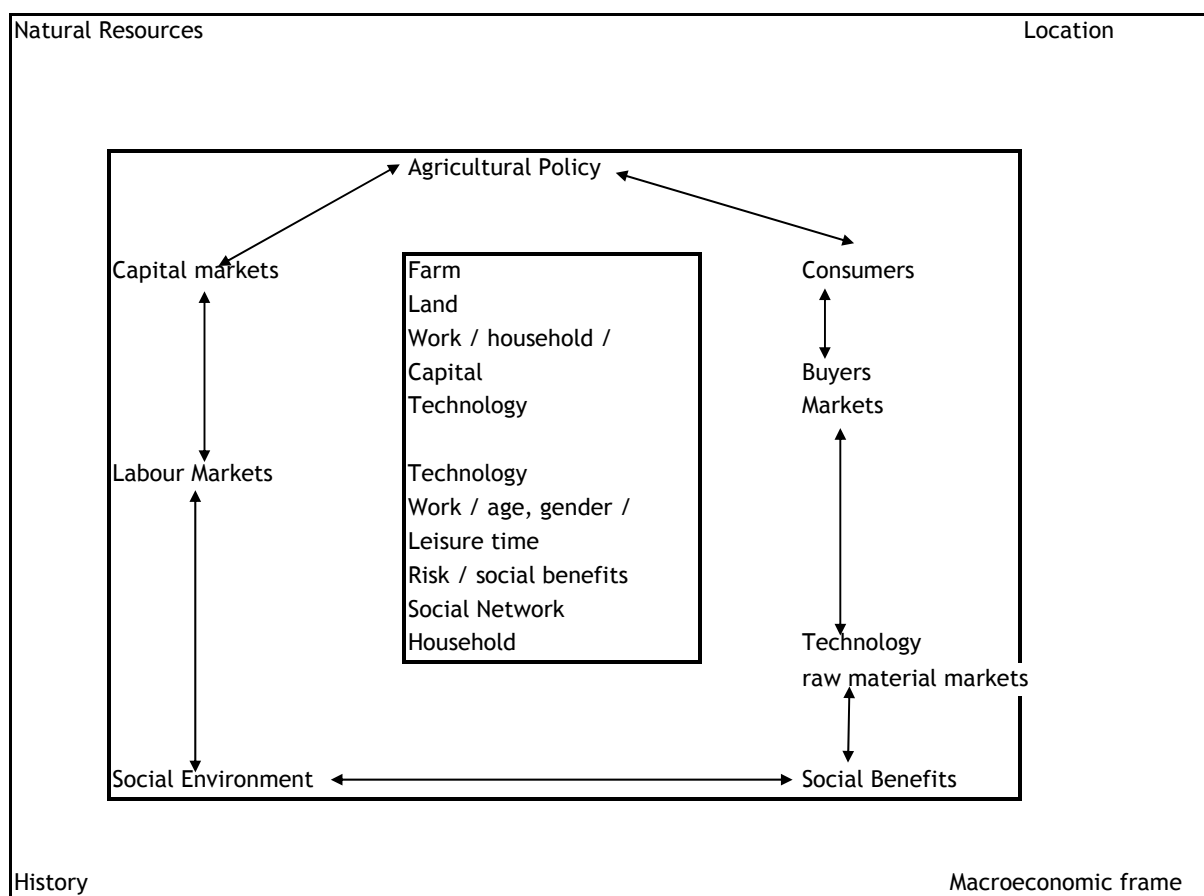
The agricultural sector of the new member states is characterized by many small farms, often natural and supplementary engaged in agricultural activities, and larger in size farms and cooperatives /Buchenrieder, Mishev, Davidova and others, 2007/.

Since 1970 there are authors who have tried to find the reasons for the emergence and existence of small scale farms /Roger, 1970/. Roger concludes that in order to restructure a sector, it is first necessary to understand better the reasons for their existence and development. His research has proven a strong link between changes occurring in the industry, improving infrastructure, and hence increases the efficiency of farms, better access to raw materials, the possibility of selling products and others.

Analysing small scale farms we could not omit Chayanov model of utility /figure 3/.



Figure 4 Adapted model Chayanov



Source: Adaptation by Chayanov

Chayanov theory is based on the study of Russian holdings. The main hypothesis, which advocates that owners tend to have more time to rest and socio-cultural activities, even at the cost of income. In subsequent studies this hypothesis is supplemented that put in work and productivity reaches only so far, which have reached their minimum needs for agricultural products, while the rest remains for rest and relaxation, for this purpose, sacrificing income from the farm. The application of the Chayanov model of agriculture is typical for countries in transition, as the main attention is paid to the historical development of households.

At a later stage of the Chayanov model, is enriched by an additional element - namely the selection of the household can only redistribute time in the following areas:

- Time to produce market-oriented goods
- Time to produce goods for own consumption, and income for bying fuel for private car, water, electricity, the cost of raising children and others.
- Free time outside the other two categories

Azam and Besley /1991/ add that these farms produce agricultural products allocating the time according to the distribution above, but the main argument for that is the inability to purchase the necessary agricultural products due to the remoteness of residence.

There is no consensus about definition of subsistence farms, not only in Bulgaria. In survey held by Proto /2004/ the small scale farms are called poor farms and the reason is the

small size of arable land. According to that survey one of the ways to transform the farmers to large agrarian ones is to increase the price of the land (sell/rent). The reason of the proposed decision is as follow: If the farmers sell/rent part of the land he will relive capitals. Those capitals can be invested in other types of cultures - more labour consuming, or to buy high quality of seeds. Also the capital can be invested in livestock breeding. In that way the sector will not lose the dualistic structure but the small scale farms will be more viable and sustainable. The authors realized that the running of that model of farming will be impossible without specific measures. However it is only propose and it is not applicable for Bulgarian agriculture.

In 2003 researchers in agricultural sector (IAMO volume 22, 2003) faced a problem to perform a clear definition about substance farming. The authors inspected a lot of thesis and definitions and used criteria about the project is consumed sold production by farmers. The conclusion is that there are no farms which are 100% subsistence. The top border of natural holders is 50% consummation by households or more of total production.

According to Kostov and Lingard /2004/ small scale farm is mostly attributed to the natural compound farms and characterized them as traditional, small, rural, low income, with a few staff and low tech. Despite this characteristic, Kostov and Lingard, do not deny their role and place, namely that they produce a large part of agricultural production. Also made by comparison of the percentages, in the same survey, the production of agricultural products reached the market in Romania, Bulgaria, Russia and Poland, it is clear that on average about 50% of output is still sold, even directly from a farm, neighbours, relatives, friends or barter is carried out for other goods or services.

In some countries such as Romania, after the loss of most of the dependant jobs in the cities, workers are directed to rural development and cultivation of agricultural produce to be able to maintain a minimum lifestyle of their households /Buchenrieder, 2001; Petrick and Weingarten, 2004 /. Thus, small scale farms appears to be a social and economic buffer for the development of the country /Kostov and Lingard, 2002/ recognition of the role of small farms, Barbie Balint /2003/ also note that they exist as a way to survive and support household family budget. In a study of the agricultural sector, the Institute for agro development in Central and Eastern Europe /Abele and Frohberg, 2003/, derived definition, holding that natural does not always develop the market as it is constrained by product market, on the one hand, and second, that production is consumed within the household. On this basis the authors /Abele and Frohberg/, conclude that the degree of subsistence of the farm is inversely proportional relationship between the share of surplus production and internal consumption. Another conclusion is that semi-subsistence farms sell at least 75% of its production. In addition, the study provides two options faced by semi-subsistence farms. From one side the owner of such farm may seek employment outside the agricultural sector. The main factor for the farmer, who would take this step if other sectors are developing faster than agriculture, is a great reward against his work. In some cases this is related to migration from rural to urban areas. In this situation, the farm may continue to provide the household with food, which are intended for internal consumption, but the main income comes from another sector. In case that the first option cannot be implemented due to various reasons and barriers, the owner may remain in the agricultural sector and to compensate for their small income through rational use of resources for production. In the proper management of the farm, he can achieve technological progress through mechanization, new varieties of plants, employment of data processing machines, milking units and others. Also, technological progress is usually accompanied by investment in human capital and tangible. Reaching this stage, farms can be categorized as market-oriented structures. The hypothesis is that the degree of subsistence will decrease, as will undergo a new structure that is semi-subsistence before

becoming a commercial farm. The decision of how the owner will develop or reduce/stop his activity is in connection with development and income from other sectors.

Alexi Aleksiev /2003/ makes extensive survey of agricultural holdings. It recognizes the importance of small scale farms for development of the agricultural sector. Occurrence and large number of them are explained by:

- Economic and social conditions in the country;
- Agricultural reform and the division of land;
- Traditions and culture of society.

From an economic point of view, the existing of small farms is mainly because of lower income per capita in rural areas. Another factor that has to be mentioned is higher unemployment rate in the villages, forcing households to move towards the development of agricultural activities. Slower development of markets in rural areas is another reason for the slow commercialization of farms.

Land reform and in particular the restitution of the land to ex owners resulted in the creation of many small farms, often owned by people around retirement age. Traditions of the Bulgarians and the strong link between generations determine maintenance of holdings. Aleksiev/2003 / explains that the group of small scale farms includes holdings with different size, type of production, specialization, the administration and not least the share of commercialization. According to the author small scale farms are semi-subsistence farms and they used production for self consumption as the rest is sold to market. The share that goes on sale is within 20% to 70%. Moreover, he makes a comparison between farm size, specialization, way of governance and the share of output for sale.

The social role of small scale farmers in Bulgaria is analysed by Yoveva and Mishev 2001<sup>6</sup>, Kopeva and Mihajlov 2002<sup>7</sup>. The most common statement is that in Bulgaria rural areas cover 81% of the territory, and in these areas inhabitants have low incomes. Also they state the high age of the people and in accordance to that, the income is secured by social payments. In Bulgaria the pensions are insufficient so running a farm is a good opportunity to fulfil the budget and to consume a part of the products. Authors underline also social role of the subsistence farms. Running that kind of farms is mainly due to the life style. Profit is not an important factor having impact on farmer's behaviour. It is interesting phenomena that subsistence farms use only family labour (sons and grandchildren over the weekends) and especially in the summer when the children are on vacation.

In specific literature (Kanchev & Dojchinova, 1997; Mishev, 2003) used two major points of view to describe this type farming. Not so precise definition is that subsistence agriculture is self-sufficient farming in which farmers grow only enough food to feed their family. The typical subsistence farm has a range of crops and animals used to provide feed for the family during the year. The main criterion for the decisions about production structure is what the family will need during the coming year. Market prices practically do not have impact on the decision making process. Also in the past all small scale by size farms were classified as substance, but in the last few years, this group of farms was divided into two sub-groups, purely subsistence farms and semi-subsistence farms. To be able to make a clear distinction between the two sub-groups in this study we use the criteria introduced in Bulgarian regulations for semi-subsistence farms. According to Regulation № 28 from

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<sup>6</sup> Yoveva, A. and Mishev, P. (2001): Using Urban Agriculture for Sustainable City Planning in Bulgaria, UA Magazine 4 - Integration of UPA in Urban Planning, RUAF Foundation, pp. 14-16.;

<sup>7</sup> Kopeva, D. and Mihailov, D. (2002): Agrarian Reform, Regional Development and Business Opportunities in Regions with Ethnically Mixed Populations, Institute for Market Economics (IME), Sofia, Bulgaria.

5.08.2008 for purposes of the Program for rural development 2007-2013, semi -substance farms are defined as farm with economic size less than 4 ESU, arable land insufficiently to be registered under the Law of Agricultural holders, to consume more than 50% of total produced agricultural production. If we do not keep follow regulation it will be impossible to separate the group substance farms from semi-substance, and the analysis will be wrong.

In order to recognize the role of subsistence farms for the rural areas in general as well as for people living there it is enough to indicate only a few reasons for existence the subsistence farms. At first place these are the relatively higher unemployment rate and relatively lower income in the rural regions comparing to the national average. Having in mind that as a result of the restitution process the most of the Bulgarian population have some land, it is used as a kind of insurance particularly for people in rural areas that they could add some cash income for their family as well as they could save some expenditure on food producing agricultural products for self consumption.

At the second place, the slow development of agricultural markets in the country as well as poorly developed infrastructure in the rural regions, impede the process of specialization and commercialization of the relatively larger subsistence farms and deteriorate the process of transforming the subsistence farms into commercial ones and as a result reducing the role of subsistence.

It could be expected that in short run subsistence farms will continue to exist in spite of incontestable advantage of market oriented farms. In the long run some of the subsistence farms could transform in semi-substance or even market oriented farms. If we consider that there is only tiny line between substance and semi-subsistence farms it is likely some of the subsistence farms to move to semi-subsistence, but it is highly unlikely subsistence farms to transform in commercial farms. The conclusion is that the most important role of subsistence farms is the social function to support the incomes of rural families.

The specific of management (Doichinova, 1998) of small scale farms is stated that the biggest part of small farms is run as family farms. The definition is "The management of small farms is led by distribution of limited resources to achieve maximum satisfaction of goods for the family"<sup>9</sup> The author develop a theory that small farms are managing in different way, than the big ones. The decision maker is the head of the family, the aims are considered mostly with family members. Furthermore it is not rare cases that the strategy for farm development is in a contradiction with the family ones. As an example - the decision maker is willing to spend more time in agricultural activities, but in other hand he want to have more leisure time. In table 2 is shown the difference between small scale farms (subsistent and semi subsistent) and large scale farms by their management.

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<sup>8</sup> Since 22.08.2008

<sup>9</sup> Doichinova Bulgarian Family farming problems and perspectives - Sofia 1998 university press

**Table 2 Characteristics of management of small scale and large farms.**

State	Small scale farms (subsistence)	Large scale farms
Decision makers	By Household head	By holders, owners or authorized manager /chosen or hired/
Type and numbers of aims	High inter twist between family aims; only few aims	Maximizing of income; profitable activities, minimizing of inputs and etc.
Used recourses/land	In most cases limited by own land and capital	Own and rented land
Strategies	Mostly impulsive strategies, or using a "neighbourhood" ones	Forecasts, planning
Specialization Criteria	Social, market, psychological;	Maximum profit
Planning	Operative	Operative, short, middle and long term
Management	By household head, or members	By holders, auctioneers, owners or authorized manager /chosen or hired
Organization	Lack of formal organization	Formal organization
Motivation	Depends of household characteristics-emotional motivation	Depends of professional characteristic of manager, but excluding his emotional characteristics
Control	Lack of formal control	Formal control
Life circle of farms	High inter twist between farm and family cycle	Market signals, micro and macro situation and etc.

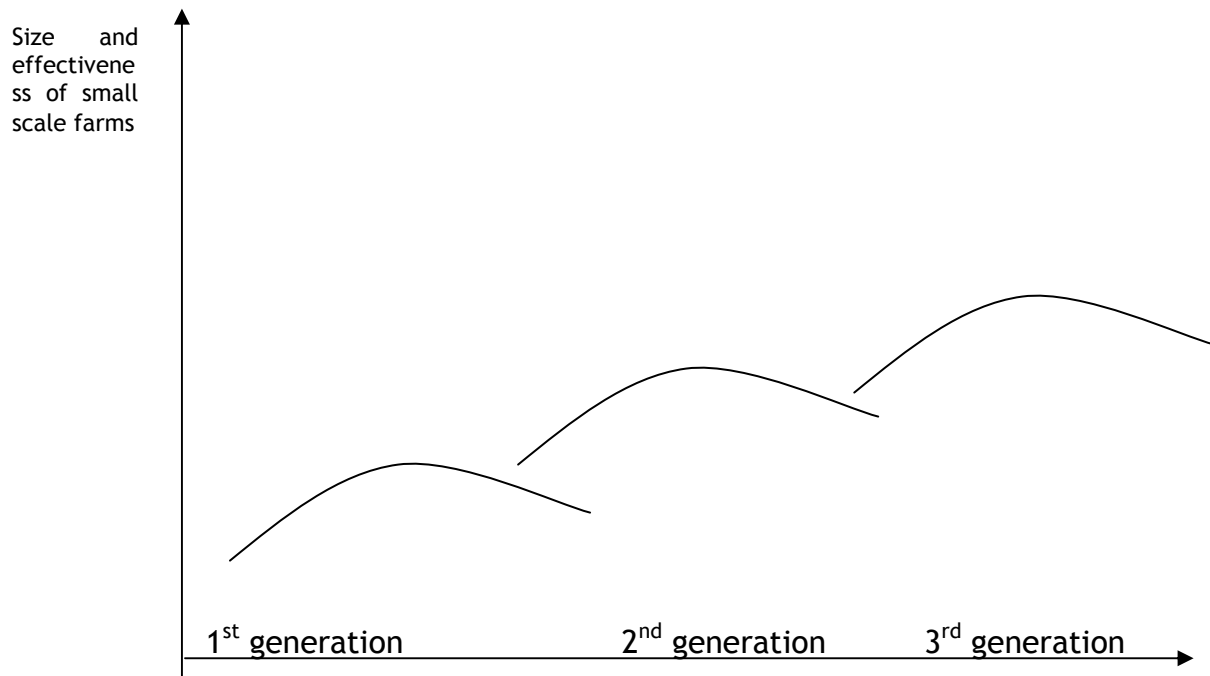
Source: self adaptation (Boehlje, M., V Eidman 1984, Kay R.D. 1981, Dalton 1983, Downey 1987)

Agricultural sector in Bulgaria if the number of farms is considered is mostly represented by subsistence and semi subsistence farms. The organization forms, life cycle depends from the household characteristics- age structures, inheritance etc.

**Life cycle of the farm and its role in the development of farms.**

In the agricultural sector, where traditionally dominated by small farms, farm development largely depends on personal qualities, abilities, knowledge and skills of the owner. Based on tracking the changes of these properties is analyzed and farming life. In general, you can trace three stages: starting a business, grow and exit businesses /Doichinova, 2005/. The phases of life circle of small farms influenced by inheritance are shown on figure 5:

**Figure 5 Size and effectiveness of small scale farms between generations**

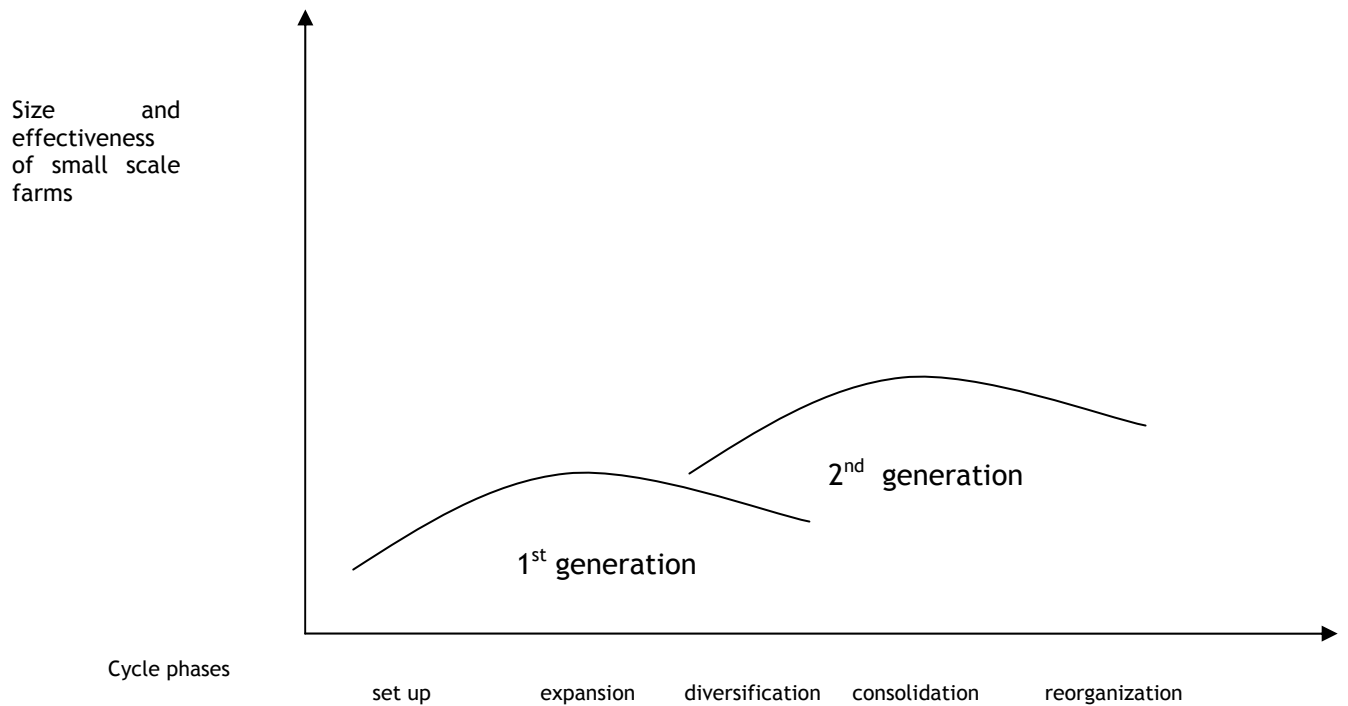


Source: Stojnev Iv., 1990

This model is adequate only if the farm will be inherited. In other cases the development of farm will stop operating or furthermore the farm will be liquidated if the next generation is not willing not run farming activities.

Entering of new generation in small scale farms creates good opportunities to transform the subsistence farms to market oriented farms. On figure 6 is shown the phases of cycles of the small scale farms.

Figure 6 Phases of cycles of the small scale farms



Source: Stojnev Iv., 1990

The development of small scale farms is permanent consecutiveness of organization changes caused by attempts to adapt to variation of eternal end external nature.

## 4 REASONS FOR EXISTING OF FARMS PRODUCING FOR SELF CONSUMPTION

In Bulgaria, reasons for existence of subsistence farms are complex. It is very difficult to separate the impact of all the factors that affect this type of farm. But generally they could be allocated to the following groups: Macroeconomic factors; Demographic factors; Agricultural policy; Factors linked to market.

### 4.1 *Macroeconomic factors*

Macroeconomic development of Bulgarian is marked by two heavy economic shocks (at the beginning of 90th and at the end of 1996 and beginning of 1997) followed by strong devaluation of the national currency, high inflation particularly up to the end of last century, slow restructuring of the economy, unpredicted policy and as a results decline in GDP, low incomes, high unemployment rate. In this situation to produce for self-consumption was the one of the ways for the large part of Bulgarian population to survive.

Since 1998 the process of stabilization of the economy started, the trend in GDP growth became positive, the economic policy - more predictable, the inflation and unemployment rate have been reduced but even by now Bulgaria is the lowest income country in the EU. In this situation production for self-consumption is still important particularly in the small towns and villages.

### 4.2 *Demographic factors*

Due to the economic situation in small towns and villages the migration from them to the big cities has been quite strong. Practically no investments have been done in the infrastructure of these regions. As a result of this the population living in these areas declined as the age structure of the population aggravated. The same is valid for the educational structure of these regions. All this contributed substantially to the reduction of economic activity carried out in these regions as well as to options of the population to get a job there. In this situation to have a small farm is a kind of solution and many people use it even if they should produce only for themselves. Thus the unfavourable demographic characteristic of the rural and semi rural regions has substantial impact on sustainability of the subsistence farms in the country.

### 4.3 *Agricultural policy*

The land reform in Bulgaria started with the land restitution. Thus land was returned to the ex-owners or their inheritors, which resulted to high fragmentation of the land. All old production structures were removed by the low. These changes in the transition period led to appearance of large number of small scale farms. Many people that started dealing with agricultural activity used to work in their kitchen gardens and transfer their skills and experience to "new" land, which they received under restitution. A lot of papers discuss the role of land reform and land market for subsistence farming. All of them conclude that the land reform lead to a high fragmentation of land, which has negative impact on the possibilities for enlargement of farms.

Liquidation of old cooperatives led to substantial changes of all rural households. They received land, animals and in some cases, some other equipment from the old coops. Thus in combination with the overall economic situation in these regions, the families did not have any other option to survive, except to grow vegetables and other agricultural products for own consumption.



During the transition period the applied agricultural policy and in particular the policy applied in the first years of transition was unpredictable and generally not in favour of farmers. Since 1998 some support to producers under different schemes was introduced but the small farmers were not able to meet all the requirements to apply for this support. Thus practically the support was intended to market oriented farms.

After accessing EU, the level of support to farmers increased and specific support was introduced as transitional measure to small farms. But it has to be mentioned that not all of small farms are allowed to apply for this support. Those of them who are not registered as producers or have lower than one economic units size, are not eligible for this support. Thus practically no policy measures are available for subsistence farmers, which limit their opportunity for development. This is not the case for semi-substance farms, which have better opportunity for development based on the introduced transitional support to them.

#### 4.4 Financing of agriculture

Generally agricultural sector is characterized with high uncertainty and high risk (climate factors and etc.). The underdeveloped financial markets, providing expensive rural credits and being biased towards large state-owned companies in the first years of transition, have hindered the farmers from engaging in technology intensive but more profitable production.

Because of this the main source of financial support to farmers was State Fund "Agriculture" and only in the last years bank institutions. To get support from the SF "Agriculture" farmers have to meet some requirements, that small farmers could not hold. They also do not have enough capital to present it as collateral to banks. Thus the only way small farms to ensure their produce is consumer loans, which in most cases are guaranteed by wage jobs of the farmers or family members. Thus over the whole period of transition and even now the opportunities of these farms to develop are quite limited.

#### 4.5 Factors linked to market

Market access of small farmers is also quite limited. There are several reasons for that. First, small scale farmers sell only surpluses, and these sells are not regular. As a result, the traders of agricultural commodities as well as processors avoid to contract with small farmers, because they often cannot produce enough quantity and secure the needed quality of the products. Thus the only options that remain for small farmers are to sell their surplus on the open markets in nearest towns, to sell to the middleman at lower prices or to exchange the produce with neighbours against other products (barter). In any case they do not get enough return to enlarge their farms.

In addition, in most cases the small scale farms production is more expensive than the one from large scale farms (higher costs for inputs, lack of specialization and etc.). Selling their produce to the market at market prices they are not able to cover the costs of production, so they prefer to use the produce for themselves. Thus they keep their farm activity but only for themselves.

Having in mind that subsistence farms do not sell the output on the market, they do not respond to market signals in a way that this implies to a market oriented farms. Therefore, self-sufficient production is an important subject of research and its impact on the agricultural sector should be assessed. Common framework for such study is given in Kostov and Lingard (1999a, 1999b), and examples of empirical modeling of this problem is given in Mishev et al. (1999), Kostov (1999), Kostov and Lingard (2000). These studies also indicate that self-sufficient production has a significant impact on agriculture as a whole,

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but also that in the medium term it will not disappear. That's why this production should be borne in mind when it sets and implements not only agricultural but also regional policy.

## 5 SMALL SCALE FARMS IN RURAL REGIONS IN BULGARIA

Results shown in this part are based on survey carried out within the framework of European project STRUCTURAL CHANGE IN RURAL LIVLEHOODS (SCARLED) in the period end of 2007/2008. As agreed under the project (SCARLED, WP4) 271 households have been interviewed in Bulgaria. 37 households of the total interviewed did not have agricultural activities in the market year 2006/2007. The surveys were held in 3 different regions in the country shown in table 3.

**Table 3 Regions selected for the survey**

NUTS 2 Raion	NUTS 3 Oblast	Obshtina	Villages, cities
South Central	Pazardzik	Pazardzik	Gelemenovo
			Kostandovo
			Dorkovo
South East	Burgas	Karnobat	Nevestino
			Krumovo Gradishte
			Ekzarh Antimovo
North Central	Veliko Tarnovo	Pavlikeni	Nedan
		Pavlikeni	Karajsen
		Svishtov	Morava

Source: SCARLED database

According to previous part of this deliverable under definition "small scale farm" we will understand these type farms which operate farms to 4 ESU (substance and semi subsistence farms). For that purpose the farms are divided on 4 groups:

- 1<sup>st</sup> group - farmers who neglect their farm activities after 2003
- 2<sup>nd</sup> group - farmers who has economic size up to 1/ESU/
- 3<sup>rd</sup> group - farmers who has economic size between 1 and 4 /ESU/
- 4<sup>th</sup> group - farmers who has economic size more then 4 /ESU/

Allocation of farms in these groups is based on criteria shown in Annex of Bulgarian ordinance<sup>10</sup> of semi-subsistence farms in Bulgaria. The distributions of farmers by ESU are as follows /table 4/:

<sup>10</sup> Semi subsistence ordinance - № 28/5.08.2008 МАР /НАРЕДБА № 28 от 5.08.2008 г. за условията и реда за предоставяне на безвъзмездна финансова помощ по мярка „Подпомагане на полупазарни стопанства в процес на реструктуриране“ от Програмата за развитие на селските райони за периода 2007 - 2013 г. /Издадена от министъра на земеделието и храните, обн., ДВ, бр. 74 от 22.08.2008 г., в сила от 22.08.2008 г./

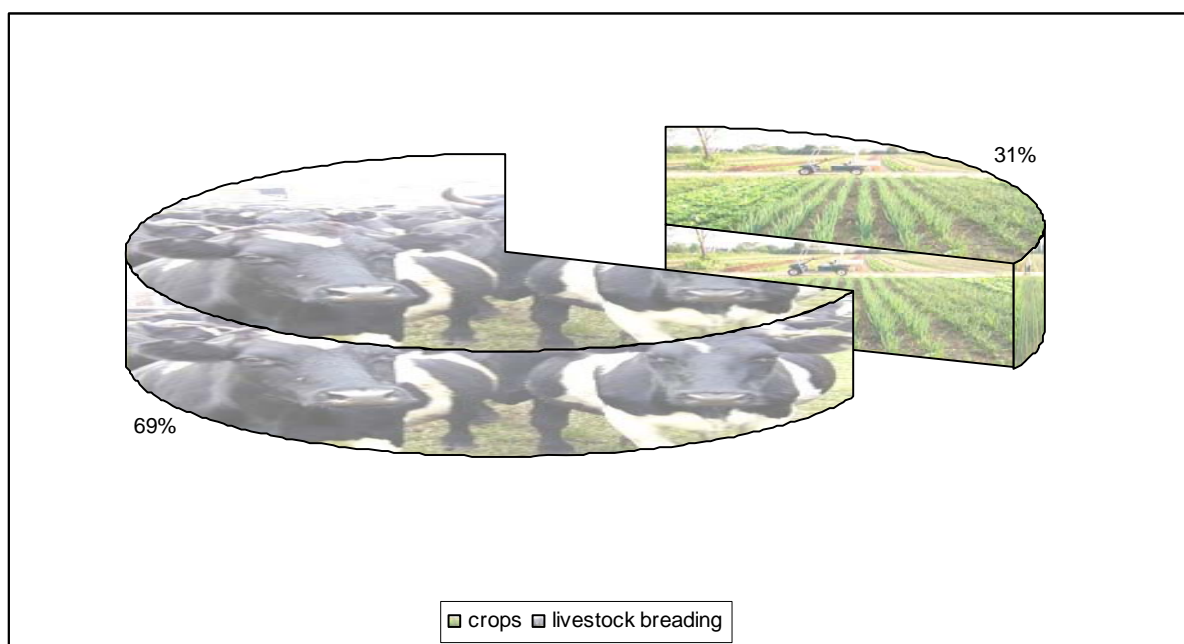
**Table 4 Distribution by ESU according Bulgarian ordinance, N=271 households**

	Frequency	Percent excluded / n.a
Exit or 0 ESU	31	11.4
Up to 1ESU	103	38.0
1-4 ESU	81	29.9
>4 ESU	56	20.7
Total	271	100.0

Source: SCARLED database

According to the accepted definition for small scale farms approximately 70% of all interviewed farms can be considered as small scale farms.

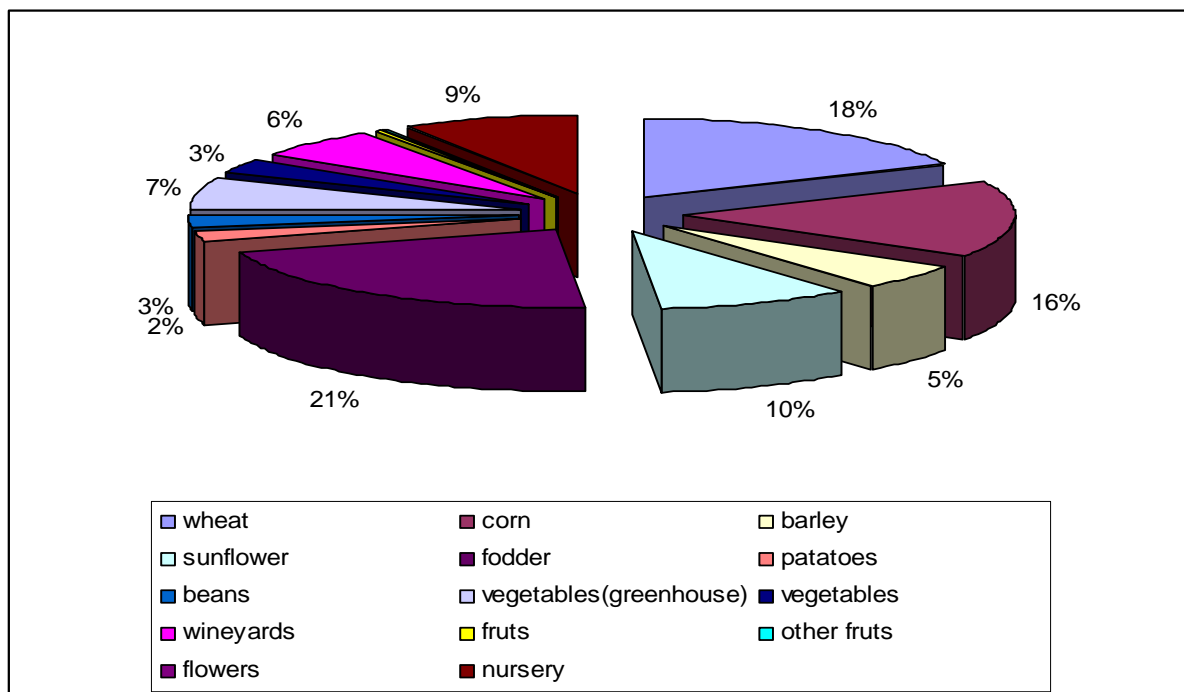
**Figure 7 Distribution of small scale farms by agricultural structure- N 184**



Source: SCARLED database

According to the figure above it is obvious that for subsistence and semi-subsistence farms the stock breeding is much more important than crop production (presented mainly by fodder and grains which accounts for 60% of total crop production, figure 8). This could be explained by the relatively large proportion of livestock breeding.

Figure 8 Distribution of crops structure of farms

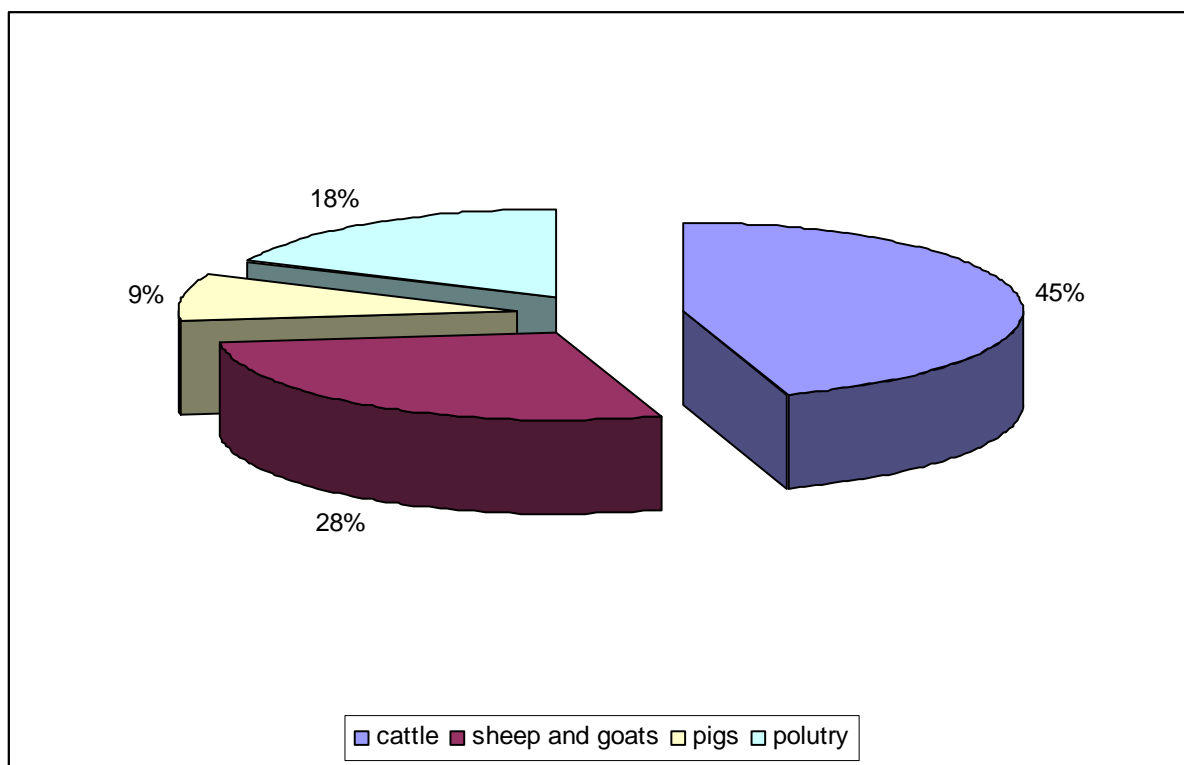


Source: SCARLED database - N 184

As seen from the figure above vegetables growing has a social rather than economic role in observed farms. From an economic point of view it consist only 3% of total output, but almost 80% of all farms in the sample grows vegetables.

The stock breeding has a very important role for the development of the farms. Almost 100% of farms in the sample have animals, as nearly half of them have cattle (46% of all farms).

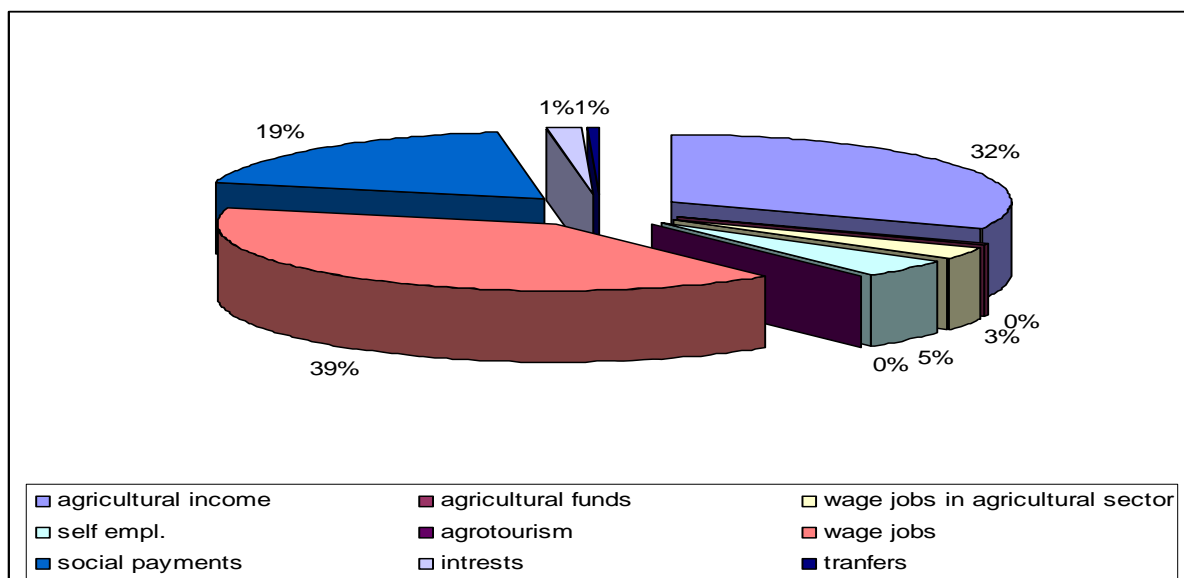
Figure 9 Distribution of farms by stock breeding - N 184



Source: SCARLED database

The annual income per household in the sample in 2006 was 7 358 BGN as only 31% of it or 2325 BGN comes from agricultural activities. The analysis shows that income from dependant jobs outside of the agricultural sector is most important income source accounted for 39% followed by income from agricultural activity (32%) and social payments (19%). The detail distribution of sources of income is shown on figure 10.

Figure 10 Distribution of income of small scale farms



Source: SCARLED database

The biggest part of the farmers in the sample answered that compared to 2003 their total income has increased. In the same time the consumption of agricultural products produced from own farm is stable over the period 2003-2006 and is accounted for about 40% of total consumed products by a household. This shows that the interviewed farms have social role for the families.

For the future development of farms it is important to analyse farmers' expectations for the future. Results of the analysis of the answers of interviewed farmers are shown in table 5.

Table 5 Farmers expectations for household's agricultural activity in the next 5 years

	Percent
No change	38%
To cease farming	12%
To scale down farming	9%
To increase the share of sales	7%
To retire	2%
To transfer to the next generation	8%
Intensify farming (increase labour/resource input)	19%
Total	100,0

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As seen from the table more than 38% of total interviewed householders of small scale farms do not expect to change anything in their farm activities, as the main reasons for this expectation are high age and low education. Seven percent will try to increase the share of sales, and another 7% will intensify farming. About 12 percent will cease farming and approximately 2 percentages will retire. These results show that small scale farmers are very conservative in respect to their farm developments. It is interesting that only 8% of all farms in next 5 years will be transferred to the next generation.



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## **6 CONCLUSIONS**

Subsistence farming in Bulgaria has an important role for development of the rural areas. This type of farming is well represented in all regions in Bulgaria and in its development two periods can be observed. In the beginning of transition their number rapidly increased. With the stabilisation of economic situation in the country the number and the average size of small farms declined especially of farms between 0.5 and 1 economic unit. There are some regional differences in the speed of process of transforming of small farms which depends highly on the overall economic situation in the specific region. The possibilities of enlargement of small farms depend also on personal motivation of farmers and government policy. The attitude of farmers about the future is very important factor for changes but the results show that farmers are not optimistic about the possibilities for further development of their activity.

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## 7 POLICY RECOMMENDATIONS

Small-scale subsistence and semi-subsistence farming in Bulgaria is a result of the substantial structural changes in the agriculture during the transition. Although their number declined in the last years this process is not followed by the increase in number of commercial farms. It is obvious that small farms are important feature of Bulgarian agriculture and long-lasting phenomenon. This means that specific policy measures for them should be defined and followed:

1. Formulation of different policy objectives for small farms is needed based on the analysis of the peculiarities and role in different branches of the agricultural sector
2. Development of small farms, prevailing in Bulgarian agriculture, needs special measures for improving rural development infrastructure and services supplied to small farmers.
3. Costly for application single area payment /Single farm payment/ schemes does not create any benefits for small farms. In the process of evaluation of current CAP and in negation of future CAP Bulgarian government should on increased payments for the public goods provided by small farmers- environmental protection, conservation of biodiversity, soil fertility and water quality, landscape preservation, food safety, animal and plant health, and rural development.

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