



RESOURCE CERTAINLI OF AGRICULTYRAL PRODUCTION IN SOUTH CENTRAL REGION OF BULGARIA

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ABSTRACT

The goal of this elaboration is to bring the tendencies in certainty of labor, land and funds of the agricultural production in the South Central Region (SCR) of Bulgaria. Object of this research are the social-economical results of agricultural production in SCR during the period between 2000 – 2008. In this research are used : statistical and economically-mathematical methods, inquiry survey, analysis and synthesis. In 2000 the utilized farming area in SCR is 16,2% of the aggregate for the country and it diminishes reaching 15,2% in 2008. The lack of interest leads to the averseness of farmers in the region to cultivate part of the land. During the analyzed period the acquired durable material assets 4 times in SCR. The work load in agriculture in SCR for the period varies round 16,5% of all working in the region and there is a tendency to go down. In agriculture the bigger portion of the working load are male between the ages of 55 – 64 with low qualification and with no secondary education. The resource certainty in the region is good in quantitative bearing but the quality of funds and labor resources is low. The resources of the region are not rationally utilized due to a variety of economic reasons.

Key words: gross domestic product, gross value added, land, funds, labor resources, structure of agricultural production.

During the period which is the object of this study (2000 – 2008) the development of Bulgaria is comparatively good. The gross domestic product (GDP) is one of the most important macroeconomic indices which measures the total market value of the manufactured goods and services for final consumption in the national economy during a particular period of time. In 2000 GDP in the country amounts to 2 7398 660 thousand levs, in 2005 it increased with 16.6 % compared to the year of 2000, and in 2008 its growth is with 15.3 % compared to the year of 2000. GDP at current prices in South Central Region in 2000 amounts to 4 273 465 thousand levs, in 2005 it increased with 16.5 % compared to the year of 2000, and in 2008 its increment is with 12.9 %.

GDP produced in the country and in all Planning Regions during the period in hand grows. Highest growth in GDP is noted in the South West Region (SWR) – 23.9 %, followed by the North-eastern Region (NER) – 13.6 %,

the third position is for the South Central Region (SCR) with 12.9 %, followed by the Northwestern Region (NWR) with the lowest growth of 6.8 %. The regions in Bulgaria are developing very unevenly.

Another macroeconomic index is the Gross Value Added (GVA). In 2000 GVA in the country amounts to 23 982 591 thousand levs. During the period in hand it increases and in 2008 amounts to 57 732 834 thousand levs i.e. with 24.4 % compared to the year of 2000. Highest is the growth in GVA in SWR – 32.9 %, second in growth is SCR – 21.8 %, followed by NWR with lowest growth of 17.4 %.

Different is the participation of the economic sectors in the formation of GVA. Largest volume in the formation of gross value added belongs to the services sector, whose share in the total GVA for 2008 is 62.2 %. In 2008 the industrial sector makes 30.5 % of GVA in the economy. GVA created in the agriculture and forestry in 2000 is 3 301 million levs, in 2005 it insignificantly increases to 3 322.2 million levs, whereas in 2007 it falls to 2 897.8 million levs only to increase again in 2008 reaching 3 990.2 million levs. The growth in physical volume of GVA made in the agricultural sector

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is 24.6 % in comparison with 2008. The relative share of the agricultural sector in GVA of the country in 2008 also rises with 6.9 %, succeeding in restoring its levels from previous years after the unfavorable 2007. The created GVA varies round 3 377.8 million leva and the deviations from its average are in the range of 3-4 %, which is typical for the field, which is dependent on the general economic conditions as well as the natural and climatic conditions. The increment of the total value of the GVA created by agriculture is insignificant and accompanied by a decrease in its relative size creates by agriculture (**Table 1**). GVA created in agriculture by planning regions is unevenly distributed with largest share in SCR. Agriculture is an important structure-defining field, regardless of the fluctuations and the decrease of its share in the formation of GVA for the economy as a whole as well as for the regional economies. Agricultural production is a complex combination of land, capital and human resources.

People in Bulgaria have a good supply of farmland. Worldwide the average size of cropland per person is 3 decares, while here it is 4.6 – 5 decares. In Europe Bulgaria belongs to the group of countries with average supply of land. In different areas of the country the supply of land varies within a wide range from 3,1 decares per person in the SCR to 9,1 decares per person in Montana. Approximately half of of the country's territory – 45,3% is used as farmland . In 2000 5 582 050 hectares were used for agricultural production. At the beginning of the period in hand many new landowners joined agricultural production happily and with high expectations. In 2005 data showed a clear tendency towards diminution of the utilized agricultural area (UAA), which remained unchanged until 2008, when UAA in the country is only 5 100 825 hectares. In the SCR the economic situation is not much different from that in the country as a whole.

Table 1. Gross Value Added Accomplished by Agriculture by Planning Regions in 2000-2008

Planning region	Gross value added of agriculture, mln. leva			Percentage of agricultural gross value added from the total Gross Value Added		
	2000	2005	2008	2000	2005	2008
Bulgaria total	3 301	3 491	3 990	13.93	9,1	6,9
North-Western	289	597	669	18.31	16,5	14,7
North-Central	533	537	598	17.13	14,5	12.4
North-Eastern	743	513	579	21.3	11,9	9,0
South-Eastern	426	513	551	17.78	9,7	7.8
South-Central	878	797	975	17.75	13,4	12.0
South-Western	432	533	618	5.25	3.4	2.3

Source: Statistic 2001-2009

In 2000 UAA in the region is 16.2 % of all in the country, with highest share in the district of Plovdiv – 34.7 % of the general for the region, district Haskovo – 24.9 %, district Pazardzhik – 15.5 %, district Kardzhali – 13.3 %, and district Smolyan with only 8.6 %. In 2005 UAA in the region increases to 20.6 %, as the general economic environment in the country is good and it can be expected that there will be some positive changes in agriculture, which, however, are followed by a diminution to 15.3 % in 2008. During the period in hand UAA in SCR is generally decreasing, as the transient increase of 2005 is followed by a serious decline (**Table 2**). In 2000 there are 906 686 hectares utilized agricultural areas in the region, whereas in 2008 they are 780 503 hectares i.e. there is a diminution of 13.37 %. The lack of economic interest has an influence

on the decision of a big number of owners in the municipalities in the region not to utilize part of their lands. Due to unfinished lawsuits about the identification and separation of ownership, in the period 2000 – 2005 the share of natural land in SCR is growing. In 2008 this tendency to decline continues, 14.4 % of the areas with agricultural purpose in the region – 130806 hectares are not being utilized. SCR has the largest relative share of fallow land in the country – 23.9 %.

There are extremely favorable soil and climatic conditions for the development of plant growing in SCR. The moderate Mediterranean climate combined with the water resources is an important prerequisite for the cultivation of a great variety of agricultural crops. In SCR mainly developing is an intensive agricultural

production, which includes vegetable growing, tobacco-growing, fruit-growing, and viticulture.

The employment in agricultural crops on the territory of SCR is dynamically changing, and during the period in hand it is highest in 2005, after which a substantial fall occurs. **Table 2** illustrates the changes in SCR that occurred in the utilized for various agricultural crops land during the period between 2000 and 2008. Unfavorable are the tendencies in the employment of land. In 2008 the areas of all cultures, except for meadows and permanent grasslands, are lessening. In 2005 only the areas with industrial crops, vegetables, and flowers are lessening compared to 2000.

There are good climatic conditions and tradition in cultivating cereals in SCR. The utilized areas with cereals in 2005 increase with 9.8 % compared to 2000. The employment with wheat, rye and triticale, maize and oats is also increasing. During the following period from 2005 to 2008 cereal areas decrease with 45.5 %, that leads to an overall decline of 40.2 % for the period as a whole. The size of the areas with oilseeds from 2000 to 2005 is substantially increasing – 41 483 hectares. For only three years from 2005 to 2008 oilseeds decrease with 24 %. For the whole period the utilized lands have decreased with over 50 %.

The utilized for industrial crops lands decreased with 15 980 hectares from 2000 to 2008. Tobacco is the production that has the most important role in plant growing in the region. During the period 2000-2005 25 318 hectares tobacco are cultivated in the region, while in 2008 – 15 528 hectares. The reasons for that is the worldwide tendency to diminution of the cigarette production as well as internal low purchase prices that do not satisfy the farmers.

There are natural climatic prerequisites and water resources for development of vegetable growing in SCR.

In the group of “Vegetables and flowers” there are significant changes in the utilized areas. There is no vegetable crop that does not leave areas available for other productions. The main crops are tomatoes, cucumbers, pepper, potatoes, watermelons and melons, etc. but during the whole period between 2000 and 2008 the areas for them diminish with 41.5 %. The import of vegetables from Greece, Turkey,

Macedonia, the Arab countries, etc. has left the native vegetable farming unprofitable and with no competitive abilities. Products, which have been known and consumed for centuries, are vanishing from the market, the taste, kitchen, and nutrition of Bulgarians are changing. The reasons for the diminished production of vegetables are also in the organization of trade which allows large chains of resellers, high prices of seeds, preparations, etc.

There is an exception from the general tendency of reduced land use and it is apparent in the areas covered with meadows and annual feed. From 2000 to 2005 they increase with 174.7 %, and from 2000 to 2008 – with 177.3 %. Permanent grasslands and meadows – orchards from 2000 to 2005 are increasing, after which they diminish generally for the whole period in hand with 3.5 %.

Fruit-growing in SCR is a traditional production professionally experienced in growing different types of fruit like apples, apricots, peaches, morello-trees, and cherry-trees, walnut-trees, and almonds. The areas with permanent crops increase generally for the region from 2000 to 2005 with 19.6 %, after which they diminish from 2005 to 2008 with 28 %, so the development for the region as a whole is negative – there is a general diminution of the areas with 14 %. There are fewer areas with certain types of fruit-bearing trees. Most significant is the diminution of the areas with apple-trees from 4 094 hectares in 2000 to 2 219 hectares in 2008. The areas with vines are also decreasing – with 40.9 %, which questions the expectations for development of wine-production that will play a higher role in the European and other global markets.

In agriculture in the country the tangible fixed assets (TFA) in 2000 are 101 442 thousand levs, whereas in 2008 they reach 877 591 thousand levs, i.e. over 8.5 times. In SCR TFA in 2000 are 19 978 thousand levs, whereas in 2008 – 115 674 thousand levs. The share of TFA in agriculture in the region in 2000 is 19.7 % of all in the country, i.e. it is in third place of all regions. In 2008 TFA in the region are 13.2 % of all in the country. Many farms use old equipment. A significant part of the small and average farms are pressed by the unfavorable economic situation in the country and cannot maintain their equipment and sell it off. Only the bigger agricultural farms buy new high-performance equipment, charge with

ultimate load of tasks, and reduce costs for human labor. Farms having their own tractors for the period between 2000 and 2008 expand with 3 %, while the number of tractors they dispose with increases with almost 2 %. The situation concerning farms using their own harvesters is different. They decrease with over

50 %, and the number of harvesters they dispose with increase with 12.2 %. New classes of harvesters have significantly better capacity and higher power. Farms that possess harvesters cultivate larger areas as a result of the process of concentration of land.

Table 2. Changes in the employment of areas in SCR during the period between 2000 and 2008 (basis – 2000)

№	Main crops	2008		2005		2000
		Change hectares	in %	Change hectares	B %	hectares
1	Cereals	-371807	- 40,2%	+24844	+9,8%	253309
2	Oilseeds	-22016	- 55,4%	+41483	+104,4%	39718
3	Industrial crops	-15980	- 41,6%	-2725	- 7,1%	38460
4	Vegetables and flowers	-21077	-41,5%	-12173	-24,0%	50729
5	Meadows and annual feed	+12726	+177,3%	+12537	+174,7%	7176
6	Permanent grasslands and meadows-orchards	-13400	-3,5%	+89752	+23,6%	380775
7	Perennials	-14173	- 14,0%	+3722	+19,6%	58709
	UAA	-126183	-13.9%	+177605	+19.6%	906686

Source – NSI, private calculations

The leasing of capitals of TFA – GVA per unit of TFA, is decreasing during the period in hand in the country as well as in SCR. In 2000 this index for the country is 32.54lv, and it decreases to 4.55lv in 2008. This tendency is also characteristic for SCR in which in 2000 the leasing of capitals is 43.95lv, in 2005 – 14.52lv, and in 2008 it is 8.43lv (diminution of over 5 times). Deleveraging in agriculture is a lasting tendency that leads to irrational use of land resources and the production of expensive and uncompetitive agricultural produce.

The condition of the labor resources in agriculture in the country has deteriorated characteristics. The population living in villages decreased with 29 % in 2007, whereas in 2008 it is 28.9 % of all for the country and the territory with rural areas is nearly 82 % of all the land in Bulgaria. In SCR the share of rural population is with 33.7 % higher than the one in the country as a whole. In all of the districts in the region this share is significant. In 2008 it is over 50 % in the district of Kardzhali, followed by the district of Smolyan – 45.8 %, the district of Pazardzhik – 38 %, the district of Haskovo – 29.9 %, and the district of Plovdiv – 25.7 %. There are visible differences between the districts but the common thing is that the general as well as the

rural population is decreasing. In all of the districts in the region the diminution of the rural population is bigger than the general. In the district of Pazardzhik the rural population has decreased with over three times the overall decline, and in the districts of Plovdiv and Haskovo it is over two times.

Over a quarter (27.8 %) of the population living in villages are over 60-years-old, a quarter are over 40-years-old, and only 22.6 % are over 20-years-old. The small share of people in reproductive age is one of the main reasons for the negative natural growth of the rural population. Another reason is the quality of life which is much poorer than the quality in cities. The rural population in SCR with 2.3 % during the period between 2000 and 2008, leading in this negative tendency is the district of Pazardzhik -13.4 %, followed by the district of Smolyan – 8.7 % and Haskovo – 8.4 %. Significant is the diminution in the district of Plovdiv – with 7.2 %, a little lower is the speed of reduction of rural population in the district of Kardzhali. The reasons for the negative growth in the region are the natural and mechanic movements of this population. Migration is deeply rooted in the country and respectively the SCR, every cataclysm in the economy causes strong migration flows.

Migration is motivated mainly by the low economic status and the lack of life prospects. It is vividly pronounced in the villages and mostly among agricultural producers. The regions with low degree of urbanization, mainly villages and small towns in rural areas have the biggest migration potential. The mechanic growth in SCR in 2008 is negative i.e. 5 595 persons have emigrated from the region. People who change their residence during the period between 2000 and 2008 are young and educated. Three out of four migrants from farm families in the region is under the age of 45 and two thirds of the migrants from non-agricultural families. This deprives the agriculture of educated and highly qualified young people and impairs the quality of labor resources which are indispensable for a modern farming industry. Migrating rural population is in working age and generally never goes back to the village and the agricultural labor. In this way habits, skills, knowledge and experience in exercising the specific agricultural labor are lost.

In 2008 949 180 people have put work in farms and are 470 085 annual work units (AWU). Biggest part of all employees in agriculture work in farms with amount of UAA from 0.5 to 0.9 hectares – 19 6844 people, i.e. 79 631 AWU, followed by 18 6425 people or 75 865 AWU labor input on farms with a size from 0.1 to 0.29 hectares, and the smallest labor input is in farms from 20.0 to 29.9 hectares – 4 067 AWU, i.e. 5 734 people. The small share of employees in large farms is disturbing as these farms have significantly greater opportunities to employ work force with high qualification and knowledge. These are farms which offer higher incomes and better living conditions for working and living. One of the reasons for the small number of employees in large farms is the fact that they buy higher productive agricultural machinery at the expense of less living labor.

A larger portion of all people employed in agriculture are male, 36 % of all people who put work in agriculture are of the age limit between 55 and 64, bigger part of the employees in the field are without secondary education, and only 12 % of the managers of farms of natural and other persons have agricultural education. The labor force in agriculture is with lower quality indicators than the one in services and industry. There are enough highly qualified specialists – BAs in

agricultural sciences, forestry and aquaculture. Only for the period between 2000 and 2009 6 264 people have graduated in these degrees. They remain in the big cities and don't work in their specialty, they re-qualify or take positions requiring only secondary education, they refuse to go back to the villages and become an active part of agricultural labor force. From them less than 3 % work in their specialty as the work conditions and the quality of life in villages do not satisfy young people.

During the last years 2008-2009 the number of family labor in agriculture has increased with 95 684 people. Contraction in employment outside agriculture 'collects' family members as workforce, regardless the fact that the family farms cannot take the additional units. A result of this process is an additional diminution of the income of those employed in agricultural production, loss of motivation and opportunities for the development of a modern, competitive and profitable agriculture. The tendency in labor resources in SCR is to decrease. The agriculture in the region loses its most adequate and most highly qualified workforce.

The number of farms in SCR in 2007 has decreased with 30.3 % compared to 2003. In 2007 there are 133 569 farms, whereas in 2003 their number is 191 651. The reason for that is mostly the low-income of the farms, the long production cycle, the seasonality of revenues and the low return on production costs, which leads to denial of tillage.

The number of farms that have UAA in SCR in 2007 is 130 322, which is with 58 028 less than in 2003, as the average UAA per farm is 2.8 hectares in 2007, which is with 0.5 hectares more than in 2005 and with 0.05 hectares less than in 2003. UAA of farms in 2007 has increased with 21.5 % compared to 2005, whereas compared to 2003 it has decreased with 24.7 %, i.e. the diminution from 2003 to 2007 is with 3.2 %. The number of farms that have UAA constantly decreases, and UAA from 2003 to 2005 decreases after which in 2007 it increases but does not reach its amount from 2003. These processes are accompanied by reduction of the farms with no UAA from 2003 to 2005, and followed by an increase in 2007, so that their number almost reaches the one from 2003. Many of the agricultural farms that have UAA cease to exist, part of their lands pass to the most vital holdings that concentrate larger areas and become bigger

and sturdier. In the region the benchmark average UAA is still low, among the large farms there are small farms with less land that depend more on family work and small-size equipment with no development perspectives. According to the status of the farms their distribution and the agricultural areas they utilize show a tendency to maintain the relationships between them.

For the period between 2003 and 2007 the number of farms owned by natural persons has decreased with 28.4 % but the agricultural area utilized by them increases with 39 %. The diminution by sole traders is 60% and the one of the UAA – 54.4 %. Co-operations decrease with 11.4 %, the agricultural area utilized by them decreases with 66.5 %. The decrease in the number of trade associations is 10.4 %, which is accompanied by an increase in UAA – 17.6%. In the general diminution in the number of farms and in UAA in SCR only by farms owned by natural persons an increase in the utilized agricultural area and a decrease in their number is present. Farms owned by natural persons gross up and utilize significantly more land without changing their status. The single management of activity gives them opportunity of implementation of direct control over production, savings in administrative costs, and rapid response to changes in market situation. The increase of UAA in trade associations proves the effectiveness of the implementation of reproduction, which includes not only trade and realization of agricultural production, but also its production and processing as well as the advantages of using different European programs for stimulation of the agricultural production.

In the structure of UAA in the region in 2003 the share of cereals is 49.3%, followed by industrial crops – 23.7%, and oilseeds – 17.9%. Perennials are over 6.3% of the agricultural land, while strawberries, fresh vegetables and flowers are 5.6%. This structure is maintained in 2007 with biggest share for the cereals 39.8%, followed by industrial crops – 17.8%, and oilseeds 13.4%. Perennials are 7%, vineyards take 4.5%, and strawberries, fresh vegetables and flowers take 3% of the agricultural land. The common tendency to diminution of the crops is repeated. There is a small increase of 0.7% in the share of

perennials in 2007 compared to 2003, but in hectares there is a diminution. Only the share of fruits including apples, peaches, sour cherries, and cherries in UAA increases from 1.8% in 2003 to 2.4% in 2007, and the amount of their hectares also grows. Of all cereals the leading is wheat, which took 63% of their land in 2003, and in 2007 its share has grown to 71.7%. When it comes to barley there is a significant diminution in the covered areas as a share from 21.6% to 9.6% of the areas covered with cereals as well as hectares with 37 637 hectares.

Leading in the specialization of the region are the cereals. Well developed is the production of industrial crops and oilseeds, perennials – mostly vineyards and fruit as well as strawberries, fresh vegetables and flowers. In the region are also developed some unique to the country agricultural productions – rice, hops, and oil-bearing crops such as rose, lavender, mint, etc. Their cultivation is deeply rooted and with traditions, and industrial experience, combined with quality land resources.

Conclusions: The resource security of the agricultural production in SCR is quantitatively good. The use of the agricultural land fund is becoming worse, a tendency to diminution of UAA and an increase of uncultivated areas is clearly emerging. The leasing of capital of FTA is unstable. Deleveraging in agriculture is a lasting tendency and leads to an irrational use of land resources. Labor resources in SCR are decreasing. Agriculture in the region is losing the most adequate and most highly qualified man power. The resources available to agriculture in the region are used irrationally due to a number of economic reasons.

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