

AGRARIAN REGIONS IN SERBIA AS NATURAL FOUNDATION AND MARKET CHANGE IN CIRCUMSTANCES OF TRANSITION

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Abstract

Process of transition movements in Republic of Serbia is in progress. Transition movements have not bypassed agrarian sector. Market agriculture should gain significance along this process. On this occasion we would like to emphasize two elements which affect development of Market Agriculture. Those are regionalization and specialization of agriculture.

In study about agrarian regions in conditions of transition two charts are given, that pinpoint the essence of natural foundation and market opportunities in transition circumstances.

Study of agro-identities starts with introspection of each region in respect of its natural values: plain (Vojvodina), hilly (Sumadija), mountain-hilly (Pester). Therefore, plain region is specialized for production of stable livestocking (cattle and hogs), mountain-hilly is based on pasture (sheep and cattle) etc. Regional disposition of some types of livestocking is limited by natural conditions and structure of agricultural area. Essentially, the level of livestock farming has been determined by economic progress of the region and Market development.

The certain other regions are specialized in viticulture, fruit-growing or vegetable growing (vicinity of big cities).

In time of transition, i.e. transferring to Market Agriculture, issue of regional identity has become more actual than ever. This could be best illustrated on the example of forming specialized cooperatives, agricultural markets and companies (plum and apple production and other agricultural cropping) spread throughout particular areas of Serbia.

Key words: agrarian regions, regionalization, specialization, transition.

Introduction

In Republic of Serbia transition was implemented simultaneously with various restrictive factors that were imposed from the outside. Firstly, economic sanctions with all their downsides and culmination in bombing that occurred in 1999. Such circumstances caused the process of transition to begin and stop several times, before it was established. Getting to see direction and tempo of transition in Serbia, International institutions

pinpoint inefficiency in institutional and infrastructural reforms as stumbling block and fundamental problem.¹

Although, it should be stressed that existing system of relations in agriculture, that was inherited from former Yugoslavia was functioning more less successfully in sense of organization of agricultural production as well as providing necessary agricultural alimentary products in difficult conditions of economic embargo and war. Most contributive were farming households and small holdings² and of course agricultural conglomerates. Main characteristics of transition during the last decade are:

1. during the last decade the farmers successfully dealt with farming production organization and through open markets they were the main city suppliers with farming products, predominantly with fruit, vegetables and other products.

2. adequate modernization occurred as well as production process was restructuring in coordination with new circumstances. That can be seen by greenhouses and glasshouses for early vegetable growth that also benefited to good offer supply in cities,

3. for conditions of sale or industrial processing, the farmers made necessary changes in their production plans, like forming new attractive productions, like berries and forest fruit, cherries, grapes and similar kinds.

4. during the last years new type of farming estates developed, with more and more contemporary characteristics. The new organization includes defined and purpose-made goods, renewing equipment with contemporary tools and machines for production process and employment of well educated professionals as entrepreneurs-contemporary managers. Those are modern producers that stream towards profitable production, who are well educated and who produce in advance for the market.³ Even though this kind of producers is quite isolated and rare, they are worth of pinpointing and their significance of mentioning.

For faster development of transition processes and with better results, in our opinion, it is necessary to create conditions in agriculture politics that will catalyze them. This refers to removal of large price disparity in primary farming products prices, as well as prices of same products refined, solving intermediate goods and protective farming materials insufficiency, facilitate credit granting conditions, enlarge number of farming associations for different spheres of their performance. In field of agriculture, 330 companies haven't been privatized (from among many veterinary stations) and 38

¹ Mihailovic Branko, Parausic Vesna, Simonovic Zoran (2007): Factor Analysis of Business Ambient in Serbia in Ending Phase of Economic Transition, Institute for Economy of Agriculture, Belgrade, p. 28.

² Corporate edition (2006): Agriculture and Rural Development of Serbia in Period of Transition, Association Of Agrarian Economists of Serbia (DAES) and Faculty of Agriculture, Belgrade, p. 89-92.

³ Djekic Snezana (2005): Agrarian Management, Faculty of Economy, Nis p. 19.

more in alimentary industry. This implies that out of total number of not-privatized companies in Serbia, 25% are subjects of agricultural alimentary industry of Serbia.⁴ If agricultural politics extents would benefit and fasten agricultural production transition, we are convinced that Serbian way of gradual transition would supply with good results, opposite to unnecessary breakages of the previous system, real transition and gradation would be provided, that is of crucial significance for agricultural production.

Two elements are significant for market agriculture development:

- regional sectioning
- agricultural specialization.

Republic of Serbia includes three agricultural regions. They stand out by their natural foundations as quality of soil, weather conditions, presence of water, altitude and other natural conditions.

As agrarian regions in Serbia are in process of transition, i.e. forming of market relations, in this work we wanted to highlight the regional foundations of Serbia, whereas those foundations are simultaneously a chance for profitable market economy.

In follow-up of the introduction two statistical charts are given, about fruit and vegetable production and crop and herbs production. As figures are given by counties and separately for Vojvodina, they very accurately illustrate ideas submitted in this text. As the statistics provides with information organized by counties, not by agrarian regions and supplies with data about Vojvodina in whole, we have to distinguish that Bor, Zajecar, Zlatibor, Raska, Pirot and Pein County are of hilly-mountain region and the other counties make rolling-hilly region.

⁴ Eric Dejan, Stosic Ivan, Brnjas Zvonko (2007): *Strategical Management in Agrarian Business*, Institute of Sciences of Economy, Belgrade, p. 118.

Table 1 - Production of fruit and grapes, 2007.

| | Apple | | Plum | | Grapes | |
|---------------------------|-------------------|---------------------------------|-------------------|---------------------------------|-------------------|---------------------------------------|
| | Productivity in t | Average yield by the tree in kg | Productivity in t | Average yield by the tree in kg | Productivity in t | Average yield by the vine plant in kg |
| Republic of Serbia | 245228 | 16,3 | 680566 | 16,2 | 353315 | 1,1 |
| Vojvodina | 83591 | 17,7 | 44694 | 17,1 | 67813 | 1,5 |
| Central Serbia | 161637 | 15,7 | 635872 | 17,1 | 285502 | 1,1 |
| City of Belgrade | 19842 | 13,1 | 30680 | 20,6 | 21611 | 1,6 |
| Macva County | 7746 | 26,0 | 65259 | 20,6 | 2462 | 1,2 |
| Kolubara County | 3187 | 15,9 | 56995 | 14,4 | 74 | 1,1 |
| Podunavlje C. | 19287 | 8,9 | 6291 | 8,9 | 11912 | 1,3 |
| Branicevo County | 5151 | 14,0 | 13946 | 8,0 | 17209 | 0,9 |
| Sumadija County | 6136 | 14,7 | 82512 | 20,5 | 13014 | 1,1 |
| Pomoravlje C. | 6245 | 14,7 | 32952 | 15,2 | 20250 | 1,0 |
| Bor County | 2851 | 19,7 | 4307 | 11,8 | 36371 | 1,2 |
| Zajecar County | 2428 | 10,0 | 8946 | 8,2 | 23045 | 0,9 |
| Zlatibor County | 20535 | 22,1 | 36258 | 11,0 | 0 | 0 |
| Morava County | 18931 | 23,6 | 79070 | 25,5 | 1131 | 1,6 |
| Raska County | 13264 | 23,6 | 50147 | 23,3 | 239 | 1,5 |
| Ras County | 11563 | 26,0 | 60247 | 21,9 | 56161 | 1,4 |
| Nisava County | 5125 | 11,6 | 23295 | 8,9 | 29066 | 0,8 |
| Toplica County | 4625 | 12,5 | 42413 | 13,1 | 6382 | 0,9 |
| Pirot County | 1334 | 5,4 | 7577 | 6,0 | 11811 | 0,8 |

| | | | | | | |
|-------------------------|------|------|-------|------|-------|-----|
| Jablanica County | 9282 | 19,0 | 24561 | 17,2 | 30318 | 1,2 |
| Pein County | 4105 | 13,6 | 10416 | 14,2 | 4446 | 0,6 |

Source: Municipalities in Serbia 2008, Belgrade, 2009, pages 206-209.

Table 2 - Production of industrial and herbal crops, 2007.

| | Sugar Beet | | Sunflower | | Beans | | Potato | |
|---------------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|-------------------|---------------------|
| | Productivity in t | Average yield in kg | Productivity in t | Average yield in kg | Productivity in t | Average yield in kg | Productivity in t | Average yield in kg |
| Republic of Serbia | 3206380 | 40579 | 294502 | 1903 | 39224 | 947 | 743282 | 9134 |
| Vojvodina | 3109874 | 40935 | 276924 | 1971 | 8307 | 1156 | 275882 | 12396 |
| Central Serbia | 96506 | 31693 | 17578 | 1227 | 30917 | 857 | 517400 | 8192 |
| City of Belgrade | 83938 | 36495 | 2255 | 1659 | 2211 | 897 | 41210 | 12396 |
| Macva County | 1002 | 20875 | 642 | 1558 | 2350 | 981 | 38375 | 86310 |
| Kolubara County | 0 | 0 | 144 | 1321 | 963 | 766 | 15501 | 5845 |
| Podunavlje County | 5671 | 15753 | 1160 | 1255 | 1246 | 870 | 19037 | 8181 |
| Branicevo County | 1076 | 25023 | 6984 | 1508 | 5060 | 828 | 30609 | 7241 |
| Sumadija County | 1766 | 17314 | 2104 | 1216 | 1563 | 905 | 28719 | 9782 |
| Pomoravlje County | 656 | 24296 | 173 | 812 | 2240 | 866 | 21615 | 9357 |
| Bor County | 0 | 0 | 2871 | 815 | 2652 | 1373 | 10615 | 4486 |
| Zajecar County | 0 | 0 | 807 | 865 | 1044 | 536 | 12096 | 5108 |
| Zlatibor County | 0 | 0 | 0 | 0 | 821 | 930 | 67223 | 10173 |
| Morava County | 80 | 16000 | 7 | 1000 | 687 | 1041 | 98173 | 12399 |
| Raska County | 16 | 8000 | 2 | 667 | 536 | 787 | 32339 | 9195 |
| Ras County | 2265 | 16778 | 103 | 1073 | 1349 | 912 | 32861 | 10301 |
| Nisava | 0 | 0 | 7 | 1000 | 1734 | 546 | 18269 | 6080 |

| County | | | | | | | | |
|-------------------------|----|------|-----|------|------|-----|-------|------|
| Toplica County | 12 | 2400 | 1 | 1000 | 730 | 418 | 6135 | 4028 |
| Pirot County | 0 | 0 | 0 | 0 | 826 | 721 | 7820 | 5866 |
| Jablanica County | 12 | 1000 | 308 | 914 | 3048 | 696 | 20599 | 5834 |
| Pcin County | 12 | 600 | 10 | 500 | 1857 | 781 | 16204 | 4471 |

Source: Municipalities in Serbia 2008, Belgrade, 2009, pages 198-201.

Plain region

Law land region includes Panonian plain that is Vojvodina. Soil in this part of country is of best class.⁵ Combined with continental climate and its characteristics, with particular regard to properly distributed precipitation, it creates a first class agricultural region.

Irrigation makes great potential of this production, especially Danube-Tisa-Danube Canal. Well organized watering can by itself increase crop yields.

As we stressed earlier these make very convenient conditions for farming, crop husbandry in particular, specifically for corn and wheat production. We should pinpoint industrial crop production – turnip and oilseeds. If here we add developed food industry (oil mills and sugar refineries) then we have production potentials not only for domestic use, but for export, too.

Livestock farming is of barn type and very intensive.

According to indicators agricultural production in plain region up to now was optimally organized through Agricultural and Farming Industrial Conglomerates. During the transition process they have become private large husbandry holdings.

Foreign capital inflow is significant in this area. There is a high interest of foreign investors not only for state owned Agricultural and Farming Industrial Conglomerates oil mills and sugar refineries and similar production capacities, but for investing into completely new production systems.

In addition, it is meaningful to mention modern equipment, well coordinated expert staff and technologically very successful production until now.

⁵ Markovic Petar, Simonovic Dragoljub (1973): Economy of Agriculture, Savremena Administracija, Belgrade, pp. 283-285.

Rolling Country

This region spreads over Basin of Velika Morava River, parts of Sumadija, Danube river basin and eastern Serbia. Characteristics of this area are that it leans on plain region and pervades with it, also in continental climate, and soil quality that varies from first to fourth class.⁶ This region is mainly fruit-vineyard-livestock husbandry orientated. In this gentle hilled area are situated our most successful vineyards like Fruska Mount, Smederevo County and Zupa County.

Fruit growing is of great significance. Plum was the dominating cultivation, and in the present it is still very important in whole production. Peach, apricot, cherry, pear growth are mostly represented, and processing capacities set for new fruit cultivations which are to be activated and affirmed.

In livestock breeding cattle and pig dominate. Cattle husbandry is of extensive type, and of largest significance for the possibility of open pasture. State holdings occupied only about 7% of the pasture land, and transition to joined land holding is in its initial phase. Otherwise, in this region, as in the countryside in whole, prevail old households, that are to be reconstructed and revitalized with adequate and market oriented organization.

Exporting capacities of the region are rich, specifically in fruit growth and animal husbandry, as well as in viticulture, that should be branded and protected. An export capacity also correlates with conditions for food production and other attractiveness that characterize this area.

Mountain agricultural region

Mountain region includes river basins of South and West Morava, Nisava River and Timok River. It is mainly pasture-livestock orientated, though fruit growth is significant, specifically plum and apple cultivation. Livestock husbandry is extensive and in largest part based on pasture. Cattle and sheep dominate the livestock husbandry, and unexpected benefit can bring goat breeding in large capacities, which wasn't the case until now. South-Eastern area of Serbia that is Nis County is established as the center of goat husbandry, where Annual Goat Fair is arranged. Mountain region is also suitable for pig pasture and live poultry.

Mountain Regions is very attractive for livestock husbandry, with high production capacities especially in sheep breeding (sheep breeds of Pirot, Svrljig, Old Mountain, Dry Mountain are significant). These breeds of sheep represented high and fulfilled

⁶ Vujcic Milica, Ristic Lela, Malesevic Ljiljana (2006): Management in Agrarian Business, Copyright Publication, Kragujevac, p. 108.

capacity in the past, when these breeds were exported to almost all continents of the world, and should be restructured and revived in the present times.

Apart from plum and apple, other fruit sorts are grown as quince, pear and rowan.

Vegetable growth is mostly for domestic use, though in South Morava Basin there are some market production capacities. Jablan County represents a leader in vegetable cultivation and production. Long term tradition in production of pepper, tomato and other vegetables combined with contemporary agricultural and technological means can represent a base for guaranteed quality. In South Morava Basin viticulture is developed, and there The Ball of the Vlasotina Grape Growth used to be held. Vineyard capacities are significant in Timok river basin⁴.

It is crucial to pinpoint the importance of affiliation agricultural production of this region to other economy branches, like tourism, mountain sports and activities. Forest fruit and herbs collecting possibilities are worth mentioning, like mushrooms, wild nuts, medicating herbs. Some parts of this region are already widely recognized, like Zlatibor, Tara, Kopaonik, Djerdap, Old Mountain, Sar Mountain.

Restrictive Factors in Development of Agricultural Regions

As we emphasized before, Serbia has favorable watering system for primary agricultural production, which is unfortunately not fully exploited. Canal Danube-Tisa-Danube, largest and unique hydro-system in the world is not used for agricultural production, or in very moderate way. River flows are also rarely used for land irrigation. Out of the total cultivated land, only 78 000 hectares (1.6%) is being watered. In Serbia, due to geographical heterogeneity, it is difficult to mark global micro-areas for agriculture, but areas for particular productions can be differed (wheat, industrial cultivations, fruit, grape, livestock, etc.), which actually is of most importance for politics in agricultural economy.

Restrictive factors in agriculture and agrarian sector are presented in decrease of demand and consumption of agrarian products on domestic market, and unfavorable relations and conditions in foreign exchange of agrarian goods⁵. Greatest decrease of production range occurred in livestock husbandry; whilst intensity of production descends in crop production was slower and more gradual. Detrimental state in

⁴ Simonovic Zoran, Simonovic Dragoljub, (2009): Agricultural Regions of Serbia during the recession, Regional Development and Demographic Flows of South-Eastern Europe, University of Nis, Economic Faculty of Nis, p. 123.

⁵ Simic J., Stevanovic S., (2004):Restrictions and strategic opportunities for adaptive development of agricultural industry of Serbia and Montenegro towards European Union, European Annals, Faculty of Economy, Belgrade, p.332.

viticulture and vine making is manifested through grape and vine production decrease, fall in competitiveness of domestic vines followed by amplified vine import.

Changes in fruit growth were of stagnating character.

One of the main features of Serbian agricultural regions is their unbalanced development. Most distinctive difference in developmental stages is between Plain and Mountain Region. Only 3% of land in mountain region was state owned, which means that this area is prevailed by small estates, divided into ten parcels by household, which slowed down natural process of land concentration that was initiated but never adequately finished. The state should reactivate and then bring this process to final stage. Production in agricultural regions of low land and mountains was mainly orientated towards fulfillment of their own needs, with almost no introduction to market conditions. Due to these circumstances, production is defined as excessively wide and expertise found only in traces.

Gentle hilled and Mountain Regions are both poorly equipped with agricultural means, in comparison to Plain Region.

Conclusions

1. Three agricultural regions of Serbia reveal diverse natural preconditions for agricultural production. While in plain region crop production prevails, industrial crops and barn livestock husbandry, in rolling country dominates fruit-vineyard-livestock husbandry and in mountain region livestock husbandry and fruit and vineyard production. In existing conditions of recession rolling country region and mountain region can offer berries (strawberry, blackberry, and raspberry) for export, where we already achieved significant results. Though the world is overwhelmed with recession, low flexibility of food demand requires production. This stands as the unique chance of agriculture in time of recession, when many needs and commodities are cast aside, particularly immovables, cars and similar. Regarding affirmation of regional-agricultural identity of Serbia by the regions, Sumadija County could specialize in plum and berry production, Sjenica County for Sjenica's cheese, Old Mountain area for old-mountain hard cheese production, River Jablanica Basin County for vegetable growth, etc.
2. Unbalanced economical development among regions is of great importance. Plain area is highly developed and mountain region considerably behind, not only because of natural conditions, but above all for social, economy and historical circumstances.
3. We believe that in actual present moment, all regions have a chance in agricultural business and entrepreneurship to start and organize production or redefine acquired competitive advantages for specific agricultural products.

Literature

1. Djekic Snezana (2005): Agrarian Management, Faculty of Economy, Nis
2. Eric Dejan, Stosic Ivan, Brnjas Zvonko (2007): Strategical Management in Agrarian Business, Institute of Sciences of Economy, Belgrade.
3. Corporate edition (2006): Agriculture and Rural Development of Serbia in Period of Transition, Association Of Agrarian Economists of Serbia (DAES) and Faculty of Agriculture, Belgrade
4. Markovic Petar, Simonovic Dragoljub (1973): Economy of Agriculture, Savremena Administracija, Belgrade
5. Mihailovic Branko, Parausic Vesna, Simonovic Zoran (2007) Factor Analysis of Business Ambient in Serbia in Ending Phase of Economic Transition, Institute for Economy of Agriculture, Belgrade
6. Simonovic Zoran, Simonovic Dragoljub, (2009): Agricultural Regions of Serbia during the recession, Regional Development and Demographic Flows of South-Eastern Europe, University of Nis, Economic Faculty of Nis.
7. Simic J., Stevanovic S., (2004):Restrictions and strategic opportunities for adaptive development of agricultural industry of Serbia and Montenegro towards European Union, European Annals, Faculty of Economy, Belgrade
8. Vujcic Milica, Ristic Lela, Malesevic Ljiljana (2006): Management in Agrarian Business, Copyright Publication, Kragujevac