The Importance of Financing Agriculture of Serbia in Function of Improving Competitiveness of the National Economy

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Abstract: - The subject of this paper research is the assessment of the importance of financing agriculture, with the aim to increase competitiveness of Serbian national economy in global environment. The most important prerequisite of the integration process is the increase of competitiveness of national economy in the field of export-oriented economy. Experiences of developed countries which invest significant financing resources in agriculture clearly indicate the effects of those investments on their whole countries.

Key-Words: - financing agriculture, competitiveness, Serbia, developed countries, productivity, export potential

1 Introduction
The competitiveness of national economy on the global market is being accomplished by price and non-price factors. The dynamics of creating the competitive economy must be synchronized with the limited speed of building new institutional mechanisms which should facilitate the reallocation of resources. Institutionally unequipped market economy will not be able to involve and use them efficiently. From the point of view of a competition increase, it is also necessary to assure the opening up of the national market, and to base the economic growth on the
increase of the services of the economic-financial sector, the agriculture sector, the commerce, building, and related economic activities, which is absent under the conditions of global crisis.

In Serbia an opinion prevails that within the agricultural sector there are the unused potentials of development. The lack of entrepreneurial and investment resources, the unrelatedness and fragmentation of the economic subjects of agriculture, low competition, are the main characteristics of Serbian agriculture. The participation of agriculture in the national product of the Republic of Serbia has been highly rated, which is not a consequence of good agricultural conditions, but the fact that the economy functions in conditions of crisis.

2 Agriculture – a Chance for Serbia

Regarding the fact that Serbia is considered an agricultural country, the aim of the paper is to highlight the new thinking on the prospects for the development of agriculture, based on the importance of financing agricultural sector in function of competitiveness of the national economy. Besides the size of the agricultural budget the aim is to emphasize the importance of other sources of financing agriculture (commercial banks, special purposes’ funds, subsidies, etc.) which is the experience of developed countries, primarily members of the European Union. Therefore, the global economic crisis has further emphasized the importance of this paper research. This paper uses the method of the investigated phenomena, temporal and spatial comparison and synthesis of results. The research covered the period over the past few years (2006, 2007, 2008, 2009, 2010 and 2011) that is characterized by transitional conditions in Serbia. Data sources are publications of national and international institutions, the results of previous research done by domestic and foreign authors, as well as available database on agriculture.

Agriculture occupies a prominent role in the economic and political life of many countries for the following reasons: agriculture is of strategic importance for the country, agricultural production depends on natural conditions, agriculture is not only the manufacturing sector of the economy, but also an important consumer of goods and services, agriculture has a role in protecting the environment and man's place of residence. Serbia has a great potential in the agriculture sector owing to favorable climate conditions, good natural soil characteristics and available water resources, however, that potential is not completely used. The agriculture in Serbia is not considered to be the usual economic branch, due to the specificity of this production, tradition, which is related to it and great expectations as well. In all municipal or regional strategies, it is recognized as one of the main strategic directions for development, and the majority of citizens, rural as well as urban perceive the agriculture as the largest chance for the development of Serbia. The agriculture is an economic branch which is able to generate more wealth than it is making now and in such a way to contribute to the development of a country and it can represent a short-term buffer for facilitating the transitional processes.

The potential of agriculture in Serbian real sector is not to be underestimated, with the net foreign exchange of more than 1.5 billion euros per year. The structure of agricultural export products consists mainly of low level modification products. With the analysis of agro-industry of Serbia, low level of capacity utilization has been highlighted.

The available natural conditions in Serbia are insufficiently used and are not completely in function of a more dynamic and export directed development of agricultural production. With a more complete and more rational use of agricultural resources, the constant and increased investments in technological advancements, a significantly larger extent of the agricultural production can be accomplished. The improvement of the export orientation in Serbian agriculture requires restructured and innovative production technology in agricultural production. The soil is the most important resource in agricultural production. The soil resources of Serbia, according to the way of usage, indicate that arable areas are present with even 83%, while the countries in the region have an average of 60%. Serbia has about 0.6 hectares of quality arable area per capita, while the average for the countries of the European Union is around 0.4 hectares per capita. Serbia constantly achieves a positive balance in the international trade exchange of the agricultural and food products. Thus, the balance between export and import of the agricultural products in 2006 was 360 million dollars; in 2009 the balance of the same products exchange was 637 million dollars, whereas in 2011 the difference between the value of the import and the export of the agricultural and food products was even 1300 million dollars. The constant increase of
a positive balance in the international trade balance signifies that Serbia has the competitive advantages in the production of the agricultural and food products. Irrespective of the restrictive factors, agricultural land according to the quality and the surface it occupies represents one of the most important resources for the development of agricultural production. The agriculture in Serbia is facing many problems which are primarily the result of low investment, which conditioned a relatively low competition and lack of development in comparison with the comparative countries. There are productions and individuals that are, along with their products, competitive enough since the competition is built on the application of capabilities, skills and creativity of the individuals to adapt to the new conditions. The analysis of the investments in agriculture in recent period indicated that they were insufficient for a significant acceleration of the economic growth of this activity. The technical structure of investments was also unfavorable from the point of view of the economics of investments and product effects. As far as the investments in the objects of the social infrastructure in a village are concerned, a more significant difference might be perceived between the needs and what is done. [2]

3 The Analysis of Agriculture Financing

Long-standing debate among economists, and those who are for and those against the agricultural intervention, suggest that incentive policy is an essential pillar of agricultural development policy, because without subsidies even the agricultures of developed countries can not survive. In accordance with the conditions and needs of agricultural development subsidies are determined. The necessity of state intervention in agriculture stems from the specificity of this production. A major problem in Serbian agriculture is an unequal participation of this sector in creating a social product and the investment economic activity. The lasting problem of Serbian agriculture represents the lack of capital for a long-term financing. The latest measures of agrarian policy are directed towards the course in which the banks plan their resources towards the development of the agricultural sector. The agriculture belongs to the capital-intensive activities. In the agricultural sector, the natural processes are of the greatest importance. Due to this fact, the agriculture is not considered to belong to the activities which require large capital investments. The capital intensity in agriculture does not originate from extremely high amounts of capital, but from the length of capital lockup, which has the same significance. The reason why this fact is such is twofold. First, a long period is necessary to produce the agricultural products, and, second, its consumption is gradual during the whole next year. In recent years there has been the trend of nominal budget reduction and, consequently, the reduction of the participation in overall budget. Similarly, the agricultural budget is smaller in comparison with the competitive countries. Particularly because of that, the agrarian budget within the subsequent period should be raised and should reach the level of around 5% (five percent) out of the total budget (in the following three-year period 4.2%), which is an improvement in relation to the existing level, but still smaller in comparison with the countries with which the agriculture of Serbia competes in the same markets. According to the financial perspective for 2007 – 2013, 42.5% (forty-two point five percent) out of the EU total budget is used for the preservation and management of natural resources, while in Serbia the agrarian budget for the time period 2007-2013 was, on average, only 2.86% (two point eighty-six percent) out of the total budget.

Table 1: The available resources for a direct financial assistance for agricultural producers in Serbia and countries potential competitors (in 2011)

<table>
<thead>
<tr>
<th>Country</th>
<th>Resources per inhabitant (in euros)</th>
<th>Resources per hectare (ha) of cultivated land (in euros)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albania</td>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td>Bosnia and Herzegovina</td>
<td>18</td>
<td>32</td>
</tr>
<tr>
<td>Croatia</td>
<td>99</td>
<td>364</td>
</tr>
<tr>
<td>Macedonia</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>Serbia</td>
<td>27</td>
<td>40</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>51</td>
<td>77</td>
</tr>
<tr>
<td>Slovenia</td>
<td>155</td>
<td>402</td>
</tr>
<tr>
<td>Hungary</td>
<td>233</td>
<td>626</td>
</tr>
<tr>
<td>EU</td>
<td>156</td>
<td>448</td>
</tr>
</tbody>
</table>

Source: the Economic Chamber of Serbia

According to the data (cf. Table 1), it can be concluded that Macedonia has the fewest available resources per inhabitant and per hectare (ha) of cultivated land. The most of the resources for a
direct financial assistance is available to Hungary. [6].

Apart from the size of the budget, the structure of spending resources is also important, that is, its efficacy, which implies that with using as few resources as possible, the more advantageous economic effect on the development of agriculture, can be accomplished. In order to achieve this, the structure of budget must follow the direction of: an increase of portion of structural support directed towards increasing investments, introducing standards, finding the new markets, accomplishing value-added products and opportunities through organic production and a protection of geographical origin of a product; reducing a portion of the costs of administration; an increase of resources aimed at rural development, the continuation of the market support for the subvention of input through payments per hectare and headage payments.

Agricultural production, “primary,” as well as “secondary” agriculture, that is, the modification of agricultural products for the purpose of the rational use of available resources, needs a financial support for the development and modernization of the available resources and the ways of their usage. [4]

In certain stages of socio-economic development, agriculture is supported by appropriate material and financial grants in the form of subsidies. For this, there are several reasons: to overcome some difficulties in the implementation of agri-food products on the domestic and international markets, selective measures aimed at improving and increasing the specific production, stimulation of the application of a certain technological process of production of seeds, fertilizers and others. The necessity of state intervention in agriculture stems from the specifics of the production, that is slow turnover of capital invested in agricultural production, due to the seasonal nature of the production. On the other hand, climatic factor in agricultural production plays an increasingly important role as regards the organic production, which takes place mostly outdoors. In the agricultural production, the necessity is highlighted, apart from the long-term credits, to ensure the support in the form of the developmental and the current stimulus plans in order to achieve a positive impact in a domestic and a foreign market.

4 The Potential Effects of the Agricultural Financing (the Experiences of the Developed Countries)

Due to the fact that the financial outlays and investments in the agriculture affect the level of application of the agro-technical measures, their application affects the productivity in the agriculture as a direct determinant of competitiveness. [5]

Table 2: The number of citizens that one farmer feeds

<table>
<thead>
<tr>
<th>Country</th>
<th>The number of citizens that one farmer feeds (for the year 2010)</th>
<th>The number of citizens that one farmer feeds (for the year 2011)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>153</td>
<td>156</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>81</td>
<td>81</td>
</tr>
<tr>
<td>France</td>
<td>74</td>
<td>77</td>
</tr>
<tr>
<td>Austria</td>
<td>55</td>
<td>56</td>
</tr>
<tr>
<td>Italy</td>
<td>52</td>
<td>52</td>
</tr>
<tr>
<td>Slovenia</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Serbia</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Romania</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Source: EUROSTAT and the Statistical Office of the Republic of Serbia

According to the available data given in Table 1 and Table 2, we can conclude that in Slovenia, which outlays 155 euros per inhabitant for the agriculture, that is to say, 402 euros per hectare of the arable land, one farmer produces food for 25 inhabitants, whereas in Bulgaria, which outlays 51 euros per inhabitant, in other words, 77 euros per hectare of the arable land, one farmer produces food for 21 inhabitants. In Serbia, a significantly smaller amount of money is outlayed, only 27 euros per inhabitant, that is, 40 euros per hectare of the arable land, which results in the lower level of application of the agro-technical measures, which affect the productivity, as well, since one farmer in Serbia produces food for 15 inhabitants. Therefore, higher financial outlays influence a better application of the agro-technical measures, which leads to greater productivity and, at the same time, competitiveness. A better application of the agro-technical measures influences the amount of the yields. Thus, for example, in Germany the crop yield ("agricultural output") is 7.3 tons per hectare, in France 7.0 tons
per hectare, whereas in Serbia the same culture succeeds with 3.8 tons per hectare.

We especially highlighted, as a measure, the irrigation system's subvention, which has the significant effects, especially in drought conditions and the lack of water supply. The potential effects of the irrigation systems are given in Table 3:

Table 3: The potential effects of the irrigation system

<table>
<thead>
<tr>
<th>Crop</th>
<th>Ton/hectare (ton/ha)</th>
<th>Yield gap in %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without Irrigation</td>
<td>With Irrigation</td>
</tr>
<tr>
<td>Sugar beet</td>
<td>50,0</td>
<td>85,0</td>
</tr>
<tr>
<td>Corn</td>
<td>8,0</td>
<td>12,0</td>
</tr>
<tr>
<td>Soybean</td>
<td>2,7</td>
<td>4,0</td>
</tr>
</tbody>
</table>

Source: the Economic Chamber of Serbia

Due to the fact that Serbia has an excellent irrigation canal network, investing in this system would not require high financial outlays, and it would give enormous effects, even to 70% greater yield of a certain culture. A better yield lowers the price of a product and, in such a way the product becomes more competitive in both domestic and foreign markets, which leads to the enhancement of the international trade balance.

It should be noted that the increase in labor productivity in Serbian agriculture was the result of reducing the labor force in this sector. Although the decline in the number of active farmers in Serbia positively affects the resource structure of agriculture, it is still unfavorable compared to the EU countries. In fact, in the period from 1992 to 2008 the supply of land in Serbian agriculture increased from 4.61 to 7.51 hectares per farmer, while at the same time, in the EU, ratio land/labor increased from 5.12 to 8.27 hectares per farmer. By the analysis of the other partial productivity of agriculture we come to the fact that the average agricultural production per hectare of agricultural land in the EU doubles compared to Serbia. An identical conclusion can be given for the growth dynamics and the average annual growth rate of land productivity in the EU and Serbia is 0.48% and 0.24%, respectively. The difference in the productivity of labor and land between the EU and Serbia is, to the greatest extent, caused by the factor relations cattle/labor and cattle/land which shows the inadequacy of livestock production, but also the low level of utilization of the production potential of livestock in Serbia.

5 The Financial Measures in Serbian Agriculture

In developed countries, the state intervenes in four directions: determines the appropriate pricing policy of agricultural products, determines the extent of input benefits for different types of costs, determines the appropriate models for financing agricultural production and supplies and subsidizes export of agricultural products. Among other policy instruments the USA uses The Program to promote exports and Voluntary restraint agreements on imports to support local production.

The agricultural production is not accumulative enough and it is quite risky, so that it is not attractive to the domestic and foreign commercial banks. Probably, one of the greatest problems of Serbian agriculture is the financing. While not discussing the policy choice of measures, we will define two major drawbacks of the domestic agricultural policy:

- low level of the national budget appropriations (or outlays) with the intention of encouraging the agriculture (so-called “agrarian budget”);
- financing the agriculture annually, with a frequent change of choice/the amount of measures

The development of the competitive agricultural production implies such investments that will lower the costs of production and raise the value-added and the quality of a product, along with the preservation of the natural environment. This group of the financial support primarily needs to be directed towards supporting the young farmers to create the competitive production units.

The state needs to define the clear measures for financing the agrarian sector and they should primarily be concerned with: [1]

- The cooperation with commercial banks, the subvention of the long-term credits for buying the irrigation systems (a period of 8-10 years, with a 3% interest rate)
- The increase of the subventions, but also, the progression to the subvention income only.

The agrarian policy needs to operate towards the increase in production and export. The increase in export of agricultural food products is based on: financing the export production, harmonizing the standard of quality with international standards and
funding for market research and the promotion of the agrarian products. Namely, in general, financing the agriculture in Serbia must be at far higher level that it is today, if the problems (accumulated over many decades) are to be removed. On the other hand, one of the basic facts is the seven year financing, with the exactly determined amounts of subventions, the possible users and the purposes at annual level. Following this principle, among all the participants in the process of production, the modification and food launch, an extremely necessary stabilization is established, along with the predictability and consistency in the agrarian policy. That policy, in particular, known within a longer period of one year, is essential to Serbia, so as to enable the stable and attractive environment for doing business with the participation of the domestic participants in agribusiness, but also to attract the foreign investors.

What is special about Serbian agricultural holdings is its fragmentation, so the average size of a farm in Serbia is only 3.5 hectares while at the level of EU farm size is about 17.7 hectares. So, one of the specific measures to establish greater competitiveness of the agricultural sector in Serbia is consolidation of agricultural land holdings. The new integrative processes (admission in the European Union) will even more alter the conditions of production, which will be reflected in greater liberalization of agriculture and, consequently, will require a greater competition. The increase in competition is reflected in the increase of the standard of living during a longer period of time and it can be increased by investing in the equipment and the new technologies, as well as by the investments in knowledge.

6 Conclusion
In order to achieve the potentials of Serbian agriculture, it is necessary to accelerate the process of harmonization of the domestic legislation with the European legislation, so as to enable Serbia's access to the EU as soon as possible. The level of development of the overall financial system determines the concrete forms with which the financial support of the development of agriculture will be realized. In conditions of the developed market-financial system, the dominant role belongs to the commercial banks, micro-financial organizations, as well as to the larger number of the local groups, that is, funds. Our financial system is far away from such business conditions. The underdeveloped financial system puts the public funds in spotlight. Financing the agricultural sector needs to be directed towards: the enhancement of conditions for short-term credit for the agricultural production and stocks, the development of bank jobs within the agrarian sector, market-oriented agricultural production, the development of the spot market transactions, Futures trading of the agricultural products. The larger investments in the agriculture lead to the productivity growth, and consequently, to the competition increase. The increase of competition of agriculture offers a significant enhancement of the international trade balance and the reduction of deficit that Serbia has compared to other countries. One of the advantages of the competition enhancement refers to the opening up of the possibility for the country to join the EU.

References:
[6] Bugarin Miloš, The fight for the market: How to use as good as possible the production and the export potentials of the agriculture and the food industry of Serbia, The Second Agricultural Forum "Food for Europe," held from October 11-October 13 in Subotica (Serbia) 2012.