HUMAN RESOURCE DEVELOPMENT AND EMPLOYMENT IN AGRO-INDUSTRIAL SECTOR

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Abstract: It is widely known that efficiency of modern development, and of the agro-industrial sector as well, cannot be based solely on material component but now, more than ever, on human resources. It is concluded in the paper that the concept for the increase of export in agriculture and food industry, along with the stable and sustainable increase of the production, implies the adjustment of the export structure of these kinds of products to the global demands. Also, it is emphasized that the improvement of the export competitiveness can be realized by using one’s own comparative advantages, based not only on agro-ecological potentials but also on: technological modernization, improvement of the educational concept, application of adequate management and organizational knowledge and experiences, etc. In this paper, human resources and their employment in the agro-industrial sector, being one of the fundamental factors for economy growth and development of the Republic of Serbia, will be presented

Key words: agro-industrial sector, human resources, employment, development, strategy;

1. Introduction

Food is the basic natural resource which guarantees life. Food production is important ever since a man was born, and food exchange within national economies but also on the international level, have a constant growing tendency [9]. Agriculture and food industry are strategic branches of economy with long traditions and remarkable potentials on which the strengthening of economic performances of a country can be based. Agro-industrial sector, production of food and beverages, tobacco, fertilizers and production of agricultural machines, in domestic economy can represent a leading sector, having in mind the dynamics and considerable potential for further growth.

Agro-industrial complex is based on the organization and socio-economic relations of primary production, food industry and food trade. Establishing and developing the agro-industrial complex is polivalent, technologically, economically and above all an eminent social process. However, the economic development of our country so far, the agro-industrial complex, especially the primal production, did not get appropriate attention. Such an attitude towards this branch, together with its inherited extensive character, influenced the level of growth and the growth dynamics of agro-industrial production is considerably lagging behind in comparison to other branches of economy. One of the unfavorable consequences is the gap between the increasing daily needs and consumption, on one hand, and insufficient level of food production, on the other hand. Food production in sufficient quantities and adequate
quality represents one of the most important objectives of any social community, not only from the economic, but also from the political point of view. Having in mind that domestic agro-industrial sector lags behind other branches, one of the most important and at the same time the most difficult task in the future will be the necessity of transforming the agro-industrial complex from the capital intensive into a professional-science intensive branch.

Modern ways of doing business is characterized by numerous restraining factors, where the world economic crisis, energy limits, impact of climate changes are only some of them. These factors have a strong impact especially on branches such as agriculture and food industry. Moreover, the subject of this paper is to study the problems and perspectives of development of agro-industrial sector in Serbia and its importance for further development of the country. Since human resources are the most important factor for resolving this complex problem, because food production development is impossible without human resources, economic reforms and development of agro-industrial sector cannot be implemented without radical changes of human resource structures. Serbia is a country which has comparative advantages for agriculture development in respect to favorable natural and climate conditions. These advantages can result in adequate raw basis for food industry development. However, the analysis of the export balance points to the fact that despite the favorable raw basis, the export structure of agro-industrial sector mainly consists of raw materials, while the percentage of those products, which require higher levels of processing, is low. Also, there is the need for long-term, strategic approach in both production and introducing products to new markets, which would enable the domestic agriculture to considerably change its concept into a branch which guarantees development and export. The process would enable the improvement of the competitiveness of the agricultural goods, where the introduction of the quality standards would significantly increase the quality level of products. Today, the efficiency of the modern development in general as the development of the agro-industrial sector cannot be based only on material component but on others as well, such as the human resources component. People and their knowledge are becoming the base and the most important development resources. That is why it is impossible to do the rehabilitation and revitalization of the agro-industrial sector without the human resources component. Continuous education and development of employees are the most efficient ways of acquiring the competitive advantage, the basic precondition for entering a market and competing for the trust of customers. The concept of the continuous learning and development is an important potential and the key of future success [16].

2. Development of the agro-industrial sector as the integral part of the economic development of Serbia

Serbia is a country which has comparative advantages for the development of agriculture as a single branch. Those comparative advantages are the result of the natural and climate conditions, in which the domestic economy operates, and they secure the adequate raw basis for food industry development. However, the analysis of the export balance of domestic economy points out the fact that favorable raw basis is not taken advantage of in a proper way, having in mind that the export structure of the agro-industrial sector is mostly comprised of raw materials, while the percentage of those products which require higher levels of processing, is low. Agricultural production, as the integral part of the whole national production forms specific and very important links with other industrial branches. The connection between the agriculture and other branches is of great importance for the development of Serbian
economy. Factors which degrade those links are unequal regional development, dispensed market, presence of industry in major urban areas, etc. It is very important to point out the fact that the slow development of agriculture has an unfavorable impact on the development of industry and industrial branches which deal with processing of agricultural products.

First, the fact that the level of import in listed branches in constantly increasing is very unfavorable for domestic economy. Numerous elements that are being imported are used in both textile and leather industries and in other branches of food industry.

Second, there is a significant disproportion between the existing processing capacities and the raw basis. The disproportion is characterized by oversized capacities to such an extent that it can hardly be overcome by export. Also, the existing capacities are not fully used which increases the production costs due to high permanent costs per product, which makes the products uncompetitive on the market. High percentage of the lack of use of capacities is evident in the field of meat processing, fruit processing, production and processing of milk and dairy products, production of sugar, etc. On the other hand, the decrease in cattle breeding had a significant influence on the decrease of the food industry potential. The lagging behind of agricultural development has negative consequences for the economic development on the whole, which caused some of the economic and social consequences, and the regional development of the country [7].

The domestic agricultural policy has so far ignored major strategic and some of the persistent problems such as degraded economic state of agriculture, unfavorable conditions for doing business in agriculture, disinterest of agricultural producers for larger scope of production, etc. Moreover, one of the disadvantages concerning agricultural policy management in our country is the fact that agricultural policy did not succeed to encompass all of the elements of economic policy, price policy, credit and tax policies, export and import policies, etc.

Serbian economy has been functioning for a while now in a specific environment created by long-term social and political and economic changes. Due to this, when considering the strategies related to future economic development, the specific environment had to be considered first. It is characterized by:

- Higher percentage of service sector presence in GDP,
- Significant increase of domestic production cover by the import, privatization income and loans,
- Lack of qualified resources (human capital and infrastructure),
- Serious demographic problems (aging and depopulation) [6].

When defining the strategy of rural development the respective institutions demanded special attention for the necessity of institutional changes in order to achieve the higher level of decentralization of the economy and its faster regional development. The estimated growth of agricultural production is expected to be based on the increase of crops due to modern technologies [8]. Also, it is vital to say that the redesign of the role of Serbian agriculture in the region is planed, in the sense of increasing its importance and role in comparison to other countries in the region. That is plausible only if the domestic agricultural production introduces the necessary quality system and standardization of products, which would grant the entrance onto developed markets. On the other hand, improvements and the production increase of traditional products with the protected geographic origin would strengthen comparative advantages of our producers.

However, the analysis of recent results shows that rural economy in Serbia makes around 30% less of GDP per capita in comparison to the national average and it is usually based on primal branches. On the other hand, this sector also faces the problem of the unemployment and demographic changes which affect also other parts of the economy [11].
Due to listed problems related to the development of agro-industrial sector which have been present in the Serbian economy for quite some time, the programming of rural development of Serbia should be done based on the new principles. Official documents foresee the operationalization of three visions in this field:

1) **vision of agricultural development** (which should be based on the concept of dynamic development and establishing competitive family based agriculture, and which could, in such a way, be more integrated with the food and processing industry and contribute to the sustainable development through environmental protection and protection of rare natural resources);

2) **vision of development of food industry and marketing** (focus on consumers, standardization and innovation);

3) **vision of rural economy of Serbia as a whole** (creation of a demographically balanced concept of rural regions which would, as the urban regions as well, contribute the creation and development of GDP) [11].

In the new economic development strategy of the Republic of Serbia, as in the new strategy of industrial development for the period from 2011 to 2020, the food industry occupies one of the important stands.

The development of food production in the future period should be directed towards the increase of the scope of production, improvement of the quality of food products, increase of quality and improvement of packaging of food products, and especially towards the more efficient health control of this group of products [2]. Nowadays business is characterized by tough competition and strict requirements in relation to standards which represent the assumptions of development of food industry which need to be fulfilled in order to have the development all together [3]. The development of this branch implies the application of the latest technological procedures in order to secure more efficient usage of available capacities and resources and which would be in line with the sustainable development principles [1].

The research shows that there are expectations of the more intensive development in the food production sector of the so called projected food and new groceries whose production is based on improving the existing or new compositions of food through aromatization, coloring, vitaminizing, and also by adding ingredients for improving the taste, appearance, smell and other characteristics. On the other hand, the application of other construction materials in the process of manufacturing processing machinery and packaging enables the introduction of new and improvement of the existing technologies in the food industry. Mass production and the application of special materials for packaging enable adequate packaging and quality protection of all types of food. Aseptical processes in the whole chain of processing, distribution, storing and consuming, and the stressed hygiene requirements and sanitary conditions in production, transport and usage have a significant influence as well, and they will have a greater impact on the technological development and on the greater involvement of science in the sector in the future [7].

### 3. Possible directions of development and perspectives for achieving faster development of the agro-industrial sector

Agriculture represents one of the oldest activities of the human society and the majority of the population nowadays is still doing agriculture. Agriculture had been the basic and the only occupation of people for a long period of time, but especially in the last century it made way for the industry to a some extent. Today, having in mind the production capacities, the agricultural development is closely related to the industrial development. At one point the industry detached itself from the agriculture in order for the agriculture to become part of the
industry. While the agriculture dictated the development of other branches in the earlier period, and by its accumulation enabled the rapid industrial development, now the industry is a leading branch which initiates and speeds the agricultural development [5]. Despite these tendencies, the importance of agriculture is increasing having in mind that the modern man is interested not only for the richer nutrition but also for satisfying some of the modern needs enabled by the agriculture, in the wider sense, which are a direct result of the dynamic industrial development.

On the basis of the set priorities, present and future tendencies of technological development worldwide, it is possible to determine the basic directions of long-term technological development of agriculture and food industry. Those directions are as follows:

- faster growth and development of food production,
- change in the structure of food production, wider offer and quality of products,
- eliminating disproportions between the primary production and processing capacities,
- enabling new production procedures and the use of energy resources and other resources,
- optimal connection among the production factors from the economic effects stand point of view,
- directed and more congruent regional, sectorial and spatial development,
- reduction of technological and development dependence from the developed world,
- strengthening of own technological potential,
- strengthening of export capacities and competitiveness on the world market,
- employment increase,
- more rational and efficient usage of domestic raw materials, energy and other natural resources,
- more efficient use of scientific, technical and innovative achievements,
- increase of work productivity, professional potentials and other qualitative production factors,
- more congruent division among certain branches and groups based on needs, possibilities and specificities of technological development,
- broadening of cooperation and specialization of companies,
- protection and improvement of the environment,
- increase of the accumulative and reproductive capabilities,
- achieving higher levels of technological and economic development,
- enabling science and companies for setting and achieving higher development goals.

These tendencies can be realized through the following goals:

- expand the agricultural land,
- draft detailed construction programmes for irrigation systems, begin the construction of smaller systems and arrange the water flows of the mountainous areas, in order to expand the surfaces intended for irrigation with the tendency to secure 20% of the cultivated land for irrigation and the draining of flooded areas [7].

By achieving the set goals the cattle breeding production would increase its presence in the final agricultural production and would make the basis for improving the agricultural production. In such a way, it would be possible to secure the high income integration between the primal production of crop farming and cattle breeding production and their connection with the food industry. The process would contribute to the realization of considerable effects in production and trade on the domestic and international market.
If there was an initiation to increase the production in the food industry, it would secure the processing of raw materials from the agriculture, with a higher processing phase in all branches. Those processes would condition the significant increase of production and specialization with a far better offer and product quality, in line with the demands of domestic and international markets. On the other hand, in such a way the level of usage of available capacities would increase which would influence the production growth rate and the production structure being more favorable. The expected annual average growth rate could be over 5% [7].

The vision of agro-industrial sector development should focus on three priority investment directions:

- The first direction is towards improving the market efficiency and the application of standards. These activities would contribute to the restructuring of farms and achieving EU standards which would enable these products to enter the market of EU countries. On the other hand, the improvement of the agricultural production would contribute to the development of processing and marketing of agricultural products.
- The other direction is towards improving the environment and villages, and the preparation and implementation of local rural development strategies.
- The third direction represents the economic development on the whole, in the sense of improvement and development of underdeveloped infrastructure, diversification and development of other economic branches, and development of human resources in rural areas [4].

4. Development of human resources and employment in the agro-industrial sector

Contemporary development tendencies of countries with market economy proved that education and creation of human resources are priorities by national strategies and policies of social, economic and technological advancement. When talking about the Republic of Serbia and its development – the reconstruction and transformation of education, especially vocational, represents one of the assumptions of the complete sustainable development of the Republic of Serbia. Investing in education and securing adequate human resources who can adapt to changing circumstances, is also characterized as an investment and represents an obligation for the Republic of Serbia. Therefore, the educational policy is not only directed towards creating human resources but is part of the general development policy of a society.

Having in mind the fact that human resources are being treated as the basic generator of the society, human capital can be described as a personality of certain social need and socially recognized physical, psycho-social, educational and social characteristics, favorable for occupying certain posts and performing certain tasks, function and role in a society. Human resources represent a limitation to development, high technology and the reflection of technological progress, science as the basic production strength and the modern organization being the generator and the production results, are the determining factors of the socio-economic development.

Employment as the component of the economic development, also being the index of the achieved level of economic development, represents one of the constant and prior development goals. While considering the issue of employment, apart acknowledging the achieved level of economic development, one should pay attention to specific characteristics of the country or economic branch and time. Employment represents a state in which the capable members of society individually or altogether do something useful and gather resources for satisfying their need and fulfilling certain social demands.
The problems of engaging people in the agro-industrial sector started in the 50s when good farmers were turned into bad industrial workers. A lot of them mentally stayed in their villages. That caused controversial thinking whether those people were more useful for the industrial sector and less harmful for the development of the agro-industrial sector. Maybe it was time for a certain historical come back. Certainly it was, because our industry shrunked few times in comparison to the scope of industry from 1989 which marked the beginning of the transitional period [7].

Discussing the problems of engaging the human resources in the agro-industrial sector obliges us to say that those problems are more evident in the primal part and that regardless of the increase in the employment in the last decade, quantitative dimension of that increase is disturbing. In order to make the possibility of choice of these people at least comparable to the one others have in other branches, the conditions for the young to stay in villages have to be made. Their unwillingness to be part of the primal sector is characterized by:

- Hard work in the primal sector of the agro-industrial complex,
- Lack of cultural and leisure activities,
- Inability to achieve higher family standards,
- Continuation of schooling, etc.

The engagement of human resources in the processing sector of the agro-industrial sector is problematic in relation to the working conditions in certain segments. Certain number of people of the agro-industrial professions do tasks and jobs for which they have not educated for which represents a special problem in engaging people for the agro-industrial complex from the qualitative point of view. The fluctuation in the agro-industrial sector is much higher because fluctuations of workers with lower qualifications are higher, especially the fluctuations of unskilled workers.

Employment of women in the agro-industrial sector is also interesting not so much because of efficiency, but because of broadening the array of professions in the agro-industrial production which makes room for additional employment and change in the gender structure. Age structure in certain parts of agro-industrial sector is surely important for the territorial aspect of employment.

In order to secure the progressive relation between the science-technological processes and the employment, in general and in the agro-industrial complex, it is necessary to provide permanent monitoring of the science-technological progress and its influence on the status of employment through the employment policy.

In the policy dealing with the agro-industrial development, that is, in the battle for the bigger quantity of food, which certainly influences the progress and especially the implementation of the employment policy, one should take into consideration the following circumstances [14]:

a) Decision of a society to faster develop the agro-industrial sector, especially the primal agricultural production,

b) The influence of the science-technological progress results onto the agro-industrial complex leads to the more intensified production, both primal and processing, widens the array of required human resources. That is how the scope of work is being broadened.

c) The concept of the active policy of employment has to enable the creation of the similarly attractive working conditions in the agro-industrial complex, in the future, also through the system of delegation, which was not the case so far. In the primal allocation the weight of prices was made on the back of agricultural and food products, in the secondary, the companies in the agro-industrial complex are not in the more favorable position, and in the unintended, personal incomes of the employees considerably lag behind the incomes in the economy.
d) There is a growing presence of equal valuation of work in the agro-industrial complex in comparison to other branches. Once there was an attitude, especially among the young, that agricultural work was less valuable than in industry. Today, more and more the human resources are being promoted in the agro-industrial complex, and the latest social research shows that there is a growing interest among the young for the agro-industrial complex. However, this growing interest can be the result from the long time spent waiting for the job. Thus, the framework is still not as favorable, especially when agricultural production is considered alone.

In the employment policy and also in the agro-industrial complex, one should count on the increase of the percentage of those with university education. This is an ongoing process in developed countries. The expansion of scope of production and services and better organization are the two far more important factors for employment of new staff. The projection of employees in every company of the agro-industrial complex, and consequently on the whole agro-industrial complex, should contain the following:

- Needs of employees according to education, professions, profiles, etc,
- Educational need and their providers,
- Education along work and advancement,
- Employment (resources and schedule),
- Inflow and outflow of employees,
- Employee needs (housing, standard, culture, etc.).

Since there is a lack of certain profiles in the agro-industrial complex, first one should comprise the list of basic professions and profiles (professions directly linked to the company’s business), then general professions and profiles (present in all companies), then the specific professions and profiles which deal with the side business.

The problem of employment is present in all environments, to some extent, both economically developed and undeveloped. The problem of unemployment has become one of the biggest ones of our economy. This problem was evident especially after the economic reform thanks to the restrictive investment politics and low level of economic development. Weak results concerning employment are due to: deranged economic flows, string process against agricultural policies, gap between the education and what economy needs, weak links with the international partners, etc. [16].

It is evident that certain expected results concerning employment in the agro-industrial complex and SMEs have been left out. The unemployment is particularly high in big cities where the employment is the only way of earning and where taking care of several family members, with high inflation rates and recession, is becoming a social and a personal problem of numerous families, especially of those with low or medium income.

4. Conclusion

One can conclude that agro-industrial sector has an important role in the future development of the domestic economy. This importance is derived from the fact that this branch, due to competitive advantages which our country has for their development, can provide enough food for the population and direct most of its production towards export. In order to realize this in the future it is necessary to modernize the production capacities and the production technology, do the restructuring and focus on certain markets, its needs and demands. The increase of the production efficiency represents one of the basic tasks which would improve the competitiveness of the branch, both on domestic and international market. The necessity of developing human resources in the agro-industrial complex certainly provides a chance for
rehabilitation and revitalization of the whole agro-industrial sector. The food production should be categorized as the development priorities which is impossible to do without the adequate human resources.

5. Literature


Zahvaljujemo se Ministarstvu prosvete i nauke Republike Srbije za finansiranje projekta III 46000 za period 2011-2015.