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ANALYSIS OF AGRICULTURAL LABOR EFFICIENCY FROM THE PERSPECTIVE OF LABOR PRODUCTIVITY

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Abstract

The approach regarding the efficiency of the labor force in agriculture, but also from the perspective of labor productivity in this sector, is determined by the economic activities for the development of the national economy. This paper is based on the comparative analysis of statistical data from a quantitative and qualitative point of view, highlighting labor productivity and labor resource consumption for the main activities of the national economy. For this research were identified statistical data provided by the National Institute of Statistics, data on the value of production, production costs, and the level of labor. With the help of these data, relating the value of production and production expenditures to the volume of labor, it was possible to determine two indicators that can be used to analyze the economic efficiency of labor, namely labor productivity and labor consumption. These two indicators were determined for the main branches of the national economy, implicitly also of the agricultural sector. Agriculture is considered one of the most powerful forces shaping human behavior and therefore economic activity. This paper investigates the effects of agriculture on labor productivity and the agricultural labor force that drive this relationship and are determined by the main activities of the national economy.

Keywords: labor force, agriculture, labor productivity, economic efficiency

JEL classification: Q10, Q15

INTRODUCTION

Agriculture occupies an important share of the Romanian economy, although more than 49% of the population works in rural areas, its contribution to GDP is about 8-9%. In the last 20 years, Romanian agriculture has undergone huge structural changes through the liberalization of the market and production in order to adapt to the new sustainable agricultural needs. Agricultural human resources include not only the labor force needed to carry out agricultural work, but also the labor force that provides technical guidance, organization and management of all agricultural resources. Labor resources (labor resources) refer to all persons engaged in agricultural activities with certain physical and intellectual abilities, experience and professional qualifications that are used in certain economic and social conditions depending on the degree of mechanization offered.

The economic importance of living labor comes from its high proportion of agricultural production costs, especially in households. Labor occupies an important position in agricultural production and is a decisive factor in the development of land capital and working capital. Under the influence of scientific and technological progress, increasing labor organization, employment and increasing agricultural labor productivity are the foundation of agricultural economic progress. Agricultural labor management requires specific approaches to other areas of activity, in which the employed labor force dominates. In Romania, the special social nature of agricultural work is not only manifested at the family level. For more than 40 years, a large number of people from rural areas have migrated, and agricultural workers have relied on expert guidance. In agriculture, the labor force is made up mostly of members of peasant families. Family work in agriculture has many advantages over other sectors. Farmers and their families work alone and do not feel the difficulties of the workers, and the rewards are better than those of the agricultural workers. Priority solutions and plans are needed to stabilize the rural workforce, improve its quality structure and increase employment to:

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- a) stimulating the occupational field of the rural population and ensuring the stabilization of the youth;
- b) improving the system of general and professional training of young people and recycling of farmers;
- c) lasting stimulation of the growth of agricultural production, especially animal husbandry through modern financing systems;
- d) favoring the withdrawal from the activity of the elderly farmers and supporting the formation of family farms in lease system, as well as the establishment of different associative forms of agricultural exploitation;
- e) development of extension and consultancy and improvement of the activity of agricultural centers to support the professional training of small farmers;

MATERIAL AND METHODS

The data in this paper are based on data provided by the National Institute of Statistics, which aimed to highlight labor productivity and labor consumption of resources for the main activities of the national economy. A number of significant elements are presented in relation to the value of production, production costs, and the level of labor. With the help of these data, linking the value of production and production costs to the volume of labor, hence two indicators can be determined that can be used to analyze the economic efficiency of labor, namely labor productivity and labor consumption. These two indicators are determined for the main sectors of the national economy and are also involved in the agricultural sector. This paper is based on the comparative analysis of statistical data from a quantitative and qualitative point of view, highlighting labor productivity and labor resource consumption for the main activities of the national economy. As a method in this paper, we find the index with a fixed base - it reflects the relative increase or decrease of the researched phenomenon in each period compared to the comparison period.

RESULTS AND DISCUSSION

In the economic literature and in current practice it is used alongside the notion of agricultural holding and those of agricultural unit and agricultural enterprise, often intersecting or even substituting. It follows from the above that the definition of agricultural holdings must contain the statement that: it is an economic unit; of production; whose basic activity is the exploitation of land, plants and / or animals; in order to obtain agricultural products.

According to the Institute of Statistics, labor productivity is defined as: The employed population comprising all persons - both employees and self-employed - employed in production activities that fall within the limits of production in national accounts. Labor productivity per employed person was calculated as the ratio between gross value added and the number of employed persons.

Table 1-Labor productivity per person, by main activities of the national economy, lei / person / year

Activities of the national economy	2013	2014	2015	2016	2017	2018	2019	2019/2013 %
Agriculture, forestry and fishing	13187.9	12482.5	13241.1	15465.4	18357.7	20482.6	22742.6	72.5
Industry	91043.4	93494.6	96604.1	100228	107779.1	114273.4	120954.7	27.1
Construction	70736.6	67339.3	66491.8	68631.1	63553.7	77574.1	89906.2	83.0
Trade	52859.4	57721.4	66411.7	73839.2	83322	88987.5	96706.5	74.5
Information and communications	225489.5	219899.6	208870.3	235013.9	254372	278230.6	348225.7	32.9
Financial intermediation and insurance	203895.8	197109.3	210277.4	225853.9	184545.3	223641.9	218138.3	62.7
Professional activities	123258.1	118593.3	138772.5	139821.2	168410.8	179544.4	200589.9	7.0
Public Administration	75072.4	80809.9	96382.7	90940.9	108984.5	127457.5	131036.7	54.4

(Source: National Institute of Statistics)

From the analysis period 2013-2019, it is noted that the highest value was registered in the information and communications activity, professional activities but also the public administration for the analysis period with values between 200 thousand lei / person / year reaching up to 348 thousand lei / person / year due to the increase of added value, and the lowest values were found in the activity of agriculture, industry, construction and trade in the period 2013-2019, these values were noted due to the fact that the amount of these activities is much smaller for each employee.

The main reason for the increase in labor productivity both in the agricultural sector and in the rest of the economic activities is due to the increase in gross value added. According to the Institute of Statistics, the average monthly labor cost represents the total expenses incurred by the unit for labor, namely: gross amounts paid directly to employees (direct expenses) from: - salary fund (including bonuses and rights in kind) respectively, the amounts granted directly for the work actually performed (basic salary, bonuses and allowances granted as a percentage or in a fixed amount, additions to basic salaries); - net profit and other funds (including rights in kind) - prizes and incentives from the fund for participation in net profit, rights in kind and cash benefits, incentives, expenses representing meal vouchers granted to employees;

Table 2. Average monthly labor costs per employed person, main economic, lei / person / month

Activities of the national economy	2013	2014	2015	2016	2017	2018	2019	2019/2013 %
Agriculture, forestry and fishing	2095	2248	2375	2794	3191	3675	3898	86.1
Industry	2932	3099	3214	3477	3881	4309	4745	61.8
Construction	2112	2181	2435	2606	2910	3324	3999	89.3
Trade	2237	2421	2650	2901	3397	3785	4064	81.7
Information and communications	5294	5679	6267	7002	7596	8623	9319	76.0
Financial intermediation and insurance	6568	6523	6903	6976	7456	7947	8729	32.9
Professional activities	4125	4254	4648	5068	5319	5949	6619	60.5
Public Administration	3501	3925	4033	4354	5415	6230	7068	101.9

(data Source: National Institute of Statistics)

As can be seen, each economic activity recorded increases in average monthly costs, with agriculture ranking third, with relatively low costs compared to other activities, where as can be seen the highest costs per person during one month is recorded for economic activity (information and communications). The main reason why the average monthly costs increased both in the main sector analyzed, namely agriculture, but also in other economic activities is due to the increase of the minimum wage in the economy, so that the employer's contributions to the state have changed.

According to the average monthly labor costs measured in lei per person in the agricultural sector, it ranks third among all economic activities, given that this activity is characterized by the availability and need of people depending on the season, so the costs per person does not register in all months of a current year. Thus, analyzing the evolution of this indicator, there is an increase in costs per person in agriculture, reaching in 2019 (2794 lei / person / month), being 33.4% higher than the base year, representing an absolute value of approximately 700 lei / month / person.

Table 3. Comparison between labor productivity and labor costs, by main economic activities, in 2019

Activities of the national economy	Labor productivity	Average costs
Agriculture, forestry and fishing	1,895	3,898
Industry	10,080	4,745
Construction	7,492	3,999
Trade	8,059	4,064
Information and communications	29,019	9,319
Financial intermediation and insurance	18,178	8,729
Professional activities	16,716	6,619
Public administration	10920	7068

(Source: National Institute of Statistics)

The table above, comparing labor productivity and labor costs by main economic activities, shows that in Agriculture, forestry and fishing, the average costs are higher than in productivity, the costs in agriculture are much higher than the sum produced per employee, due to the fact that extensive agriculture in Romania requires an additional manual labor force, compared to other systems with a high degree of mechanization in other states, the rest of the analyzed activities did not notice significant changes.

Making a comparison between labor productivity and labor costs, we note that in terms of labor productivity agriculture is below the average for all economic activities, respectively 127994.8 lei / person / month, while the average monthly cost for all economic activities presented is 6055.1 lei / person / month. It should be noted that the labor costs in information and communications register an increase of 29019 lei person / year.

CONCLUSIONS

The National Employment Strategy aims to be an integrated approach to relevant policies, both from the perspective of demand development and from the perspective of efficient supply management on the labor market and proposes realistic approaches, which can be financed from the national budget, unemployment insurance budget and financial resources allocated in the 2014-2020 programming period. The success of this strategic approach depends on the real involvement of all stakeholders (central and local public authorities, social partners, civil society, etc.) in substantiating, implementing, monitoring and evaluation of the actions to be developed.

The Romanian labor market has developed and maintained a number of structural deficits in terms of population and labor force, deficits that have been amplified by the economic and financial crisis. Thus, until 2016, it was not possible to recover the job loss suffered during the crisis. In connection with the increase of employment, in Romania there is, compared to the situation at European level, an important reservation that refers to the oversizing in the conventional statistics of the official population employed in agriculture, in relation to the requirements of a modern economy. at a low average productivity at national level.

The main reason for the increase in labor productivity both in the agricultural sector (forestry and fishing) and in the rest of the economic activities is due to the increase in gross value added. According to the Institute of Statistics, the average monthly labor cost represents the total expenses incurred by the unit for labor, namely: gross amounts paid directly to employees (direct expenses) from: - salary fund (including bonuses and rights in kind) respectively, the amounts granted directly for the work actually performed (basic salary, bonuses and allowances granted as a percentage or in a fixed amount, additions to basic salaries); - net profit and other funds (including rights in kind) - prizes and incentives from the fund for participation in net profit, rights in kind and cash benefits, incentives, expenses representing meal vouchers granted to employees;

According to the average monthly labor costs measured in lei per person in the agricultural sector, it ranks third among all economic activities, given that this activity is characterized by the availability and need of people depending on the season, so the costs per person does not register in all months of a current year.

Thus, analyzing the evolution of this indicator, there is an increase in costs per person in agriculture, reaching in 2019 (2794 lei / person / month), being 33.4% higher than the base year, representing an absolute value of approximately 700 lei / month / person.

In conclusion, comparing labor productivity and labor costs by main economic activities, it appears that in Agriculture, forestry and fishing, the average costs are higher than in productivity, the costs in agriculture are much higher than the amount produced per employee. , due to the fact that extensive agriculture in Romania requires an additional manual labor force, compared to other systems with a high degree of mechanization in other states, the rest of the analyzed activities did not notice significant changes.

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