

INCREASING THE EFFICIENCY OF THE LABOUR RESOURCES USAGE OF AGROSECTOR ENTERPRISES IN THE SYSTEM OF SUSTAINABLE DEVELOPMENT OF THE RURAL TERRITORIES: A CASE STUDY OF UKRAINE

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Abstract

In the article it was found that during 2016-2019 in Ukraine the total productivity of agricultural workers increased, due to increased investment and technological renewal of agricultural production by large agricultural holdings. The main reason for this growth is the opening of access to Ukrainian agricultural enterprises to the markets of the European Union. Accordingly, the enterprises of the agricultural sector of Ukraine focus on the development of crop production, which is more attractive in terms of increasing profitability due to significant export opportunities. According to the obtained results, the amount of labour costs of employees in agricultural enterprises for the analysed period has generally more than doubled. In the article we have identified regional features of labour productivity of enterprises in the agricultural sector of Ukraine, in terms of studying the level of efficiency of staff use. We have substantiated the proposals for the introduction of a special algorithm in the activities of agricultural enterprises to ensure the efficiency of the management of their labour resources. We in the article proved that the improvement of the system of formation and use of labour resources of agricultural enterprises of Ukraine should also consider the identified regional disparities in the levels of labour productivity, in order to stimulate the productivity of enterprises in the regions with the lowest rates.

Key words: rural territories, labor resources, agricultural enterprises, sustainable development, labor efficiency

INTRODUCTION

Peculiarities of the functioning of agricultural enterprises involve the involvement in the labour process of a significant number of employees, effective management of which is designed to ensure the appropriate level of profitability. Thus, the need to study the efficiency of human resources in the enterprise is of particular importance in modern conditions.

In Ukraine, for a long time, the efficiency of labour used in agriculture was low due to the low level of income of agricultural enterprises and the lack of structural investment in agriculture. However, the situation has changed dramatically since the signing of the Association Agreement between Ukraine and

the EU in 2014. It resulted in the wide opening of the European Union markets to Ukrainian agricultural producers. In the market, there were tendencies to a rapid increase in the level of profitability of agricultural enterprises, a significant increase in investment in fixed assets, and subsequently - in the human capital of agricultural enterprises. Currently, the market is experiencing a systematic transformation of agricultural producers into large agricultural holdings, which invest heavily in upgrading equipment and machinery. At the same time, the urgent need of such enterprises is the formation of an effective system for ensuring the high efficiency of labour resources, because as practice shows, with extensive development of the agricultural sector in the

recent past, quantitative estimates of reserves and resources were basic. with the transition to an intensive path of development. In addition, since improving the efficiency of staff in practice is one of the key reserves for improving the market position of the enterprise, the need to improve the management system of the efficiency of labour resources of agricultural enterprises becomes especially relevant.

Many scientists and practitioners have studied the issue of efficient use of labour resources of agricultural enterprises at different times. In particular, it is worth noting the works of D. Bohynia [2], A. Cherep [4], O. Grishnova [7], Ye. Kachan [8], V. Nykyforenko [11], M. Vynohradskiy [27], O. Shubalyi [22, 23] and others. In addition, a significant contribution to the study of specific aspects related to the efficient use of labour resources of enterprises is based on studies of scientists such as O. Agres [1], A. Boiar [3], M. Dziamulych [5; 6; 20; 21], A. Kibanov [9], A. Popescu [13; 14; 15; 16; 17; 18; 19], S. Strumilin [25], I. Tsymbaliuk [26], V. Yakubiv [31], Ya. Yanyshyn [28-30], I. Zhurakovska [33]. However, rapid technological changes and transformations, the intensive spread of innovations in agriculture necessitate a significant deepening of existing research on the efficiency of labour resources of agricultural enterprises.

MATERIALS AND METHODS

The classic criteria that characterize the use of labour resources of enterprises in agriculture include labour productivity as the main indicator; the level of use of the working time fund; the state of labour discipline and the level of staff turnover; the number and proportion of workers engaged in manual labour; high-quality compliance of personnel with production requirements and positions held; the relative and an absolute number of workers laid off. In this case, productivity reflects the ability of the personnel management system to provide a certain result in changing conditions and capabilities of the enterprise. However, in the process of intensification of investments in agricultural

enterprises and technological renewal of their production base, the methodology of measuring efficiency is changing, which is based not only on economic indicators of calculating the ratio of personnel costs and results (determining the profitability of staff use) but reflects achieving the set goals in the field of personnel management [10].

However, the analysis of labour efficiency is not limited to labour productivity and its derivative results but is a broader system of indicators based on comprehensive coverage of labour results and features of the organization of the production process in agricultural enterprises. As a result, not only the cost but also some absolute and natural indicators of labour use are considered.

In particular, the analysis of the number and movement of labour resources is important for the analysis of the efficiency of the use of labour resources of agricultural enterprises in terms of labour turnover. For this purpose, the following coefficients are calculated:

- turnover ratio on acceptance;
- turnover ratio from dismissal;
- total staff turnover ratio.

The calculation of these indicators and coefficients is performed according to the following method.

Staff turnover ratio for acceptance:

$$R_{ac} = \frac{N_e}{N_{av}}$$

where N_e – the number of employees hired in the organization for a certain period;

N_{ac} – the average number of employees is the corresponding period.

Staff turnover ratio for the release:

$$R_r = \frac{N_d}{N_{av}}$$

where: N_d – the number of dismissed employees of the organization for a certain period.

Total staff turnover ratio:

$$R_t = \frac{N_e + N_a}{N_{av}} = R_{ac} + R_r$$

In addition, given the seasonality of many types of work in agricultural enterprises, the calculation is recommended staff turnover ratio, which characterizes the movement of labour under the influence of negative causes. Staff turnover ratio:

$$R_{st} = \frac{N_d - N_{id}}{N_{av}}$$

where: N_{id} – the number of inevitably laid-off workers.

The second stage of the analysis covers the completeness of the use of labour resources, which can be estimated by the number of working days of the employee during the reporting period, as well as the intensity of working time. However, the main indicator that characterizes the efficiency of labour resources of agricultural enterprises is currently labour productivity, which is measured by the ratio of output to labour costs. Depending on the direct or inverse relationship, there are two indicators: output and labour intensity.

Production - is the amount of output per unit time or the number of products per average employee or worker per year, quarter, month. It is measured by the ratio of the volume of output to the amount of working time spent on its production:

$$Y = \frac{Q}{T}$$

where: Y – yield;

Q – volume of output;

T – working time.

Labour intensity is an indicator that characterizes the cost of time per unit of output (ie the inverse of production):

$$L_i = \frac{T}{Q}$$

where: L_i – labour intensity per unit of output.

The greater the output per unit time or the lower the cost of time per unit of output, the higher the level of productivity [32].

Production and labour intensity are interrelated and inversely related, but the percentage increase in output is not equivalent to the percentage decrease in labour intensity. The relationship between them is expressed as follows:

$$P_{Li} = \frac{P_Y}{(100 + P_Y)} \times 100$$

or

$$P_Y = \frac{P_{Li}}{(100 + P_{Li})} \times 100$$

where: P_{Li} – the proportion of labour intensity reducing, %;

P_Y – the share of production increase, %.

The most common and universal indicator is the output, the indicators of which, depending on the unit of measurement of working time can be measured:

- in man-hours worked;
 - in the worked man-days;
 - in man-months, man-years (these units of time are equivalent to the average number of employees for the corresponding period).
- If labour costs are measured in man-hours worked, then get an indicator of average hourly output:

$$Y_h = \frac{Q}{T_h}$$

Hourly output characterizes labour productivity for the actual time worked, daily also depends on the length of the working day and the use of working time within the shift. Its level is affected by intermittent downtime and loss of time. The relationship between these indicators of productivity is characterized by the relationship:

$$Y_{day} = Y_h \times L$$

where: L – is the average actual length of the working day [29].

Thus, assessing the efficiency of labour resources of agricultural enterprises provides an opportunity to identify and eliminate the causes of their inefficient use, as well as – to identify existing reserves to improve such

efficiency through the rational placement of agricultural personnel and its use in accordance with production plans and employment opportunities.

RESULTS AND DISCUSSIONS

As you know, one of the most important factors in increasing the profitability and competitiveness of agricultural enterprises is the effective management of its labour resources. It should be noted that the labour resources themselves will play the role of a key component of overall competitiveness, along with other factors to ensure its high level. In this aspect, economic methods of human resource management are a set of ways to influence by creating economic conditions that encourage employees to act in the right direction and seek solutions to their problems. Since the basic and most informative criterion for assessing the efficiency of labour resources of agricultural enterprises is labour productivity, it is necessary to assess its dynamics considering the difference in indicators in terms of agricultural industries – crop and livestock (Fig. 1).

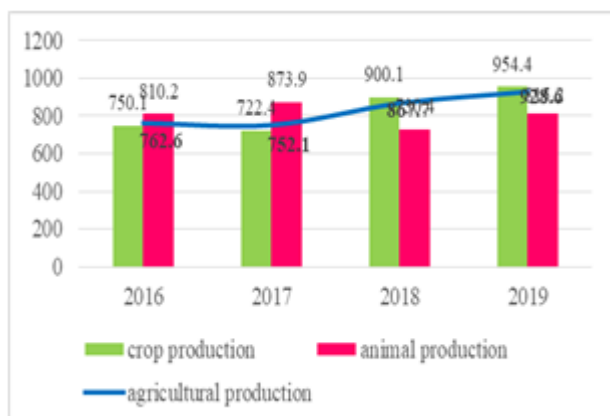


Fig. 1. Labour productivity in agricultural enterprises in Ukraine (per 1 employee on agricultural production, in 2016 prices; thousands UAH)
Source: [24].

It was found that during 2016-2019 in Ukraine the total productivity of agricultural workers increased, which was due to increased investment and technological renewal of agricultural production by large agricultural holdings. As already mentioned, the main reason for this growth is the opening

of access to Ukrainian agricultural enterprises to the markets of the European Union. Thus, in comparative prices labour productivity increased from 762.6 to 928.6 thousand UAH. per one employee employed in agriculture, i.e. by almost 22% (almost 5.5% annually). This value is significantly higher than the industry average even in comparison with the developed countries of Central and Eastern Europe.

However, if we consider the dynamics of labour productivity by industry, it is clear that during the analysed period the main growth occurred in crop production, where productivity increased from 750.1 thousand UAH. in 2016 to UAH 954.4 thousand. per employee in 2019. At the same time, in the livestock sector in 2018 there was a significant decline in labour productivity and as of the end of 2019, its overall indicator in the industry by only 0.6% exceeded the value for 2016. Such disparities are due to the fact that the main element in the structure of exports of agricultural products of Ukrainian enterprises is crop production. That is why the main investments are aimed at updating the technological base and stimulating employees employed in this field. At the same time, livestock products are more focused on the domestic market, which is not characterized by significant fluctuations in consumption in the short term. Accordingly, the enterprises of the agricultural sector of Ukraine focus on the development of crop production, which is more attractive in terms of increasing profitability due to significant export opportunities. For this reason, the dynamics of labour productivity in the livestock sector during the analysed period remained almost unchanged.

Since the main criterion influencing the assessment of the efficiency of labour resources in terms of labour productivity is the cost of labour, we analysed the dynamics of this indicator in the agricultural sector of Ukraine in 2016-2019 (Fig. 2).

According to the results of the study, it was found that the amount of labour costs of employees in agricultural enterprises for the

analysed period has generally more than doubled.

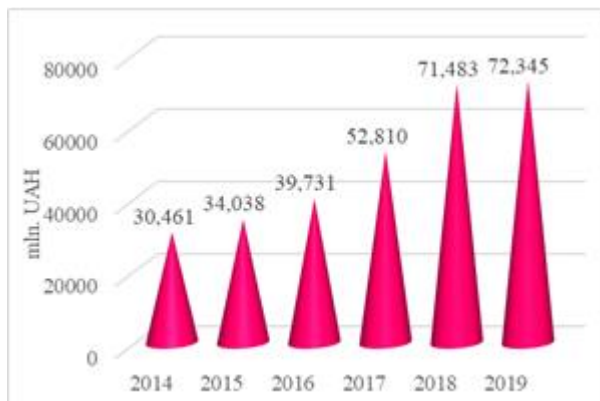


Fig. 2. Dynamics of labour costs of employees of agricultural enterprises of Ukraine for 2014-2019
 Source: [24].

At the same time, during the first half of the analysed period, there was not a significant increase in labour costs, which was mainly

due to an increase in prices due to inflation in Ukraine's economy. The second period - instead, starting in 2017 with the opening of the EU market for enterprises in the agricultural sector of Ukraine, the level of labour costs of agricultural workers increased by UAH 13.079 million. or by 32.9% year on year, in particular, the growth in 2018 compared to 2017 was 35.4%. Thus, it can be concluded that the expansion of the share of the European Union market available to Ukrainian agricultural enterprises gave them the opportunity to increase labour costs, which resulted in increased productivity.

We have identified regional features of labour productivity of enterprises in the agricultural sector of Ukraine, in terms of studying the level of efficiency of staff use (Fig. 3).

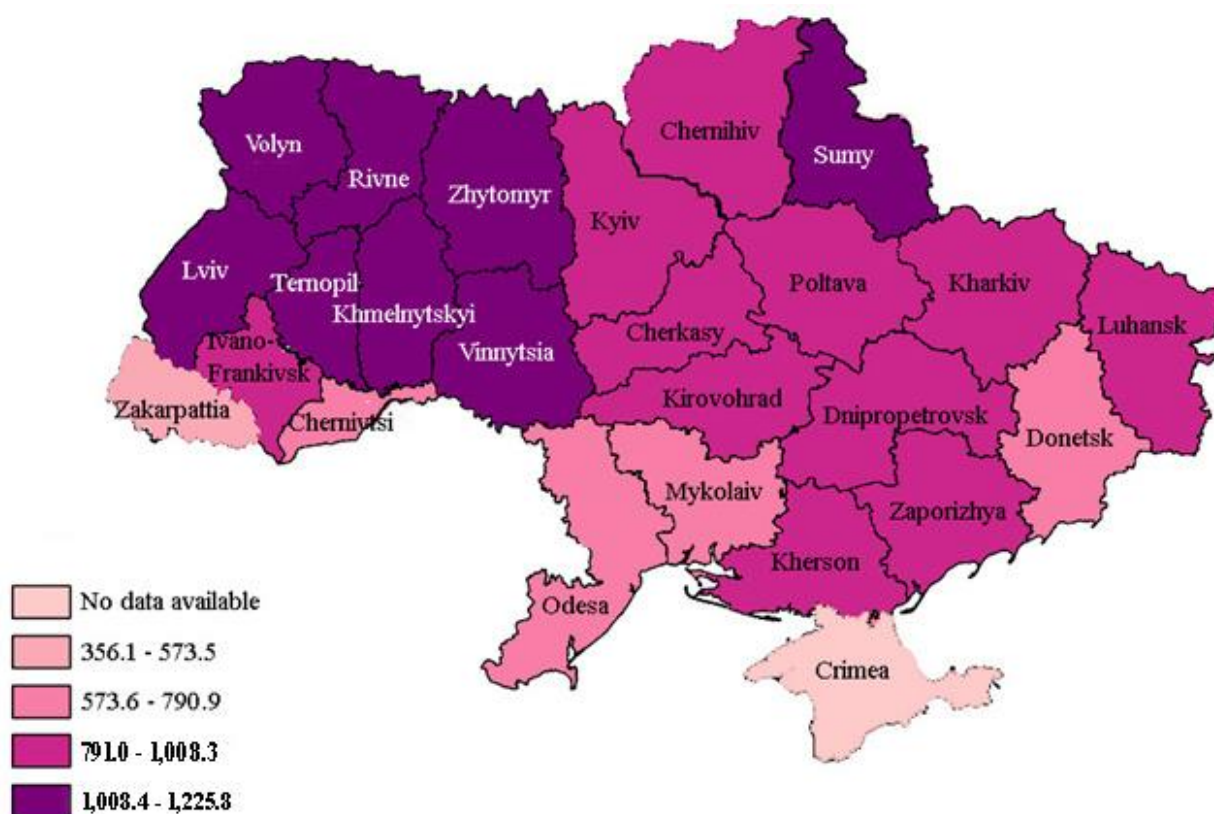


Fig. 3. Labour productivity in agricultural enterprises in regions of Ukraine in 2019 (per 1 employee on agricultural production, in 2016 prices; thousands UAH)
 Source: [24].

As we can see from the analysis, the highest level of labour productivity in Ukraine is characteristic of the Western regions, which in

terms of resources are among the least favourable for agricultural production. At the same time, in the regions of Central and

Eastern Ukraine, where the most fertile soils are located, the productivity of agricultural enterprises is lower, and in some southern regions (Odesa, Mykolaiv region) the efficiency of staff use is relatively low. The explanation for this fact is the resource provision of enterprises – in those areas that have limited opportunities for agricultural production, enterprises are forced to make more intensive use of the available potential of hired labour to ensure their competitiveness and increase profits. At the same time, in regions where natural conditions are conducive to agricultural production, the requirements for high efficiency in the use of workers are lower, as profitability is ensured through better use of the climatic factor.

As practice shows, each producer determines the directions and reserves of labour productivity by specific agricultural and technical and organizational-economic situation: the achieved level of culture of agriculture and animal husbandry, mechanization and electrification of production, specialization of agriculture, availability of labour resources, their age, gender, professional composition, etc. At the same time, the level of labour productivity is also influenced by natural and economic conditions: soil quality, rainfall, temperature, length of the growing season, the use of technical means, etc. However, the increase in labour productivity is economically progressive only when it occurs on the basis of increasing the production of gross agricultural output.

Thus, labour productivity is effective and important, but not the only factor that improves the efficiency of labour resources of agricultural enterprises. In addition, since the most effective incentive to increase productivity is financial surcharges, it should be noted that many companies are quite limited in this regard to widely apply it without compromising their investment plans. Accordingly, there is a question of availability of alternative methods of increase of efficiency of the use of labour resources of the agricultural enterprises in the system of the necessity of formation of social capital of rural territories.

As the practice of economic activity shows, to ensure effective personnel management at the enterprise level, it is necessary to comprehensively use the tools of all available methods of influencing the functioning of labour resources. Accordingly, in addition to the basic methods of human resource management, in practice, a more complex system of methods is used, which considers the specifics of the processes of implementation of the tasks of human resource management.

The formation of a system for managing the efficiency of labour resources of agricultural enterprises should be based on a system of stimulating the labour potential of workers, so such a system should include the following elements:

- formation of principles of effective management of labour resources in modern conditions;
- ensuring managerial influence on labour resources in the process of implementing the strategy of enterprise development;
- ensuring the introduction of innovative approaches to vocational training, retraining, and advanced training of enterprise personnel;
- introduction of the system of social partnership at the enterprise for stimulation of increase of efficiency of use of labour resources.

Thus, the assessment of the effectiveness of human resource management can be implemented by determining its economic, social, and organizational efficiency. The essence of the approach is to use indicators for these types of efficiency in correlation analysis and expert evaluation, by developing criteria for achieving certain end results with the appropriate level of resources and product quality, as well as in determining weights using rank correlation to calculate a comprehensive efficiency indicator. The value of the criteria is calculated by comparing the actual values of the partial exponent to the base value using the mathematical adjustment function of the four types of dependence. Maintaining the weighting factor is due to the need to coordinate interests between employees, staff, and enterprise [12].

It should also be noted that in addition to purely technical factors associated with the

production activities, the efficiency of labour resources will certainly be directly or indirectly affected by subjective factors, which can generally be reduced to a group of socio-economic factors. At the same time, there is a problem of forming unified approaches to ensuring the institutional and organizational-economic structure, which would allow forming topical approaches to ensuring the overall economic efficiency of the use of labour resources in agricultural enterprises.

This need, in turn, requires ensuring the availability of relevant and adequate tools to identify reserves to improve the efficiency of labour resources and opportunities for the formation of current long-term plans for enterprises to implement measures aimed at improving staff efficiency.

The availability of conceptual approaches to finding reserves and planning current measures to effectively improve the efficiency of their own employees will allow agricultural enterprises not only to improve their management system but also to provide opportunities to improve strategic planning and increase opportunities for profitability. Therefore, one of the main and extremely important elements of the formation of a system of socio-economic factors to improve the efficiency of labour resources in the agricultural sector is their practical complementarity. Thus, we have substantiated the proposals for the introduction of a special algorithm in the activities of agricultural enterprises to ensure the efficiency of the management of their labour resources (Fig. 4).

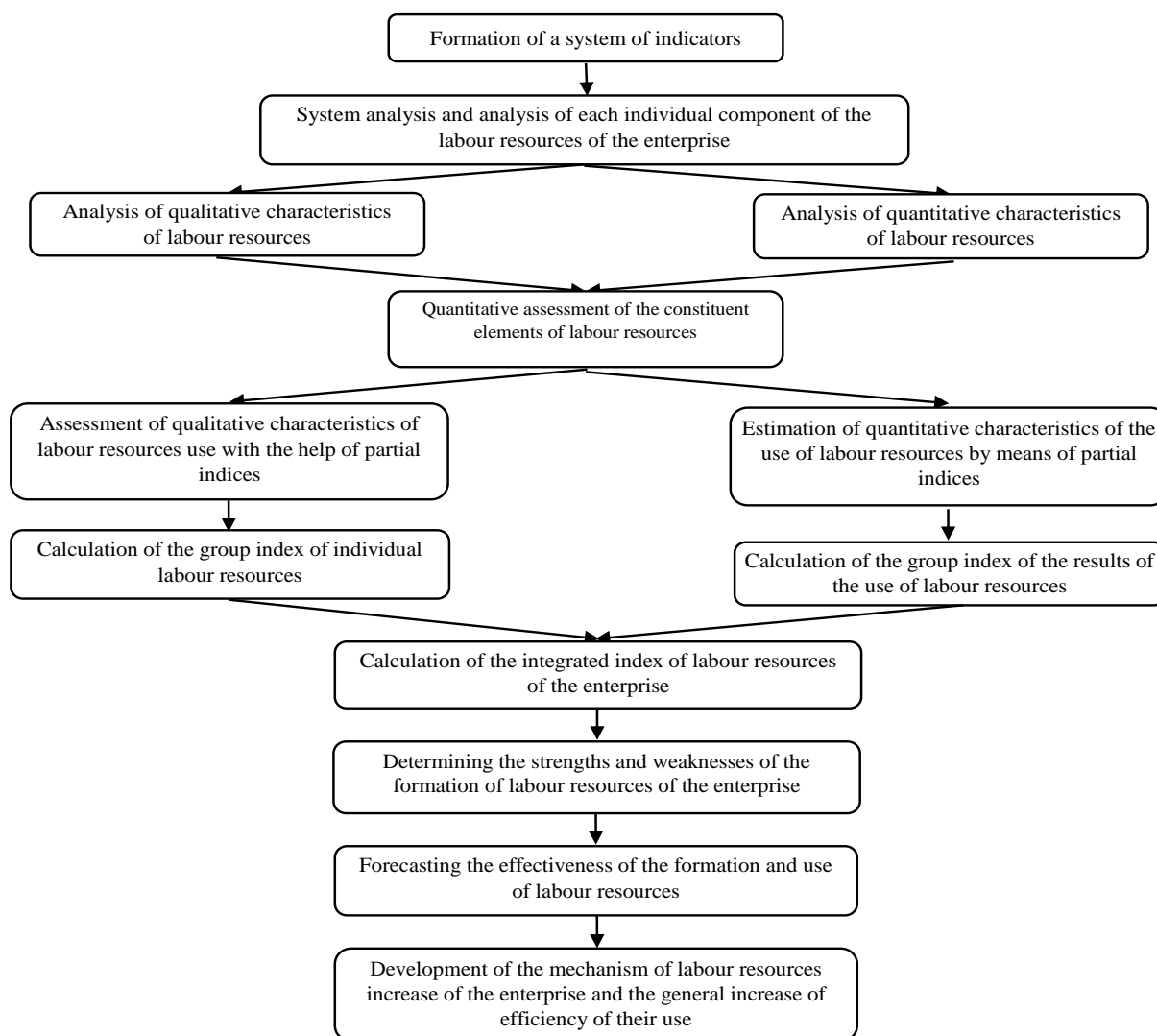


Fig. 4. Algorithm of formation and use of labour resources of agricultural enterprises
 Source: author's own development.

The practical application of the proposed mechanism to improve the efficiency of labor resources is a combination of quantitative and qualitative characteristics of the formation of efficiency according to the specified parameters. Based on this, it is possible to determine the integrated index of labor efficiency, which is the basis for planning, forecasting and implementation of effective measures aimed at improving the productivity of agricultural enterprises in Ukraine. Thus, the incentive for employees to increase efficiency will be based not only on productivity indicators, but also through the integrated index will include the results of assessing the quality characteristics of the staff of agricultural enterprises.

CONCLUSIONS

According to the results of the study, we propose to form a system of criteria for assessing the efficiency of labour resources of agricultural enterprises, which would be based on considering both the economic and social effects of the effectiveness of their impact. In our opinion, the general criteria for assessing the effectiveness of use should be grouped into two main areas:

(1) Evaluation of the effectiveness of the use of labour resources on the basis of the evaluation of the performance of an individual employee, which includes the following performance criteria:

- production efficiency;
- professional skills;
- compliance with deadlines;
- the amount of hourly output;
- efficiency of working time use;
- attentiveness in performing tasks;
- observance of technological discipline in production;
- observance of rhythmic work;
- speed of recognition and correction of mistakes.

(2) Evaluation of the effectiveness of the use of labour resources based on the evaluation of the performance of an individual employee in a particular workplace, which should include the following criteria:

- the structure of time spent on tasks assigned to the employee;
- observance of labour discipline by a specific executor;
- manifestation of personal initiative in solving problems and ensuring the continuity of the production process;
- the level of ability to consciously make independent decisions to improve the efficiency of the tasks;
- readiness to constantly learn new skills and improve their skills;
- the level of workload;
- transfer of professional knowledge and skills to other employees in the process of performing production tasks;
- the level of readiness, if necessary, to help other employees in the process of performing the tasks.

We believe that the improvement of the system of formation and use of labour resources of agricultural enterprises should also consider the identified regional disparities in the levels of labour productivity, in order to stimulate the productivity of enterprises in the regions with the lowest rates.

Thus, in the introduction of a system to improve the efficiency of labour resources of agricultural enterprises in the system of rural development and the formation of human capital in rural areas, the most important place is a set of measures to increase productivity. This is due to the fact that in the general structure of personnel efficiency indicators labour productivity occupies a leading place, both in the process of long-term planning and in the process of forming specific current production plans and finding reserves to increase the profitability of agricultural enterprises in Ukraine as a whole.

REFERENCES

- [1] Agres, O., Sadura, O., Shmatkovska, T., Zelenko, S., 2020, Development and evaluation of efficiency of leasing activities in agricultural sector of Ukraine. Scientific Papers: Series «Management, Economic Engineering in Agriculture and rural development», Vol. 20(3): 53-60.

- http://managementjournal.usamv.ro/pdf/vol.20_3/volume_20_3_2020.pdf. Accessed on Oct. 15, 2020.
- [2]Bohynia, D. P., 2001, Fundamentals of labor economics. Kyiv: Znannia-Press. 314 p.
- [3]Boiar, A., O., Shmatkovska, T. O., Stashchuk, O. V., 2018, Towards the theory of supranational finance. Cogent Business & Management. 5(1). <http://doi.org/10.1080/23311975.2018.1482594>.
- [4]Cherep, O. G., Zhyganova, A., 2013, Labor resources as a factor of effective activity of enterprises in modern economic conditions. Financial and credit activities: problems of theory and practice. Vol. 2: 172-178.
- [5]Dziamulych, M., Sadovska I., Shmatkovska T., Nahirska K., Nuzhna O., Gavryliuk O., 2020, The study of the relationship between rural population spending on peasant households with the main socio-economic indicators: a case study of Volyn region, Ukraine. Scientific Papers: Series «Management, Economic Engineering in Agriculture and rural development», Vol. 20(2): 217-222. http://managementjournal.usamv.ro/pdf/vol.20_2/volume_20_2_2020.pdf. Accessed on Oct. 15, 2020.
- [6]Dziamulych, M., Shmatkovska, T., Gordiichuk, A., Korobchuk, T., 2020, Estimating peasant farms income and the standard of living of a rural population based on multi-factorial econometric modeling: a case study of Ukraine. Scientific Papers: Series «Management, Economic Engineering in Agriculture and rural development», Vol. 20(1): 199-206. http://managementjournal.usamv.ro/pdf/vol.20_1/Art27.pdf. Accessed on Oct. 15, 2020.
- [7]Grishnova, O. A., 2006, The human mind. Kyiv: KNEU. 218 p.
- [8]Kachan, D. P., Shushpanov, D. G., 2003, Management of labor resources. Kyiv: Ed. House "Law Book". 258 p.
- [9]Kibanov, A. Ya., 2008, Personnel management of the organization. Moscow: INFRA-M. 638 p.
- [10]Naumko, Yu. S., 2011, Theoretical bases of formation of system of management of labor resources. Efficient economy. Vol. №5.
- [11]Nykyforenko, V. G., 2013, Personnel Management. Odessa: Atlant. 275 p.
- [12]Osipova, A. Yu., 2015, The mechanism of providing effective management of the personnel of the enterprise: Ph. D. Diss. Econ. Science. Khmelnytsky. 246 p.
- [13]Popescu Agatha, Condei Reta, 2015, Research on Romania's employment in agriculture and its position in the European Union, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 15(2): 281-289.
- [14]Popescu Agatha, 2013, Considerations on the main features of the agricultural population in the European Union, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 13(4): 213-220.
- [15]Popescu Agatha, Dinu Toma Adrian, Stoian Elena, 2018, Demographic and economic changes characterizing the rural population in Romania, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 18(3), 333-346.
- [16]Popescu, A., Matei, A., 2008, Researches concerning the feasibility of Production Integration Management in a family sericultural farm, Bulletin USAMV Cluj-Napoca, Horticulture, Vol.65 (2): 302-307.
- [17]Popescu, A., Matei, A., Sladescu, V., 2008, Research concerning production diversification and integration in order to increase productivity and competitiveness of family sericultural farms, Scientific Papers Animal Science and Biotechnologies, Vol. 41(1): 702-707.
- [18]Popescu Agatha, 2015, Research on labour productivity in Romania's agriculture, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 15(2), 271-280.
- [19]Popescu Agatha, 2016, The position of tourist and agrotourist guesthouses in Romania's accommodation structures, Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development, Vol. 16(1), 417-424.
- [20]Shmatkovska, T., Dziamulych, M., Gordiichuk, A., Mostovenko, N., Chyzh, N., Korobchuk, T., 2020, Trends in human capital formation and evaluation of the interconnection of socio-demographic processes in rural area: a case study of Volyn region, Ukraine. Scientific Papers: Series «Management, Economic Engineering in Agriculture and rural development», Vol. 20(2): 437-444. http://managementjournal.usamv.ro/pdf/vol.20_2/volume_20_2_2020.pdf. Accessed on Oct. 15, 2020.
- [21]Shmatkovska, T., Dziamulych, M., Yakubiv, V., Myshko O., Stryzheus L., Yakubiv R., 2020, Economic efficiency of land use by agricultural producers in the system of their non-current assets analysis: a case study of the agricultural sector of Ukraine. Scientific Papers: Series «Management, Economic Engineering in Agriculture and rural development», Vol. 20(3): 543-554. http://managementjournal.usamv.ro/pdf/vol.20_3/volume_20_3_2020.pdf. Accessed on Oct. 15, 2020.
- [22]Shubalyi, O. M., Rud, N. T., Gordiichuk, A. I., Shubala, I. V., Dziamulych, M. I., Potiomkina, O. V., Sereda, O. V., 2018, Personnel management. Lutsk: Lutsk NTU. 404 p.
- [23]Shubalyi, O. M., Kosinskyi, P., Golyan, V., 2020, Economic simulation of the development of agriculture in Ukraine due to integrated use of natural resources and waste. Bulgarian journal of agricultural science. Vol. 26(2): 323-331. <https://www.agrojournal.org/26/02-08.pdf>. Accessed on Oct. 15, 2020.
- [24]State Statistics Service of Ukraine. Official website: <http://www.ukrstat.gov.ua>. Accessed on Oct. 15, 2020.
- [25]Strumilin, S. G., 1982, Problems of labor economics. Moscow: Nauka. 342 p.

[26]Tsymbaliuk, I. O., Shmatkovska, T. O., Shulyk, Y. V., 2017, Tax alternatives to implement the tax capacity of internet activity in Ukraine. Financial and credit activity: problems of theory and practice. Vol. 22: 336-344. <http://fkd.org.ua/article/view/110049>. Accessed on Oct. 15, 2020.

[27]Vynogradskyi, M. D., Vynogradska, A. M., Shkanova, O. M., 2009, Personnel management. Kyiv: Center for Educational Literature. 502 p.

[28]Yakubiv, V., Boryshkevych, I., Yakubiv, R., 2019, Balanced system of economic performances as a strategy forming tool of development of agricultural enterprises in Ukraine. Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development Vol. 19(3): 669-680.

[29]Yakubiv, V., Polujk, M., 2019, Innovative methodologies for estimating the personnel of agricultural enterprises in Ukraine. Scientific Papers. Series «Management, Economic Engineering in Agriculture and Rural Development», Vol. 19(1) http://managementjournal.usamv.ro/pdf/vol.19_1/volume_19_1_2019.pdf, Accessed on Apr. 22, 2020.

[30]Yakubiv, V., Sodoma R., Hrytsyna, O., Pavlikha, N., Shmatkovska, T., Tsymbaliuk, I., Marcus, O., Brodska, I., 2019, Development of electronic banking: a case study of Ukraine. Entrepreneurship and Sustainability Issues, 7(1): 219-232. [http://doi.org/10.9770/jesi.2019.7.1\(17\)](http://doi.org/10.9770/jesi.2019.7.1(17)).

[31]Yanyshyn, Ya., Sodoma, R., Markiv, G., Lipych, L., Shmatkovska, T., Shidnytzka, G., 2020, Economic efficiency of the nuts complex business in the agriculture of Ukraine. Scientific Papers Series “Management, Economic Engineering in Agriculture and Rural Development“. Vol. 20(2): 531-536. http://managementjournal.usamv.ro/pdf/vol.20_2/volume_20_2_2020.pdf. Accessed on Oct. 15, 2020.

[32]Zavinovska, G. T., 2003, Economics of labor. Kyiv: KNEU, 2003. 300 p.

[33]Zhurakovska, I. V., Sydorenko, R. V., Shmatkovska, T. O., Brodska, I. I., 2020, Factors of influence on employment in small and medium-sized business in Ukraine. Financial and credit activity: problems of theory and practice. Vol 1(3)2: 109-119. <http://fkd.org.ua/article/view/200379/200860>. Accessed on Oct. 15, 2020.