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Assessment of labour potential renovation for trade enterprises

Abstract. *Introduction.* Trading activity is one of the most important components of the economy, affecting the quality of life, economic development and competitiveness. However, the development of trade is not possible without effective renovation of labour potential for trade enterprises. The *purpose* of this paper is to research renovation of labour potential for trade enterprises based on its phases with regard to the model of integral index. *Results.* Labour potential of trade should be considered in the context of its four phases taking into account their component structures. Therefore, the integrated assessment of the labour potential in trade was done for Lviv region of Ukraine for the years 2005 and 2010-2015 by generalising integral indicators of formation, distribution (redistribution), development and use of labour potential of enterprise, as well as by calculating taxonomic indicators of its components. The authors have established a differentiation of tempo dependencies of integral indicators at different time intervals and discovered heterohronnist phases of trade enterprises' labour potential renovation. It has been found out that special attention should be given to the effective use of labour potential, which is a prerequisite to ensure its renovation. *Conclusions.* A requirement to ensure a balanced renovation of labour potential of trade enterprises is to further the related payments, particularly in the longer term, with a possibility of application of a large number of indicators.
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Оцінка відтворення трудового потенціалу торгівлі
Анотація. У статті визначено структуру процесу відтворення трудового потенціалу. Проведено інтегральне оцінювання трудового потенціалу за фазами його відтворення. Побудовано узагальнюючі інтегральні показники рівня формування, розподілу (перерозподілу), розвитку й використання трудового потенціалу сфери торгівлі Львівської області.
Ключові слова: торгівля; трудовий потенціал; відтворення трудового потенціалу; фази відтворення трудового потенціалу; інтегральний показник; таксономічний показник.

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Оценка воспроизводства трудового потенциала торговли
Аннотация. В статье определено структуру процесса воспроизводства трудового потенциала. Проведено интегральное оценивание трудового потенциала по фазам его воспроизведения. Обобщено интегральные показатели уровня формирования, распределения (перераспределения), развития и использования трудового потенциала сферы торговли Львовской области.
Ключевые слова: торговля; трудовой потенциал; воспроизводства трудового потенциала; фазы воспроизводства трудового потенциала; интегральный показатель; таксономический показатель.

1. Introduction

Labour potential is one of the most important factors of economic development in the field of trade. Its role is becoming even more significant as renovation rates are decreasing and the requirements to the quality of renovation are increasing. Determination of needs of trade enterprises, their regional specificities, methods and sources of employment, an analysis of different reasons for the shortage of qualified personnel by certain professions or specialties and trends - all this is impossible without a statistical study of the main indices of the labour market. The presented information witnesses the vitality of the theme of investigation related to the current status and prospects of renovation of labour potential in the trade sphere.

2. Brief Literature Review

Works of both Ukrainian and foreign scientists are dedicated to methodological, methodical and applied issues, related to the problems of investigating the labour market and renovation of labour potential. D. Bohynia [4], V. Blyzniuk [3], I. Bazhan [2], O. Borodina [5], V. Diesperov [6] are among them. Foreign experience relevant to human resource development is presented within research works done by P. Partington (2002) [8], D. Torrington and L. Hall (2005) [9], J. Sullivan (2015) [10], M. Jennex (2014) [11], C. Borjigen (2015) [12], A. Jamal (2015) [13], etc. Yet, no sufficient attention is paid to the investigation of the efficient renovation of labour potential in the context of trade development. The application of the integral index model will provide for the complex evaluation of renovation of labour potential in the sphere of trade and detect specific features of changes in component structure of labour potential and to scientifically substantiate the necessity of the appropriate measures of state influence at different levels of administration.

3. The purpose of the article is to study peculiarities of the component structure of labour potential in trade (by phases of labour potential reproduction) based on the application of the integral index model.

4. Results

Modern scientific literature presents a substantiation of concepts related mainly to the intensive type of renovation of labour potential formed on the basis of the extended reproduction of population, labour force, connecting it with, the labour market and employment, working places, quality characteristics and socioeconomic policy of the state, which reduces the essence of the process to reproduction of generations. Some scholars view renovation of labour potential as a process of formation of its quantitative and qualitative elements, which characterize the joint efforts of the population to perform working activity in the corresponding historical and socioeconomic conditions in time and space (Pirozhkov, 1991). That is, the essence of this notion is given the same status as the reproduction of social product in the form of separate phases of its formation, development and use.

In our view, we should understand *renovation of labour potential in trade* as a continuous process of renovation of people's skills at work, as well as quantitative and qualitative development of structural components of labour potential, their distribution (redistribution) and use according to their scope.

Understanding of the essence of labour potential, along with the substantiation of separate stages of its renovation, requires application of special approaches to structuring the labour potential of trade enterprises. Domestic science clearly shows deep scientific interest towards this trend, which gives us a possibility to single out the main structural components which form labour potential in trade, namely demographic mobility, medical-biological mobility, educational mobility, organisational mobility, economic mobility, motivational mobility, qualification mobility, intellectual and innovation mobility, as well as cultural and labour mobility. It is also worth noting that such components as intellectual and innovation

mobility, cultural mobility and labour mobility are dominating in the structure of labour potential in the trade sphere in the modern conditions.

Selection of indices according to structural components of labour potential, which determine its phases of renovation are shown in Figure 1. We would like to emphasise that the presented indices reflect possibilities of the development of components of labour potential on the basis of the existing regional peculiarities which influence its print over the economic, social, cultural and spiritual spheres of human activity.

Thus, having singled out a number of indices for each of the components of the phases of renovation, we consider it reasonable to carry out an integral assessment of the formation, distribution (redistribution), development and use of labour potential of trade enterprises in Lviv Region of Ukraine.

Thus, the integral evaluation of labour potential by phases of its renovation will make it possible to determine the generalising integral indices related to the formation, distribution (redistribution), development and use of enterprise labour potential. An algorithm for the integral assessment is presented in Figure 2.

To determine generalising integral indices, we will apply taxonomic analysis (stage 4 of the algorithm). Its advantage is the absence of preliminary separation of subsets of strongly correlated features, which does not lead to non-correlated factors.

Such an approach provides for the calculation of taxonomic indices of development of components of labour potential in trade by phases of renovation (Table 1).

As we can see from the Table 1, the integral index of formation of trade potential in Lviv region before 2011 has a tendency to grow. Yet, we observe its decrease in the period of 2011-2015.

Such a situation was mainly due to worsening of dynamics for the indices of the demographic component, which, in turn, was caused by regional migration flows in the face of a growing number of workable population and an increase in the average life expectation. Similar trends are observed
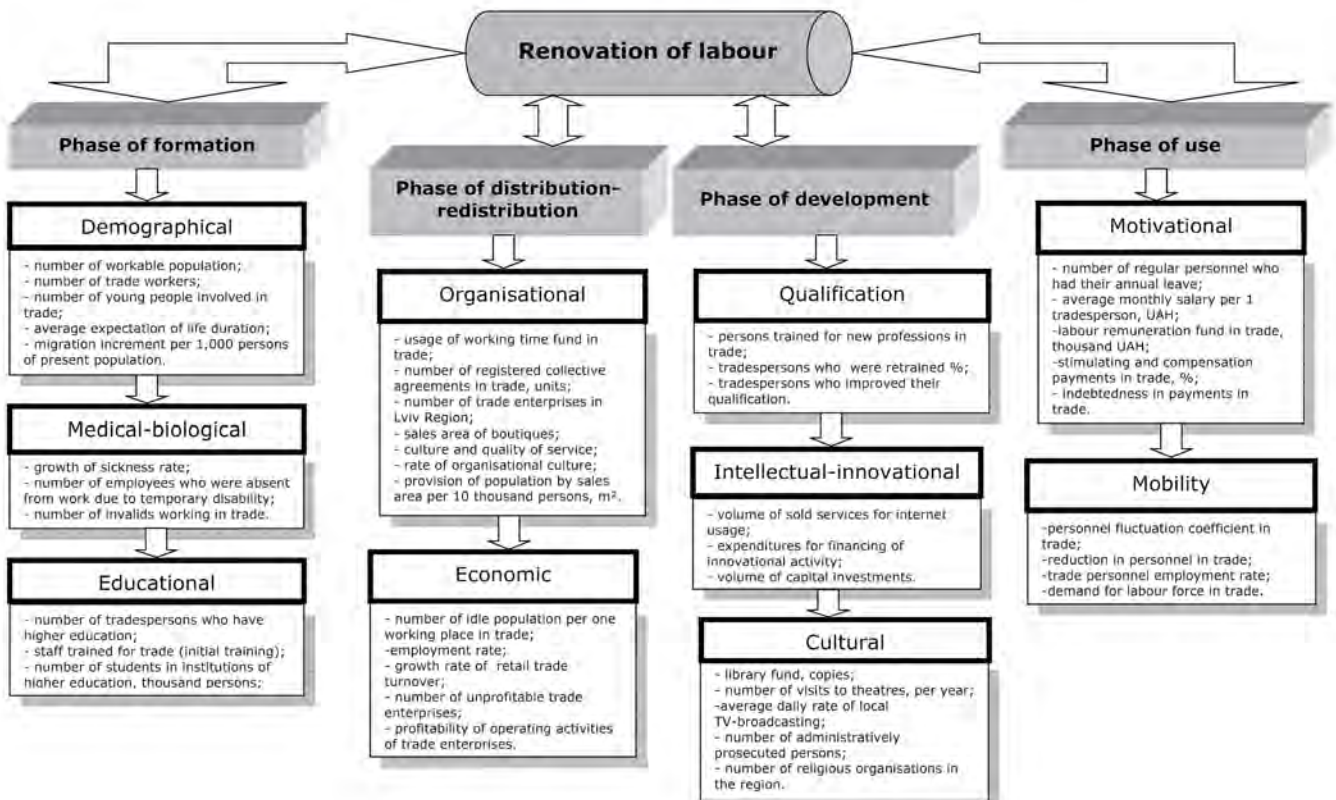

Fig. 1: **Renovation of labour potential in the sphere of trade with its distribution by phases and components**
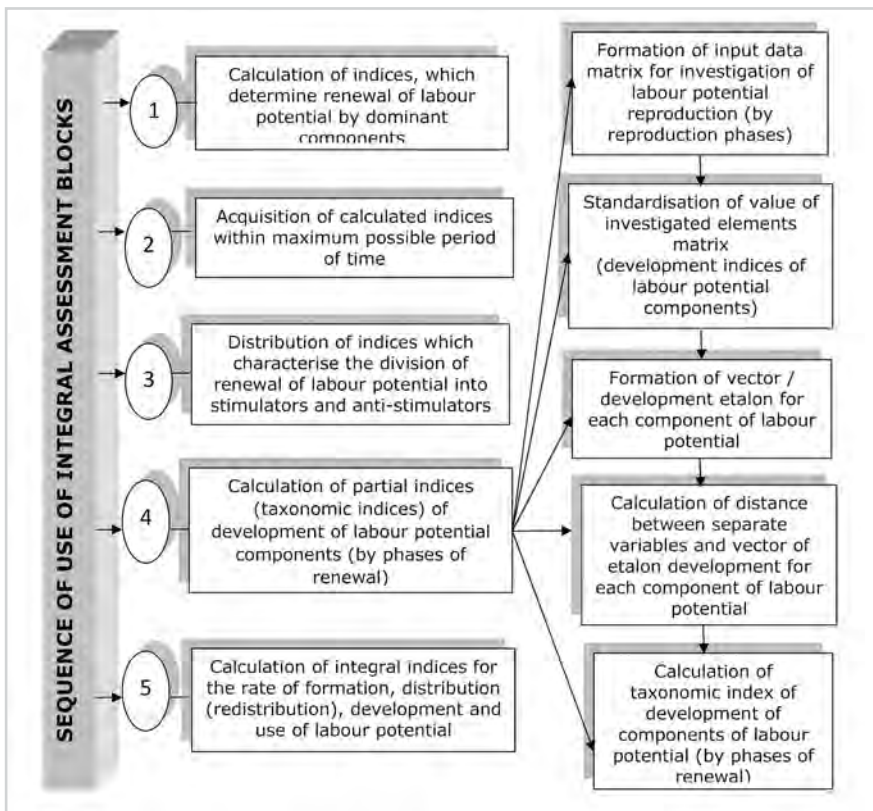Source: Compiled by the authors

Fig. 2: **Algorithm for integral assessment of labour potential by phases of renovation**
Source: Compiled by the authors

decrease starting from 2012. In 2015, the integral index was 0.24, which is by 0.03 less than in 2013 and by 0.11 less than in 2012. In general, the indicated dynamics indicates worsening of the rate of distribution (redistribution) of labour potential in trade.

That became possible due to a gradual decrease in the number of trade enterprises (starting from 2013), a decrease in the working time fund and the number of registered collective agreements in trade. Moreover, it happened simultaneously with the growth of the economically active workable population employed in this sphere. A slight growth of the taxonomic index of development of the economic component (starting from 2014) makes it impossible to clearly define its future (Figure 3).

According to the data presented in the table 1, the integral index of the rate of development of labour potential in Lviv region till 2013 had a trend towards growth. Yet, it decreased in 2014 (Figure 3). Consequently, it is important to emphasise here the positive dynamics of its taxonomic indices, which is caused by the growth of the number of tradespersons willing to improve their qualification, participate in retraining programmes and learn new job skills; the growth of expenditures on innovation activity and costs to cover Internet services (except 2014). A rather high value of the indicated integral index in 2013 gives us grounds to affirm good prospects of Lviv region regarding the development of labour potential in trade. However, its decrease in 2014 witnessed worsening of the situation.

Finally, the dynamics of the integral index of labour potential in trade in Lviv Region provides no grounds for a statement that there is a strictly expressed trend in either decrease or increase in this index. Within the period of 2012-2013, we observed a decrease in the integral index, whereas in 2014 its value increased by 0.15, if compared with 2013, and composed 0.64, which indicates improvement of the use of labour potential only by the end of the investigated period. The same dynamics is inherent to the taxonomic indices of the phase of renovation. In 2014, we observed the growth of the taxonomic index of the motivation component. This undoubtedly will have a positive impact on renovation of labour potential and the growth of the taxonomic index of mobility, which will have a negative impact on its use.

Tracking of the speed of changes in the integral indices of labour potential by phases of its renovation (Figure 4) acquires a great value in the context of checking the balance of renovation of labour potential in trade in Lviv region.

As can be seen, the differentiation of speed-wise dependences is rather noticeable, especially at certain time periods. We can observe heterochronicity of renovation phases of tradesmen labour potential, which reflects regularity of the development of separate processes and has irregular wavelike character. It has a negative impact on the renovation of labour potential as there remains certain cumulativeness between its phases.

Summing it up, we can conclude that the dynamics of the values of the integral index for the rate of labour potential in Lviv region in trade indicates the improper use of labour potential because of its inefficient formation. Therefore, when it comes to the phase of formation, it is worth paying special attention to the detection and improvement of physical and spiritual abilities of humans, needed to perform their working activity, as well as to their quantitative

with regard to the educational component, which depicts a different aspect of the process of formation of labour potential in Lviv Region. In 2013, the integral index for the formation of labour potential in trade was equal to 0.34 and, while growing in dynamics, by the end of the analysed period (2015) composed 0.40 (increasing by 0.06). Taking into account that the maximum value of the coefficient is equal to 1, the indicated dynamics shows the growth of labour potential of trade enterprises by the end of the analysed period. The growth of the value of the integral index in 2015 can be explained by the growth of taxonomic indices of the development of all components of the formation phase of labour potential (Figure 3).

Despite the slight growth of the integral indices of labour potential of trade enterprises in 2015, there are objective reasons to conclude that in the case of the unchanged demographic situation in the state in general and in Lviv region in particular, taking into consideration the situation in the field of healthcare and education, the prospects for the effective formation of labour potential in trade are endangered. This will manifest itself in the long term.

Regarding the integral index of distribution (redistribution) of labour potential in trade in Lviv Region, we observed the growth of this index before 2012. It has begun to

Tab. 1: **Dynamics of taxonomic and integral indices of labour potential in trade in Lviv region (2005, 2010-2015)**

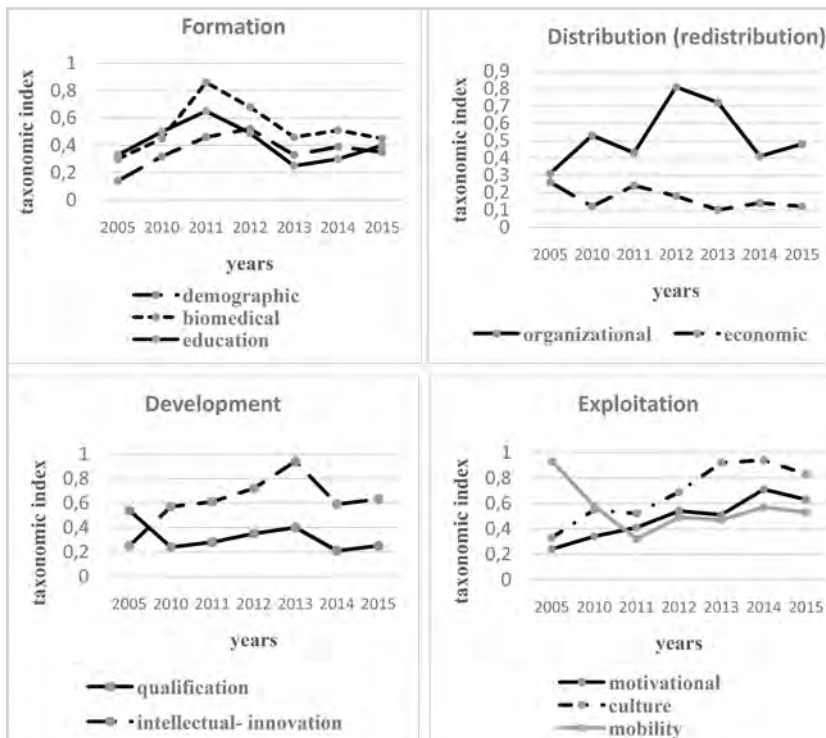| Index	Year						
	2005	2010	2011	2012	2013	2014	2015
Integral index of labour potential formation rate	0.24	0.42	0.64	0.56	0.34	0.39	0.40
Integral index of labour potential distribution (redistribution) rate	0.28	0.25	0.32	0.38	0.27	0.24	0.24
Integral index of labour potential development rate	0.35	0.42	0.45	0.56	0.70	0.49	0.51
Integral index of labour potential usage rate	0.47	0.44	0.36	0.51	0.49	0.64	0.65

Source: Compiled by the authors

Fig. 3: Taxonomic indices of development of components of labour potential in trade in Lviv Region by phases of renovation
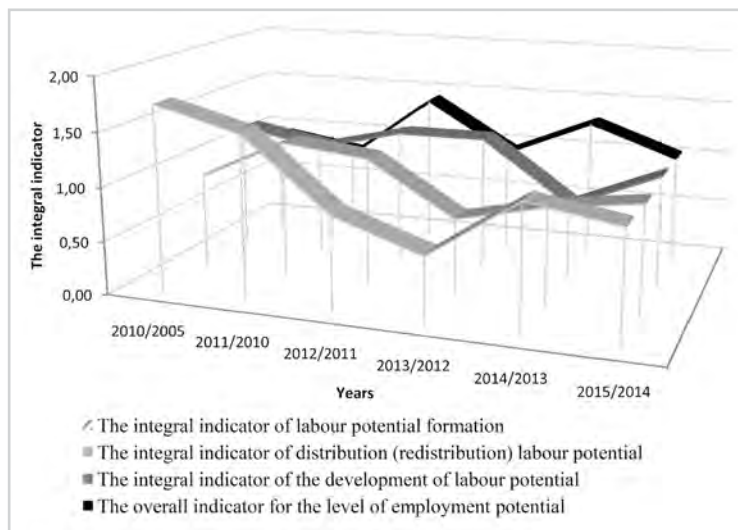Source: Compiled by the authors based on own investigations

Fig. 4: Speed-wise changes of integral indices of labour potential in trade in Lviv Region by phases of reproduction
Source: Compiled by the authors based on own investigations

and qualitative ratio, as the performance of this phase determines development of other phases of the labour potential renovation.

The negative dynamics of the integral index of the phase of distribution (redistribution) of labour potential in trade in Lviv Region can be a consequence of the established trends in the development of labour potential of the region, determined by high competition in the labour market. Thus, under the conditions of frequent oversaturation of the labour market with a high concentration of economically active workable population, constant growth of employed persons in general and the number of young people employed in the area of trade, social tension increases and the load upon the social infrastructure of the city grows. A significant number of people working in the area of trade form workable population of low qualification. For this reason the possibilities for the employee's development can be substantially complicated, along with rigorous selection of the most competitive persons. Thus, the employee falls into the medium of hard selection where better conditions of working activity and renovation of labour potential are often transformed into low-qualification employment, which brings no alternative for the region with an excess of labour. Such a situation often leads to gradual deintellectualisation and loss of previously gained abilities and skills of a higher level of qualification.

5. Conclusions

It should be indicated that the integral assessment of the phases of renovation of labour potential for Lviv Region in trade has made it possible to track the dynamics of negative processes and their elements, which will allow to make adjustments to provide for a high-quality process of renovation of their labour potential based on the principle of the lower expenditures.

The proposed approach to the calculation of the integral indices of labour potential by phases of its renovation is important and informative. Further calculations are considered to be essential, in particular those which are related to a more durable retrospective cross-section and with a possibility of application of a larger number of indices based on the official statistical data. Special attention should be paid to the efficiency of the use of labour potential, which is a precondition for its balanced renovation.

References

1. The State Statistics Service of Ukraine (2014). *Labour of Ukraine in 2013.* Kyiv: SSSU (in Ukr.).
2. Bagan, I. I. (2003). Conceptual bases of reproduction of labour potential and its development. *The formation of market relations in Ukraine, 6*(25), 92-96 (in Ukr.).
3. Blyzniuk, V. (2003). Ukraine Human capital as a factor of economic growth. *Ukraine: aspects of labour, 6,* 20-24 (in Ukr.).
4. Bogynia, D. P. (1997). *Criteria and performance assessment of motivation for enterprises of different ownership forms.* Lviv (in Ukr.).
5. Borodina, O. (2003). Human capital as the main source of economic growth. *Ukrainian Economy, 7,* 48-53 (in Ukr.).
6. Diesperov, V. (2007). *Evaluation of the labour efficiency.* Kyiv: IAE NASU (in Ukr.).
7. World Economic Forum (2015). *The Global Competitiveness Report 2014-2015.* Retrieved from http://reports.weforum.org/global-competitiveness-report-2014-2015/economies/#indexId=GCI&economy=UKR
8. Partington, P., & Stainton, C. (2002). *Managing Staff Development.* Philadelphia: Open University Press.
9. Torrington, D., Hall, L., & Taylor, S. (2005). *Human resource.* Harlow: Pearson Education.
10. Sullivan, J. (2015). *Directly Improving Business Results through Bold HR Leadership And Innovative Actions.* Retrieved from https://drjohnsullivan.com/articles/hr-strategy/slides-directly-improving-business-results-bold-hr
11. Jennex, M. (2014). A proposed method for assessing knowledge loss risk with departing personnel. VINE: *The journal of information and knowledge management systems, 44*(2), 185-209. Retrieved from http://www.emeraldinsight.com/doi/full/10.1108/VINE-07-2012-0028
12. Borjigen, C. (2015). Mass collaborative knowledge management: Towards the next generation of knowledge management studies. *Program: electronic library and information systems, 49*(3), 325-342. doi: http://dx.doi.org/10.1108/PROG-02-2015-0023
13. Khedhaouria, A., & Jamal, A. (2015). Sourcing knowledge for innovation: knowledge reuse and creation in project teams. *Journal of Knowledge Management, 19* (5), 932-948. doi: http://dx.doi.org/10.1108/JKM-01-2015-0039