

**ინოვაციური ეკონომიკა
და მართვა**

**INNOVATIVE ECONOMICS
AND MANAGEMENT**

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**უნყვეტი სწავლება უკრაინაში ეკონომიკის
ინოვაციური მოდელის ეკონომიკური და
სოციალური განვითარებაში**

**LIFELONG LEARNING IN UKRAINE IN THE
ECONOMIC AND SOCIAL DIMENSION OF
INNOVATIVE MODEL OF ECONOMY**

ABSTRACT. This paper highlights issues relating to lifelong learning, first of all, its influences in economic and social development of economy's country. The factors, which influence of lifelong learning are outlined.

It is noted that the participation of adult in lifelong learning in EU's countries and the transition economies is differences. It is observed, that among the four factors of influencing on the average wages (the Indicator of Lifelong learning, Higher Education development, Infrastructure and digital content and the Indicator of Skills), the value of lifelong learning is rather significant, but less than infrastructure and digital content. Emphasis is placed on strengthening the concept of lifelong learning in the context of the diffusion of innovative processes in the economy.

It is proposed to strengthen measures within the Ukraine's economy regarding the development of lifelong learning among of population, first of all, the employees, in particular: developing criteria for assessing prior education, mechanisms for creating, recognizing and approving non-formal types of education, determining basic skills and competencies, training personnel for the established lifelong learning system.

Key words: lifelong learning, innovative economy, benefits, employees, government, wages.

ანოტაცია. ნაშრომში განხილულია საკითხები, რომლებიც ეხება სწავლას სიცოცხლის ბოლომდე, პირველ რიგში მის გავლენას ეკონომიკის, ქვეყნის ეკონომიკურ და სოციალურ განვითარებაში. ასახულია ის ფაქტორები, რომელთა გავლენას ახდენს სიცოცხლის ხანგრძლივობაზე.

სტატიაში ძირითადი აქცენტი გაკეთებულია იმ ძირითად საკითხებზე, რომლებიც ეხება საკითხს - სწავლა სიცოცხლის ბოლომდე. გაანალიზებულია აღნიშნულ საკითხებთან დაკავშირებული ევროკავშირის ქვეყნების გამოცდილება. შემოთავაზებულია კონკრეტული ნინადადებები, რომელთა გათვალისწინება სასურველი იქნება უკრაინის ეკონომიკური პოლიტიკის დაგეგმვისათვის.

საკვანძო სიტყვები: უწყვეტი სწავლება, ინოვაციური ეკონომიკა, სარგებელი, თანამშრომლები, მთავრობა, ხელფასები.

The purpose of the article is to analyze the state of lifelong learning of employees of Ukraine, to determine the main factors that influence on it in the economic and social dimension of innovative model of economy.

Originality and value, problem statement: The processes of forming and development of the innovative, progressive society in Ukraine

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With regard to Ukraine, the situation is rather ambiguous, on the one hand, in terms of enrollment - higher education - Ukraine is among the top 15 countries in the world, but the qualitative characteristics are inadequate to the needs of the labor market. At the same time, a number of factors influence the professional development of workers, in particular, the quality of jobs, the level of remuneration, which slows down the multiplier effect of those with higher education on the final development of the national economy in Ukraine.

Materials and methods, analysis of recent research:

Lifelong learning is becoming more and more important for the countries that want to be competitive in the global knowledge economy. So the era of the 21st century is not only a new landmark development but, above all, a transformational shift to the intellectualization as the process of the saturation of the information environment by the intellectual assets[6].

A lifelong learning framework encompasses learning throughout the lifecycle, from early childhood to retirement, and in different learning environments, formal, nonformal, and informal. Opportunities for learning throughout one's lifetime are becoming increasingly critical for countries to be competitive in the global knowledge economy [7].

Analyzing the Levchenko's research, we can observe a positive tendency of increasing the indicator of lifelong learning during the analyzed period. Under the influence of the 4th Industrial Revolution, the authors identified the interdependence between the global competitiveness index and lifelong learning [7].

Besides, the countries which pay more close attention and implement the effective models of lifelong learning have more intensive pace of innovation development of their economy [4].

The issues of role of lifelong learning and the process of its dissemination in Ukraine in the economic and social dimension of innovative model of economy are quite relevant.

From standpoint of the methodology of our research in first phase of implementation, which are based on the research of foreign and Ukrainian literatures and the analysis of the results of one's own research. In our own research, we used the method of analysis and synthesis. The relationship between total average wages, the Indicator of Lifelong learning, Higher Education development, Infrastructure and digital content and the Indicator of Skills - representing the indicators were analyzed using Pearson correlation coefficient and linear regression. These indicators have been selected from OECD database, Eurostat Database, the Global Competitiveness Report, the Global Talent Competitiveness Index, the Global Information Technology Report. The analysis has been carried out using Statistica Package.

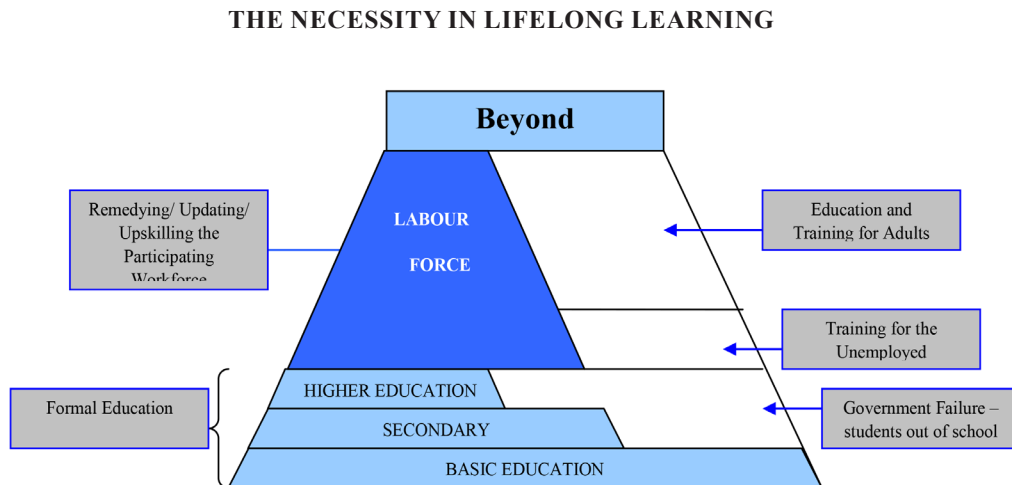
Presenting main material:

Lifelong learning crosses sectors, promoting learning beyond traditional schooling and throughout adult life (post-compulsory education). This definition is based on Delors' four 'pillars' of education for the future:

- Learning to know - mastering learning tools rather than acquisition of structured knowledge.
- Learning to do – equipping people for the types of work needed now and in the future including innovation and adaptation of learning to future work environments.
- Learning to live together, and with others – peacefully resolving conflict, discovering other people and their cultures, fostering community capability, individual competence and capacity, economic resilience, and social inclusion.
- Learning to be – education contributing to a person’s complete development: mind and body, intelligence, sensitivity, aesthetic appreciation and spirituality [2].

The need for the emergence of lifelong learning we can see in the Figure 1.

FIGURE 1.



Source: [7]

Formal education is not able to cover all population of the world throughout their life, it can give some basics skills, abilities and competencies, on base of which a person can continue their professional development.

We must affirm, that education helps reduce poverty; if developing countries do not promote lifelong learning opportunities, the skills and technology gap between them and industrial countries will continue to grow [7].

In today’s environment, the development of any economy in the world can not be imagined without stimulating the innovation orientation of such countries. In such circumstances, the basis of the innovative development of the countries of the world is high-tech production, which, in turn, causes an increase in the requirements to the level of professional qualification of employees, in particular, the value of their intellectual component. In addition, intensive detection in the process of production of technology-intensive technologies creates the need for continuous improvement of the knowledge, skills and abilities of employees, which necessitates the creation of an effective system of continuous professional development and strengthening of factors that increase the motivation of employees to constantly learn, acquire and acquire new skills.

Analyzing approaches to the implementation of the Adult Education Concept in foreign countries, we should focus on its forms in Ukraine.

The forming of period is undoubtedly much later than abroad. And, as the preliminary analysis of the effectiveness of implementation of the system of lifelong learning in Ukraine, testifies, it requires urgent solution of the following problematic aspects, which continue to hinder the implementation of the system of lifelong learning development, in particular:

- slowing down fundamental changes in education and the economy as a whole on the basis of innovation and integration transformation, especially in those sectors that need to attract intellectual resources;
- lack of legal framework regarding clear regulation of the state mechanism of its implementation;

- increasing disparities between the needs of the labor market and graduates of educational institutions in the country;
- low level of participation of employers in the system of continuous education;
- reduction of expenditures on education from the state budget;
- reduction of qualification skills and professional knowledge of the teaching staff;
- lack of reliable information on the real employment of young professionals;
- lack of clear interaction between all stakeholders (enterprise, state, universities, public institutions) in the training of young professionals and further constant updating of their knowledge and skills;
- increasing the tendency of unequal access to quality education;
- reducing incentives for students and the working population to acquire new knowledge and competences.

The increasing relevance of lifelong learning in today’s world is the need to increase the skills of employees in the face of fierce competition in the labor market.

Raising the level of qualifications is becoming a necessity. Is the primary factor in the improvement of the quality of human capital, which is the main condition for socio-economic development [1].

In the literature of subject the need for adult education is:

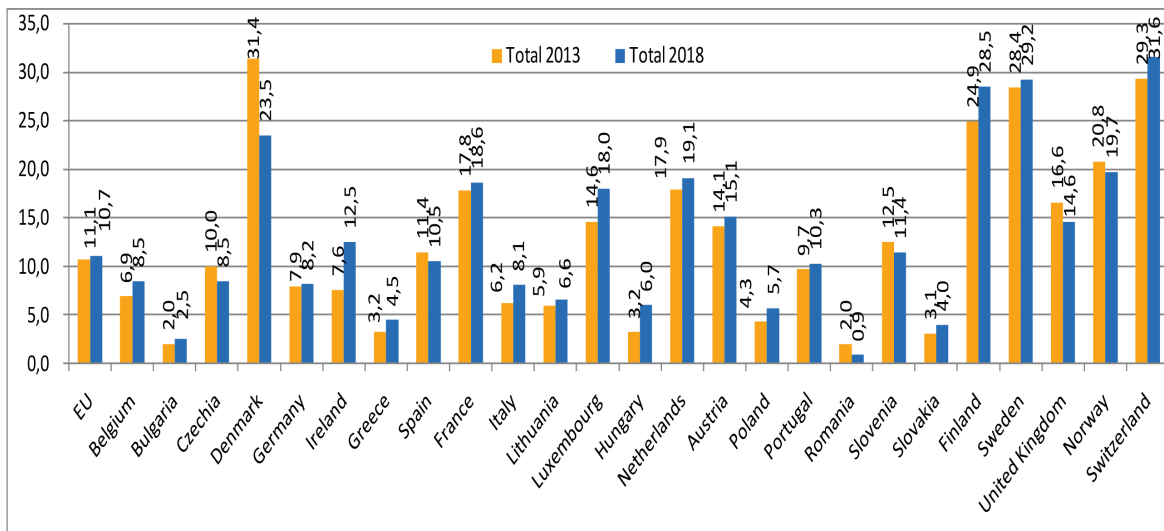
1. the need to supplement the qualifications,
2. the need for skills development,
3. the need for retraining,
4. willingness to participate in social life,
5. curiosity for the world,
6. innovation and the rapid development of science and technology [8].

Further, we consider it appropriate to analyze the adult participation in lifelong learning in some countries of the world, in particular in the EU (Fig. 2).

As an example, Figure 3 shows the dynamics of adult participation in lifelong learning in the last 5 years in the EU’s country.

FIGURE 2.

**ADULT PARTICIPATION IN LIFELONG LEARNING
(% OF POPULATION AGED 25 TO 64) IN 2013 AND 2018 YEARS**



Source: Authors’ own elaboration

Most countries have increased their coverage of lifelong learning over the past few years: from 7.6% to 12.5 % (Ireland), from 6.2 % to 8.1 % (Italy), from 6.9% to 8.5 % (Belgium) etc. But the EU-28 in whole the participation in lifelong learning is decreased.

Before, in comparing with 2010 year we could observed the result of increasing too: from 5% to 18.7 % (France), from 5.5 % to 9.8 % (Portugal), from 9.3% to 10.9 % (the EU-28 in whole) etc [3].

Unfortunately, we should note, that in “transition economies” lifelong learning is less popular. Most countries are only beginning to develop the mechanism of its provision and conditions for its development. In such countries is observed the adherence to the traditional education (the coverage of the population by higher education is the highest in the world).

Economic factors such as income and employment play an important part in lifelong learning. They can provide people with reasons for joining learning programmes, as well as featuring in policy decisions on financing provision. The direct economic effects of lifelong learning potentially include impacts on earnings, on employability, and on the wider economy.

As confirmation of the hypothesis of importance of lifelong learning we consider it appropriate to provide quantitative data of calculations, in particular to carry out correlation-regression analysis.

Thus the authors calculated the relationship between economic benefits (personal, in wage) and lifelong learning, using the variables of the average total wages, the indicator of lifelong learning, higher education development, infrastructure and digital content and the indicator of skills. As result they obtained the following conclusions: the value of the pair correlation is more than 0.5, which is evidence of a linear correlation between variables, namely: the strongest relationship is observed between the total average wages and the infrastructure and digital content (0.841), total average wages and Lifelong learning ($r = 0.777$); total average wages and Skills ($r = 0.739$); ($r = 0.8158$) and notable correlation between total average wages and HEd ($r = 0.601$). It should be noted that the correlation coefficient of the relationship between total average wages and HEd is lower than the correlation coefficient of the relationship between total average wages and Lifelong learning because of the process of complement and challenge to the traditional institutions, such as: private sector trainers, virtual universities, international providers, corporate universities, educational publishers, content brokers, and media companies [5].

As we can observe the stated below scatter plots from the Figure 3, the relationship between all variables is linear, there is normal distribution.

So, from the Figure 3, we can see, that mean value of Lifelong learning is 60,30. The lowest value of Lifelong learning among the countries is 36,40 score (minimum), the highest is 80,55 score (maximum). The highest value is on 54,15 score higher than the lowest value (dimension). The standard deviation is 12,30 ($12,30 * 2 = 24,6$). Consequently, the variance, the square of the standard deviation, is $(10.01) * 2 = 20.02$. The asymmetry and the coefficient of variation are given with the corresponding standard errors.

The mean value of Readiness subindex (Skills) is 5,65. The lowest value of Readiness subindex (Skills) among the countries is 4,40 score (minimum), the highest is 6,50 score (maximum). The highest value is on 2,10 score higher than the lowest value (dimension). The standard deviation is 0,45.

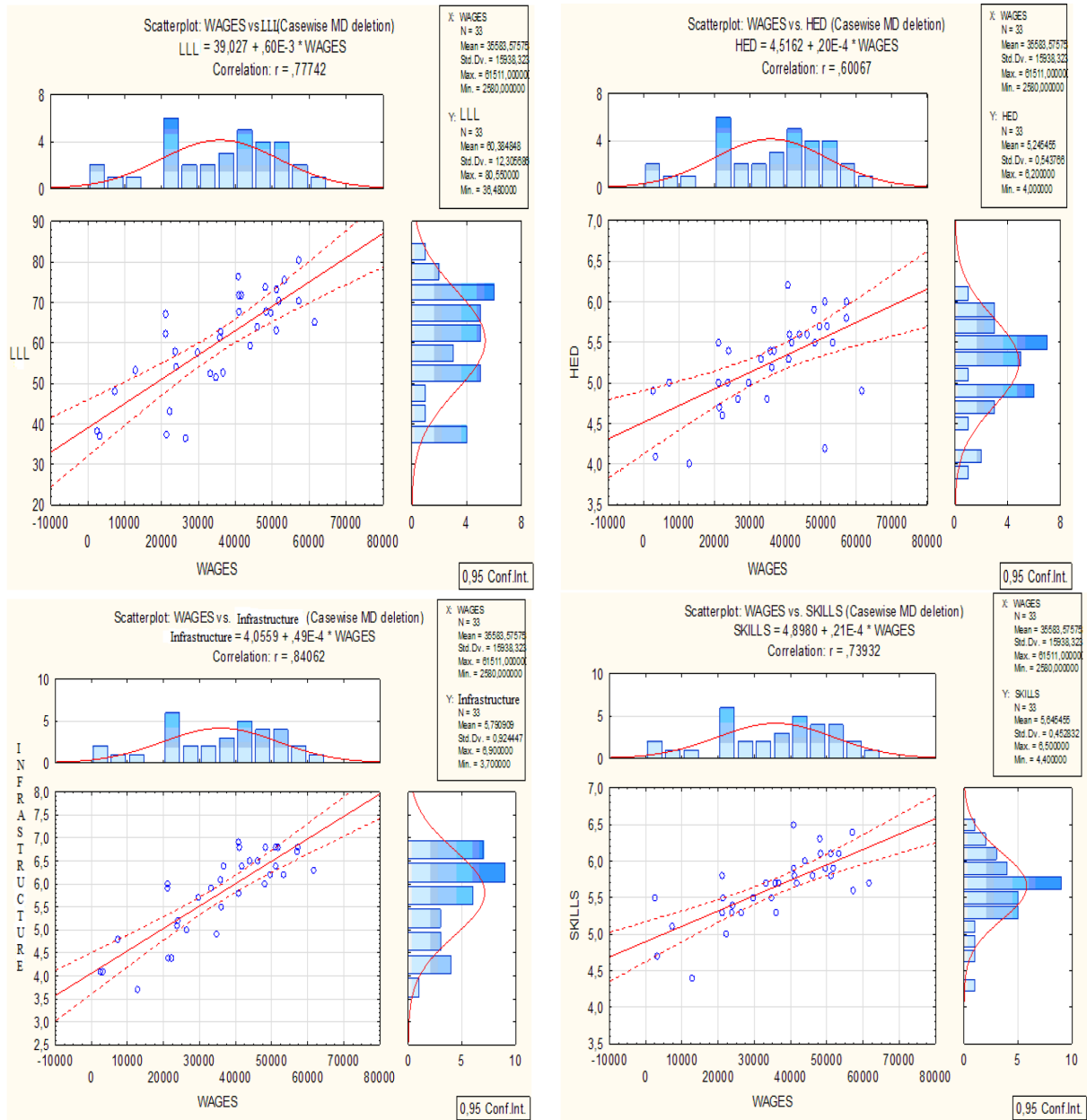
The mean value of Global innovation index (subindex high education) is 5,25. The lowest value of Global innovation index (subindex high education) among the countries is 4,00 score (minimum), the highest is 6,20 score (maximum). The highest value is on 2,20 score higher than the lowest value (dimension). The standard deviation is 0,54.

And the mean value of Infrastructure - Readiness subindex (Infrastructure and digital content) is 5,79. The lowest value of Infrastructure - Readiness subindex (Infrastructure and digital content) among the countries is 3,70 score (minimum), the highest is 6,90 score (maximum). The highest value is on 3,20 score higher than the lowest value (dimension). The standard deviation is 0,92 [5].

Thus, among the four factors of influencing on the average wages (the Indicator of Lifelong learning, Higher Education development, Infrastructure and digital content and the Indicator of Skills), the value of lifelong learning is rather significant, but less than infrastructure and digital content. It could be explained through the process of comprehensive digitization of the all sphere of innovative economy and the inability to be engaged in lifelong learning without infrastructure and digital content.

FIGURE 3.

LINEAR REGRESSION MODEL



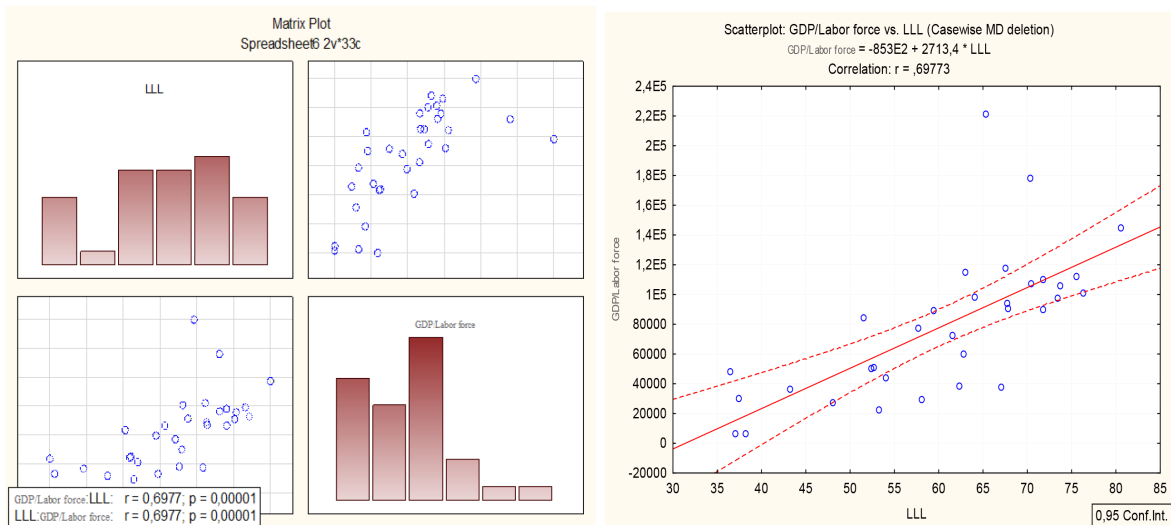
Source:[5]

Note: LLL- Lifelong learning, Skills- Readiness subindex (Skills), HED - Global innovation index (subindex high education), Infrastructure - Readiness subindex (Infrastructure and digital content)

As we can see from Figure 4, the value of the pair correlation is more than 0.5, which is evidence of a linear correlation between variables, namely: the notable relationship is observed between the GDP/Labor force and the State of Lifelong learning (0.697), that is, in terms of innovative model of economy the state of development of lifelong learning influences on the level of GDP/labor force. It explains the fact that the developed countries are increasingly focusing on the development of lifelong learning through the dissemination and implementation the lifelong learning’s policy [5].

FIGURE 4.

LINEAR REGRESSION MODEL



Source:[5]

Note: LLL- Lifelong learning, GDP/Labor force - Gross domestic product / Labor force (ages 15 and older)

CONCLUSIONS:

Thus, the analysis allows us to conclude that in the conditions of the modern information society, achieving human life success is impossible without the constant replenishment of educational capital. In addition, the continuous professional development of workers has a positive effect on the socio-economic development of the country, contributing to its competitiveness. Therefore, in the context of the formation of an innovative economy in Ukraine, it is extremely important to support the concept of lifelong learning.

Lifelong learning in Ukraine at the national level should be defined as a full-fledged educational sphere, with properly organized monitoring and quality control and ensuring the equal recognition of various forms of education.

It is urgent to develop an appropriate program in Ukraine for a lifelong education system for all segments of the population, which included: developing criteria for assessing prior education, mechanisms for creating, recognizing and approving non-formal types of education, determining basic skills and competencies, training personnel for the established lifelong learning system.

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