

The Impact of Education on the Income of the Economically Active Population in the European Union

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Abstract— In this article, we confirm that education is the main social catalyst for people from different social backgrounds. There is a direct connection between the conscious birth of children and the education of people. The higher the level of education, the higher the income of workers, the higher the labor productivity and speed of economic development, the higher the intensity of export. We found that over the past ten years, the population in the fears of the European Union has increased by an average of 3%. Along with the increase in the number and density of the population, the employment of people with higher education (level 5-8) is steadily increasing. It is important to say that in Europe as a whole, the trends we have identified characterize the steady demand of the labor market for raising the level of education of labor resources. Based on Eurostat data, we calculated that the average level of personnel costs in 2017 in the European Union was on average 37.4 thousand euros. The difference between the maximum level of personnel costs in the field of electricity, gas, steam, the highest value of which is noted in Austria and the minimum - in the area of accommodation and catering services in Bulgaria is 30 times. For the same period of time, people receive a very differentiated income and have different motivation to work, as well as different opportunities to recover physical and mental costs. Despite the general growth trend in the share of educated economically active people in the countries of the European Union, about 9-10% of them are poor people. Our correlation-regression analysis showed that the more educated people, the higher the average level of their costs and the fewer people who can be classified as “poor”. Thus, education is the main factor in improving the competitiveness of any country and is the main wealth of the people.

Keywords— *education, employment, personnel costs, income, poverty*

I. INTRODUCTION

The problem of improving the quality of knowledge, productivity growth, development of innovation in the economy is closely linked to the growth of the level of education. The level of education that children receive is influenced by a variety of factors, including the level of parents' income, the possibility of providing children with basic and additional education, the diversity of scientific and cultural development, sports training, health, and many

other factors [8]. In recent years, in many European countries, the demographic crisis has contributed to a decrease in the natural growth of the local population, but it was compensated for by the successful influx of migrants, as well as by young people who came to Europe for education. The educational level of migrants often differs significantly from what is required on the labor market in the European Union. This is a multifaceted problem and therefore requires a significant number of in-depth studies, which will be the subject of our further attention. In this paper we aim to analyze the relationship between the level of education and incomes of people living in the countries of the European Union. To do this, we use monographic, statistical and analytical research methods, as well as correlation and regression modeling (both pairwise and multifactorial).

II. LITERATURE REVIEW

According to Austrian scholars Fessler P. and Schneebaum A., “visiting children in preschool educational institutions frees parents for productive work,” and “second-generation migrants (as their authors call disadvantaged groups with less educated parents) gain more benefits in terms of education and work” [3], because it contributes to the development of the effect of socialization of preschoolers and leveling up the quality of preparing children for learning from different social sectors of society.

American scientists Ramamurthy S., Sedgley N. write about the quality of education and differentiation of the level of remuneration in their work. They write that “low-quality education can, on average, lead to a decrease in the accumulation of human capital,” in addition, they note that “black people have less access to good quality educational institutions compared to white people. This link provides a new explanation for the differences in black-and-white education and the resulting wage gap”.[12]

Individual labor income, according to Italian scientists Le Mogli M., Mencarini L., Rapallini C., is “the moderator of the trajectories of the well-being of parents before and after the birth of their first child in Germany” [9]. The authors found that there is a relationship between income levels and first births. At the same time, they proved that within three years after the birth of a child “among better

educated parents, people with higher income experience a more dramatic decline in their subjective well-being".

In the work of Indian researchers Agrawal T., the authors explore the relationship of education with income levels. As a result, it was found that "the higher the level of education, the higher the income of employees."

This is confirmed by the authors as a result of a comparative analysis of the level of labor productivity and income: "a difference of 30 percent for employees of enterprises and 40-50 percent for workers of agriculture" [1].

It is necessary to fully agree with the opinion of the Italian researchers Odoardi I., Muratore F. that "the influence of human capital through improved education contributes to economic recovery by increasing labor productivity" [11].

In the work of German scientists, it is noted that due to the "endogenous depreciation of human capital, the effective retirement age is often lower than the statutory retirement age, which leads to the permanent disability of older workers." The authors also state that "lifelong learning is not able to even out economic and statutory retirement," but "well-designed education allows more workers to engage in highly productive activities at the end of their working life, which will reduce social transfers or early switch to a very low paid job" [5].

According to other German scientists, "the growth in employment and education of men contributed to the increase in income inequality", "the growth of employment and the level of education of women reduces the demographic behavior of the family"[15]. The global trend associated with late decision-making by families about the birth of children, as well as the growth of the level of education and reduced fertility are natural phenomena of our time, since people do not want to experience significant inequality in their own incomes.

The influence of the family on the acquisition of education is of paramount importance. A tremendous conclusion about this was made by Italian scientists Guetto r., Panikella N., who write that "children living in single-parent or two cohabitant households of biological parents have worse educational outcomes than children of two married biological parents", We agree with the authors that " children of highly educated parents are subject to more severe penalties if they consider access to the most prestigious academic program" [6].

The influence of a more educated workforce on export intensity was proven in their work by Mulliqi A., Adnett N., Hisarcclilar M.. They write that "the influence of the share of workers with higher education, many years of experience and the price of labor are interconnected" [10].

According to Haghighi N.F., Bijani M., Parhizkar M., the development of human resources in Iran is influenced by 6 key factors: "1) migration; 2) the absence of nativism; 3) propensity for foreigners; 4) gender imbalance; 5) lack

of equity in the allocation of resources; 6) the absence of meritocracy. " The authors claim that "the closeness of the relationship between these factors is 65.5%" [7].

Zhang X. writes in her work about the need for increasing government spending for rural youth in China, which "in the general equilibrium model in the short term, public spending on public education crowds out the accumulation of industrial capital, but in the long run they will have their good effect" [16]. Obviously, this is connected with the urbanization of the population and with the prospect of the overflow of labor resources from the agricultural sector and from the countryside to the industrial sector and the city. State investment in education of rural students in China is an investment in the future of the country.

The interrelation of higher educational achievements with the growth of educational mobility and a steady position of labor resources in the labor market is investigated in their work by a group of German scientists Saniter N., Schnitzlein D., Siedler T. [13].

In the work of the Netherlands scientists Boi T., Eller CC., Van de Werfhorst HG, DiPrete TA (2019) presents the results of a study in France, Germany and the United States, which shows that "workers have higher earnings when they are engaged in occupations which correspond to their level of education and field of study" [2]. The authors presented evidence that the level of remuneration is higher where the education of workers is professionally consistent with the positions held.

According to English scientists Gregg P., Macmillian L., Vittori C. (2019), who, arguing about the role of education, have established the relationship between "parents' income and sons' income, and parents' income is a strong predictor of success in the children's labor market" [4].

However, among the many studies on the topic of education, only Italian scientists Virdia S., Schindler S. say in their work that "raising the level of education does not affect the overall level of social stratification in attaining professional status"[14]. This conclusion of scientists is rather relative, one should not agree with it completely, since it is education that is the most important social elevator that contributes to the multifaceted positive development of the personality, the increase in individual incomes and the growth of the economy.

A review of the literature allows us to draw ten key conclusions:

1. Education is the main social catalyst for people from different social strata of society.
2. There is a direct relationship between conscious parenting and the education of people.
3. The higher the level of education, the higher the income of employees.
4. The higher the level of education of people, the higher the productivity and speed of economic development.

5. The higher the level of education of people, the higher the intensity of exports.

6. Lifelong learning is not able to equalize economic and statutory retirement, but well-designed education allows more workers to engage in highly productive activities at the end of their working life, which will reduce the level of social transfers or early switch to very low-paid jobs.

7. Public investment in the education of rural schoolchildren is an investment in the country's future.

8. Employees have higher earnings when they are engaged in professions that are appropriate to their level of education and field of study.

9. There is a very close relationship between the income of parents and the income of sons, and the income of parents is a strong predictor of success in the labor market for children.

10. Raising the level of education does not affect the overall level of social stratification in attaining professional status

III. STATISTICAL DATA ANALYSIS

The population in the fears of the European Union over the past ten years has increased by an average of 3%. The highest rate of population growth was observed in Luxembourg - by 26.4%, in Malta - by 17.3%, in Cyprus - by 14%, in Iceland - by 13.3%, in Norway - by 13%, in Switzerland - by 13%, in Ireland - by 11%, in the UK - by 8.5%, in Liechtenstein - by 8.4%, in Belgium - by 7.7%, in Austria - by 6.5%, in Denmark - by 6.1%, in France - by 5.2%, in the Netherlands - by 5%, in Finland - by 4.5%, in Spain - by 4.2%, in Italy - by 3.9%, in The Czech Republic - by 3.5%.

Along with population growth, there is an increase in population density in the countries of the European Union. The highest population density is observed in Malta (1,495 people per 1 kilometer), then in the Netherlands (501 people), in Belgium (374 people), Great Britain (272 people), Liechtenstein (240 people), in Germany (243 people), Luxembourg (231 people), Switzerland (212 people), in Italy (203 people), in Denmark (137 people), in the Czech Republic (137), in Poland (124), in Portugal (113) (Figure 1).

Together with an increase in the number and density of the population, the proportion of the population with a higher education at the age of 30 to 34 years is steadily increasing. If in 2007 the average value of this indicator in the countries of the European Union was 30%, in 2018 it increased to 40.7%.

The highest proportion of educated people with higher education at the age of 30-34 in 2018 was observed in Lithuania (57.6%), in Cyprus (57.1%), in Ireland (56.3%), in Luxembourg (56, 2%), in Sweden (52%), in the Netherlands (49.4%), in Denmark (49.1%), in the UK (48.8%), in Belgium (47.6%), in Estonia (47.2%), in France

(46.2%), in Poland (45.7%), in Greece (44.3%), in Finland (44.2%), in Latvia (42.7%) , in Slovenia (42.7%) and in Spain (42.4%) (table 1).

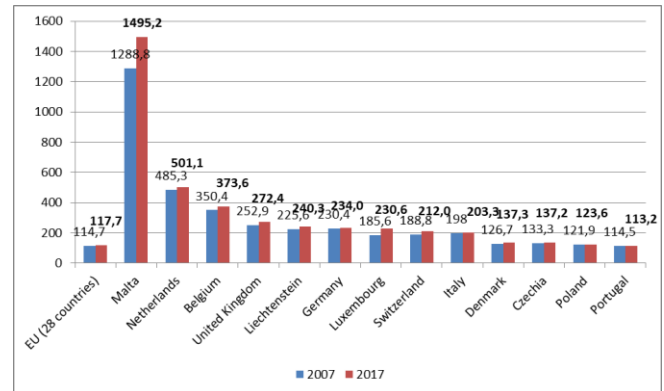


Fig. 1. Population density in the most densely populated countries of the European Union

TABLE I. HIGHER EDUCATION AMONG THE POPULATION AGED 30 TO 34 YEARS (IN PERCENT) [17]

Geo \time	2007 y.	2010 y.	2015 y.	2018 y.	2018 y. to 2007 y. (+/-)
EU (28 countries)	30,0	33,8	38,7	40,7	+10,7
Lithuania	36,4	43,8	57,6	57,6	+21,2
Cyprus	46,2	45,3	54,5	57,1	+10,9
Ireland	45,2	51,4	53,8	56,3	+11,1
Luxembourg	35,3	46,1	52,3	56,2	+20,9
Sweden	41,0	45,3	50,2	52,0	+11,0
Netherlands	34,9	41,4	46,3	49,4	+14,5
Denmark	38,1	41,2	47,6	49,1	+11,0
United Kingdom	38,3	43,1	47,9	48,8	+10,5
Belgium	41,5	44,4	42,7	47,6	+6,1
Estonia	33,5	40,2	45,3	47,2	+13,7
France	41,4	43,2	45,0	46,2	+4,8
Poland	27	34,8	43,4	45,7	+18,7
Greece	26,3	28,6	40,4	44,3	+18,0
Finland	47,3	45,7	45,5	44,2	-3,1
Latvia	25,7	32,6	41,3	42,7	+17,0
Slovenia	31,0	34,8	43,4	42,7	+11,7
Spain	40,9	42,0	40,9	42,4	+1,5
Austria	20,9	23,4	38,7	40,7	+19,8
Slovakia	14,8	22,1	28,4	37,7	+22,9
Germany	26,5	29,7	32,3	34,9	+8,4
Malta	20,8	22,1	29,1	34,2	+13,4
Croatia	16,8	24,5	30,8	34,1	+17,3
Czechia	13,3	20,4	30,1	33,7	+20,4
Hungary	20,6	26,1	34,3	33,7	+13,1
Bulgaria	26,0	28,0	32,1	33,7	+7,7
Portugal	19,5	24,0	31,9	33,5	+14,0
Italy	18,6	19,9	25,3	27,8	+9,2
Romania	13,9	18,3	25,6	24,6	+10,7

The lowest level of education of the population is in Romania (24.6%), Italy (27.8%), Portugal (33.5%), Hungary (33.7%), the Czech Republic (33.7%) and other countries.

From the data of table 1 it follows that only in Finland for the period from 2007 to 2018 the level of education of the population in the age of 30-34 decreased by 3.1 percentage points. The highest rate of growth in the level of education of people during this period occurred in Slovakia - by 22.9 percentage points, in Lithuania - by 21.2 percentage points, in Luxembourg - by 20.9 percentage points, in the Czech Republic - by 20.4 pp, in Austria - by 19.8 pp, in Poland - by 18.7 pp and in other countries.

TABLE II. YOUNG PEOPLE NEITHER IN EMPLOYMENT NOR IN EDUCATION AND TRAINING (15-24 YEARS) - % OF THE TOTAL POPULATION IN THE SAME AGE GROUP [17]

Geo \time	2007 y.	2010 y.	2015 y.	2018 y.	2018 y. to 2007 y. (+/-)
Italy	16.1	19.0	214	19.2	+3.1
Bulgaria	19.1	21.0	19.3	15.0	-4.1
Romania	13.3	16.6	18.1	14.5	+12
Greece	11.3	148	17.2	14.1	+2.8
Croatia	12.9	15.7	18.1	13.6	+0.7
Cyprus	9.0	11.7	15.3	13.2	+4.2
Spain	12.0	17.8	15.6	12.4	+0.4
France	10.7	12.7	12.0	11.1	+0.4
Hungary	11.5	12.6	11.6	10.7	-0.8
United Kingdom	11.9	13.6	11.1	10.4	-1.5
Slovakia	12.5	14.1	13.7	10.2	-2.3
Ireland	9.5	19.4	14.3	10.1	+0.6
Estonia	8.9	14.0	10.8	9.8	+0.9
Belgium	11.2	10.9	12.2	9.2	-2.0
Poland	10.6	108	11.0	8.7	-1.9
Finland	7.0	9.0	10.6	8.5	+1.5
Portugal	11.2	11.4	11.3	8.4	-2.8
Lithuania	7.1	13.2	9.2	8.0	+0.9
Latvia	11.9	17.8	10.5	7.8	-4.1
Malta	11.5	9.5	10.5	7.3	-42
Denmark	4.3	6.0	6.2	6.8	+2.5
Austria	7.4	7.4	7.5	6.8	-06
Slovenia	6.7	7.1	9.5	6.6	-0.1
Sweden	7.5	7.7	6.7	6.1	-1.4
Germany	8.9	8.3	6.2	5.9	-3.0
Czechia	6.9	8.8	7.5	5.6	-1.3
Luxembourg	5.7	5.1	6.2	5.3	-0.4
Netherlands	4.3	4.8	4.7	4.2	-0.1

A separate topic is the problem of non-compliance of the level of education of youth with the requirements of the labor market. Among the countries of the European Union, the proportion of young people who are not employed either

in the economy or belonging to the number of students (in the sphere of education and training (aged 15–24 years)) is growing (Table 2).

The growth in the proportion of young people not engaged in education and training, or in employment, has a positive trend in Italy (by 3.1 percentage points), in Romania (by 1.2 percentage points), in Greece (by 2.8 pp), in Croatia (by 0.7 pp), in Cyprus (4.2 pp), in Spain and France (0.4 pp each) in Ireland (by 0.6 percentage points), in Estonia (0.9 percentage points), in Finland (1.5 percentage points), in Lithuania (by 0.9 percentage points), in Denmark (by 2.5 pp).

The reduction in the proportion of young people not engaged in education and training, or in the employment sphere, was decreasing in Malta, Latvia, Bulgaria, Germany, Portugal, Slovakia, Belgium, Poland, Great Britain, Sweden, in the Czech Republic and in other countries.

The most important trend of recent years in the field of education of the population in the countries of the European Union is that there is a steady upward trend in the employment of people with higher education (levels 5-8). If in 2009 the value of this indicator was 28%, then by 2018 it increased to 35.1% (Figure 2).

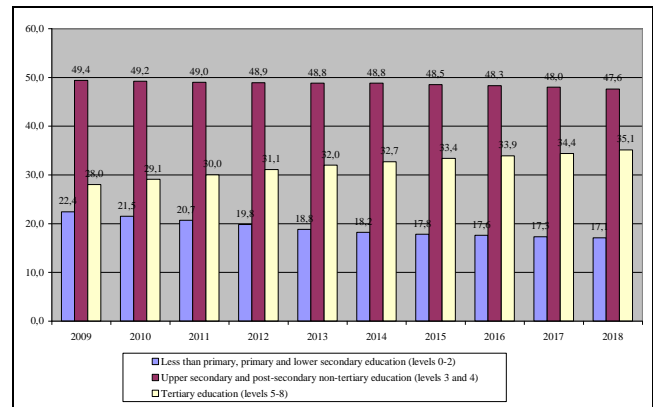


Fig. 2 The educational level of the economically active population in countries European Union for the period from 2009 to 2018 (in percent) [17]

From the data presented in Figure 2, it follows that in the countries of the European Union, the proportion of people with less than primary, primary and lower secondary education (levels 0-2) decreased from 22.4% in 2009 to 17.1% in 2018 (by 5.3 percentage points).

The share of the employed population with secondary and postgraduate education (levels 3 and 4) also tended to decrease from 49.4% in 2009 to 47.6% in 2018 (1.8 percentage points). In general, these trends characterize the steady demand of the labor market for raising the level of labor force education.

Another problem characteristic of the modern labor market is that the number of working poor people in the European Union tends to increase among working people. The proportion of poor working people aged from 18 to 64 years old has a steady upward trend, especially from 2014 to

2016: in 2009 this figure was equal to 8.4%, in 2010 - 8.3%, in 2013 - 9%, in 2014 - 9.5%, in 2015 - 9.6%, in 2016 - 9.6%, in 2017 - 9.4%. (Figure 3)

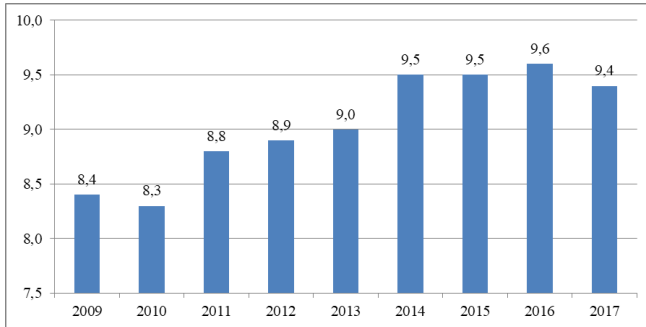


Fig.3 Poverty risk level among working people aged 18–64 [17]

It is important to say that the level of personnel costs in 2017 in the European Union was on average equal to 37.4 thousand euros. The highest value of this indicator was noted in Sweden - 59.6 thousand euros, in Denmark - 58.8, in Belgium - 58.4, in Luxembourg - 57.6, in Austria - 54.5, in Ireland - 53, 8, in France - 53.6, in Iceland - 53.1, in the Netherlands - 52.7, in Finland - 46.1, in Germany - 43.4, in the UK - 42.3, in Italy - 41.5.

The lowest level of personnel costs is in Bulgaria - 8.5 thousand euros, in Romania - 9.9, in Latvia - 11.1, in Hungary - 14.1, in Poland - 14.2, in Croatia - 14.6, in Slovakia - 16.8, in Estonia - 17.5, in the Czech Republic - 18, in Portugal - 21.7, in Greece - 23.3, in Slovenia - 25.2, in Spain - 36.7 thousand euros.

The average growth rate of personnel costs among the 28 countries of the European Union for the period under review is 10.2%. The highest growth rate of personnel costs is noted in administrative support activities - by 12%, in real estate operations - by 13.9%, in wholesale and retail trade - by 10.8%, in electricity, gas, steam - by 17.6%, in the production sector - by 12%, in the mining industry - by 14.9%.

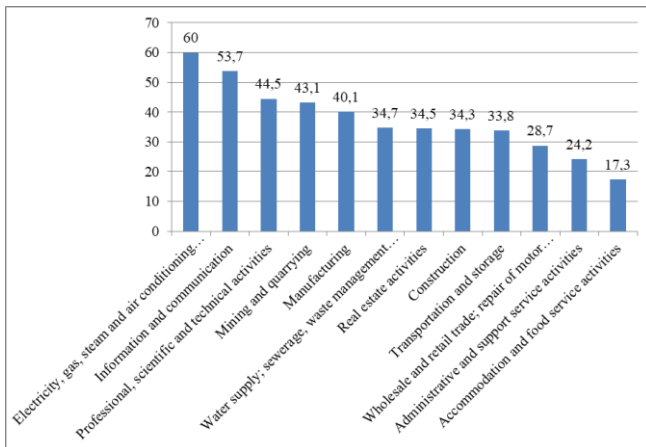


Fig. 4 The level of personnel costs by industry average of the countries of the European Union in 2017 (thousand euros per person) [17]

The highest level of remuneration by industry in the European Union is in the field of electricity, gas, steam - 60 thousand euros per employee, in the field of information and communication - 53.7%, in professional, scientific and technical activities - 44, 5 thousand euros, in the field of mining - 43.1 thousand euros, in the field of production - 40.1 thousand euros, in the field of water supply, sewage, waste disposal and restoration work - 34.7 thousand euros.

The lowest level of personnel costs is in the area of accommodation and catering services - 17.3 thousand euros, in the area of administrative support activities - 24.2 thousand euros, in the wholesale and retail trade - 28.7 thousand euros, in transportation and storage - 33.8 thousand euros, in the construction sector - 34.3 thousand euros, in real estate transactions - 34.5 thousand euros.

If in the field of electricity, gas, steam the average in the European Union the level of personnel costs is on average 60 thousand euros per month, in this sector of the economy among the countries of the European Union the highest level of personnel costs is noted in Austria - 117.3 thousand euros, in Belgium - 115.8 thousand euros, in Luxembourg - 94.3 thousand euros, in Ireland - 84.3 thousand euros, in Sweden - 83.2 thousand euros. The lowest level of personnel costs in the field of electricity, gas, steam is noted in Romania - 14.6 thousand euros and in Bulgaria - 15.1 thousand euros.

As already noted above, the lowest level of personnel costs in the countries of the European Union is observed in the area of accommodation and catering services - 17.3 thousand euros. At the same time, among the 28 countries the lowest value of this indicator is noted in Bulgaria - 3.9 thousand euros, in Romania - 4.9, in Lithuania - 6.2, in Latvia - 6.4, in Hungary - 6.7, in Slovakia - 7.7 thousand euros.

Thus, the difference between the maximum level of personnel costs in the field of electricity, gas, steam, the highest value of which is noted in Austria - 117.3 thousand euros and the minimum - in the area of accommodation and catering services in Bulgaria - 3.9 thousand euros, is 30 times. For the same period of time, staff costs differ dramatically.

In order to identify the factors that influence the "Percentage of people with higher education (levels 5-8)", we built various correlation-regression models, in which such factors as homicide rate, number of thefts, population density, as well as the percentage of working poor people and an indicator of the average size of personnel costs, including by industry. However, the closeness of the relationship between the factors as a result of pairwise analysis did not give its effect.

As a result, the most successful correlation-regression model for our analysis, we chose the following example. Based on the official data of Eurostat, we chose the indicator "Percentage of people with higher education (levels 5-8)" as the dependent variable (U), and as influencing factors: 1) X1 - "Percentage of working poor people (EU28 = 100)", X2 - "The average level of

personnel costs (thousand euros per person). " Factor analysis was carried out by us in Excel. As a result of correlation and regression analysis of factors, it was found that the relationship between them obeys the equation:

$$y = 33,3 - 38,7 * X1 + 18,6 * X2 \quad (1)$$

The coefficient of multiple correlation, equal to 0.504, indicates the average closeness of the relationship between the indicator "Percentage of people with higher education (levels 5-8)" and the factors included in the model. The multiple coefficient of determination shows that 25.4% of the variation of the indicator "Y" is explained by the variation of the factors included in the model. The significance of the regression equation as a whole is estimated using the Fisher F-test. In this case, the null hypothesis (H0) of the statistical insignificance of the regression equation and the indicator of the proximity of communication is put forward. To do this, a comparison is made of an actual Ffact of 4.3. Since Ffact > Ftab, with a probability of 95.0%, we reject the hypothesis H0 and draw a conclusion about the statistical significance of the regression equation and the proximity index of the relationship. The search for other factors will be the subject of our further research.

Thus, in our analysis, the indicator "Percentage of people with higher education (levels 5–8)" positively correlates with the indicator "Average level of personnel costs" and is inversely related to the indicator "Percentage of working poor people". Interpretation of the result may sound like this: the more educated people, the higher the average level of their costs and the fewer people who can be classified as "poor". This conclusion is quite logical and confirms the idea that education is the main factor in improving the competitiveness of any country and the wealth of the people.

IV. CONCLUSION

1. Firstly, in the fears of the European Union over the past ten years, the population has increased by an average of 3%.

2. Secondly, it is positive that along with the increase in the number and density of the population, the proportion of the population aged 30 to 34 who has a higher education is steadily increasing.

3. Thirdly, the most important trend of recent years in the field of education of the population in the countries of the European Union is that there is a steady upward trend in the employment of people with higher education (levels 5-8). It is important to say that in Europe as a whole, the trends we have identified characterize the steady demand of the labor market for raising the level of education of labor resources.

4. Fourth, on the basis of Eurostat data, we calculated that the level of personnel costs in 2017 in the European Union countries was on average equal to 37.4 thousand

euros. The highest value of this indicator was noted in Sweden - 59.6 thousand euros, in Denmark - 58.8, in Belgium - 58.4, in Luxembourg - 57.6, in Austria - 54.5, in Ireland - 53, 8, in France - 53.6, in Iceland - 53.1, in the Netherlands - 52.7, in Finland - 46.1, in Germany - 43.4, in the UK - 42.3, in Italy - 41.5 thousand euros. The lowest level of personnel costs is in Bulgaria - 8.5 thousand euros, in Romania - 9.9, in Latvia - 11.1, in Hungary - 14.1, in Poland - 14.2, in Croatia - 14.6, in Slovakia - 16.8, in Estonia - 17.5, in the Czech Republic - 18, in Portugal - 21.7, in Greece - 23.3, in Slovenia - 25.2, in Spain - 36.7 thousand euros.

5. Fifth, it is important to note that the average growth rate of personnel costs among the 28 countries of the European Union over the period under review is 10.2%. Depending on the industries, the growth rate of personnel costs is not the same. The highest growth rate of personnel costs is in the field of electricity, gas, steam - by 17.6%, in the field of mining operations - by 14.9%, in the field of real estate operations - by 13.9%, in administrative support activity - by 12%, in the production sector - by 12%, in the wholesale and retail trade - by 10.8%.

6. Sixth, on the basis of Eurostat data, we found that the difference between the maximum level of personnel costs in the field of electricity, gas, steam, the highest value of which is noted in Austria is 117.3 thousand euros and the minimum in the area of accommodation and services catering in Bulgaria - 3.9 thousand euros, is 30 times. Thus, for the same period of time, staff costs differ dramatically. Therefore, people have different motivation to work, as well as different possibilities for the recovery of physical and mental costs. Despite the general growth trend in the share of educated economically active people in the countries of the European Union, about 9-10% of them are poor people.

7. Seventh, a correlation-regression analysis of the influence of various factors on the change in the indicator "Percentage of people with higher education" showed that it positively correlates with the indicator "Average level of personnel costs" and has the opposite effect on the indicator "Percentage working poor people." Interpretation of the result may sound like this: the more educated people, the higher the average level of their costs and the fewer people who can be classified as "poor". This conclusion is quite logical and confirms the idea that education is the main factor in improving the competitiveness of any country and the wealth of the people.

REFERENCES

- [1] Agrawal T., Agrawal A. (2019) Who Gains More from Education? A Comparative Analysis of Business, Farm and Wage Workers in India. *Journal of development studies*, Vol. 55, Issue 6, pp. 1081-1098, DOI: 10.1080/00220388.2018.1443209.
- [2] Boi T., Eller CC., van de Werfhorst HG, DiPrete TA (2019) School-to-Work Linkages, Educational Mismatches, and Labor Market Outcomes. *American sociological review*, Vol.84, Issue 2, pp 275-307, DOI: 10.1177/0003122419836081.
- [3] Fessler P., Schneebaum A. (2019) The educational and labor market returns to preschool attendance in Austria/ *Applied Economics*,

Vol.51, Issue 32, pp.3531-3550, DOI:
10.1080/00036846.2019.1584368.

- [4] Gregg P., Macmillan L., Vittori C. (2019) Intergenerational income mobility: access to top jobs, the low-pay no-pay cycle and the role of education in a common framework. *Journal of population economics*, Vol.32, Issue 2, pp.501-528, DOI: 10.1007/s00148-018-0722-z.
- [5] Gries T., Jungblut S., Meyer H., Krieger T. (2019) Economic Retirement Age and lifelong learning: A theoretical model with heterogeneous labor, biased technical change and international sourcing. *German economic review*, Vol. 20, Issue 20, pp.129-170, DOI: 10.1111/geer.12140.
- [6] Guetto R., Panikella N. (2019) Family structure and learning outcomes of children: heterogeneous effects in high school. *Demographic research*, Vol.40, pp.1015-1046, No 40, DOI: 10.4054/DemRes.2019.40.35.
- [7] Haghghi N.F., Bijani M., Parhizkar M. (2019) An analysis of major social affecting human resource development in Iran. *Journal of human behavior in the social environment*, Vol.29, Issue 3, pp.372-388, DOI: 10.1080/10911359.2018.1536577.
- [8] Кузнецова А.Р., Ягафарова В.А. Образование как ключевой фактор повышения конкурентоспособности страны. Высшее образование сегодня. 2013. №1. С.31-33. Kuznetsova A.R., Yagafarova V.A. Education as a key factor of increasing country competitiveness. *Higher education today*. 2013, No. 1, pp. 31-33.
- [9] Le Mogli M., Mencarini L., Rapallini C. (2019) Does income moderate the satisfaction of becoming a parent? In Germany it does and depends on education. *Journal of population Economics*, Vol.32, Issue 3, pp. 915-952, DOI: 10.1007/s00148-018-0689-9.
- [10] Mulliqi A., Adnett N., Hisarcililar M. (2019) Human Capital and Exports: A Micro-Level Analysis of Transition Economies. *International trade and economic development journal*. DOI: 10.1080/09638199.2019.1603319.
- [11] Odoardi I., Muratore F. (2019) The role of human capital after the crisis in Italy: A regional analysis. *Socio-economic planning sciences*, Vol.66, Issue , pp. 58-67, DOI: 10.1016/j.seps.2018.07.002.
- [12] Ramamurthy S., Sedgley N. (2019) A Note on School Quality, Educational Attainment and the Gap. *Eastern Economic Journal*, Vol.45, Issue.3, pp.415-421, DOI: 10.1057/s41302-018-00132-1.
- [13] Saniter N., Schnitzlein D., Siedler T. (2019) Occupational knowledge and educational mobility: Evidence from the introduction of job information centers. *Economics of education review*, Vo.69, pp. 108-124, DOI: 10.1016/j.econedurev.2018.12.009.
- [14] Virdia S., Schindler S. (2019) Educational upgrading, career advancement, and social inequality development from a life-course perspective in Germany, Vol.60, pp. 29-38, DOI: 10.1016/j.rssm.2019.02.002
- [15] Zageh H., Breen R. (2019) Family demography and income inequality in West Germany and the United States. *Acta sociologica*, Vol.62, Issue 2, pp.174-192, DOI: 10.1177/0001699318759404.
- [16] Zhang X. (2019) Structure change in the framework of costs on public education: evidence from China. *Modern economic policy*, Vol. 37, Issue: 2, pp. 366-388, DOI: 10.1111 / coep.12408
- [17] Eurostat official website: <https://ec.europa.eu/eurostat/data/database>, last accessed 01/06/2019