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Is Health Status a Determinant of The Economic Activity? Some Evidence From Poland¹

Abstract: Health condition is an important area of social life. Employees in good health work more efficiently and effectively than sick ones. It is widely accepted that health is one of the elements of human capital and a factor in determining the situation of the individual in the labour market. The main objective of the research is to analyse the health status of household members in the context of their professional activity. The working hypothesis assumes that people suffering from health problems are rather economically inactive than unemployed. In the paper an attempt is made to identify factors (related to eg. health) which affect the probability of being economically inactive. To achieve the objective of the paper individual data of household members from the European Survey on Income and Living Conditions (EU-SILC) conducted by Central Statistical Office in Poland in 2013 was used. The results of the analysis indicate that in general, deterioration of health increases the risk of remaining economically inactive. In the analysis of the order of importance of factors affecting economic inactivity, the ones connected with health turned out to be of the greatest importance.

Keywords: health, professional activity, econometric models

JEL: I1, J2, C2

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1. Introduction

Health is a broad concept since it not only includes physical and mental aspects, but also social and spiritual dimensions. It is considered to be the value of fundamental significance to human beings (Devlin, Morris, Parkin, 2012: 4). It has non-material and economic dimensions.

Despite the fact that in the classical terms health is not a concept from the field of economics, it strongly affects the economic activity of people. It allows one to function in the environment, determines the level and structure of consumption, the quality of life and, finally, a general sense of happiness. These are the reasons why in the recent years the economists have been greatly interested in the issue of health.

State of health has a direct impact on the participation of members of households in the labour market and the income they earn. The employees who enjoy good health work more efficiently than sick people. They are also more active regarding looking for a job, and more willing to improve or change their qualifications. Additionally, healthy people have smaller limitations regarding the work they can do.

The main purpose of the research is to conduct an analysis of professional activity of household members within the context of their health condition. It is assumed that health is a major factor shaping the economic activity of the population. The working hypothesis assumes that people suffering from health problems are rather economically inactive than unemployed. The key problem tackled by sick or disabled people is their low professional activity rather than difficulty finding a job.

Professional activity is affected by factors connected with individual characteristics of a given person, including state of health. The article presents an attempt to identify factors (connected inter alia with health condition) that affect the probability of being economically inactive. The analyses include the log-linear analysis of frequency tables, classification and regression trees (CART) and the logit model.

2. Health in theory

Health is a specific feature of a human being, defining to a considerable extent the possibility of using one's own physical and mental efforts, abilities and experience on the labour market. Similarly, professional development depends on an employee's health condition. Health belongs to rare goods that are difficult to evaluate (Golinowska, 2015). Apart from education and professional experience, health is one of the three most important factors determining the quality of human capital. For most people work is the main source of income, having an influence on the social and financial situation of a household. That is the reason why health is a subject of particular importance. The health resources are variable and subject to depreciation in the course of one's life. Thus, certain actions have to be taken in order to prevent loss of health or at least to slow it down.

According to a universal definition of health recommended by the World Health Organisation² (WHO), health is not only a complete lack of diseases or disability but also a condition of full physical, mental and social well-being³. What should be highlighted within the context of the above definition is that the state of health is defined most of all with the use of a subjective evaluation of one's well-being rather than with the use of hard quantitative indicators (e.g. blood pressure level). Such a definition of health has certain consequences. Firstly, two hypothetical persons of 'objectively' similar health condition (on the basis of results of medical tests) may evaluate their health in two different ways. The 'burdensomeness' of health problems stems, to a great extent, from their subjective perception by a given person. The further consequence of the adopted definition of health is the application of conventional ranges in its measurement. People who enjoy good health are not the ones who have no symptoms (it is nowadays difficult to talk about completely healthy people, taking into account the current level of the diagnostics development), but the ones for whom aches and pains or medical indicators are not obstacles to well-being.

There is a corellation between health and professional activity. Both the theory of economics and the empirical research indicate that, as a rule, working people are in better health than those unemployed and professionally inactive. There may be a few ways to explain this. One of them is the positive dependence between income and health condition (Grossman, 1972; Ettner, 1996). Higher income of working people allows them to purchase medical services (including, in particular, in the private sector). In the economic sense, it is assumed that health is something normal. Although it is commonly accepted that healthcare has a limited impact on health (Lalonde, 1974), the possibility of using services of higher quality by people who earn more is invaluable.

Moreover, work may affect health through non-monetary channels. An important factor that determines the state of health is the broadly-understood environment, including work environment. It may have a positive or negative impact on physical health (e.g. noise, harmful chemicals). The health of employees is an important cost factor for firms and a key determinant of the productivity of an economy. Health

² Preamble to the Constitution of the World Health Organisation as adopted by the International Health Conference, New York, 19–22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948.

³ A review of the definition of health can be found at: Suchecka, 2016.

problems suffered by the employees do not only contribute to a reduction in productivity, but in many cases also to additional costs on the part of the employer (Huber, Lechner, Wunsch, 2015). That is why the employers are interested in shaping the work environment so as to prevent degradation of the employees' health.

It is also cultural and social aspects of the environment connected with work, which are listed as factors that determine health condition. A stable form of employment, a good atmosphere at work or even prestige of the profession are what may have a positive impact on health condition, whereas stressful occupation and the work environment may accelerate loss of health. Thus, work has an influence on the social dimension (defined as the ability to maintain proper relationships with other people and to fulfil social roles) and the mental dimension of health (connected, for example, with the ability to think clearly and logically, to recognise feelings and express them properly, and the ability to cope with stress, depression and fear). The actions taken by the employers for the benefit of a good work environment and promotion of health (e.g. in the form of incentive sports programmes) connected with social networking effects, affect health condition and the situation on the labour market (Wellman, Friedberg, 2002; Lechner, 2009).

Non-material health benefits connected with work constitute another aspect. Generally, people who are professionally active have higher self-esteem, which contributes to higher self-evaluation of their health condition. In the case of the unemployed, in turn, not only is a risk of unhealthy behaviours greater (e.g. problems with alcohol), but, as some researchers suggest, it may also reduce the life expectancy. What is also important from the perspective of health is continuous employment, since an increase in the number and duration of periods of unemployment has an adverse influence on health condition, in particular on mental health (Sullivan, von Wachter, 2009).

Despite the fact that the health aspect of work is important, the opposite relation also has to be considered. State of health is a significant factor that defines the economic activity of people. Poorer health is connected with lower productivity. It results in a given category of employees obtaining remuneration below expectations; it also changes the alternative cost of free time and, consequently, reduces the inclination to undertake professional activity.

Numerous studies indicate a positive impact of good health on the probability of participation in the labour market (Cai, 2010). It is particularly visible in the case of elderly people. L. Cai and G. Kalb (2006), S.W. Pit, R. Shrestha, D. Schofield and M. Passey (2010) indicate that self-perceived ill-health was found to be the main cause of early retirement in Australia. Similar conclusions may be drawn from the works by, for example, Berg et al. (2010), Bambra and Eikemo (2009) for European countries or the USA.

According to a new study of UK longitudinal research poor health – especially poor mental health – is a key reason that people move out of employment, or into temporary and part time employment. Having higher qualifications lessens the impact of poor health but does not offer full employment protection (*Understanding Society...*, 2016).

The effects of health on labor force participation are likely to be highly socially determined. This observation is also consistent with evidence that health may be a more important determinant of wages in less developed rather than more developed countries. The size of the estimated effect may also be sensitive to the age, cohort, gender, and family circumstances of the sample individuals (Currie, Madrian, 2005).

The households in which disabled people live constitute a separate issue in the research on the impact of health on the labour market. Long-term limitations in the proper functioning of one's system have much more serious consequences for participation in the labour market than incidental deterioration of health. Disabled people are rather inactive than unemployed. These are usually older people, who tend to be realistic about their chances, and having failed to find a job they give up seeking and accept to be out of the labour market, which often means the final and irreversible exclusion from the world of work. The problem of disability may also relate to other members of households at non-working age.

Some studies indicate that households with disabled children (Gould, 2004) or elderly people who require care (Ettner, 1995) contribute to a reduction in the indicator of participation of women in the labour market. Other researchers point out that the occurrence of an illness in the family (requiring long-term, regular care) may in certain cases increase women's participation in the labour market. It is connected with the greater possibilities of working part time or flexitime (Vecchio, 2015).

The professional activity of women in the case of considerable deterioration of the husband's health looks different, though. In such circumstances there is a greater probability of married women increasing their professional activity. As the international research demonstrates, the level of public transfers from social welfare has a great significance for the level of professional activity of families with disabled persons (Jacobs et al., 2013).

3. Data and methods

The evaluation of the situation of the members of households on the labour market, in particular people with and without disabilities, was conducted with the use of data from the research on economic activity of the population. Health condition was identified on the basis of reports on the research on income and living conditions of people in Poland (EU-SILC) in 2011 and 2013.

The situation on the labour market was analysed in combination with a subjective evaluation of health condition based on figures from individual households from the European Union Statistics on Income and Living Conditions (EU-SILC), conducted in 2013 by the Central Statistical Office of Poland. The full data set includes 30.162 observations of household members in Poland. In this case, people at the working age (18–59/64), constituting almost 72% of the members of households under examination (21.704), were the subjects. The reason why the data set was narrowed down to people at working age is that retired people are usually economically inactive, which would distort the representation of the analysed phenomenon.

Because of using different sources of data, information related to disabled people may not be fully comparable due to the manner of identification of the disabled people. In BAEL, the group of disabled people was separated on the basis of the legal criterion. Disabled people included people aged 16 and over with a certificate on the degree of disability or incapacity to work. In the EU-SILC research, disabled people were separated on the basis of the disability benefits they received.

For the purpose of identification of the factors that significantly affect whether one remains economically inactive (dummy dependent variable), methods typical of analysing data of qualitative nature were applied. The log-linear analysis of frequency tables, classification and regression trees (CART) and the logit model were used⁴.

The following independent variables were adopted for the analysis:

- 1) education (primary and lower, lower secondary, upper secondary, post-secondary, tertiary education);
- 2) sex (1 man; 0 woman);
- 3) age (18–29; 30–44; 45–59/64);
- 4) general health (very bad, bad, fair, good, very good);
- 5) limitation in activities (without limits, limited, strongly limited);
- 6) suffer from any chronic illnesses (1 yes, 0 no);
- 7) disability benefits (1 yes, 0 no).

Thus, selected variables identifying the social and health situation of the people were used.

4. Research results

On the basis of the analysis of coefficients of economic activity of people with and without disability (Tab. 1) one may observe that in the case of people without disability both the coefficient of professional activity and the coefficient of employment are more than three times higher in the analysed years 2001–2015 than in the case of disabled people. As regards the unemployment rate, it was similar for both groups

⁴ The description of the afore-mentioned methods is available inter alia in: Gruszczyński, 2012; Maddala, 2013; Gatnar, Walesiak (2011).

by the year 2003, while from 2004 a decrease is visible. However, one has to point out that a decrease in the unemployment rate amongst people without disability was greater, which may be connected with their greater (as a rule) spatial and professional mobility. The greatest discrepancies in the level of this coefficient relate to the years 2014 and 2015. Smaller disproportions in the level of the unemployment rate than in the case of employment coefficients may be connected to the existing support systems directed towards disabled employees in the form of, for example, reductions and additional payments for employers. As a result disabled people who decide to be professionally active, do not deal with insurmountable difficulties in finding a job.

Table 1. Coefficient of activity (%), coefficient of employment (%) and unemployment rate (%)of non-disabled and disabled people in Poland in the years 2001–2015

Specification	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Coefficient of activity															
Non-disabed	77.3	75.9	75.2	74.9	74.9	74.2	74.0	74.7	75.3	76.0	76.4	77.1	77.7	78.6	78.8
Disabled	26.1	25.8	23.7	23.4	23.9	22.1	22.6	23.9	24.5	25.7	26.3	27.5	27.3	27.1	25.9
Coefficient of employment															
Non-disabed	62.8	60.4	60.0	60.4	61.4	63.3	66.8	69.4	69.1	68.6	69.0	69.3	69.6	71.6	72.9
Disabled	20.9	20.5	19.1	18.1	18.6	18.2	19.4	20.8	21.4	21.8	22.2	23.0	22.4	22.8	22.5
Unemployment rate															
Non-disabed	18.7	20.4	20.2	19.3	18.0	14.6	9.6	7.0	8.2	9.6	9.7	10.1	10.3	9.0	7.5
Disabled	19.8	20.5	19.2	22.6	21.9	17.3	14.1	13.1	12.8	15.3	15.5	16.2	18.0	16.1	13.0

Source: own elaboration on the basis of BAEL GUS

Taking into account degrees of disability (Fig. 1) in the analysis of professional activity, one may observe that the level of inacivity increases up to 90% with an increase in the degree of disability. In both analysed years the values of the analysed coefficients are approximate. However, a slight fall of the coefficient of professional activity is noticeable. In 2013, an increase in the unemployment rate was observed in the case of people with slight degree of disability.

Taking into account jointly the situation on the labour market and the health condition (Tab. 2), one may observe that the worse the evaluation of the state of health, the lower the professional activity, both in the case of people without disability and the disabled people. As regards disabled people, the percentage of people who remain economically inactive is much higher than in the case of people without disability. Other factors that have a negative influence on professional activity are chronic diseases and limitations of everyday activity in connection with health problems. These factors affect economic activity of people without disability to a greater extent than in the case of the disabled. Thus, it is important to analyse the issue of inactivity rather than the issue of unemployment, since unemployment is not as significantly different for the sick and the 'healthy' as professional activity.



Figure 1. Coefficient of employment (%), coefficient of inactivity (%) and unemployment rate (%) of disabled people at the working age (18–59/64) by degree of disability in Poland in 2011 and 2013

Source: own elaboration on the basis of BAEL GUS

Table 2. Economic activity (%) of non-disabled and disabled people at the working age (18–59/64) by selected variables connected to health in Poland in 2013

Specification	Coefficier	nt of inactivity	Coefficient	of employment	Unemployment rate		
specification	disabled	non-disabled	disabled	non-disabled	disabled	non-disabled	
Self-perceived health							
Very good	70.00	34.32	24.00	55.91	20.00	14.88	
Good	/0.00	26.15		64.99		12.00	
Fair	79.81	56.40	18.49	36.52	8.41	16.26	
Bad	89.95	80.73	8.32	14.18	17.19	26.41	
Very bad	96.92	92.50	1.54	48.17	50.00	14.16	
Suffer from any chronic illness or condition							
Yes	86.22	67.91	12.06	26.78	12.50	16.55	
No	75.83	32.16	19.17	58.61	20.69	13.60	
Limitation in activities because of health problems							
Strongly limited	92.65	86.38	5.88	10.32	20.00	24.21	
Limited 82.94		68.95	15.53	25.45	9.00	18.03	
Not limited	75.66	34.94	20.22	56.21	16.92	13.59	
Total	85.33	43.88	12.67	48.17	13.66	14.16	

Source: own calculations on the basis of EU-SILC 2013 (Polish edition), 01.03.2014 version, Eurostat

Factors that have a considerable impact on remaining economically inactive were identified, first of all, with the use of the log-linear analysis⁵. At the same time, tests on all interactions of *k*-factors demonstrated that the model without two- and three-factorial interactions has to be rejected, which means that the inclusion of all interactions of the second and third order to the model increases its fitness. However, it is not true as regards the interactions of the fourth order, which, if added, do not result in significant improvement (p = 0.1678). What it means is that the least complex model is a model with the three-dimensional connections. Pearson's chi-square test and the chi-squared test based on the product of the greatest reliability evaluate the goodness of fitting the model to the observed data. The values of test statistics of the afore-mentioned tests with the *p* probability level are presented in Table 3. These tests demonstrate a lack of statistically significant difference between the expected sizes of cells (calculated in compliance with the proposed model) and the observed sizes; thus, the defined model explains in a satisfactory manner the sizes in the frequency table.

Inactive(2) * General health(5) * Suffer from any chronic illness(2) * Limitation							
in activities(3)							
Test	Chi-square	df	p-value				
Likelihood ratio Chi-square	14.9182	10	0.1351				
Pearson Chi-square	15.3718	10	0.1191				

Table 3. Results of the log-linear analysis

Source: own calculations on the basis of EU-SILC 2013 (Polish edition), 01.03.2014, Eurostat

As the conducted research demonstrates, among people suffering from chronic diseases the risk of remaining economically inactive is more than 2.5 times greater than in the case of people who do not suffer from such diseases (*odds ratio* – OR = 2.62). In turn, taking into account self-assessment of state of health amongst people suffering from chronic diseases who perceive their health condition as bad or very bad, the risk of remaining economically inactive is almost six times greater than in the case of people who believe to be in good health (OR = 5.98). As regards people with no chronic diseases, OR reaches 2.54. In the case of people with considerable limitations in physical activity, who additionally perceive their health condition as bad, the risk of remaining economically inactive is more than six times greater than the risk calculated for people in a similar situation, but per-

⁵ Log-linear analysis provides a more sophisticated way of looking at multi-way frequency tables. It can test various factors (discrete or categorical variables), that are used in the crosstabulation and their interactions, for statistical significance. Specifically, one may think of the multi-way frequency table to reflect various main effects and interaction effects that add together in a linear fashion to bring about the observed table of frequencies. You can find detailed information in e.g. Gatnar, Walesiak, 2011.

ceiving their health condition as good (OR = 6.02). This means that state of health determines, to a great extent, the fact of remaining economically inactive.

General health	Inactive vs G variable: Su chronic il	eneral health ffer from any llness: yes	Inactive vs G variable: Su chronic i	eneral health ffer from any llness: no	Inactive vs General health variable: Limitation in activities: yes, strongly limited		
	inactive: no	inactive: yes	inactive: no	inactive: yes	inactive: no	inactive: yes	
Very good	51.5	11.5	2869.5	1235.5	4.0	3.0	
Good	640.5	170.5	7220.5	1456.5	33.0	18.0	
Fair	1502.5	842.5	1695.5	434.5	100.0	146.0	
Bad	549.5	763.5	60.5	42.5	123.0	347.0	
Very bad	41.5	166.5	4.5	1.5	20.0	142.0	
Total	2785.5	1954.5	11850.5	3170.5	280.0	656.0	

Table 4. Boundary tables of the interdependence of general health and selected variables

Source: own calculations on the basis of EU-SILC 2013 (Polish edition), 01.03.2014 version, Eurostat

Next, the significance of factors affecting economic inactivity was analysed. For this purpose, the CART procedure was applied⁶. In the analysis, the dependent variable was the dummy variable which identified the fact of remaining economically inactive (Fig. 4).

The error rate after 10-times cross-validation reached 0.2071, which means that the model fits the data well. On the basis of the research on the power of particular predictors (1 – the greatest significance; 0 – the lowest significance) in the differentiation of people who are economically inactive and active as part of this CART analysis, it was found that general health, education and limitation in activities have the greatest influence on remaining economically inactive, while sex turned out to be of the lowest significance. Detailed results of the ranking of importance of factors in the CART analysis are presented in Figure 2.

The conducted research of the adequacy of the classification of people who are economically inactive and active demonstrated that the biggest number of well qualified cases are amongst professionally active people (ca. 71% of people at the working age).

⁶ CART (Classification and Regression Tree) is a non-parametric procedure for predicting continuous responses with categorical and continuous input variables. CART model uses a binary tree to recursively partition the design space into subspaces, in which the distribution of the response will be more homogeneous. CART analysis consists of four basic steps: 1) tree building, during which a tree is built using recursive splitting of nodes; 2) stopping the tree building process; 3) tree "pruning," which results in the creation of a sequence of simpler and simpler trees, through the cutting off of increasingly important nodes; 4) optimal tree selection. More information about this method can be read in eg. Lewis, 2000.



Figure 2. Ranking of predictors in the CART analysis for dependent variable 'inactive'

Source: own calculations on the basis of EU-SILC 2013 (Polish edition), 01.03.2014 version, Eurostat



Figure 3. Tree graph for dependent variable inactive

Source: own calculations on the basis of EU-SILC 2013 (Polish edition), 01.03.2014 version, Eurostat

The tree presented in Figure 3 has four terminal nodes and three non-terminal nodes. When analysing the further levels of the classification and regression tree, starting from roots up to the end leaves one may formulate the following exemplary rules:

- 1) if a person has lower secondary education, the risk of being economically inactive is greater (node number 2);
- better education (other than lower secondary education), with a lack of limitations in everyday activity, increases a chance for being professionally active (node number 5);
- 3) if, despite better education (other than lower secondary education), there occur any limitations in everyday activity caused by a disease and a given person assesses his/her state of health as bad or very bad, the risk of being economically inactive increases (node number 6).





After introducing to the analysis the variable which identifies persons receiving disability benefits, the order of the influence of the analysed factors on remaining economically inactive was changed. The power of particular predictors is as follows in this case: education (1.00), sex (0.70), general health (0.61), age (0.54), limitation in activities (0.41), disability benefits (0.38), suffering from any chronic illness (0.32).

The classification tree presented for this set of variables (Fig. 4) has 7 terminal nodes and 6 non-terminal nodes. The following exemplary rules may be formulated on the basis of the analysis of the further levels of the CART tree:

- 1) the receipt of disability benefits increases the risk of economic inactivity (node number 2);
- 2) if a person receives no disability benefits and has lower secondary education, there are greater chances for him/her to be economically inactive (node number 4);
- 3) the risk of being economically inactive is greater also in the case of women who do not receive disability benefits, have education other than lower secondary education and are aged 18–29 (node number 12).

Specification	Parameter	Standard error	Wald chi-square	p-value	Odds ratio	
Constant	-1.7069	0.0542	991.70	0.0000	—	
Sex	-0.8606	0.0401	461.49	0.0000	0.4229	
Suffer from any chronic illness	0.6670	0.0638	109.22	0.0000	1.9484	
Primary and lower	0.6032	0.0668	81.47	0.0000	1.8279	
Lower secondary	2.4219	0.0930	677.67	0.0000	11.2677	
Post-secondary	-0.6735	0.1087	38.40	0.0000	0.5099	
Tertiary education	-0.8106	0.0593	186.62	0.0000	0.4446	
Very bad	1.1983	0.2144	31.23	0.0000	3.3144	
Bad	0.4911	0.0839	34.24	0.0000	1.6341	
Good	0.4630	0.0534	75.09	0.0000	1.5889	
Very good	0.9659	0.0650	220.62	0.0000	2.6271	
Limited	0.4188	0.0713	34.53	0.0000	1.5202	
Strongly limited	1.0507	0.1108	89.93	0.0000	2.8595	
Disability benefits	2.4043	0.0815	870.66	0.0000	11.0704	
Age: 18–29	0.5734	0.0520	121.63	0.0000	1.7744	
Age: 30–44	-0.8696	0.0544	255.11	0.0000	0.4191	
Classification of cases: odds ratio: 20.57 correct: 83.47%; R ² Nagelkerke = 0.3753						

Table 5. Results of estimation of parameters of the logit model for the variable describing the probability of the risk of inactivity

Source: own calculations on the basis of EU-SILC 2013 (Polish edition), 01.03.2014 version, Eurostat

Furthermore, factors affecting the probability of remaining economically inactive were identified with the use of the logit model. The afore-mentioned variables characterising the social and health situation of the analysed people were adopted as explanatory variables. Only dummy variables were introduced to the model. For variables which were initially categorical variables, the most numerous groups were adopted as the basis for comparison (as regards education it is upper secondary, for age 45–59/64, for general health – fair, while for limitation in activities – without limits).

On the basis of the estimated parameters of the logit model, one may observe that men are less exposed to being economically inactive and also persons aged 30–44 are less exposed to being economically inactive as compared with people aged 45–59/64. The risk of exposure to economic inactivity is definitely lower in the group of people with post-secondary education or tertiary education than in the group of people with upper secondary education.

The risk of remaining economically inactive is higher in the case of people suffering from chronic diseases and it increases with the occurrence of problems connected with limitation of everyday activity in connection with health problems. People who receive disability benefits are the ones with a much higher risk of remaining professionally passive. Apart from that, the risk of inactivity also increases in the case of poorly-educated people.

What should be emphasised is that receiving disability benefits and the level of education have the greatest influence on remaining economically inactive. Only then do we deal with variables connected with subjective assessment of one's state of health.

5. Conclusion

Health condition is one of the most important factors determining the economic activity of people. It is confirmed by a review of international research and conducted analyses.

The degree of participation in the labour market of people suffering from diseases is lower than in the case of people without any problems. Each dimension of health (disability, chronic diseases, health limitations affecting everyday activities and subjective perception of one's state of health) shapes professional activity. In general, deterioration of health increases a risk of remaining economically inactive. In the analysis of the order of importance of factors affecting economic inactivity, the ones connected with health turned out to be of the greatest importance. Similar conclusions were drawn from the application of the logit model. A significant impact of the health condition on the professional activity of population is visible there. Thus, what we need is a proper policy regarding improvement of professional activity of the sick (disabled), not limited to helping unemployed and sick people, which certainly does not exclude or deny the need to provide such help.

Interesting conclusions were reached as a result of including the 'disability benefit' variable to the analyses. The obtained results confirm the international observations, according to which in the event of financial support of the disabled the probability of active participation in the labour market decreases. The above findings combined with a great significance of the level of education of people suffering from chronic diseases and disabled people are important hints at the time of developing solutions in the scope of the social policy. Properly designed programs should provide for a proper level of support for people dealing with health problems and, simultaneously, maintain a high level of economic activity of this group of employees. However, a further, in-depth research is required in this field.

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Czy stan zdrowia determinuje aktywność ekonomiczną? Wyniki dla Polski

Streszczenie: Kondycja zdrowotna jest istotnym obszarem życia społecznego. Pracownicy o dobrej kondycji zdrowotnej pracują wydajniej i efektywniej niż człowiek chory. Powszechnie przyjmuje się, że stan zdrowia jest jednym z elementów kapitału ludzkiego i czynnikiem określającym sytuację jednostki na rynku pracy. Głównym celem badań jest analiza stanu zdrowia członków gospodarstw domowych w kontekście ich aktywności zawodowej. Hipoteza badawcza zakłada, że osoby z problemami zdrowotnymi pozostają raczej bierne zawodowo niż bezrobotne. W artykule podjęta została także próba identyfikacji czynników (związanych m.in. ze stanem zdrowia) wpływających na prawdopodobieństwo pozostawania biernym zawodowo. Do realizacji celu badań zostały wykorzystane dane dla członków gospodarstw domowych, pochodzące z Europejskiego Badania Dochodów i Warunków Życia (EU-SILC), przeprowadzonego przez Główny Urząd Statystyczny w Polsce z 2013 r. Wyniki badań wskazują, że pogorszenie stanu zdrowia zwiększa ryzyko pozostania biernym zawodowo. W analizie kolejności ważności czynników wpływających na bierność zawodową te związane ze zdrowiem okazały się jednymi z wożniejszych.

Słowa kluczowe: zdrowie, aktywność zawodowa, modele ekonometryczne

JEL: I1, J2, C2

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