
WORKPLACE RELATIONSHIPS OF OLDER PEOPLE AS AN IMPORTANT FACTOR IN WORK QUALITY

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Received: 02. August 2022

Reviewed: 20. August 2022

Accepted: 14. October 2022

Abstract

Population forecasts assume a decrease in the size of the labor force in the labor market. What factors will be necessary for keeping older people in the labor market? It is assumed that for employed older people, good relations with their colleagues will play an important role. Our contribution aims to determine the specifics of the perception of positive relationships of employed persons aged 55-64 with colleagues in EU countries. The data source for the indicator "Employed persons having a good relationship with their colleagues" is the Eurostat database. The methods used to achieve the goal are comparison, descriptive statistics, growth coefficients, average growth coefficients, and beta convergence of the analyzed indicator. In teams composed of employees aged 55-64, it seems much more important to build good relationships than in teams composed primarily of employees aged 15-24. Collectives composed of women can perceive relationships with colleagues worse than men in Slovakia. The critical finding is that the perception of good relations in the Slovak Republic has significantly worsened since 2005. It is, therefore, important that employers make more outstanding efforts to improve relationships.

Keywords: job satisfaction, older people, relationship with colleagues, work motivation

JEL Classification: D900, J140, J280

Introduction and theoretical background

Demographic developments in the European Union so far and population projections for the next period make it possible to predict future trends in the labor market. Based on them, it can be concluded that the size of the workforce will decrease in the future, and the economic burden on the productive part of the population will

increase (Eurostat, 2021). It follows that the use of the employment potential of persons in the pre-retirement and retirement years will become increasingly important. One of the ways to increase the employment of older persons is to find approaches that will lead to the fact that people of retirement age will continue to work even after retirement age and that people of pre-retirement age will not retire early. Several factors can influence such a decision. Among the most important factors can be considered their state of health (Ćwirlej-Sozańska et al., 2018; Neary et al., 2019; Cristea et al., 2020), motivational factors (Łaszkiiewicz & Bojanowska, 2017; Bohorquez et al., 2020; You & Lee, 2021) and satisfaction with the work performed and the work environment (Raziq & Maulabakhsh, 2015; Lakic, 2019; Homocianu et al., 2020).

It is started from the assumption that employment is influenced by relationships at the workplace in the scientific state. Workplace relationships can lead to improved cooperation and atmosphere and ultimately impact work productivity. Therefore, analysing and monitoring the factors that influence them is vital.

Reuter et al. (2020, p. 997) say, "Having a good relationship with colleagues is the most important factor for being happy at work". Persson et al. (2018a) claim that strengthening positive work relationships among colleagues is essential for employee health promotion. Persson et al. (2018b) highlight employee relationships as vital resources that create sustainable workplaces. Comi et al. (2022) researched the effect of retirement on social relationships. They found that older people during retirement have a more significant share of relationships with family and less with colleagues and better overall satisfaction and deeper emotional relationships. Good workplace relations are reflected in the quality of work. Barroso (2022) found that higher-quality personal workplace relationships in Europe are experienced primarily by managers, professionals, technicians, and associate professionals, while worse interpersonal relationships are experienced mainly by skilled agricultural workers and elementary occupations, and that the best relationships with colleagues are among those with contracts of unlimited duration.

Good relations at the workplace can lead to significant employee satisfaction and, therefore, can contribute to the decision of employees to remain in employment even after retirement age. Good relations with colleagues can be assessed in several ways. We assess them based on the indicator "Employed persons having a good relationship with their colleagues" in percentage in the scientific study, and the researched age category is persons aged 55 to 64 years.

Our contribution aims to determine the specifics of the perception of positive relationships of employed persons aged 55-64 with colleagues in EU countries. It is focused on the indicator's values at the level of the EU27 states. To quantify the phenomenon, it indicates the percentage of employees who have good relations with colleagues. When evaluating the results, it is aimed to evaluate the status and development of the indicator in the Slovak Republic in the context of the results of the EU states.

It sought the answers to several research questions in the research study:

- Are the differences between EU countries decreasing in the proportion of people aged 55-64 perceiving a positive relationship with their colleagues?
- What is the specificity in the share of persons aged 55-64 and 15-24 perceiving a positive relationship with colleagues? - What are the specifics of each sex in the proportion of people who perceive that they have a positive relationship with colleagues?
- Is the position of the Slovak Republic improving in the values of the indicator?

The answers to the mentioned questions will allow us to fulfill the set goal of the scientific study.

Several important tasks will need to be completed to complete the goal:

- To express descriptive statistics and use them to characterize the level and variability of the indicator values in the three years of the analyzed period.
- To express growth coefficients and average growth coefficients using the geometric mean. Use them to characterize the dynamics of the indicator's development.
- To carry out beta convergence and find out the convergence tendencies of the EU27 countries within the monitored indicator.
- To determine the specifics between the sexes.
- To characterize the status and development of the indicator in the Slovak Republic in the context of the EU.

Our findings can contribute to the systematization of knowledge on the mentioned issue and help employers determine approaches to improve the situation in the labor market. We expect essential conclusions primarily from the state's characteristics and the indicator's development in the Slovak Republic. They will enable us to formulate recommendations for employers in Slovakia.

Material and methods

The data source for the indicator "Employed persons having a good relationship with their colleagues" is Eurostat (2022). Eurostat indicates the source: European Foundation for the Improvement of Living and Working Conditions (Eurofound). Indicator data in percentages have been published in five-year intervals since 2005. The last period of published data is 2015. We monitored data for all 27 EU countries.

One of the fundamental specifics that we will focus on is identifying regional differences at the national level and their tendencies. We used several methods to determine regional differences. We analyzed the average level of indicator values and their variability using descriptive statistics. We monitor the state of the indicator values and focus on assessing the development dynamics. Based on the values of the variability indicators in all three years, we assessed how its variability changed.

To characterize the dynamics of development, growth coefficients, and average growth coefficients are used for the analyzed indicator, which is expressed as a geometric mean according to relation (1).

$$\bar{k} = n-1 \sqrt[n]{\frac{y_n}{y_1}}, \quad (1)$$

where n is the number of periods,

y_1 is the indicator's value in the first period,

y_n is the indicator's value in the n th period. Own modification of the source Minařík et al. (2013). Note that in the study, it is expressed the average annual growth coefficient of the indicator.

The beta convergence method is used to analyze the convergence tendencies in the analyzed period. It is based on initial values and average growth coefficients for all units. The initial values are the values of the indicator in the first period. Beta convergence is a method that uses the method of least squares to quantify

the parameters of a linear regression, where the dependent variable is the logarithm of the average growth coefficient, and the independent variable is the logarithm of the initial values. If the linear regression function is decreasing, the tendency towards convergence prevails. If the linear regression function increases, the tendency toward divergence prevails (Minařík et al., 2013). The linear regression model has an expression according to (2).

$$y_i = b_0 + b_1 x_i + e_i, \quad i = 1, 2, \dots, n, \quad (2)$$

where n is the number of units,
 x_i is the logarithm of the initial values,
 y_i is the logarithm of the average growth coefficient,
 e_i is a random component.

If the regression coefficient is positive, the compensating regression function increases. If the regression coefficient is negative, the equalizing linear regression function decreases. Part of beta convergence is also the expression of the coefficient of determination, which expresses how many percent of the total variability is explained by the model. If its values are low, it is concluded that convergence or divergence tendencies are not proven.

It is used tables and graphic displays for a more explicit description of the status and development of the analyzed indicator. Data analysis is performed in Microsoft Excel and StatSoft's Statistica program.

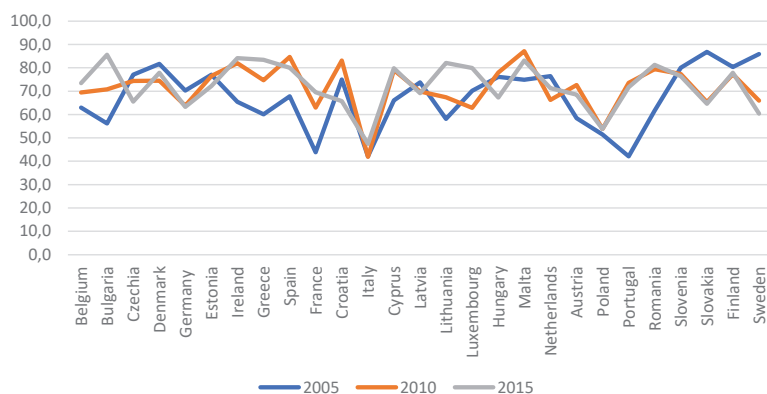
Results and discussion

Specifics of the perception of positive relationships of employed persons aged 55-64 with colleagues in EU countries

It is analyzed the status and development of the indicator in EU countries and describes its level and variability using descriptive statistics in the introductory part of the scientific study.

Based on the displayed values of the indicator in 27 EU countries in Figure 1 and Table 1, it can be concluded that the values of the indicator varied in the first year of the analyzed period in the interval from 42.1% to 86.8%. In the last year of the analyzed period, from 47.4% to 85.6%. Surprisingly, the minimum value of the indicator was in Italy in all three years. Thus, the extreme values (the lowest) in Italy are not only an exception but have a stable character. Employers in Italy must focus more on building good relationships in the workplace.

Figure 1 Employed persons having a good relationship with their colleagues, aged 55-64



Source: Author's editing according to Eurostat (2022)

Table 1 Descriptive statistics of the indicator "Employed persons with a good relationship with their colleagues, aged 55-64."

Descriptive statistics	2005	2010	2015
Arithmetic mean in %	67.5	71.6	72.4
Standard deviation	12.6	9.6	9.4
Coefficient of variation in %	18.6	13.3	13.0
Minimum in %	42.1 / Italy, Portugal	41.9 / Italy	47.4 / Italy
Maximum in %	86.8 / Slovakia	87.1 / Malta	85.6 / Bulgaria

Source: Author's editing according to Eurostat (2022)

Another interesting finding is that in 2005 the maximum value of the indicator was in Slovakia. In the next period, however, values were significantly decreased. The average level of the indicator increased compared to the first year. However, the variability of the indicator expressed by both the standard deviation and the coefficient of variation decreased. This fact thus reduced the variability of the indicator values in individual EU countries.

To capture changes in the indicator in the analyzed period and to determine its dynamics, it is expressed the growth coefficient, or the coefficient of decline (Table 2), and the average annual growth coefficient, or the average annual coefficient of decline.

Table 2 Descriptive statistics of the indicator "Employed persons with a good relationship with their colleagues, aged 55-64."

Countries with increasing indicator values		Countries with a decrease in indicator values	
Country	Growth coefficient	Country	Decline coefficient
Belgium	1.165	Czechia	0.851
Bulgaria	1.523	Denmark	0.953
Ireland	1.286	Germany	0.900
Greece	1.388	Estonia	0.938
Spain	1.180	Croatia	0.876
France	1.587	Latvia	0.936
Italy	1.126	Hungary	0.884
Cyprus	1.209	Netherlands	0.933
Lithuania	1.413	Slovenia	0.955
Luxembourg	1.138	Slovakia	0.744
Malta	1.109	Finland	0.970
Austria	1.173	Sweden	0.703
Poland	1.045		
Portugal	1.703		
Romania	1.320		

Source: Author's editing according to Eurostat (2022)

The highest increase in the values of the indicator was in Portugal, where the value increased by 70.3% from 2005 to 2015. We do not have evidence of which factors caused the increase in the indicator values, but it would be interesting to focus on finding these facts in further research. The most significant drop in values was recorded in Sweden. The second in line was Slovakia. In Slovakia, the indicator's value dropped from 2005 to 2015 to 74.4%. The indicator's decreasing values signal that it is necessary to direct employers to devote themselves more to building positive relationships in the workplace.

Comparison of the perception of positive relationships of employed persons with colleagues aged 55-64 with persons aged 15-24 and differences between sexes

In the next step, we focused on the differences in the values of the indicator for persons aged 55-64 and for persons aged 15-24. The descriptive statistics of the indicator for employees of different age groups (Table 3) show that the average values of the indicator within the EU are significantly higher in the 15-24 age group in all three years. Thus, on average, older age groups have much less good relations with their colleagues. In 2015, three countries were exceptions: the Czech Republic, Romania, and Lithuania. In other states, the rating is higher in younger age groups. The most significant differences between age groups are in Sweden, where the difference is up to 20.9 percentage points (20.9 percentage points more in the 15-24 age group).

Table 3 Descriptive statistics of the indicator “Employed persons with a good relationship with their colleagues, aged 55-64 and 15-24.”

Descriptive statistics	2005		2010		2015	
Age	15-24	55-64	15-24	55-64	15-24	55-64
Arithmetic mean in %	80.4	67.5	77.9	71.6	81.3	72.4
Standard deviation	9.7	12.6	9.7	9.6	10.0	9.4
Coefficient of variation in %	12.1	18.6	12.5	13.3	12.3	13.0

Source: Author's editing according to Eurostat (2022)

Building good relationships in a team of older workers from the mentioned comparison is much more critical. Employees’ perception of good relations is rated worse on average within them than in the group of young employees.

Descriptive statistics by sex (Table 4) show that in 2010 and 2015, the average values of the analyzed indicator were higher for women. The variability of the values, expressed by both the standard deviation and the coefficient of variation, was higher for women in the entire analyzed period than for men. An interesting finding is that in some EU countries, there was a significant difference between the sexes.

Table 4 Descriptive statistics of the indicator “Employed persons with a good relationship with their colleagues, aged 55-64.”- males and females

Descriptive statistics	2005		2010		2015	
Sex	Males	Females	Males	Females	Males	Females
Arithmetic mean in %	69.9	63.5	71.0	72.4	72.3	72.4
Standard deviation	12.0	17.1	10.0	11.2	9.5	11.2
Coefficient of variation in %	17.1	27.0	14.0	15.4	13.1	15.5

Source: Author's editing according to Eurostat (2022)

The values of the indicator for women were 17.8% lower than for men in Poland in 2015. There were similarly significant differences between the evaluation of men and women in the Czech Republic (difference 11.8%) and Slovakia (difference 10.6%). The situation is the opposite in countries such as Denmark (difference of 13.5%) and the Netherlands (difference of 11.7%). The values of the indicator are higher for women.

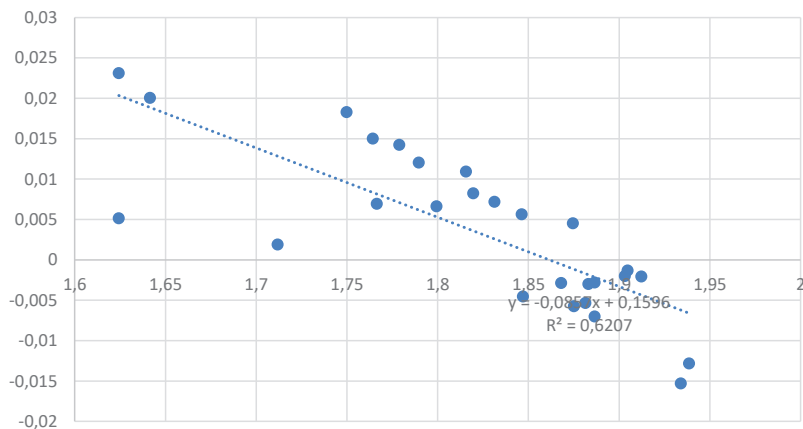
It can be concluded from the comparison of values and the findings of sex differences in the Slovak Republic and the Czech Republic that from the aspect of building good relations between colleagues for the group of employees aged 55-64, employers must pay more attention to female teams.

Convergence of EU countries

To know the answer to the research question, whether the differences in the share of persons aged 55-64 who perceive that they have a positive relationship with colleagues between EU countries are decreasing, it is used the beta convergence method (Figure 2). The function is decreasing from the graph and values of the regression coefficient of the linear regression function. The coefficient of determination

is 62.07%. The tendency towards convergence prevails among the EU 27 countries from the above. Differences between countries have narrowed. We can consider this fact and the growth of level values as positive. In general, the perception of good relations with colleagues within the EU is improving.

Figure 2 Beta convergence of the indicator “Employed persons with a good relationship with their colleagues, aged 55-64.”



Source: Author's editing according to Eurostat (2022)

Several conclusions for employers follow from the mentioned characteristics. In collectives composed of employees aged 55-64, it seems much more important to build good relationships than in collectives composed primarily of employees aged 15-24. In collectives composed of women, it is worse on the average perception of good relationships than those composed of men in the Slovak Republic. Another important finding is that the perception of good relations in the Slovak Republic has significantly worsened since 2005. It is, therefore, important that employers make more efforts to improve relations.

Conclusion

Good relationships among colleagues at the workplace are a significant motivating factor for job satisfaction, a critical factor in the quality of work, reflected in older people's decisions to extend their working life. It is found that when comparing the indicator “Employed persons having a good relationship with their colleagues” for the younger generation aged 15-24 with older people aged 55-64, younger workers have better relationships with their colleagues. In a sex comparison, it is found that women in the Slovak Republic suffer from deteriorated relationships with colleagues more than men. We consider the findings to be a challenge for employers to prevent unwanted interpersonal situations and improve relationships at workplaces, mainly where female work groups in the age range of 55-64 are concentrated. We recommend the reasons for the deterioration of the perception of relations with colleagues for further research.

Interesting findings were data on Italy, when the minimum value of the indicator was in all three years, 2005, 2010, and 2015 for persons aged 55-64. On the contrary, in Slovakia, the values in this indicator for 2005 reached the maximum among all EU countries - 86.8%. The highest increase in the values of the indicator was in Portugal, where the value increased by 70.3% from 2005 to 2015. The most considerable decrease in values was recorded in Sweden, while the second in order was in Slovakia. In Slovakia, the indicator's value dropped from 86.8% in 2005 to 74.4% in 2015.

As for the development of the monitored indicator within the EU countries in the analyzed period, the countries' convergence is found. In general, the perception of relationships with colleagues is improving, and the differences between countries are decreasing.

Improving workplace relations may be one of the critical factors that will play a significant role in older people's decisions not to take early retirement or to work during retirement. Considering the demographic development in the EU countries in the growth of the share of older adults in the population and the forecasts of the increase in the share of economic dependence of older people, it is vital to identify the motivational factors that influence the quality of work of older people and their job satisfaction, so that ultimately policymakers and employers can adequately set up tools supporting the use of the working potential of older people on the labor market.

Bibliography

1. Barroso, M. (2022). Workplace Relationships in Europe: An Analysis by Occupation and Employment Status. *Intangible Capital*, 18(1), pp. 39-77.
2. Bohorquez, E., Perez, M., Caiche, W., & Rodriguez, A. B. (2020). Motivation and Work Performance: Human Capital as a Key Factor in an Organization. *Revista Universidad y Sociedad*, 12(3), pp. 385-390.
3. Comi, S. L., Cottini, E., & Lucifora, C. (2022). The Effect of Retirement on Social Relationships. *German Economic Review*, 23(2), pp. 275-299.
4. Cristea, M., Noja, G. G., Stefea, P., & Sala, A. L. (2020). The Impact of Population Aging and Public Health Support on EU Labor Markets. *International Journal of Environmental Research And Public Health*, 17 (1439)(4), pp. 1-27.
5. Ćwirlej-Sozańska, A., Wiśniowska-Szurlej, A., Wilmowska-Pietruszyńska, A., Sozański, B., & Wołoszyn, N. (2018). Assessment of Psychological Capacities for Professional Work in Late Middle Age and at the Beginning of Old Age. *Medycyna Pracy*, 69(4), pp. 375-381.
6. Eurostat. (2022). Employed Persons Having a Good Relationship with Their Colleagues by Sex and Age. (source: Eurofound, [QOE_EWCS_7A1__custom_6008901]. You may find details at https://ec.europa.eu/eurostat/databrowser/view/QOE_EWCS_7A1__custom_6008901/default/table?lang=en
7. Eurostat. (2021). Projected Old-Age Dependency Ratio. You may find details at <https://ec.europa.eu/eurostat/databrowser/bookmark/e790b7df-e279-44cc-ad31-e9eb08d893dc?lang=en>
8. Homocianu, D., Ploeanu, A. P., Florea, N., & Andries, A. M. (2020). Exploring the Patterns of Job Satisfaction for Individuals Aged 50 and over from Three Historical Regions of Romania. An Inductive Approach Concerning Triangulation, Cross-Validation, and Support for Replication of Results. *Applied Sciences*, 10(7, 2573), pp. 1-32.
9. Lakic, V. (2019). Job Satisfaction of Employees in Organizations in Relation to Their Demographic Characteristics. In: E. Kozarevic, & J. Okicic (Eds.), 6th International

- Scientific Conference Economy of Integration (Icei 2019). (E)Migration and Competitiveness Of Southeastern European Countries. EBSCO, Tuzla, BOSNIA & HERCEG: Univ Tuzla, Fac Econ; Thomson Reuters, 297-307.
10. Łaskiewicz, E., & Bojanowska, A. (2017). The Future of Polish Labour Market and the Issue of Work Motivation in Older People. *Folia Oeconomica, Acta Universitas Lodzensis*, 328(2), pp. 75-89.
 11. Minařík, B., Borůvková, J., & Vystrčil, M. (2013). *Analýzy v regionálním rozvoji*. Praha: Professional Publishing, 244
 12. Neary, J., Katikireddi, S. V., Brown, J., Macdonald, E. B., & Thomson, H. (2019). Role of Age and Health Perception of Returning to Work: a Qualitative Study. *BMC Public Health*, 496(19), pp. 1-10.
 13. Raziq, A., & Maulabakhsh, R. (2015). Impact of Working Environment on Job Satisfaction. *Procedia Economics and Finance*, 23, pp. 717-725.
 14. Persson, S. S., Lindstrom, P. N., Pettersson, P., & Andersson, I. (2018a). Workplace Relationships Impact Self-Rated Health: A Survey of Swedish Municipal Health Care Employees. *Work-A Journal of Prevention Assessment & Rehabilitation*, 60(1), pp. 85-94.
 15. Persson, S. S., Lindstrom, P. N., Pettersson, P., Nilsson, M., & Blomqvist, K. (2018b). Resources for Work-Related Well-Being: A Qualitative Study about Healthcare Employees' Experiences of Relationships at Work. *Journal of Clinical Nursing*, 27(23-24), pp. 4302-4310.
 16. Reuter, K., Loeschke, J., & Betzler, M. (2020). What Is a Colleague? The Descriptive and Normative Dimension of a Dual Character Concept. *Philosophical Psychology*, 33(7), pp. 997-1017.
 17. You, Y.-L., & Lee, H.-S. (2021). Understanding the Perspectives and Experiences of Employed Older People on Active Ageing in Their Later Working Life (Biographical Narrative Approach). *International Journal of Environmental Research and Public Health*, 18(13), pp. 1-19.

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