

MIGRATION AND MOBILITY OF QUALIFIED MILLENNIALS

Alice Reissová¹
Jana Šimsová²

DOI: <https://doi.org/10.31410/EMAN.S.P.2019.135>

Abstract: *Currently, many companies face the problem of a lack of workers, including the most highly qualified ones. Employers are very interested in whether today's young people are willing to commute or even move because of work. The purpose of this research was to answer these questions. The research group consisted of 1082 students of Jan Evangelista Purkyně University in Ústí nad Labem (Czech Republic). Students from all faculties, i.e. Faculty of Social and Economic Studies, Faculty of Mechanical Engineering, Faculty of Science, Faculty of Arts, Faculty of Education, Faculty of Health Studies, Faculty of Art and Design and Faculty of Environment, were involved. A written questionnaire was chosen as the method. The data was collected and processed using STATISTICA software. The statistical methods of the Mann-Whitney U Test, Kruskal-Wallis test, and the comparison of the parameters of two binomial distributions were used to evaluate the questions. The results indicate that the respondents from individual faculties show a similar willingness to commute to a job or, more precisely, to the amount of time they are willing to spend on the way. Differences, however, are in the willingness to move, both within the country and abroad. In this aspect, the students of the Faculty of Art and Design show the greatest willingness to move. The comparison of the students' attitudes by gender shows very interesting results. Women are statistically less willing to commute to work as well as to move within the country or abroad than men. Their un/willingness to move might be motivated by the fact that they plan to have children. Thus, the students were asked whether they plan to have children within 3 to 5 years after finishing their studies and their willingness to commute or move was evaluated taking this aspect into consideration. The students that are planning to start a family are less willing to commute to work for longer than 1 hour or to move within the country or abroad. Statistically significant differences were also found within gender. Women who are planning to have children prefer to work only in the place of residence and are unwilling to move (within the country or abroad). Men who are planning to have children show a more negative attitude towards moving abroad unlike those that are not planning to have children. It is also interesting that there are differences in students' plans to have children depending on the type of faculty they are studying. Most often, the students that plan to have children in less than 5 years after graduation are from the Faculty of Health Studies, of Arts and of Education. On the other hand, the smallest number of students that are planning to have children study at the Faculty of Mechanical Engineering and of Science. This result of the research is influenced by the ratio of registered men and women in each faculty. Women are planning to have children more often than men.*

Keywords: *Labour mobility, labour migration, willingness to commute for work, gender differences.*

1. INTRODUCTION

Many European countries have been experiencing a period of economic prosperity. In the labour market, demand for workforce predominates over its supply. Businesses report a lack of workforce and seek both low- and highly-qualified workers [1]. Due to ageing populations, the number of workers in working age has been gradually decreasing. A further decrease in workforce is driven by brain drain, i.e., the temporary or permanent outflow of workforce from their home country. The aspects of labour migration and the ageing popu-

¹ Department of Economy and Management of the Faculty of Social and Economic studies, Jan Evangelista Purkyně University, Ústí nad Labem, Czech Republic

² Department of Mathematics and Statistics of the Faculty of Social and Economic studies, Jan Evangelista Purkyně University, Ústí nad Labem, Czech Republic

lation index have thus become a societal phenomenon [2]. Businesses may attract employees partially by offering conditions enabling the employment of more women or older people [3]. Graduates also form a potential source of new workforce. To allow employers to approach them effectively, they need to know whether young people are willing to commute for work (mobility) or even move to get a job (migration). Many studies show that low unemployment and high qualifications are typical factors decreasing the willingness to commute for work [4]. People with high qualifications realize the value of time and their willingness to accept a job offer with a longer commuting time depends on the size of the offered salary [5]. Along with limited willingness towards labour mobility, labour migration also features certain drawbacks. It may represent a potential source but also a loss of workforce. While predicting labour migration, it is important to continuously compare labour markets, especially those threatened by a potential brain drain [6]. Apart from macroeconomic trends, it is also vital to pay attention to current attitudes of the young generation, denoted as Generation Y or millennials.

2. METODOLOGY

The aim of this survey was to establish the willingness of young people towards labour mobility and labour migration. The research population comprised 1082 students from Jan Evangelista Purkyně University in Ústí nad Labem (Czech Republic). The survey comprised students from all the faculties, i.e., the Faculty of Social and Economic Studies, the Faculty of Mechanical Engineering, the Faculty of Science, the Faculty of Arts, the Faculty of Education, the Faculty of Health Studies, the Faculty of Art and Design and the Faculty of the Environment. The research was conducted using the written questionnaire method. Data were acquired and processed using MS EXCEL and STATISTICA software. The question assessment was performed using the Mann–Whitney U Test, Kruskal-Wallis test and comparing parameter matching of two binomial distributions. It was investigated whether there are statistically significant differences in the willingness to commute for work (mobility) or move (migration) between students of individual faculties.

3. RESULTS

To establish the level of willingness towards labour mobility and migration, respondents were asked the question listed in Table 1. For reasons of clarity, the questions are labelled A to G.

Label	Question
A	I want to work only where I am domiciled
B	Commute up to 30 minutes
C	Commute up to 60 minutes
D	Commute for more than 1 hour
E	I am willing to move within the Czech Republic
F	I am willing to move abroad on a temporary basis
G	I am willing to move abroad on a permanent basis

Table 1: The wording and labels to establish information about mobility and migration

First, the aforementioned questions were assessed using a descriptive method. Table 2 shows that 92% of students declare a willingness to commute for work for up to 30 minutes at a maximum.

	A	B	C	D	E	F	G
relative frequency	0.70332	0.92421	0.52587	0.11922	0.56561	0.50184	0.30683

Table 2: Relative frequencies of answers to questions A to G

Willingness towards labour migration (moving) within the Czech Republic is expressed by 56% of respondents while willingness to move abroad permanently is lower (30%).

H1: As far as willingness to commute for work (mobility) and move (migration), there are no statistically significant differences between students of individual faculties.

As the data did not show normal distribution, non-parametric tests were used. In this case, it was the Kruskal-Wallis test. The results of the test are given in Table 3.

Question	p-value	Pair comparison
A	0.8719	
B	0.6252	
C	0.0100	Faculty of Science x Faculty of Health Studies, $p=0,027027$
D	0.3823	
E	0.0077	Faculty of Social and Economic Studies x Faculty of Art and Design, $p = 0,025782$
F	0.0000	Faculty of Art and Design x other faculties except for Faculty of the Environment
G	0.0000	Faculty of Art and Design x other faculties except for Faculty of the Environment

Table 3: Attitudes of students from individual faculties to mobility and migration

The results show that in respect of labour mobility, university students declare a similar level of willingness to commute for work, regardless of their faculties. As far as labour migration is concerned (moving for work), the attitudes of the Faculty of Art and Design students differ. Another subject of the survey was to establish whether there are gender differences in respect of labour mobility and labour migration and the following hypothesis was made:

H2: There are significant gender differences in the willingness towards labour mobility (to commute for work) and labour migration (to move within the country or abroad).

	Rank Sum	Rank Sum	U	Z	p-value	Z	p-value
	female	male				adjusted	
A	396469.5	189433.5	128008.5	0.018925	0.984901	0.020369	0.983749
B	396891.0	189012.0	127587.0	0.106581	0.915121	0.125413	0.900197
C	412510.0	173393.0	111968.0	3.354761	0.000794	3.588322	0.000333
D	412719.5	173183.5	111758.5	3.398329	0.000678	3.734137	0.000188
E	408300.0	177603.0	116178.0	2.479235	0.013167	2.618884	0.008822
F	414026.5	171876.5	110451.5	3.670137	0.000242	3.846066	0.000120
G	417897.0	168006.0	106581.0	4.475060	0.000008	4.697227	0.000003

Table 4: Gender differences in attitudes of students to mobility and migration.

These differences were verified using the Mann–Whitney test. The results of the test are given in Table 4. Table 4 shows which attitudes to mobility differ according to gender. Table 5 shows the average values of the coded answers. The higher the value of the code, the greater the disagreement. Based on the Mann–Whitney test, it can be stated that hypothesis 2 has been partially confirmed: men tend to show more willingness to commute longer distances and more willingness to migrate.

sex	A	B	C	D	E	F	G
female	2.159836	1.795082	2.538251	3.353825	2.457650	2.616120	3.032787
male	2.165714	1.805714	2.354286	3.174286	2.300000	2.382857	2.734286

Table 5: average values of coded answers on mobility and migration

The third hypothesis verified whether:

H3: Variables having the biggest impact on mobility and migration are not only gender but also the fact whether they want to have children.

The difference in attitudes of these two groups (I am planning to have/not to have children upon completing my studies) was verified using the Mann-Whitney test. The results of the test are given in Table 6.

	Rank Sum 1*	Rank Sum 2**	U	Based on	p-value	Z adjusted	p-value
A	306714.5	279188.5	136478.5	-1.75244	0.079699	-1.88623	0.059265
B	318274.5	267628.5	142878.5	0.50342	0.614672	0.59237	0.553606
C	314351.5	271551.5	144115.5	-0.26200	0.793319	-0.28024	0.779291
D	324946.0	260957.0	136207.0	1.80543	0.071008	1.98383	0.047275
E	334348.5	251554.5	126804.5	3.64043	0.000272	3.84548	0.000120
F	345424.5	240478.5	115728.5	5.80202	0.000000	6.08014	0.000000
G	350254.0	235649.0	110899.0	6.74455	0.000000	7.07939	0.000000

1* I want to have children, 2** I don't want to have children

Table 6: Differences in willingness towards labour mobility or labour migration of students who are planning to have or not have children

It clearly follows from table 6 that the attitudes of the group planning to have children and of the group not planning to have children differs from question D (commuting for more than an hour) and with all questions concerning migration. It follows from Table 7 that the averages of the coded answers to questions E, F and G are higher in those who want to have children and they do not show a willingness towards labour migration.

	A	B	C	D	E	F	G
1*	2.22044	1.78957	2.48096	3.24248	2.29258	2.35470	2.70941
2**	1.95883	2.14150	2.90909	2.92281	2.60205	2.91509	3.1303

1* they don't want to have children, 2** they want to have children

Table 7: Average values of coded answers on mobility and migration

The same process was used to test whether there are differences between women planning to have children and women not planning to have children. Women planning to have children prefer to work where they are domiciled and show a significantly lower willingness towards labour migration. For men planning to have children, their willingness towards mobility does not differ from men not planning to have children. However, men planning to have children are less willing to move abroad, either temporarily or permanently.

Finally, the survey looked into whether there are statistically significant gender differences in planning to have children. The last hypothesis was stated as:

H4 Female students plan to have children more often than male students.

Table 8 indicates the number of men and women who are planning to have children within 3 to 5 years of completion of their university studies.

	Rank Sum 1*	Rank Sum 2**	U	Based on	p-value	Z adjusted	p-value
A	34316.50	27108.50	15018.50	0.09944	0.920788	0.10467	0.916639
B	33505.00	27920.00	14395.00	-0.76256	0.445727	-0.87330	0.382499
C	34120.00	27305.00	15010.00	-0.10848	0.913614	-0.11698	0.906877
D	33860.00	27565.00	14750.00	-0.38500	0.700237	-0.41850	0.675583
E	32581.00	28844.00	13471.00	-1.74527	0.080939	-1.85555	0.063518
F	32204.50	29220.50	13094.50	-2.14569	0.031898	-2.27215	0.023078
G	31692.50	29732.50	12582.50	-2.69022	0.007141	-2.79792	0.005144

1** not to have children, 2** to have children

Table 8: The absolute frequency of men and women who are planning to have children within 3 to 5 years of completion of their university studies

Table 8 show that there are more women planning to have children upon completion of their studies (58%) than men (44%). A test consisting in comparing parameter matching of two binomial distributions verified that the proportion of men is statistically significantly low (p-value of 0.000).

Another analysis focusing on whether there are differences in planning to have children between individual faculties was done. The highest percentage of students planning to have children come from the Faculty of Health Studies (65%) and the lowest percentage from the Faculty of Art and Design (40%).

4. DISCUSSION

Many employers expect that their future employees will be willing to commute to work or even move. Jun [7] notes that commuting or the length of commute leads to a loss of welfare. Quart et al. [8] carried out an extensive survey among German medical faculty students and found that most future physicians declare a willingness to commute up to 40 minutes at a maximum. Cassel [4] states that the factors influencing the willingness to commute are gender, level of education, and the presence of children in the household. Cassel's findings are in line with the conclusion of this study which established that not only gender but also planning to have children influences willingness towards labour mobility and migration. Beck and Hess [5] note that other important variables influencing willingness to commute for work are also the salary offer,

commuting by one's partner, options of commuting, etc. Very similar factors are also contemplated by other authors [9], [10], [11]. On the contrary, certain individual studies indicate that no difference between aversion to commuting in men and women was found [12].

Another important topic of this article was the issue of willingness to move abroad. It was found that the level of willingness to move depends not only on gender (women are less willing to move) but also on the type of faculty where the respondent studies. Similar conclusions, i.e., that strong predictors of moving abroad are the type of university and field of study, were also drawn by other authors [13]. Currently the highest level of willingness to migrate can be perceived in graduates in the medical and health fields of study. For example, Santric-Milicevic et al. [14] state that up to 70% of graduates from a university specialized in education of health professionals in Serbia want to move abroad. A similarly high number is seen in health professionals in many other countries [15], [16]. According to McKenzie et al. [17], most frequently, the reason for labour migration (not only in health professionals) is the expectation of a larger salary. Djajic, Kirdar and Vinogradova [18] calculate how the size of salary influences the decision on migration according to the level of qualifications. For university graduates, the reason for migration may also be an effort to avoid repayment of loans for university studies which are conditioned by attaining a certain income [19]. A reason why students move abroad may also be acquiring work experience which represents a form of capital improving their work opportunities after their return to their home country [20]. Based on the findings of some studies, it can be assumed that young people who decide to move abroad show certain personal characteristics [21], [22]. Herz et al. [23] think that interest in moving abroad is also influenced by increasing age where the willingness to migrate decreases, while it increases in students. The outflow of skilled workforce abroad may be beneficial for the economies of individual countries only if it concerns temporary labour migration [24], [25], [26], [27].

5. CONCLUSION

The aim of this study was to establish the level of willingness of university students towards labour mobility (commuting for work) and migration (moving for work) and by which variables the mobility and migration are influenced. The research population comprised 1082 university students of various fields of study. It was found that in students of individual faculties there is no significant difference in the willingness to commute for work, whereas the most preferred maximum commute time is 30 minutes. As far as labour migration is concerned (moving for work), the attitudes of the Faculty of Art and Design students differ. Some gender differences were also established. Compared to women, men show more willingness to commute longer distances and also more willingness towards labour migration (moving for work).

Planned parenthood is a significant variable influencing migration. Students who want to have children show a significantly lower willingness towards labour migration. From the point of view of statistical significance, female students plan to have children more often than male students. Differences in planning to have children differ significantly not only with gender but also with the field of study.

REFERENCES

- [1] Major, Z., & Kovacs, T. (2017). An Analysis of the Labor Force Engaged in Security: Tackling the Problem of Labor Shortage Observed in Security. *Annals of the Faculty of Engineering Hunedoara - International Journal of Engineering*, 15(4), 97–101
- [2] Grenčíková, A., Skačkauskienė, I. & Španková, J. (2018). The features of labor emigration from the Slovak Republic. *Business: Theory and Practice*, (271–277), 271. <https://doi.org/10.3846/btp.2018.27>
- [3] Fuchs, J. (2013). Demography and labor shortage. Future challenges of labor market policy. *Bundesgesundheitsblatt-Gesundheitsforschung-Gesundheitsschutz*, 56(3), 399–405. <https://doi.org/10.1007/s00103-012-1616-y>
- [4] Cassel, S. H., Macuchova, Z., Rudholm, N., & Rydell, A. (2013). Willingness to commute long distance among job seekers in Dalarna, Sweden. *Journal of Transport Geography*, 28, 49–55. <https://doi.org/10.1016/j.jtrangeo.2012.10.011>
- [5] Beck, M. J., & Hess, S. (2016). Willingness to accept longer commutes for better salaries: Understanding the differences within and between couples. *Transportation Research Part A*, 91, 1–16. <https://doi.org/10.1016/j.tra.2016.05.019>
- [6] Savić, M., & Zubović, J. (2015). Comparative Analysis of Labour Markets in South East Europe. *Procedia Economics and Finance*, 22, 388–397. [https://doi.org/10.1016/S2212-5671\(15\)00309-3](https://doi.org/10.1016/S2212-5671(15)00309-3)
- [7] Jun, M.J. (2019). Quantifying welfare loss due to longer commute times in Seoul: A two-stage hedonic price approach. *Cities*, 84, 75–82. <https://doi.org/10.1016/j.cities.2018.07.007>
- [8] Quart, J., Deutsch, T., Carmienke, S., Doepfmer, S., & Frese, T. (2019). Willingness to commute among future physicians: a multicenter cross-sectional survey of German medical students. *Journal Of Occupational Medicine And Toxicology*, 13. <https://doi.org/10.1186/s12995-018-0200-2>
- [9] Huber, P., & Nowotny, K. (2013). Moving across Borders: Who is Willing to Migrate or to Commute? *Regional Studies*, 47(9), 1462–1481. <https://doi.org/10.1080/00343404.2011.624509>
- [10] Chng, S., White, M., Abraham, C., & Skippon, S. (2016). Commuting and wellbeing in London: The roles of commute mode and local public transport connectivity. *Preventive Medicine*, 88, 182–188. <https://doi.org/10.1016/j.ypmed.2016.04.014>
- [11] Morris, E. A., & Zhou, Y. (2018). Are long commutes short on benefits? Commute duration and various manifestations of well-being. *Travel Behaviour and Society*, 11, 101–110. <https://doi.org/10.1016/j.tbs.2018.02.001>
- [12] Gershenson, S. (2013). The causal effect of commute time on labor supply: Evidence from a natural experiment involving substitute teachers. *Transportation Research Part A*, 54, 127–140. <https://doi.org/10.1016/j.tra.2013.07.010>
- [13] Hercog, M., & Laar, M. (2017). Motivations and Constraints of Moving Abroad for Indian Students. *Journal of International Migration & Integration*, 18(3), 749.
- [14] Santric-Milicevic, M., Matejic, B., Terzic-Supic, Z., Vasic, V., Babic, U., & Vukovic, V. (2015). Determinants of intention to work abroad of college and specialist nursing graduates in Serbia. *Nurse Education Today*, 35590-596. doi: 10.1016/j.nedt.2014.12.022
- [15] Lee, E., & Moon, M. (2013). Korean nursing students' intention to migrate abroad. *Nurse Education Today*, 331517-1522. doi: 10.1016/j.nedt.2013.04.006
- [16] Sprinks, J. (2013). Half of Portuguese nursing school graduates leave to work abroad. *Nursing Standard*, 28(12), 14.

- [17] McKenzie, D., Gibson, J., & Stillman, S. (2013). A land of milk and honey with streets paved with gold: Do emigrants have over-optimistic expectations about incomes abroad? *Journal of Development Economics*, 102, 116–127. <https://doi.org/10.1016/j.jdeveco.2012.01.001>
- [18] Djajic, S., Kirdar, M. G., & Vinogradova, A. (2016). Source-country earnings and emigration. *Journal of International Economics*, 99, 46–67. <https://doi.org/10.1016/j.jinte-co.2015.12.001>
- [19] Chapman, B., & Higgins, T. (2013). The Costs of Unpaid Higher Education Contribution Scheme Debts of Graduates Working Abroad. *Australian Economic Review*, 46(3), 286.
- [20] Landolt, S., & Thieme, S. (2018). Highly skilled migrants entering the labour market: Experiences and strategies in the contested field of overqualification and skills mismatch. *Geoforum*, 90, 36–44. <https://doi.org/10.1016/j.geoforum.2018.01.009>
- [21] Grabowska, I. (2016). The Transition from Education to Employment Abroad: The Experiences of Young People from Poland. *Europe-Asia Studies*, 68(8), 1421–1440. <https://doi.org/10.1080/09668136.2016.1233522>
- [22] Furnham, A. (2017). Personality differences in managers who have, and have not, worked abroad. *European Management Journal*, 35, 39–45. <https://doi.org/10.1016/j.emj.2016.10.002>
- [23] Herz, A., Díaz-Chorne, L., Díaz-Catalán, C., Altissimo, A., & Samuk, S. (2019). Are you mobile, too? The role played by social networks in the intention to move abroad among youth in Europe. *Migration Letters*, 16(1), 93.
- [24] Boncea, I. (2015). Turning Brain Drain into Brain Gain: Evidence from Romania's Medical Sector. *Procedia Economics and Finance*, 20, 80–87. [https://doi.org/10.1016/S2212-5671\(15\)00050-7](https://doi.org/10.1016/S2212-5671(15)00050-7)
- [25] Steinberg, D. (2017). Resource shocks and human capital stocks – Brain drain or brain gain? *Journal of Development Economics*, 127, 250–268. <https://doi.org/10.1016/j.jdeveco.2017.04.001>
- [26] Heitor, M., Horta, H., & Mendonça, J. (2014). Developing human capital and research capacity: Science policies promoting brain gain. *Technological Forecasting & Social Change*, 82, 6–22. <https://doi.org/10.1016/j.techfore.2013.07.008>
- [27] Baruffaldi, S. H., & Landoni, P. (2012). Return mobility and scientific productivity of researchers working abroad: The role of home country linkages. *Research Policy*, 41, 1655–1665. <https://doi.org/10.1016/j.respol.2012.04.005>