Digital natives and working hours Hungarian and Romanian youth in the labor market

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Abstract.

Nowadays, members of the twenties who can be considered digital natives are constantly entering the labor market. Are traditional working hours appropriate for the adult generation in the digital age? Does the flexibility provided by the Internet and the digital world affect the working time ideas of twenty-year-old digital natives? We assume that members of the younger generation, Generations Y and Z (date of birth between 1995–2009; age 20–29) have similar views on working hours, regardless of country and settlement type. Accordingly, we formulated the research questions and applied the research methodology. We asked young people aged 20-29 with a degree in economics and law in Hungary and Romania about what type of working hours they prefer. Our research question was whether the type of the working time schedule is influenced by the country, the settlement type or the field of education. In our study, we concluded that in both countries, respondents would prefer to work in a schedule of partly or fully flexible working time than in full-time, fixed or non-fixed working hours. Responders prefer partly flexible working time in Hungary and fully flexible working time in Romania. For both countries, a relative majority would like to work in a schedule of fully flexible working time. The relative majority in the economic field of education prefer a fully flexible working time schedule, in the legal field of education a partly flexible working time schedule.

Keywords: labor market, digital natives, questionnaire

1. Working time

The legal and social significance of working time is also well illustrated by the fact that the first convention adopted by the International Labor Organisation (hereinafter: ILO) occurred one hundred years ago to limit the working time of industrial companies to eight hours a day and forty-eight hours a week. This convention set in motion the process that led to the transformation of previously known labor law dependency. During the Industrial Revolution, workers could work 12–16 hours a day, which was allowed by contemporary rules. The workers' lives were subordinated to production needs.

The basic concept of working time regulation is of a labor protection nature. However, the focus of the regulation of working time changed during the 20th century. Flexibility is at the heart of the new working time policy. At the same time, the employee's obligations have decreased and his level of protection has increased. Free will has become increasingly important. However the increase in the role of free will refers to the increased use of free time

compared to previous eras. After a hundred years, we can say that the socio-economic and legal changes that started with ILO Convention No. 1 are going quite well and we have come to ideas like the 4-day work week (Whiting, 2020; Máté, 2018).

The long-term decline in working time has been generally non-linear but cyclical. The demand for shorter working hours increased, but shorter working hours could only be fought for if workers were given enough capital to negotiate (Golden, 2006). In some places, regulations have also become campaign-like. In the case law of the ILO, we can see that the conventions have been drawn up almost sector by sector. At the international level, of course, other documents and legal acts have also shaped international and national practice. Among other things, the European Social Charter and the Revised European Social Charter play an important role in the jurisprudence of the Council of Europe. Article 2 of the European Social Charter mentions, within the right to just conditions of work, that the Contracting Parties undertake to provide for reasonable daily and weekly working hours, the working week to be progressively reduced to the extent that the increase of productivity and other relevant factors allow. In addition, paid public holidays and paid annual holiday of a minimum of four weeks were also formulated. We should also mention the regulation of the European Union, which has followed a similar path as the previous two, although it has been able to have a greater impact on national legislation through Article 31 of the Charter of Fundamental Rights and secondary legal sources such as Directive 2003/88/EC of the European Parliament and of the Council. It can be seen that both Hungarian and Romanian regulations are the legislative product of the new millennium. The Hungarian rules, the Romanian rules and the Directive define the working time as well. We can say that under Romanian law, working time is the defined period, defined daily or weekly, during which the employee is obliged to perform the tasks specified in the employment contract (Țiclea, 2015). At the same time, the definition of working time is limited to the period of effective work; as a general rule time spent on lunch breaks, changing working clothes, etc. do not count as working time (Ștefănescu, 2014).

The Romanian rules are similar to the Hungarian rules. For full-time employees, the normal working time in Romania is also 8 hours a day, 40 hours a week. As a general rule, working time is evenly distributed over 8 hours a day for 5 days, with a rest period of two days, but deviations from this are allowed, while respecting the normal working hours of 40 hours per week

In today's employment relationship, flexible work is becoming more and more important. The demand for flexible working hours appears to be growing in both Hungary and Romania. Flexible working time rules appear primarily in atypical forms of work. Flexible working arrangements (with a fully flexible working time schedule) are used on a smaller scale, but have been increasingly required, and can be exercised not only by the self-employed, but also in traditional employment relationships. A fully flexible working time schedule means that the employer may permit – in writing – the employee to schedule his working time in the interest of autonomous work organisation.

2. Problems and research question

We assume that members of the younger generation, Generations Y and Z (date of birth between 1995–2009; age of 20–29 years), have similar views on working hours, regardless of country and settlement type. Narrowing our study to the fields of education of economics and

law, we sought answers to the following research question: What type of working time schedule do they prefer? To answer our research questions, we conducted primary research (Musinszki et al., 2020).

2.1 Methodology

The first version of the questionnaire was prepared in the first two months of 2020 and tested in March. Due to changes in the labor market caused by COVID-19, the questionnaire was revised in March and tested again in the first half of April. The questionnaire survey was implemented online in Hungary and Romania. The questionnaires were shared with the target groups with the help of colleagues in the faculties of economics and law. The operating rules of several universities and colleges do not allow such surveys to be conducted, therefore representativeness is not ensured. The survey started in the second half of April, and the questionnaires were closed on May 10th. Data collection was performed using Google Form and processing was performed using IBM SPSS Statistics Version 26. The data were processed anonymously. After cleaning and checking the data, a sample of 251 people was available for analysis in Hungary and a sample of 125 people in Romania. Subsequently, only the responses of respondents in the age range 20–29 were retained for further analysis, so the number in the sample was 220. We decided to analyse the youth, because they have another idea in context of labor market (Dabasi et al., 2019). Data on the sample is provided in Table no. 1.

Table 1: Characteristics of the sample (N = 220 people)

		Frequency	Percent
Country	Hungary	132	60.0
	Romania	88	40.0
Age	20-24	145	65.9
	25-29	75	34.1
Marital status	single	76	34.5
	married	20	9.1
	live with partner	123	55.9
	divorced	1	0.5
Educational attainment	high school	70	31.8
	university degree or higher	150	68.2
Permanent residence (settlement type)	village	48	21.8
	other city	51	23.2
	county seat	79	35.9
	capital city (of a country), that is Budapest or Bucharest	42	19.1
Field of education	economics	127	58.3
	law	91	41.7

Source: Own compilation

As a consequence of the analysis of the field of education we took two respondents out of the sample, because they did not provide an evaluable answer to this question.

We can talk about an association between qualitative and territorial criteria. In order to conclude on the statistical population, we performed an independence test. In the independence test, we stated in Hypothesis H_o that there is no significant relationship between the variables, while in Hypothesis H_1 we stated that there is a relationship between our variables. The independence test was considered to be performed if the frequencies expected

in the case of independence (Expected Count - f_{ij}*) were not less than 1, or a value between 1 and 5 can only be taken by up to 20% of the cells. As a nonparametric hypothesis, we performed a Chi-square test. The strength of the association between the data in the sample was determined by Cramer's V-index. During the variance analysis, the existence of mixed relationships (qualitative/territorial criterion - quantitative criterion) was tested by hypothesis testing. The condition of the variance analysis is the standard deviation of the variance between the groups and the normal distribution of the quantitative variable. Due to the Likert scales, the normality condition was not met, but based on the robust nature of the F test, ANOVA tests were considered acceptable in the presence of standard deviation (Sajtos and Mitev, 2007; Ketskeméty and Izsó, 2005). The equality of variances was examined in the SPSS program using Levene's test.

3. Examination of the type of working time schedule and the factors influencing it

Our next research question was whether the type of the working time schedule is influenced by the country, the settlement type or the field of education. The following working time schedules were examined:

- full-time fixed working hours (8 hours every day, 40 hours per week),
- full-time non-fixed working hours (different number of working hours per day, but a total of 40 hours per week),
- partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday),
- fully flexible working time (weekly working time frame = 40 hours).

Respondents were asked to rate these options on a 5-point Likert scale, where 1 - not at all, 5 - completely. (What kind of working time schedule would you like to work in?) In the case of full-time fixed working hours, the average in Hungary was 3.31; and the average in Romania was 3.20. The mean for the sample was 3.27. The mode was 4 in Hungary (27.27% of responders), 3 in Romania and 3 in the sample (30.68% and 26.36% of responders. respectively). Based on the independence test. there is a weak. non-significant relationship between the full-time fixed working hours and the responses according to countries (χ^2 = 3.462, p = 0.484, df = 4, Cramer's V = 0.125).

In the case of full-time non-fixed working hours (different number of working hours per day. but a total of 40 hours per week) the average in Hungary was 3.22 and in Romania 3.43; the average of the sample was 3.30. The mode was more interesting. The majority of all responders (26.14%) gave a medium value to the question. i.e. the mode of the sample is 3. Among the Hungarian respondents, 37 people (28.03%) marked the value 3, and also 37 people marked the value 4. In the case of Romanian respondents, the majority (25 people, 28.31%) indicated the highest value. (However, 23 individuals, i.e. 26.14% of responders, marked the value 3.) There is a weak, non-significant relationship between the two variables (χ^2 = 626, p = 0.328, df = 4, Cramer's V = 0.145).

In the case of partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday), both the majority of Hungarian (41.67%) and Romanian (35.23%) responders, as well as the majority of all

respondents, marked it with the highest value on the scale (mode = 5). The average in Hungary was 3.99, the average in Romania was 3.64, and the average of the sample was 3.85. That is, there is a significant, weak relationship between the partly flexible working time and the country ($\chi^2 = 10.470$, $p = 0.033$, $df = 4$, Cramer's $V = 0.218$).

In the case of fully flexible working time (weekly working time frame = 40 hours) – similarly to partly flexible working time – the mode is 5 in all cases. For both countries, more than 42% of respondents marked the highest value. At the same time, compared to partly flexible working time, the average in Hungary is lower (3.76), the average in Romania is higher (3.67), and the average of the sample is also lower (3.72). There is a weak, non-significant relationship between the two variables. ($\chi^2 = 4.243$, $p = 0.374$, $df = 4$, Cramer's $V = 0.139$).

In both countries, responders would prefer to work in partly or fully flexible working time to full-time fixed or non-fixed working hours. Responders prefer partly flexible working time in Hungary and fully flexible working time in Romania. For both countries, a relative majority would like to work in a work schedule of fully flexible working time. In the case of fully flexible working time, the standard deviation is the highest, which means that fully flexible working time is not only the most popular for the relative majority, but also the most divisive alternative.

The homogeneity was tested based on the Levene Statistic. With the exception of partly flexible working time, the homogeneity of the standard deviations is achieved. (In the case of partly flexible working time: Levene Statistic 8.328, *df1* = 1, *df2* = 218, *Sig.* = 0.004.)

Table 2: The ANOVA test of country and working time schedule

Categories		Sum of Squares	df	Mean Square	F	Sig.
full-time fixed working hours (8 hours every day, 40 hours per week)	Between Groups	0.594	1	0.594	0.349	0.555
	Within Groups	370.583	218	1.700		
	Total	371.177	219			
full-time non-fixed working hours (different number of working hours per day, but a total of 40 hours per week)	Between Groups	2.376	1	2.376	1.454	0.229
	Within Groups	356.220	218	1.634		
	Total	358.595	219			
partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday)	Between Groups	6.694	1	6.694	4.627	0.033
	Within Groups	315.356	218	1.447		
	Total	322.050	219			
fully flexible working time (weekly working time frame = 40 hours)	Between Groups	0.401	1	0.401	0.215	0.643
	Within Groups	405.686	218	1.861		
	Total	406.086	219			

Source: Own compilation

With the exception of partly flexible working time, the significance level exceeds 0,05 in all cases, therefore we can state that there is no significant relationship between the country

and the given working time schedule. A connection can be discovered between the country and the partly flexible working time; however, we emphasise once again that in this case we can talk about heteroscedasticity.

Table 3: The mean, standard deviation and relative standard deviation of the evaluation of working time schedule based on the settlement types

Categories		N	Mean	Std. Deviation	Rel. Std. Deviation
full-time fixed working hours (8 hours every day, 40 hours per week)	capital city	42	3.07	1.386	0.451
	county seat	79	3.27	1.278	0.391
	other city	51	3.35	1.354	0.404
	village	48	3.35	1.229	0.366
	total	220	3.27	1.302	0.398
full-time non-fixed working hours (different number of working hours per day, but a total of 40 hours per week)	capital city	42	3.36	1.411	0.420
	county seat	79	3.52	1.280	0.364
	other city	51	3.12	1.194	0.383
	village	48	3.10	1.225	0.394
	total	220	3.30	1.280	0.387
partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday)	capital city	42	3.45	1.347	0.390
	county seat	79	4.16	1.079	0.259
	other city	51	3.88	1.194	0.308
	village	48	3.65	1.211	0.332
	total	220	3.85	1.213	0.315
fully flexible working time (weekly working time frame = 40 hours)	capital city	42	3.79	1.474	0.389
	county seat	79	3.82	1.347	0.352
	other city	51	3.55	1.222	0.344
	village	48	3.69	1.446	0.392
	total	220	3.72	1.362	0.366

Source: Own compilation

A schedule of full-time fixed working hours is the least preferred solution in all settlement types compared to the other options. The mean was 3.27, the mode 3 (26.40% of responders). The schedule of fixed working hours received the highest average in other cities and villages (3.35 – 3.35), while the mode was highest in the county seats. 35.4% of respondents marked the value 4. There is a weak, non-significant relationship between the two variables. (χ^2 = 17.102, p = 0.146, df = 12, Cramer's V = 0.161)

In the case of full-time non-fixed working hours (different number of working hours per day, but a total of 40 hours per week), the mean was 3.30. The mode was 3 (27.3% of respondents and 25.5% of respondents to the questionnaire gave the value 4 to the question. This preference is also reflected in the case of villages and other cities. Concerning people living in the capital cities and in the county seats, the mode was 5, but it should be emphasised that in the case of the county seats there was only a difference of 1 between those who chose values 3, 4 and 5, (3: 20 people, 4: 21 people, 5: 22 people.) Thus, there is a weak, insignificant relationship between the two variables (χ^2 = 16.852, p = 0.155, df = 12, Cramer's V = 0.160).

The majority of respondents prefer partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday). In all settlement types with the exception of the capital cities, this working time schedule received the highest average. (See Table no. 4) This is due to the fact that 14.3% of people living in the capitals do not want to work in a schedule of partly flexible working time at all. (In the capital city, only the working time schedule of 8 hours every day, 40 hours per week was more rejected – 19.0%.) The total number of respondents and the relative majority of those living in the capital towns of counties and other cities totally would like to work in a schedule of partly flexible working time. The mode of the village and the capital was 4. That is, there is a significant weak relationship between the partly flexible working time and the settlement type. ($\chi^2 = 24.983$, p = 0.015, df = 12, Cramer's V = 0.195).

In the case of fully flexible working time (weekly working time frame = 40 hours), the mode was 5, with the exception of other cities. With the exception of other cities, at least 42.3% of respondents marked the highest value in all cases. (In the case of other cities, there was only 1 difference between those who chose values 3, 4 and 5; 3: 15 people, 4: 13 people, 5: 14 people.) However, compared to partly flexible working hours, there is a higher rejection of fully flexible working time. The proportion of those who do not support partly flexible working time at all (1) or only to a small extent (2) is 14.1%. In contrast, the proportion of those who do not support fully flexible working time at all (1) or only to a small extent (2) is 21.8%. That is, there is a weak, non-significant relationship between the fully flexible working time and the settlement type. ($\chi^2 = 13.651$, $p = 0.324$, $df = 12$, Cramer's $V = 0.144$).

For all types of working time schedule, it can be observed that those living in the capital cities gave the most extreme answers. The standard deviation is the highest in capital cities among all settlement types. It can also be observed that, with the exception of full-time fixed working hours (8 hours every day, 40 hours per week), people living in villages preferred the given working time schedule to a below-average extent.

Table 4: The ANOVA test of settlement type and working time schedule

Categories		Sum of Squares	df	Mean Square	F	Sig.
full-time fixed working hours (8 hours every day, 40 hours per week)	Between Groups	2.348	3	0.783	0.458	0.712
	Within Groups	368.830	216	1.708		
	Total	371.177	219			
full-time non-fixed working hours (different number of working hours per day, but a total of 40 hours per week)	Between Groups	7.458	3	2.486	1.529	0.208
	Within Groups	351.138	216	1.626		
	Total	358.595	219			
partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday)	Between Groups	16.511	3	5.504	3.891	0.010
	Within Groups	305.539	216	1.415		
	Total	322.050	219			
fully flexible working time (weekly working time frame = 40 hours	Between Groups	2.556	3	0.852	0.456	0.713
	Within Groups	403.530	216	1.868		

	Total	406.086	219			

Source: Own compilation

The homogeneity was tested based on the Levene Statistic. The homogeneity of the standard deviations is achieved in all cases. As in the case of countries, with the exception of partly flexible working time, the significance level exceeds 0.05 in all cases, therefore we can state that there is no relationship between the settlement type and the given working time schedule. At the same time, a significant relationship can be discovered between the settlement type and the partly flexible working time (F = 3.891, $df1$ = 3, $df2$ = 216, p = 0.001).

Finally, let us look at how representatives of economic and legal profession relate to working time schedule. In the case of full-time fixed working hours. the average of those with degrees in or studying economics was 3.23. and the average of those with degrees in or studying law was 3.34. The mean for the sample was 3.28. The mode was 3 (31.50% of respondents) and 4 (26.37% of respondents) for the two fields of education. respectively. and the mode was 3 (26.61% of respondents) in the sample. The legal field of education is less divided in terms of the fixed-time work than the economic field of education. According to the independence test. there is a weak. non-significant relationship between the schedule of full-time fixed working hours and the responses according to the fields of education (χ^2 = 4.444, p = 0.349, df = 4, Cramer's V = 0.143).

The two fields of education have different approaches to full-time non-fixed working hours (different number of working hours per day. but a total of 40 hours per week). There is a weak. significant relationship between the two variables (χ^2 = 9.393, p = 0.052, df = 4, Cramer's V = 0.208). The average of the economic field of education was 3.21. the average of the legal field of education was 3.43 and the average of the sample was 3.30. The mode of economic field of education was 4 (30.71%). of the legal field of education was 3 and 5 (27 people each, 29.67%). of the sample was 3 (27.06%).

Partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday) is the most popular for both fields of education. The mode was 5 in all cases. Partly flexible working time is totally supported by 39.45% of respondents and fully flexible working time by 42.66% of respondents. In the case of partly flexible working time, the average of the economic field of education was 3.91, the average of the legal field of education was 3.79, and the average of the sample was 3.86. In the case of fully flexible working time, the average of the economic field of education was 3.80, the average of the legal field of education was 3.64, and the average of the sample was 3.73. There is a weak, non-significant relationship between partly flexible working time and the field of education. (χ^2 = 3.405, p = 0.493, df = 4, Cramer's V = 0.125) There is also a weak, non-significant relationship between the fully flexible working time and the field of education (χ^2 = 5.093 p = 0.278, df = 4, Cramer's V = 0.153).

As we observed in the previous two cases (country and settlement type), respondents would prefer to work in a schedule of partly or fully flexible working time than in a schedule of full-time fixed or non-fixed working hours. The relative majority in the economic field of education (45.67%) prefer a fully flexible working time schedule, in the legal field education (40.66%) a partly flexible working time schedule.

Table 5: The ANOVA test of field of education and working time schedule

Categories		Sum of Squares	df	Mean Square	F	Sig.
full-time fixed working hours (8 hours every day, 40 hours per week)	Between Groups	0.669	1	0.669	0.396	0.530
	Within Groups	364.818	216	1.689		
	Total	365.486	217			
full-time non-fixed working hours (different number of working hours per day, but a total of 40 hours per week)	Between Groups	2.473	1	2.473	1.502	0.222
	Within Groups	355.546	216	1.646		
	Total	358.018	217			
partly flexible working time (a 6-hour regular working time per day and a 2-hour flexible working time at the beginning or at the end of the workday)	Between Groups	0.791	1	0.791	0.539	0.464
	Within Groups	317.080	216	1.468		
	Total	317.872	217			
fully flexible working time (weekly working time frame = 40 hours)	Between Groups	1.322	1	1.322	0.707	0.401
	Within Groups	403.710	216	1.869		
	Total	405.032	217			

Source: Own compilation

The homogeneity was tested based on Levene Statistic. The homogeneity of standard deviations is achieved in all cases. In all cases, the significance level exceeds 0,05, therefore we can state that there is no significant relationship between the field of education and the given working time schedule.

4. Conclusion

In both countries, respondents would prefer to work in a schedule of partly or fully flexible working time than in full-time, fixed or non-fixed working hours. Responders prefer partly flexible working time in Hungary and fully flexible working time in Romania. For both countries, a relative majority would like to work in a schedule of fully flexible working time. With the exception of the capital city, the schedule of fully flexible working time received the highest average in all types of settlements. The total number of responders and the relative majority of those living in the county seats or other cities would like to work in a schedule of partly flexible working time. In the case of the field of education, it can also be observed that the responders would prefer to work in a partly or fully flexible working time schedule than in a full-time fixed or non-fixed working schedule. The relative majority in the economic field of education (45.67%) prefer a fully flexible working time schedule, in the legal field of education a partly flexible working time schedule (40.66%) (RQ2).

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References

Dabasi-Halász, Zs., Lipták, K., Kiss, J., Manafi, I., Marinescu, D., Roman, M. and Lorenzo-Rodriguez, J., (2019). International youth mobility in Eastern and Western Europe – the case of the Erasmus+ programme. *Migration Letters*, 16(1), pp. 61-72.

Golden, L., 2006. How long? The historical, economic and cultural factors behind working hours and overwork, In: Burke, R.J. ed.2006. *Research Companion to Working Time and Work Addiction*, Cheltenham: Edward Elgar

Ketskeméty, L. and Izsó, L., (2005). *Bevezetés az SPSS programrendszerbe*, Budapest: ELTE Eötvös Kiadó

Máté, D.A., (2018). Effects of Working Time on Work-Morale, *Conferinta Studenteasca Anuala „Constant" 2018*. Bucharest: University of Nicolae Titulescu. pp. 430-435.

Musinszki, Z. et al., (2020). Workaholism and a New Generation – Labour Market Survey among Hungarian and Romanian Youth. *Amfiteatru Economic*, 22(Special 14), pp. 1227-1242.

Sajtos, L. and Mitev, A., (2007). *SPSS Kutatási és adatelemzési kézikönyv*, Budapest: Alinea Kiadó

Ștefănescu, I. T., (2014). *Tratat teoretic și practic de drept al muncii*, București: Universul Juridic

Țiclea A., (2015). *Tratat de dreptul muncii. Legislație. Doctrină. Jurisprudență*, București: Universul Juridic,

Whiting, K., (2020). *New Zealand Prime Minister opens door to 4-day working week*. [Online] Available:<https://www.weforum.org/agenda/2020/05/new-zealand-jacinda-ardern-4-day-week-pandemic-productivity/> [Accessed 25. May 2020]