

# “Individualism and self-reliance of Generations Y and Z and their impact on working environment: An empirical study across 5 European countries”

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# INDIVIDUALISM AND SELF-RELIANCE OF GENERATIONS Y AND Z AND THEIR IMPACT ON WORKING ENVIRONMENT: AN EMPIRICAL STUDY ACROSS 5 EUROPEAN COUNTRIES

## Abstract

In recent years, numerous researches and studies confirm differences between Generations in their values, attitudes, or characteristics. However, the challenge is to get to know the Generation Z, whose individuals are currently entering the labor market for research and practical application. The presented paper aims to expand the knowledge of Generations Y and Z in the field of individualism and self-reliance. This issue is examined concerning independence regarding housing and financial independence to parental help. The aim of the study is an empirical verification of possible similarities and differences between Generations Y and Z. The study is based on an online questionnaire survey. Data were obtained from more than 1,500 respondents of these Generations (born in 1982–2005) in 5 European countries (Czech Republic, Denmark, the Netherlands, Poland, and Slovakia). Data are examined using a two-tailed t-test, Mann-Whitney U test, and regression analysis. The overall findings of the study indicate intergenerational differences in the issue of independence, with Generation Z, unlike Millennials, becoming more self-sufficient at a younger age. Research has also found that women leave the parental household earlier than men. The paper presents the possible influence of the outputs on the working environment and work motivation of the Generations Y and Z.

## Keywords

generational differences, HR management, housing,  
Czech Republic, Denmark, the Netherlands, Poland,  
Slovakia

## JEL Classification

M12, M54, R20

## INTRODUCTION

On the current understanding of Generations as a group of people born in a similar time span (15 years at the upper limit) who share a comparable age and life stage and who have been shaped by a specific time span (events, trends, and developments) (McCrindle et al., 2014; Murray, 2011), several authors currently agree (Lub et al., 2016; Lyons & Kuron, 2013; Puiu, 2017). This current trend is based on earlier knowledge, where age diversity was understood more at the paradigm level that older employees are less productive, flexible, creative, or less adaptable to the development of modern technologies (Shore et al., 2003). These facts have led to analyzing the stereotypes of older workers, age discrimination, and unfair treatment of older people. Unlike social groups (family, community), one currently encounters a mismatch between organizational roles and the age of employees in the working environment (the leader is younger than the subordinate) (Perry & Finkelstein, 1999; Perry et al., 1999). These facts contribute to the study of individual age groups at the level of defined Generations.

Nowadays, there are mainly four Generations in the labor market, namely the oldest Generation Baby Boomers (BB), Generations X and Y, and the youngest Generation Z (Bencsik et al., 2016; Desai & Lele, 2017; Stewart et al., 2017). These Generations also form an economically active population defined by the age range of 15-64 years (Beglova et al., 2017). For the purposes of this paper, Generations are annualized as follows (Bencsik et al., 2016; Lancaster & Stillman, 2010; Liffreing, 2018; Nagy & Kölcsey, 2017; Schwartz et al., 2010):

- Generation Y/Millennials (1982–1994);
- Generation Z (1995–2010).

Based on the above facts, the presented research focuses on the youngest, professionally active Generations, i.e., Generations Y and Z. Specifically, possible differences and similarities in the field of independence, individualism, or responsibility are compared based on international research conducted in 5 European countries. These research areas will be tested concerning independence in housing and financial support, both of which are related to dependence on help from one's family (parents/grandparents). Researchers also verify the fact that the behaviors, attitudes, or opinions of Generation Z are largely derived from or even consistent with the characteristics of previous Generation Y (Maloni et al., 2019; Schroth, 2019; Tang, 2019). Due to the current age of individuals from Generation Y, which is in the range of 38-26 years, several studies have been conducted that deal with the characteristics of the Millennials, even concerning previous Generations. On the contrary, as Costanza and Finkelstein (2015) stated, a challenge currently arises in the form of knowledge of the characteristics of the Generation Z, both in theory and empirically.

## 1. LITERATURE REVIEW

According to Bejtkovský (2016) or Schroer (2015), when analyzing the individualism and self-reliance of Generations Y and Z, it is appropriate to examine these values also in the Generations of parents, i.e., in the Generations of Baby Boomers and X. Both of these Generations are characterized in the working environment by high commitment and competitiveness (Loretto, 2015). More significant differences in the independence between the Generations of BB and X are reflected in the way of upbringing, where individuals from the Generation X often stayed alone at home (a consequence of the high diligence of BB's parents) and were thus mostly dependent on themselves. For this fact, Generation X is also called "latch-key kids" (Dziuban et al., 2005; Schroer, 2015). As representatives of Generation X are most often parents of individuals from Generation Z (Generation Y are, on the contrary, descendants of Generation of Baby Boomers), it is possible to talk about the transferability of these values and characteristics (Miller, 2018; Puiu, 2017; Singh, 2014).

In addition to the portability mentioned above, Generation Z is also shaped by the surrounding

world, for example, cultural-historical, economic, or political surroundings (Pandit, 2015; Swanzen, 2018). The economic and political events that took place between 2007 and 2015 (the Great Recession, terrorist attacks) affected the formation of much of Generation Z (Agarwal & Vaghela, 2018; McNally & Stagliano, 2018). For these reasons, Generation Z often grew up as part of families struggling with job loss or financial problems (Dolot, 2018). Generation Z individuals have often recognized the need for responsibility and self-reliance, as many parents have been forced to work in multiple occupations. Another proof of the transferability of values is evident in the realistic preparation of offspring (Generation Z) for adult life in uncertain times, confirmed by EY's (2015) study. According to the mentioned study, more than 90% of respondents stated that their children from Generation Z influence family budgets allocation (choice of vacation or choice of household equipment). Pandit (2015) reached the same conclusion, which mentions over 70% of families. However, individuals from Generation Z do not perceive this way of upbringing and preparation for adult life due to dependence on their parents. On the contrary, they refer to their parents only as leaders or mentors (Csobanka, 2016; Seemiller & Grace, 2017b).

Another characteristic of Generation Z is a realistic and self-sufficient relationship in terms of finance/expenditure (Chillakuri & Mahanandia, 2018). Pandit (2015) states that about half of individuals are aware of the possible consequences of student loans (characterized mainly in the USA). Pandit (2015) also points out that Generation Z has a very positive attitude towards savings, with more than half of them preferring to save money before spending it, which is in stark contrast to the Generation of Millennials. Individualism and self-reliance are also reflected in Generation Z in the field of education (Hernandez-De-Menendez et al., 2020) and the working environment (Dolot, 2018; Kutlák, 2019).

The current knowledge of Generation Y concerning individualism and independence leads to different conclusions than for Generation Z. The most striking differences can be found in the area of independence. According to DeVaney (2015), many Millennials returned to their parents in their youth or postponed weddings, buying their own property, or starting a business. The low level of self-reliance can also be demonstrated by the fact that individuals from Generation Y often turn for help or advice towards their authority, which is most often formed by their parents (Sharma, 2012), with whom, according to Aminul, Cheong, Yusuf, and Desa (2011), continuously share a household. Swanzen (2018) expresses the term “helicopters parents who hover over their children in every aspect of their lives” for this type of parental dependence and suggests that the influence of parents is most pronounced across all Generations. Many authors (Lub et al., 2016; Prawitasari, 2018) further link parental support to declining Millennials’ loyalty as a workforce. Background security and material support subsequently affect individuals with possible job dissatisfaction (McNulty, 2006).

### 1.1. European statistical data

Empirical data on generational independence are currently processed to a greater extent only by supranational institutions, e.g., the Statistical Office of the European Union (Eurostat). Eurostat (2020) data were collected in 2019 in all the EU member states. In the transformation into years of birth (1985–2004), these are respondents from the examined Generations Y and Z. However, the meth-

odology of the mentioned Eurostat’s study does not reflect this Generation distribution in its data in any way. Based on the above research, the average age of independence of an individual in the issue of housing (all the EU countries) is 26.2 years. The average age varies among each member state or clusters of states. In the Nordic countries and the countries of North-Western Europe (e.g., the Netherlands, the United Kingdom), the average age is lower (22 years and less), while the countries of Southern Europe show above-average age values (28 years and more). The closest values to the average age of the EU are reported by the countries of Central and North-Eastern Europe, which can include, for example, the Czech Republic, Poland, and the Baltic countries. The average age of independence of young people in the issue of housing in this third cluster is 26–27 years. The only exception is Slovakia, which, with an average age of 31, is closer to the Balkan countries (Croatia, Romania, etc.).

The average age of leaving the parental household of young people has shown a fluctuating tendency in recent years; specifically, it increased between 2002 and 2006 (from 26.5 to 26.8 years), before subsequently falling to the above value of 26.2 years by 2019. Apart from individual countries, the data also differ depending on the gender of the individuals, with young women moving on average from their parents earlier than men (the study does not reflect other genders). The average value of the difference is 1.9 years and further varies from country to country. These data complement Fry’s (2013, 2015) results, which confirmed the earlier age of independence for women. Manning, Brown, and Payne (2014) point to the fact that the gap is the result of earlier adolescence, which is evident, for example, in the lower age of the first cohabitation of youngsters (21.8 for women, 23.5 for men) or marriage (26.6 for women, 28.6 for men).

Regarding the countries where the empirical part of the presented research is carried out (Czech Republic – CZE, Denmark – DAN, the Netherlands – NED, Poland – POL, and Slovakia – SVK), Table 1 shows the data of these countries.

From the given data, it is evident that the total average age (EU-27), together with data from CZE and POL, shows a trend of decreasing age, the re-

**Table 1.** Average age (in years) of young people leaving the parental household, 2011–2019

Source: Own, according to Eurostat (2020).

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019
CZE	27.2	27	26.7	26.7	26.5	26.3	26.4	26.2	25.8
DAN	21	21.1	21	21.2	21.1	21	21.1	21.1	21.1
NED	23.5	23.6	23.5	23.6	23.7	23.7	23.6	23.7	23.7
POL	28.5	28.5	28.2	28.3	28.3	28	27.7	27.6	27.4
SVK	30.8	30.9	30.7	30.8	30.9	31	30.8	30.9	30.9
EU-27	26.5	26.5	26.4	26.5	26.4	26.4	26.3	26.3	26.2

maining countries (DAN, NED, and SVK) show an oscillation around the values reported in 2011. The stated values of the average age of independence show the territorial; thus, the cultural-historical influences of the analyzed states (Eurostat, 2020).

## 2. AIM

This paper aims to analyze possible similarities and differences between Generations Y and Z concerning self-sufficiency in housing in selected European countries. Possible differences may have a practical impact on values, expectations, and attitudes of the representatives of individual Generations.

## 3. HYPOTHESES DEVELOPMENT

Based on current findings, the research shows that independence and self-reliance of surveyed Generations Y and Z show significant differences that confirm the importance of this issue. The literature review outputs led to the determination of four research hypotheses listed further.

- H1: The age of individuals who are financially supported and those who do not receive financial support from their parents will not be different.*
- H2: Gender affects the age of leaving parental household, with women becoming independent at a younger age than men.*
- H3: Generational affiliation affects the age of leaving parental household, with Generation Z becoming independent at a younger age than Generation Y.*

*H4: The trend of age of leaving parental household by the age of birth will decrease towards the youngest individuals from Generation Z.*

## 4. DATA AND METHODS

The research is based on quantitative data from a questionnaire survey. The survey was conducted in 5 European countries (Czech Republic – CZE, Poland – POL, Slovakia – SVK, Denmark – DAN, and the Netherlands – NED) in the second half of 2020. In these countries, 1,535 valid questionnaires were obtained. The questionnaires were distributed in the form of CAWI (Computer Assisted Web Interviewing), i.e., by querying using a web form. The condition for participation in the questionnaire survey was the age restriction; specifically, only persons with a year of birth between 1982 and 2005 were interviewed. The reason is to examine the behavior and attitudes of the selected Generations Y and Z. Although Generation Z is defined by the years of birth 1995–2010, for legal reasons in individual countries, the upper limit is limited to the last year of the respondent's birth, 2005.

In Table 2, in addition to the distribution of respondents by country, the representation of the surveyed Generations in the given countries is also presented. From the data further, it is clear that the respondents are predominantly from the  $\frac{3}{4}$  Generation Z; however, due to the larger number of data (the only exception is the Netherlands), this is not a fundamental limiting condition for further statistical data processing. The data also show that in Generation Z, due to the current age, students predominate in all countries, while in Generation Y, most respondents are already employed.

Before testing, data quality verification was performed, specifically identifying outliers and veri-



**Table 2.** Distribution of respondents by country, generation, and career status

Source: Own research.

Economic status	CZE		DAN		NED		POL		SVK	
	Y	Z	Y	Z	Y	Z	Y	Z	Y	Z
Student	18	281	17	93	0	54	15	498	15	164
Employed*	89	50	20	1	4	0	80	47	53	12
Unemployed	3	2	4	1	3	0	4	3	1	3
Sum of Generation	110	333	41	95	7	54	99	548	69	179
Total	443		136		61		647		248	

Note: \* incl. self-employed.

fying data normality. Data quality was verified at a data set from individual countries. If the data show significant deviations from normality based on the  $p$ -value of the Shapiro-Wilk (S-W) test, they will be analyzed by a nonparametric median agreement of the two populations, the so-called Mann-Whitney U test. If the data show potential symmetry according to the skewness shape (test for asymmetry), the normality is again analyzed using the Shapiro-Wilk test, but without outliers. If, after this adjustment, the data show normality, in addition to the nonparametric test, they are also confirmed by a two-sample  $t$ -test comparing the mean values of the two populations.

The Mann-Whitney U test is used to compare unpaired experiments, comparing two different samples. The null hypothesis of the test indicates the agreement of the medians of selected populations ( $n_1$ ;  $n_2$ ). The test criterion for small samples ( $n_1 < 20$ ;  $n_2 < 20$ ) is based on the tabulated values for the U test (Svoboda, Gangur, & Mičudová, 2019). If the values of the selections are larger, the approximation of the division of the test criterion into the following is used:

$$z = \frac{U - m_U}{\sigma_U}, \quad (1)$$

where  $m_U$  and  $\sigma_U$  are the mean and standard deviation of  $U$ . The standardized value is approximately a standard normal deviate whose significance can be checked in tables of the normal distribution (Corder & Foreman, 2014).

Calculation of S-W test of normality and identification of outliers based on measures such as the interquartile range (Tukey's fences) will be evaluated due to complexity only based on program-calculated  $p$ -value in S-W test of normality and on  $k$ -value in Tukey's fences, where  $k = 1.5$  in-

dicates an "outlier", and  $k = 3$  indicates data that is "far out" (Schwertman & Silva, 2007). In the case of data normality, a parametric two-sample  $t$ -test is calculated to confirm the results, which compares the mean values of the two populations. The assumption is the agreement of variances (the  $F$ -test does not reject the null hypothesis). The following statistics are used for testing (Svoboda et al., 2019):

$$T(X, Y) = \frac{\bar{X} - \bar{Y}}{\sqrt{\frac{(n_1 - 1)s_X^2 + (n_2 - 1)s_Y^2}{n_1 + n_2 - 2} + \sqrt{\frac{1}{n_1} + \frac{1}{n_2}}}}, \quad (2)$$

where  $\bar{X}$ ,  $\bar{Y}$  ... sample mean,  $s_X^2$ ,  $s_Y^2$  ... sample variance,  $n_1$ ,  $n_2$  ... number of selection values.

It is a widely recommended practice to report an effect size for an inferential test. Cohen's  $D$  is one of the most common ways to measure effect size. An effect size is how large an effect of something is (Coe, 2012). A commonly used interpretation is to refer to effect sizes as small ( $d = 0.2$ ), medium ( $d = 0.5$ ), and large ( $d = 0.8$ ). This means that if two groups' means do not differ by 0.2 standard deviations or more, the difference is trivial, even if it is statistically significant (Olejnik & Algina, 2000).

The second part of the research focuses on a statistical analysis of age using data regression. Unlike the standard approach to regression and correlation, the data processing further aims not to capture the most accurate mathematical model (regression function) and then use it to predict future developments (Svoboda et al., 2019). The regression processing of this paper is used to verify or falsify the trend of independence, depending on the age of the individual. In all the models further, the independent/explanatory variable is the year of birth, while the dependent/explained variable

is the age at which the respondent became independent in the issue of housing. All models use a linear type of regression (straight line) with an empirical regression function (Hendl, 2015):

$$y = b_0 + b_1x, \quad (3)$$

where  $y$  ... dependent variable,  $x$  ... independent variable,  $b_0$ ,  $b_1$  ... coefficients of regression.

The statistical analysis was performed in the Statistics Kingdom (2017) online software and using a data analysis tool in Excel by Microsoft software.

## 5. RESULTS

For the analysis of the financial dependence of respondents on financial support from their parents/grandparents, a statistical comparison of the years between the birth of two groups of respondents was used. Both groups consisted only of respondents with a career status of “student”. The reason is the logical argument that people who have already started their professional careers will not be significantly financially supported by their parents. It is also necessary to add that these would be mainly individuals from Generation Y, which would distort the analyzed area in the form of a comparison of years of birth. The support was defined as a financial contribution to housing or in the form of pocket money.

Table 3 presents the results of the impact of the provision of financial support by parents on the age of the child. In all 5 countries surveyed, two statistical samples are compared against each other – with and without financial support. Using the Mann-Whitney U test, the medians of both

selections are compared. If the data based on the Shapiro-Wilk normality test show the nature of a normal distribution, they are further tested using a two-sample  $t$ -test of agreement of means (assuming agreement of variances –  $F$ -test). The observed standardized effect size (Cohen’s  $D$ ) is small or medium (0.15–0.34) in all countries, and based on the outliers’ detection method (Tukey’s fence), all the data contain only a small amount of potential outliers ( $k = 1.5$ ).

At the 95% level of significance, the null hypothesis for U test (normal approximation is used) of the median agreement in the three countries studied is rejected (CZE, POL, and SVK). The rejection says that people who are not financially supported by their parents are younger than those who are supported.

According to the S-W test ( $p$ -value  $< 0.05$ ), the data of both samples in DAN, NED, and SVK show a normal distribution, these data are longer subjected to a statistically stronger two-sample  $t$ -test. On the SVK data, the  $t$ -test confirmed the rejection of the null hypothesis about the agreement of the means. Conversely, in contrast to the original U test, one now rejects the null hypothesis of concordance of averages for DAN data. The NED data did not meet the condition of agreement of variances ( $F$ -test) and, therefore, were not further verified.

The first research hypothesis H1 focuses on self-reliance concerning financial support from parents. Specifically, the hypothesis states that the age of individuals who are financially supported and those who do not receive financial support from their parents is not statistically different. The result shows a difference between the age of individuals who receive financial support from their par-

**Table 3.** Significance of the impact of providing parental financial support on age

Source: Own research.

Country	Median year of birth		$p$ -value (U test)	Cohen’s $D$	$p$ -value (S-W test)	$p$ -value ( $F$ -test)	$p$ -value ( $t$ -test)	$H_0$
	Financially supported	Non-financially supported						
CZE	1998	1997	0.042	0.15	0.37/0.02	–	–	Rejected
DAN	1997	1997	0.100	0.17	0.09/0.05	0.016	0.029	Rejected
NED	2000	1997	0.059	0.23	0.06/0.18	0.162	–	Accepted
POL	1999	1997	$<0.001$	0.34	0.03/ $<0.01$	–	–	Rejected
SVK	1998	1997	0.009	0.27	0.17/0.06	0.001	0.028	Rejected
TOTAL	1999	1997	$<0.001$	0.35	$<0.01$ / $<0.01$	–	–	Rejected

ents and those who do not. Based on the above, the research hypothesis *H1* is rejected.

The results show that even though younger people become more financially independent (McNally & Stagliano, 2018), there is still a significant influence of other ways of financial resources (brigades, etc.), significantly higher use with increasing age. However, it should be noted that despite statistical confirmation, in some countries, the *p*-value is at a 95% level of significance. This fact suggests that the difference between the statistical samples cannot be described as significant and that the results are partly in line with the above literature review. The increase in financial independence at a younger age is also confirmed by Puiu's research (2017), according to which more than  $\frac{3}{4}$  respondents from Generation Z consider it important to have a part-time job during their school years.

### 5.1. Gender and generation

Another part of the research focuses on the influence of gender and generation affiliation on the age at which an individual becomes independent in the issue of housing, i.e. when leaving a parental household.

Comparing the difference between men and women in the term of independence is investigated using the median agreement, specifically the approximation of the U test ( $n_{1,2} > 20$ ). Based on the *p*-value, one does not reject the null hypothesis of agreement in CZE, DAN, and POL. On the contrary, for NED and SVK data, the alternative hypothesis is accepted, while in both states, the expected age of independence in the issue of housing for women is higher. However, in contrast to the rest of the countries, the size effect of NED is higher for Cohen's D (0.43), which may affect the plausibility of the results.

Research hypothesis *H2* states that women become independent earlier than men. The influence of gender can be ruled out in CZE, DAN, and POL, in which it is not possible to statistically confirm that the age of one gender would be significantly different from the age of the other gender, and therefore on the data of the mentioned countries, the research hypothesis *H2* is rejected based on a relatively high *p*-value. On the contrary, the research hypothesis *H2* is confirmed in SVK and NED and on the total data from all analyzed countries. The overall data suggest that the median age for women is 19 and for men is 20, and this difference is statistically significant; therefore, the research question of the effect of gender can be confirmed. The result is in line with the findings of Eurostat (2020) or Manning, Brown, and Payne (2014). Regarding the influence of gender on the age of leaving parental household, the research results again show a territorial factor of influence.

Dependence of belonging to a Generation (Y, Z) on the actual age of independence in terms of housing is examined in the following section. Significant differences are evident in CZE, POL, and SVK, where the differences are 3, 3, and 6 years. When subjecting the data to statistical analysis of the nonparametric U test, an alternative hypothesis of difference is confirmed. Besides, the results are supported by a very low *p*-value. It is necessary to point out the high value of the size effect for SVK data (0.7); however, due to the *p*-value value, the outputs can be considered demonstrable. Data from DAN and NED countries show a different trend (DAN – median match; NED – age  $Z > Y$ ). The result of the statistical verification is that in both of these countries, the null hypothesis of the agreement is accepted, i.e., that in these countries, there is no statistically significant difference in age between the Generations of independence in the issue of housing.

**Table 4.** Significance of gender effect on the age of leaving parental household

Source: Own research.

Country	Median age		<i>p</i> -value (U test)	Cohen's D	Tukey's fence	Hypothesis test	
	Men	Women				Type ( $H_1$ )	$H_0$
CZE	20	20	0.41	0.05	1.5	Two-sided ( $\neq$ )	Accepted
DAN	20	20	0.65	0.04	No outliers	Two-sided ( $\neq$ )	Accepted
NED	17	18	0.01	0.43	1.5	One-sided ( $<$ )	Rejected
POL	19	19	0.74	0.02	1.5	Two-sided ( $\neq$ )	Accepted
SVK	20	22	0.04	0.04	No outliers	One-sided ( $<$ )	Rejected
TOTAL	20	19	0.004	0.09	1.5	One-sided ( $<$ )	Rejected



**Table 5.** Significance of generation effect on the age of leaving parental household

Source: Own research.

Country	Median age		<i>p</i> -value (U test)	Cohen's D	Tukey's fence	Hypotheses test	
	Gen Y	Gen Z				Type ( <i>H1</i> )	<i>H</i> <sub>0</sub>
CZE	22	19	< 0.001	0.32	1.5	One-sided (>)	Rejected
DAN	20	20	0.26	0.10	No outliers	Two-sided (≠)	Accepted
NED	18	18.5	0.19	0.12	1.5	One-sided (<)	Accepted
POL	22	19	< 0.001	0.36	1.5	One-sided (>)	Rejected
SVK	25	19	< 0.001	0.70	1.5	One-sided (>)	Rejected
Total	21	19	< 0.001	0.4	1.5	One-sided (>)	Rejected

Statistical files from DAN and NED do not show a statistically different age of independence concerning individual Generations. These results are in line with the findings of the Eurostat's study (2020), which suggests a long-term trend in the development of the age of independence in housing; therefore, there is no influence of generational differences among Generations Y and Z. Conversely, data from other countries (CZE, POL, and SVK) and the summary research data statistically confirm that the age at which young people move away from their parents is lower in Generation Z than in Generation Y; therefore, research hypothesis can be confirmed. Overall data show the median of this age in Generation Z aged 19 years, in Generation Y aged 21 years, and based on this, the research hypothesis *H3* is confirmed.

## 5.2. Trend of age of leaving parental household

Statistical analysis of age using data regression is part of the following statistical analysis. Visualization of available data of all 5 examined states is shown in Figure 1, which includes graphs for individual states. In each graph, a solid line indicates the median of the values, the dashed line the average. For the average, the dotted line also shows a linear trend. A condition of at least 5 records/responses was set for each year. As there were fewer responses in some years, the years were clustered to ensure this condition. Subsequently, the median and diameter values ("y" axis) were calculated for each value of the "x" axis. The absence of the required number of responses in individual years varied between countries; therefore, the "x" axis scale is not the same in all countries analyzed.

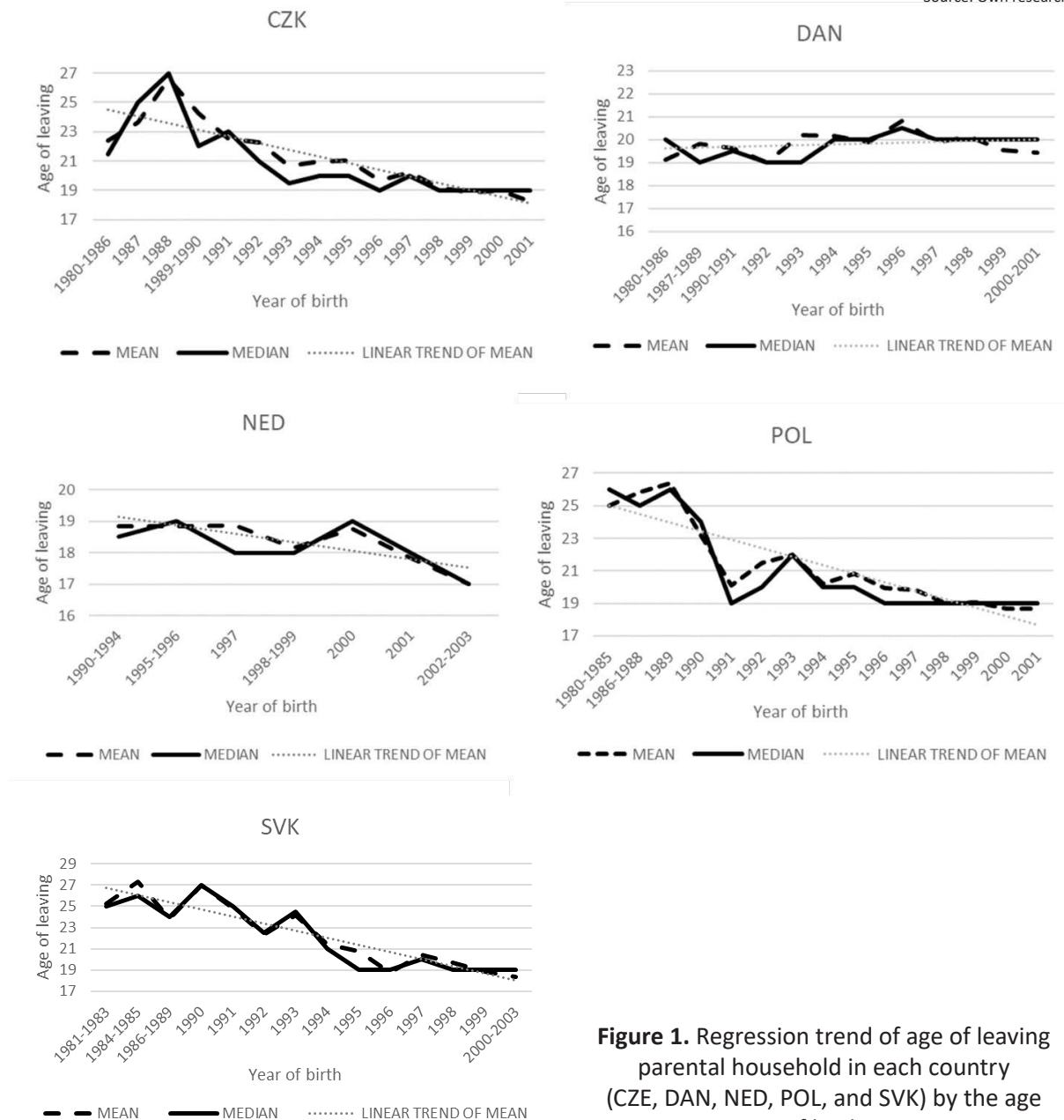
From the visualizations shown in Figure 1, it is evident that the data of CZE, POL, and SVK show

a declining trend line. The stagnant or slightly increasing trend is shown by the trend line only on the values of DAN, which, however, together with the NED, confirms a very low age of independence (see Table 5). At the same time, it is evident from all graphs that the declining trend of development decreases due to the decreasing age of the individual. This is a logical argument based on the fact that individuals become independent in the issue of housing, most often from the age of the majority. This argument is not met by the data shown in the NED graph; however, it is necessary to mention the lowest number of respondents in this country in the survey (61), which may distort the trend.

Statistical data for the graphs presented earlier are shown in Table 6. The intensity of the dependence and the quality of the regression function are expressed by the index of determination ( $r^2$ ) or the adjusted index of determination ( $r^2_{(adj)}$ ), which allows comparing the models with a different number of parameters. According to the values of these indexes, it is evident that the linear regression shows a higher intensity of dependence on the given data and, thus, the quality of the regression model. The only exception is the data from DAN, where the value of the index of determination reaches a value close to 0. If one interpolates DAN data with a regression polynomial of the 2nd degree (parabola), the value would be  $r^2 = 0.51$ , still only a slight intensity of dependence.

The value of the coefficient  $y$  ( $b_1$ ), which is negative in all countries except for DAN, confirms the forwarded declining trend of CZE, NED, POL, and SVK. Despite only the potential normality of the data, the agreement of regression and residual variance was performed using an *F*-test. The rejection of the null hypothesis confirms the existence of

Source: Own research.



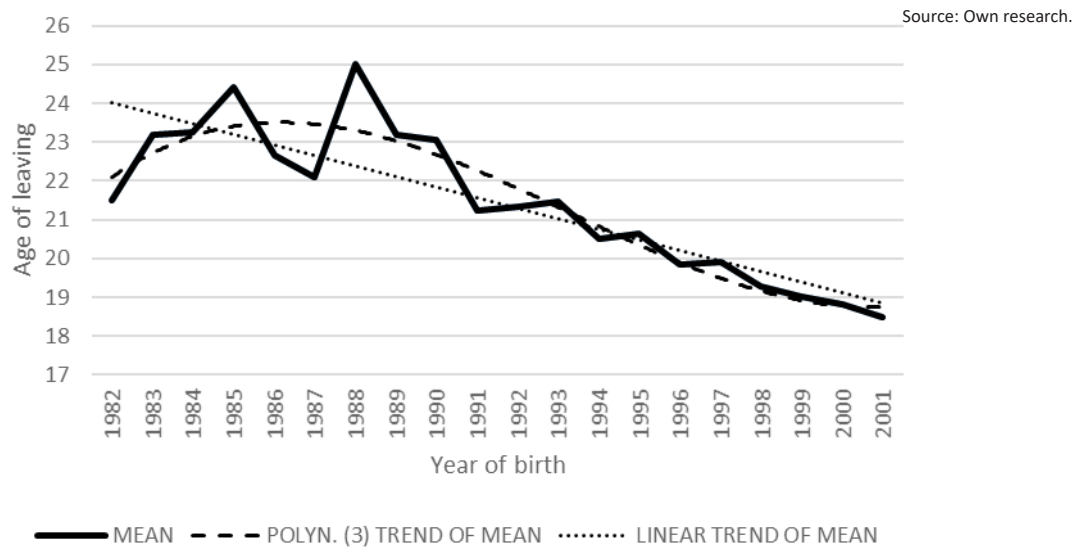
**Figure 1.** Regression trend of age of leaving parental household in each country (CZE, DAN, NED, POL, and SVK) by the age of birth

a significant dependence of the variable “ $y$ ” (age) on the variable “ $x$ ” (year of birth) (Svoboda et al., 2019). This result returned the test to all countries, except the mentioned DAN.

The total data (see Table 6) represent a linear regression model based on data from all 5 countries analyzed. The model shows the highest values of the index of determination and the adjusted index of determination, and data synthesis leads to a higher intensity of dependence and suitability of the regression function. The significant dependence of the investigated variables is also confirmed

by analyzing the agreement of regression and residual variance expressed by  $p$ -value =  $7.01e-09$ . The declining trend is confirmed by the negative value of the coefficient “ $b_1$ ” ( $-0.338$ ). Graphical visualization of data synthesis of all countries is shown in Figure 2.

In addition to the linear trend of average values, Figure 2 also shows a regression polynomial of the 3rd degree, which shows a slightly higher degree of dependence of the observed variables ( $0.867$ ). Both of these regression models confirm that with a decreasing year of birth (lower age of respond-



**Figure 2.** Regression trend of age of leaving parental household in all countries (CZE, DAN, NED, POL, and SVK) by the age of birth

**Table 6.** Linear regression trend data by states

Source: Own research.

Regression data	CZK	DAN	NED	POL	SVK	Total
$r^2$	0.773	0.081	0.625	0.701	0.806	0.851
$r^2_{(adj.)}$	0.756	-0.011	0.551	0.674	0.786	0.843
Coef. $y(b_j)$	-0.456	0.033	-0.196	-0.468	-0.688	-0.338
F	44.378	0.876	8.351	25.840	41.498	103.18
Significance F	<0.001	0.371	0.034	<0.001	<0.001	<0.001

ents), there is a decrease in the age at which she/he became independent in the issue of housing.

As expected (see research hypothesis *H4*), the trend is declining towards the youngest individuals from Generation Z based on the year of birth. The results are confirmed by linear regression, which is also visualized in the earlier graphs. The declining trend observed in CZE and POL is in line with Eurostat's study (2020) and the relatively constant trend in DAN and NED, where the age of independence in housing is significantly lower than in other countries. The difference can be seen in the data from the SVK, where a declining trend was found, although Eurostat's study (2020) forwards a constant trend of development. Another difference between the data of the submitted empirical research and the mentioned study is the specific age level, which is, however, strongly influenced by the age structure of the respondents; therefore, the results are compared only at the level of trend development.

## 6. DISCUSSION

The trend of increasing independence in the issue of housing and thus in the issue of financial self-reliance indicates possible changes for business practice. Although Generation Z is described as realistic and financial conscious (Koulopoulos & Keldsen, 2014; McNally & Stagliano, 2018), independence and self-reliance increase the cost of living. This fact may be reflected in the characteristics of individuals from Generation Z, mainly in the demands for financial evaluation, similar to research (Cseh-Papp, 2017; Fratričová & Kirchmayer, 2018), which can be described as a negative impact on business practice from the perspective of companies themselves.

On the contrary, the positive effect of this may be to increase the loyalty of individuals who will not be able to afford financial shortfalls in their income unless the reason for leaving is not to offer a better-paid job. The trend of loyalty development is in line with research by the Generation

Y. Millennials who, as confirmed not only by the presented research (DeVaney, 2015; Lub et al., 2016; Prawitasari, 2018), become self-sufficient in older age and therefore marked tendency to lower loyalty.

Moving to one's own (in the presented research, more than two-thirds of the respondents stated that they live only alone or with a partner) partly brings with it a limitation of social contacts, which the individual in a shared household receives. This fact is also confirmed by the increase in individuals living alone, at all ages between

2010 and 2019 in the EU. The growth is higher than 10% for all categories; for category 15-24, this increase is almost 30% for men and 10% for women. Single adults increased faster than adults living in a couple or another type of household (Eurostat, 2013, 2020). Representatives of the Generation Z can thus gradually tend to increase independence in the working environment, which can be seen in reducing social contact and group or teamwork. In this context, Yadav and Rai (2017) also mention the impact of moving social relationships, contacts, and communication to the online environment.

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## CONCLUSION

The research results show that based on international research from 5 European countries (CZE, DAN, NED, POL, and SVK), there are intergenerational differences between Generations Y and Z. The findings indicate an increase in independence and self-reliance in representatives of Generation Z, which is in contrast to the characteristics and developments recorded in Generation Y. This is confirmed by regression analysis in all countries surveyed, with Denmark being the only country not showing a declining age of independence in housing. The same conclusions are confirmed by the results of the test of concordance of medians of the studied Generations, where the Netherlands also joins Denmark. Another conclusion of the paper is the influence of gender on the researched issue, where women become independent compared to men earlier when the total data show a median difference of 1 year.

On these and the conclusions presented earlier, it is also possible to confirm the significant territorial influence of individual countries. The difference in the characteristics of the Generations is also reflected in the workplace. Areas influenced by individualism and self-sufficiency not only in the issue of housing are, for example, financial motivation, loyalty or social relations, and teamwork. Knowing the needs and attitudes of individual employees and the adaptation of personnel processes is the current challenge for business practice.

## AUTHOR CONTRIBUTIONS

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