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LINK BETWEEN LIFE
SATISFACTION AND JOB
SATISFACTION ACROSS EUROPE**

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BETWEEN LIFE SATISFACTION
AND JOB SATISFACTION ACROSS EUROPE²**

Work forms one of the important spheres of life and is one of the main determinants of subjective well-being in general and life satisfaction in particular (Argyle 2001; Sousa-Poza & Sousa-Poza 2000). The study aims to disclose the impact of work values and socio-demographic characteristics upon the link between life satisfaction and job satisfaction. The European Values Study 2008-2009 is used as dataset. The sample is limited to those who have jobs (28 653 cases). The results confirm findings from the literature that intrinsic motivation increases life satisfaction (Vansteenkiste 2007). It is in line with self-determination theory according to which pursuit of intrinsic motivation facilitates satisfaction of the basic psychological needs for autonomy, competence and relatedness (Deci & Ryan, 2000; Kasser, 2002). Sharing extrinsic values decreases life satisfaction. The association between life satisfaction and job satisfaction is stronger for higher educated individuals and self-employed and weaker for women, married individuals, religious individuals and those of younger age. These results are due to the different of job in life of people with different characteristics. The link between life satisfaction and job satisfaction is the same in countries with low and high GDP per capita.

Key words: life satisfaction, job satisfaction, subjective well-being, work values, European Values Study

JEL Classification: I31, J28, J01, Z13

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Introduction

Today quality of life is considered not less important than economic development (OECD 2020). Growing attention is paid to subjective dimension of quality of life, namely subjective well-being (SWB). Life satisfaction is one of the most widespread indicators of SWB. Work is one of the main factors of subjective well-being in general and life satisfaction in particular (Argyle 2001; Kalleberg 2011, Karabchuk & Soboleva, 2020; Radcliff 2005; Sousa-Poza & Sousa-Poza 2000). The contribution of job satisfaction to life satisfaction is an indicator of job involvement. Also job satisfaction has a positive impact upon employee's performance (Bakotic 2016; Luthans et al. 2007).

Today the job market is very diverse and comprises different types of contracts. There is a shift from rigid 8-hour workday scheme to flexible work arrangements (Lyness et al. 2012). Part-time and self-employment increased due to economic changes and migration (Giesecke 2009; Kalleberg 2011). On the one hand, such situation leads to more freedom and is in line with the shift from survival to self-expression values. It reflects the fact that the role of job in person's life also changes (Inglehart & Welzel 2005; 2010). When employment contracts become more flexible people can easier combine main job with side jobs, voluntary work and family related affairs. On the other hand, high incidence of temporary and informal work along with self-employment leads to rise work-related insecurity and diminishing confidence in future (Kalleberg 2011; LaRochelle-Côté & Uppal 2011). Thus, depending on the type of contract and involvement in the job work can play more or less important part in a person's life.

Furthermore, people have different work values and job preferences. Consequently, they can select a job that meets more or less their criteria even if there is not much choice. For example, individual can work more or less depending the importance of family and their interest in career. Work values implicitly show the relative importance of job in individual life. It could be even a better indicator of job importance than a direct question because it is more nuanced.

The contribution of job satisfaction towards life satisfaction is likely to depend upon a number of characteristics. First, these are work values that aims of working life and the importance of different aspects of job. Second, these are job characteristics, type of employment, etc. Third, socio-demographic characteristics such as level of education, family status, etc. For example, a person with higher education has invested more in the career and hence job can play a greater role in his or her life. Being married and having children, on the contrary, can reduce the effect of job satisfaction upon life satisfaction.

Theoretical background

Life satisfaction and job satisfaction

The interrelation between life satisfaction and job satisfaction has been largely studied. Three hypotheses regarding the interrelation between life satisfaction and job satisfaction were distinguished and tested empirically. They are spill-over, compensation and segmentation hypotheses. According to spill-over hypothesis, attitudes and practices developed in general life domain spill over into the work domain and vice versa. Segmentation hypothesis states that job satisfaction and life satisfaction are not related at all. Compensation hypothesis argues that low level of satisfaction in one domain can be compensated by a higher level of satisfaction in the other domain (Unanue et al. 2017). Very little support was found for both segmentation (for example, Gupta & Behr 1981) and compensation hypotheses (for example, Chacko 1983; Schlenker & Gutek 1987). Most empirical evidence confirms the spill-over hypotheses (Bowling et al. 2017, Unanue et al. 2017). For example, Georgellis and Lange found more support for spill-over hypothesis than for segmentation hypothesis on the EVS data (Georgellis & Lange 2012). This again demonstrates the strong and positive link between life satisfaction and job satisfaction.

At the same time while there is general consensus and empirical confirmation between the link between life satisfaction and job satisfaction, there is more debate regarding their causal relationship. Bottom-up and top-down

approaches could be distinguished. According to the bottom-up approach, job satisfaction is regarded as one of the sub-domains of the SWB. In this framework job satisfaction is one of the determinants of the life satisfaction (Cannas et al. 2019; Sironi 2019). Advocates of the top-down approach believe that individual is predisposed to transmit overall life satisfaction to its sub-domains (Heller et al. 2002; Judge & Watanabe 1993). Consequently, according to this approach life satisfaction is likely to affect job satisfaction. The current study is based on the first approach. First, with the help of instrumental variables it was shown that job satisfaction has a causal effect upon life satisfaction (Cannas et al. 2019; Sironi 2019). Second, logically job satisfaction should depend more not on the overall perception of life but also upon specific job characteristics that meet individual's needs to a greater or lesser extent.

The strength of the link between life satisfaction and job satisfaction should depend on different determinants. One could distinguish different moderators of the impact of job satisfaction upon life satisfaction. In this study I focus upon two groups of moderators namely (1) work values and (2) socio-demographic characteristics. I also will compare the impact of job satisfaction in countries with lower and higher level of GDP per capita.

The contribution of extrinsic and intrinsic work values to life satisfaction

Values are basic individual motivations that affect individual behavior and more specific attitudes (Schwartz 1992). They also have an impact upon subjective well-being (Bobowik et al. 2011; Sortheix & Lönnqvist 2014). Values can serve as moderators of the impact of job satisfaction upon life satisfaction in particular. Individuals with traditional values attach more importance to job (Inglehart & Baker 2000). Also individuals with traditional values associate stronger job satisfaction and life satisfaction than individuals with secular values (Georgellis & Lange 2012). It could be due to the fact that for individuals with secular values more spheres of life are of high importance.

In this paper I will focus on the effect of work values because they are mostly connected with job and labor market. Work values are individual perceptions of relative importance that people attach to different aspects of job. They reflect what a person appreciates in job in general but not the characteristics of a particular job (Kalleberg 1977; Ros et al. 1999, Shevchuk et al. 2018). It is logical to assume that they have even greater impact upon the association between life satisfaction and job satisfaction.

The most popular distinction is between extrinsic and intrinsic values (Deci 1975; De Witte et al. 2004; Ester et al. 2006; Gallie 2007; Gesthuizen & Verbakel 2011; Johnson & Monserud 2010; Turunen 2011). Extrinsic values are tangible outcomes or rewards of work, such as high income, material possessions, generous holidays, working conditions, a good pension plan, job security. Extrinsic values could be divided into psychological and safety. Intrinsic values are intangible rewards related to the process of work, for example an interesting job, autonomy, challenges, the opportunity to be creative, recognition, achieving something that has impact on others. Extrinsic (instrumental) work values include affiliation (love), esteem and self-actualization. Such values have more importance in countries with a lower level of socio-economic development (Kaasa 2011). Intrinsic motivation raises in importance because of growth of high-skilled occupations, rising significance of quality of work (not only quantity) and shift to service economy (Gallie 2007). It was shown that in Russia intrinsic job motivation increases the interplay between life satisfaction and job satisfaction (Soboleva 2020).

It is important that job satisfaction depends not only high income. Kalleberg pointed out three explanations of job satisfaction among workers namely personal characteristics of individuals, job content and different motivation and structure of preferences (Kalleberg 1977). Job satisfaction varies significantly across countries and depends upon the income, type of contract and upon the adequacy of qualification level (Ahn & Garcia 2004). For OECD countries it was shown that

job satisfaction to a larger extent is formed by interest towards job and job stability than by income (Clark 2005).

Magun and Monusova demonstrated that European countries differ a lot in work values. For instance, in Russia and Ukraine good pay and career advancement are relatively more important. In Western Europe people attach more importance to the achievements in job and self-realization (Magun & Monusova 2014). At the same time job security and good pay are important almost for everybody.

There could be the following explanations for this. First, when the basic needs are satisfied, people attach more importance to other values (Maslow 1954). Here is the same logic as in the case of modernization theory. Second, in more affluent societies individuals perceive that more interesting and promising jobs have higher payment and more job security. Magun and Monusova (2014) distinguish three types of European countries based on work values: with focus on job achievements (Northern and Western Europe, Spain, Slovenia, Poland and Estonia), with focus on security of the work place (Mediterranean and Post-soviet countries) and with focus on good pay and career advancement (Russia and Ukraine). Gallie (2007) showed that the spread of intrinsic job preferences is largely dependent on the composition of the workforce and especially with the educational level of the employees.

Self-determination theory (SDT) suggests that intrinsic values are associated with higher well-being because their pursuit facilitates the satisfaction of the basic psychological needs for autonomy, competence and relatedness (Deci & Ryan 2000; Kasser 2002). From the perspective of SDT, extrinsically oriented people primarily focus on obtaining external indicators of worth, such as social approval and external rewards and thus often neglect their personal wants and interests (Vansteenkiste et al. 2007).

It was demonstrated that holding extrinsic but not intrinsic values has negative outcomes not only with job performance and job satisfaction but also upon emotional well-being (Vansteenkiste et al. 2007). However, Vansteenkiste et

al. did not focus on the relation between life satisfaction and job satisfaction. The authors considered them as two variables that reflect different aspects of well-being.

Based upon the above overview I will test the **following hypotheses**:

H1. Individuals with high intrinsic values are happier than individuals with low intrinsic values given that they are satisfied their jobs.

H2. Individuals with high extrinsic values are less happy than individuals with low extrinsic values independently on the level of job satisfaction.

H3: In countries with higher GDP per capita there will be a weaker effect of job satisfaction upon life satisfaction.

The role of socio-demographic variables in the contribution of job satisfaction to life satisfaction

I suggest that the link between life satisfaction and job satisfaction should also depend upon socio-demographic characteristics of individuals. The contribution of gender-role attitudes is likely to be stronger for men than for women. Although egalitarian gender-role attitudes are more and more widespread in Europe, traditional gender-role attitudes still play a role. Men are often considered main breadwinners and women are responsible for doing household chores and taking care of children (Greene & DeBacker, 2004; Farmer 1987; Horner 1974). Today many women spend a lot of time at their jobs but at the same time they are more involved in domestic duties. Hence, the contribution of job satisfaction to life satisfaction should be weaker for them. At the same time it was demonstrated that the contribution of job satisfaction to life satisfaction does not depend on gender (Georgellis & Lange 2012; Soboleva 2020) although the determinants of this link could differ between men and women (Georgellis & Lange 2012).

For married individuals and those who have children family is likely to play a greater role in life than for those who are not married and do not have children. Married individuals and those who have children have more traditional family

values (Yucel 2015) and consequently are likely to devote more time to the family. For such individuals, job may also be of great importance, but the importance of family may somehow weaken the effect of job satisfaction to life satisfaction. According to the research of Georgellis and Lange, for women pre-school children decrease the interplay between life and job satisfaction whereas teenage children increase this association. Being married, on the contrary, increases the association between job satisfaction and life satisfaction (Georgellis & Lange 2012). In Russia being married, on the contrary decreases the interrelation between life satisfaction and job satisfaction and the presence of children does not give any difference (although the age of children was not taken into account (Soboleva 2020)). Despite these controversial previous results, I assume that for married individuals and those with children the contribution of job satisfaction to life satisfaction should be weaker.

Religiosity also refers to one of the main spheres of life that can have a profound impact upon the association between job satisfaction and life satisfaction. For highly religious individuals job satisfaction can have a smaller impact of life satisfaction because the sphere of religion is of more importance. However, it was shown that importance of God increased the interplay between job satisfaction and life satisfaction (Georgellis & Lange 2012). It could be due to the fact that importance of God strongly related to traditionalism.

The contribution of job satisfaction to life satisfaction should also depend on characteristics related to the position in the labour market. It was shown that higher education increases the link between life satisfaction and job satisfaction and that this effect is stronger for men (Georgellis & Lange 2012; Soboleva 2020). Education is one of the investments into the career. Higher educated individuals invested more to get good jobs. Consequently, job should play a greater role for higher educated individuals and contribute more to their level of life satisfaction.

Type of employment is also an important characteristic that can have an impact upon both job satisfaction and life satisfaction. In this paper I distinguish between full-time employed, part-time employed and self-employed (based on the

data availability). According to the previous research, part-time work increases probability of having no or negative link between job satisfaction and life satisfaction. Being a main earner, on the contrary, increases the association between life satisfaction and job satisfaction. Both effects are stronger for men than for women. Higher income strengthens the link between life satisfaction and job satisfaction for both men and women (Georgellis & Lange 2012). Part-timers spend at work less time than full-timers and hence job satisfaction should have a weaker impact on their lives. Self-employed compared to employed should have a weaker borderline (distinction) between work and private spheres of life. So they could be more engaged in their jobs. Hence, for self-employed job satisfaction should be more associated with life satisfaction.

People of different age are also likely to perceive differently the importance of job. Younger individuals may attach less importance to their jobs because for many of them it is a secondary activity. Besides, they may be less disappointed in some of the aspects of their jobs because they may improve them in the future. Consequently, the youngest age group should relate job satisfaction with life satisfaction to a lesser extent.

Data and methods

The European Values Study 2008-2009 is used as a dataset³. The sample is limited to employed (including self-employed). 45 countries and 30244 observations are included into analysis. This wave was chosen because in the last wave the question about job satisfaction is omitted. Also in the other surveys information on life satisfaction and job satisfaction are not available simultaneously. However, in this paper I am primarily interested in the contribution of job satisfaction to life satisfaction for different categories of individuals and this contribution should not change dramatically over time.

³ EVS 2008 Integrated Dataset, ZA4800, v.4.0.0 (2016-04-15), doi:10.4232/1.12458.
<http://www.europeanvaluesstudy.eu/page/about-evs.html>

Multilevel regression modeling is the main research method. It is a relevant approach because I have to distinguish two levels of analysis (Hox 2010; Snijders and Bosker 1999). In my case, individuals are nested in countries. Hence, I point out level 1 (individual level) and level 2 (country level).

The main dependent variable is life satisfaction. Job satisfaction is used as an independent variable. Life satisfaction and job satisfaction were measured by 10-item scales.

EVS dataset includes the following set of work values: good pay, pleasant people to work with, not too much pressure, good job security, good hours, an opportunity to use initiative, a useful job for society, generous holidays, meeting people, a job in which you feel you can achieve something, a responsible job, a job that is interesting, a job that meets one's abilities, learning new skills, family friendly, have a say in important decisions, and people treated equally at the workplace. With the help of confirmatory factor analysis, the indices of intrinsic and extrinsic values were constructed.

On individual level also independent variables reflecting socio-demographic characteristics of individuals were added. They comprise gender, level of education (three categories), three age groups (18-29, 30-49, 50 and older), degree of religiosity (10-item scale), type of employment (full-time, part-time, self-employed), marital status and presence of children.

On country level I used GDP per capita in logarithmic form for 2008 in order to control for economic development of the country.

Interaction effects were included in the models in order to compare the impact of job satisfaction on life satisfaction for different groups of individuals.

Index construction

First, I will reveal which of the items form the latent factors of intrinsic and extrinsic work values. The items of each set of values should highly intercorrelate. To see this the confirmatory factor analysis for the pooled sample was conducted. Two factors of values were distinguished namely intrinsic and extrinsic values.

The configural invariance was achieved. So it is confirmed that the factors refer to the same dimension. Figure 1 reports the results of the Confirmatory Factor Analysis (CFA) conducted for the pooled sample of EVS 2008. Table 1 describes the model characteristics.

Table 1. Gender role attitudes in EVS2017 – Exploratory Factor Analysis results

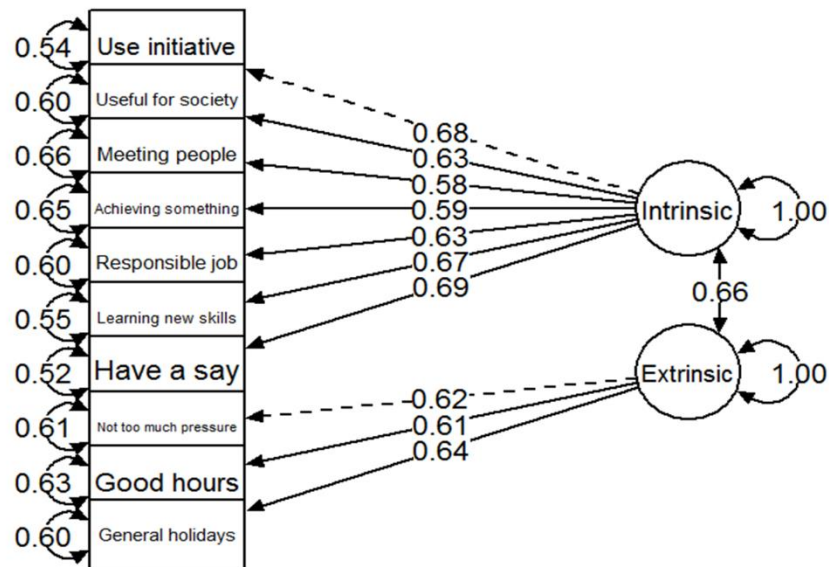


Figure 1. Work values in EVS 2008 - Confirmatory factor analysis (CFA) results for the pooled sample

Table 1. Model fit and measurement invariance, CFA 2008

	Pooled sample	Configural invariance	Metric invariance	Scalar invariance
Chi Square		4963.586	6386.5	15126.1
df		1564	1924	2284
CFI	0.982	0.955	0.941	0.831
TLI	0.976	0.941	0.937	0.847
RMSEA	0.038	0.056	0.058	0.091
P-value RMSEA	1.000	0.000	0.000	0.000
<= 0.05				
SRMR	0.023	0.036	0.054	0.079

Based on the results for confirmatory factor analysis the indices of extrinsic and intrinsic values were constructed. Intrinsic values include the following values with equal weights: using initiative, useful for society, meeting people, achieving something, responsible job, learning new skills, have a say. Extrinsic values comprise such values as not too much pressure, good hours and general holidays. Both indices vary from 0 (not important) to 1 (important).

Not all of the variables were referred to intrinsic or extrinsic values. Here, however, I chose to use the CFA as a basis. The values that were included in intrinsic and extrinsic values reflect well the latent constructs. Intrinsic values comprise different aspects of job that make its values besides just making living. More specifically, it includes the importance of career (using initiative, responsible job, have a say) and becoming a professional (learning new skills, achieving something), social aspects (meeting people) and social significance (useful for society). Extrinsic values reflect the importance of working at comfortable time and giving too much effort. It is worth noting that good pay, for example, on one hand, is one of the crucial aspects of extrinsic work values. But on the other hand it can also belong to intrinsic work values because it can be also regarded as an indicator of career or professional achievement.

It is worth noting that extrinsic and intrinsic values do not form two opposite points of the continuum. In other words, respondent can score high both on extrinsic and intrinsic work values. That makes perfect sense because both types of work values could be important to an individual.

Main results

The effect of work values and job satisfaction upon life satisfaction

Using multilevel regression modeling I calculated the effect of job satisfaction and work values upon life satisfaction. The results of the analysis are presented in table 2.

Table 2. Multilevel regression modeling. Dependent variable: life satisfaction, EVS2008

	(1)	(2)	(3)	(4)
Job satisfaction	0.355*** (0.005)	0.352*** (0.005)	0.343*** (0.009)	0.348*** (0.009)
Intrinsic values		0.183*** (0.038)	0.041 (0.113)	0.183*** (0.038)
Extrinsic values		-0.122*** (0.036)	-0.122*** (0.036)	-0.181* (0.109)
Female	-0.023 (0.022)	-0.020 (0.023)	-0.021 (0.023)	-0.021 (0.023)
Education: baseline – low education				
Medium education	0.190*** (0.032)	0.174*** (0.033)	0.174*** (0.033)	0.174*** (0.033)
Upper education	0.318*** (0.034)	0.293*** (0.035)	0.293*** (0.035)	0.293*** (0.035)
Age: baseline – 18-29 years				
30-49 years	-0.381*** (0.033)	-0.395*** (0.033)	-0.395*** (0.033)	-0.395*** (0.033)
50 and more years	-0.504*** (0.037)	-0.519*** (0.038)	-0.519*** (0.038)	-0.519*** (0.038)
Degree of religiosity (10-item scale)	0.028*** (0.004)	0.027*** (0.004)	0.027*** (0.004)	0.027*** (0.004)
Type of employment: baseline – 30 hours and more				
Less than 30h a week	-0.013 (0.036)	-0.013 (0.037)	-0.012 (0.037)	-0.013 (0.037)
Self-employed	-0.047 (0.036)	-0.064* (0.037)	-0.064* (0.037)	-0.064* (0.037)
Married	0.464*** (0.027)	0.459*** (0.027)	0.459*** (0.027)	0.460*** (0.027)
Has children	-0.103*** (0.032)	-0.096*** (0.032)	-0.096*** (0.032)	-0.096*** (0.032)
GDP in logarithmic form	0.376*** (0.054)	0.374*** (0.053)	0.374*** (0.053)	0.374*** (0.053)
Job satisfaction*intrinsic values			0.019 (0.015)	
Job satisfaction*extrinsic values				0.008 (0.014)

Constant	0.706 (0.540)	0.735 (0.531)	0.805 (0.533)	0.763 (0.533)
Observations	28,653	27,521	27,521	27,521
Log Likelihood	-57,703.080	-55,301.940	-55,301.050	-55,301.770
Akaike Inf. Crit.	115,436.200	110,637.900	110,638.100	110,639.500
Bayesian Inf. Crit.	115,560.100	110,777.700	110,786.100	110,787.500
<i>Note:</i>				* ** *** p<0.01

First, the models show that job satisfaction has a strong and significant positive impact upon life satisfaction (model 1). Second, before taking account the interaction effect with job satisfaction intrinsic values increase life satisfaction whereas extrinsic values decrease life satisfaction. Both effects are rather strong (model 2). These results are consistent with previous research and theoretical assumptions.

However, both intrinsic and extrinsic work values do not moderate an effect of job satisfaction upon life satisfaction (models 3 and 4). Hence, the hypothesis regarding that individuals with higher intrinsic motivation are more satisfied with life only given that they are more satisfied with their jobs was not confirmed.

Control variables give us expected results. Medium or upper level of education, being religious and being married increases life satisfaction. Younger individuals have higher life satisfaction compared to older individuals. Those with children are less happy with life.

The effect of socio-demographic characteristics and job satisfaction upon life satisfaction

The next models were constructed to check the impact of job satisfaction upon life satisfaction for different socio-demographic groups. In the table 3 interaction effects of job satisfaction with different socio-demographic characteristics are demonstrated.

Table 3. Multilevel regression modeling. Dependent variable: life satisfaction. Interaction effects of socio-demographic characteristics and job satisfaction, EVS2008

	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Job satisfaction	0.373*** (0.007)	0.328*** (0.011)	0.309*** (0.012)	0.389*** (0.011)	0.346*** (0.006)	0.363*** (0.008)	0.356*** (0.010)	0.363*** (0.052)
Female	0.286*** (0.080)	-0.021 (0.023)	-0.020 (0.023)	-0.020 (0.023)	-0.018 (0.023)	-0.021 (0.023)	-0.021 (0.023)	-0.020 (0.023)
Intrinsic values	0.183*** (0.038)	0.181*** (0.038)	0.181*** (0.038)	0.178*** (0.038)	0.181*** (0.038)	0.183*** (0.038)	0.183*** (0.038)	0.183*** (0.038)
Extrinsic values	-0.121*** (0.036)	-0.121*** (0.036)	-0.120*** (0.036)	-0.117*** (0.036)	-0.122*** (0.036)	-0.122*** (0.036)	-0.122*** (0.036)	-0.122*** (0.036)
Education: baseline – low education								
Medium education	0.174*** (0.033)	-0.044 (0.103)	0.173*** (0.033)	0.173*** (0.033)	0.167*** (0.033)	0.174*** (0.033)	0.174*** (0.033)	0.174*** (0.033)
Upper education	0.293*** (0.035)	0.044 (0.118)	0.291*** (0.035)	0.292*** (0.035)	0.288*** (0.035)	0.294*** (0.035)	0.293*** (0.035)	0.293*** (0.035)
Age: baseline – 18- 29 years								
age_r230-49 years	-0.394*** (0.033)	-0.395*** (0.033)	-0.770*** (0.104)	-0.394*** (0.033)	-0.395*** (0.033)	-0.395*** (0.033)	-0.395*** (0.033)	-0.395*** (0.033)
age_r250 and more years	-0.517*** (0.038)	-0.519*** (0.038)	-0.955*** (0.118)	-0.517*** (0.038)	-0.518*** (0.038)	-0.519*** (0.038)	-0.519*** (0.038)	-0.519*** (0.038)
Degree of religiosity (10-item scale)	0.027*** (0.004)	0.027*** (0.004)	0.027*** (0.004)	0.071*** (0.012)	0.027*** (0.004)	0.027*** (0.004)	0.027*** (0.004)	0.027*** (0.004)
Type of employment: baseline – 30 hours and more								
Less than 30h a week	-0.011 (0.036)	-0.012 (0.037)	-0.015 (0.036)	-0.011 (0.037)	0.136 (0.125)	-0.012 (0.037)	-0.013 (0.037)	-0.013 (0.037)
Self-employed	-0.067* (0.037)	-0.067* (0.037)	-0.065* (0.037)	-0.069* (0.037)	-0.651*** (0.129)	-0.064* (0.037)	-0.064* (0.037)	-0.064* (0.037)
Married	0.459*** (0.027)	0.459*** (0.027)	0.459*** (0.027)	0.459*** (0.027)	0.461*** (0.027)	0.591*** (0.083)	0.459*** (0.027)	0.459*** (0.027)
Has children	-0.098*** (0.032)	-0.096*** (0.032)	-0.098*** (0.032)	-0.098*** (0.032)	-0.095*** (0.032)	-0.096*** (0.032)	-0.062 (0.090)	-0.096*** (0.032)
Job satisfaction* GDP in logarithmic								-0.001

form								(0.005)
GDP in logarithmic form	0.374*** (0.053)	0.374*** (0.053)	0.373*** (0.053)	0.375*** (0.053)	0.372*** (0.053)	0.375*** (0.053)	0.374*** (0.053)	0.382*** (0.066)
Job satisfaction*female	-0.042*** (0.010)							
Job satisfaction*medium education		0.030** (0.014)						
Job satisfaction*upper education		0.034** (0.015)						
Job satisfaction*30-49 years			0.052*** (0.014)					
Job satisfaction*50 and more years			0.060*** (0.015)					
Job satisfaction*degree of religiosity				-0.006*** (0.002)				
Job satisfaction*less than 30h a week					-0.021 (0.016)			
Job satisfaction*self-employed					0.077*** (0.016)			
Job satisfaction*married						-0.018* (0.011)		
Job satisfaction*children							-0.005 (0.011)	
Constant	0.586 (0.533)	0.912* (0.538)	1.063** (0.538)	0.460 (0.537)	0.805 (0.531)	0.652 (0.534)	0.710 (0.536)	0.655 (0.652)
Observations	27,521	27,521	27,521	27,521	27,521	27,521	27,521	27,521
Log Likelihood	-55,294.060	-55,298.940	-55,292.860	-55,295.180	-55,288.960	-55,300.580	-55,301.910	-55,301.970
Akaike Inf. Crit.	110,624.1	110,635.90	110,623.700	110,626.400	110,615.900	110,637.200	110,639.800	110,639.900
Bayesian Inf. Crit.	110,772.1	110,792.1	110,780.00	110,774.40	110,772.10	110,785.20	110,787.80	110,787.90

Note:

* p < 0.05
** p < 0.01
*** p < 0.001

As expected, women associate job satisfaction with life satisfaction to a lesser extent as compared to men (model 5, figure 2). The same is true for marital status. For married individuals the contribution of job satisfaction to life satisfaction is slightly smaller than for unmarried individuals (model 9, figure 3). So, here the initial hypotheses were confirmed. The association between job satisfaction and life satisfaction is the same for individuals with and without children (model 10). It could be easily explained by the fact that here children of all ages were considered and there is a huge difference between having small and grown-up children.

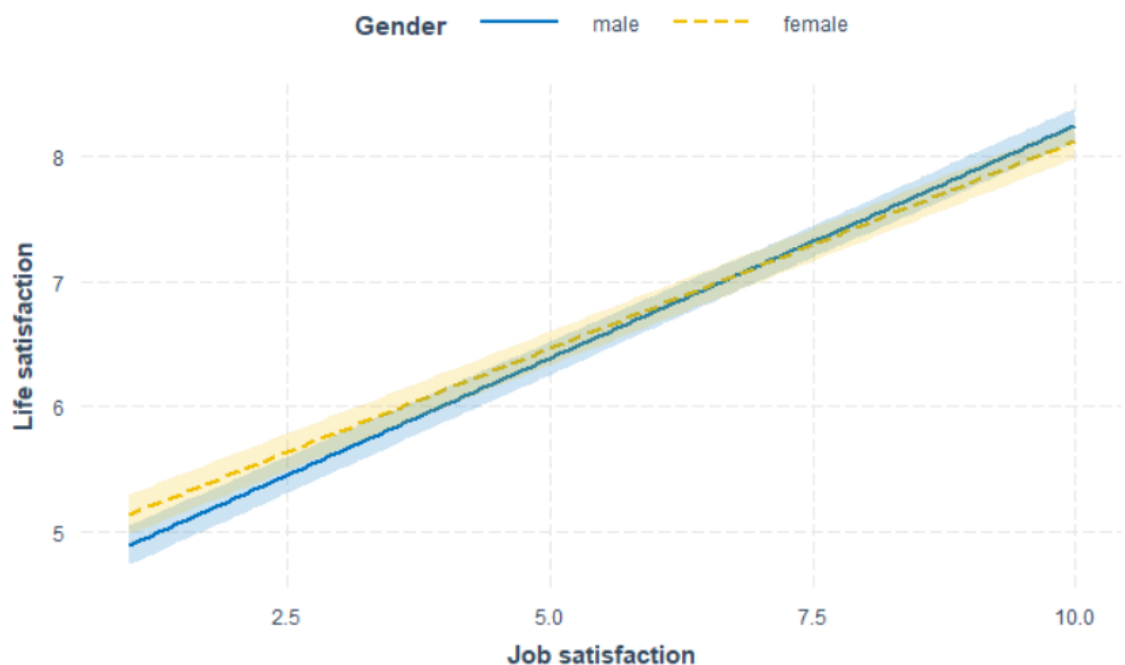


Figure 2. Marginal effect of job satisfaction upon life satisfaction for men and women

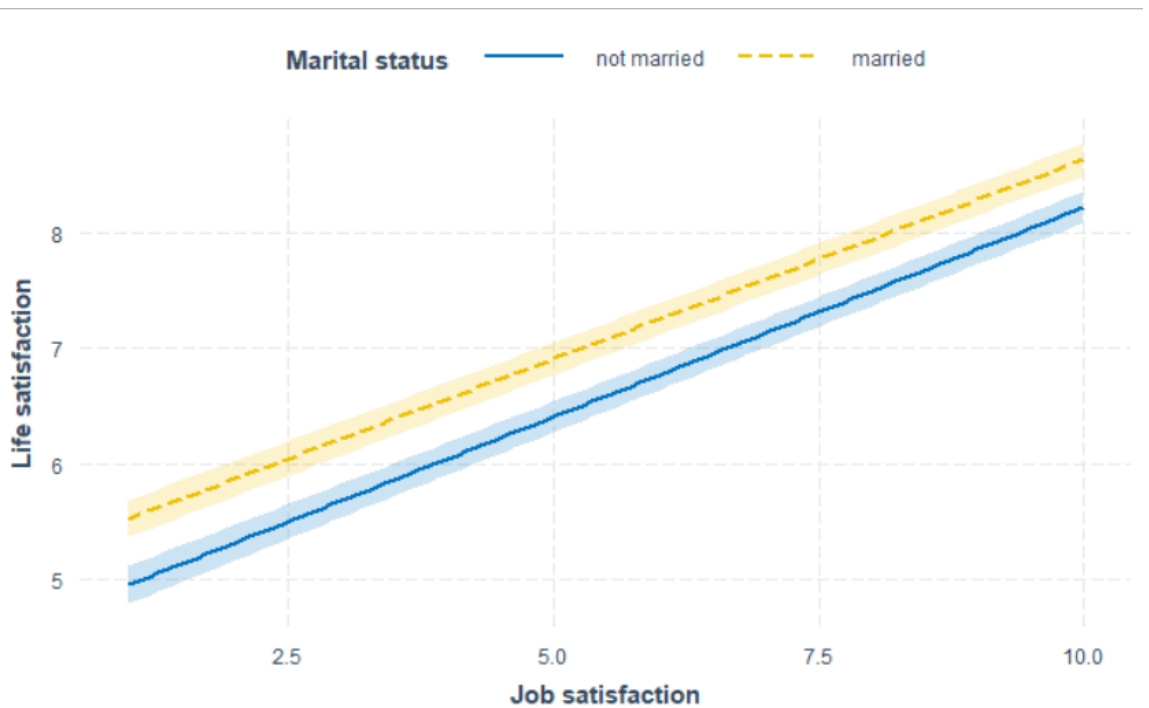


Figure 3. Marginal effect of job satisfaction upon life satisfaction for married and unmarried individuals

As far as age is concerned there is significant difference between age groups. For the individuals who are 30-49 years and 50 or more years old job satisfaction stronger contributes to life satisfaction compared to the youngest age group (model 7, figure 4). This could be easily explained because for those who belong to the youngest age group job is quite often not the main activity. In the oldest age group many people have a choice whether to work or not. It is likely that among 50+ group are both individuals who need money and work of necessity and those who enjoy working. Both of these categories should be more involved in their jobs than the high share of representatives of the youngest age group.

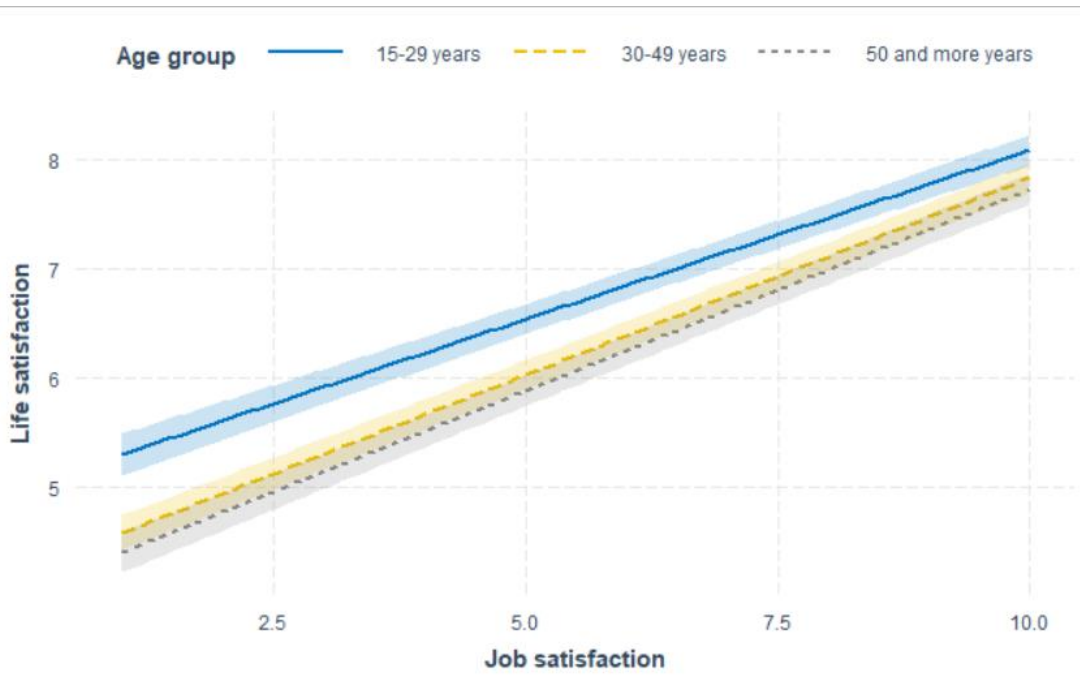


Figure 4. Marginal effect of job satisfaction upon life satisfaction for individuals of different age

Furthermore, the association between job satisfaction and life satisfaction depends upon the individual’s level of education (model 6, figure 5). Job satisfaction plays a greater role in life satisfaction for individuals with at least medium or upper educational level. Individuals with higher education have invested more in their education and are likely to attach more importance to their jobs.

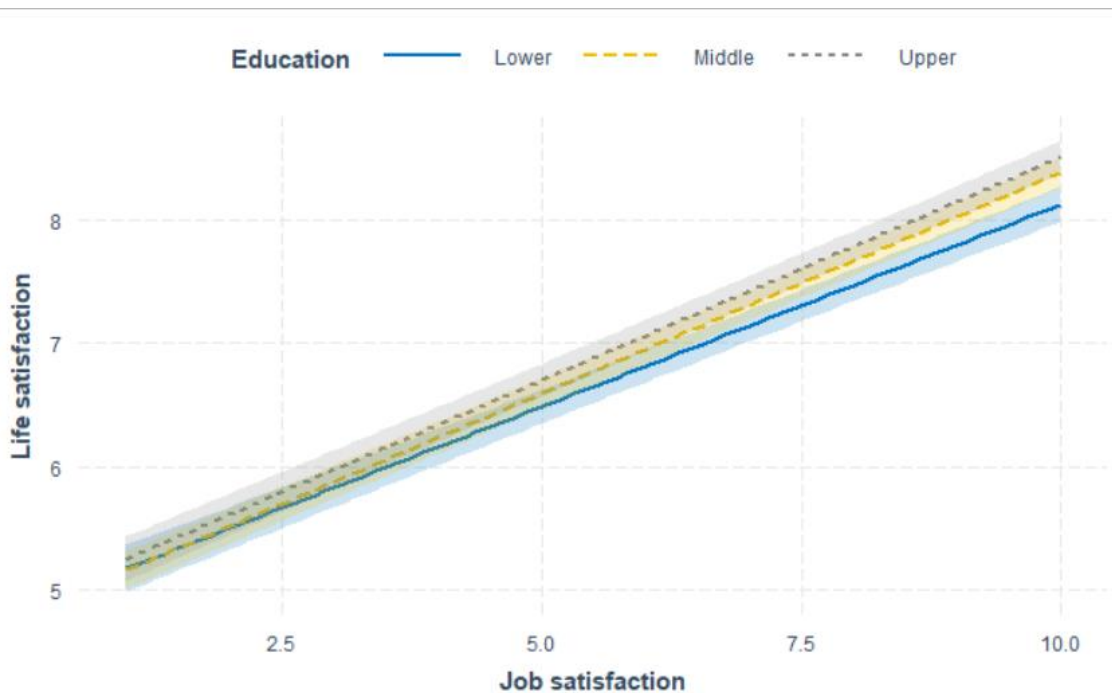


Figure 5. Marginal effect of job satisfaction upon life satisfaction for individuals with different educational level

Contrary to our expectations, no difference in contribution of job satisfaction to life satisfaction was found for full-time employed and part-time employed individuals. It could be due to the fact that part-timers are likely to have lower job satisfaction compared to full-timers. Hence, lower level of job satisfaction for part-timers can influence life satisfaction more than higher level of job satisfaction for full-timers. At the same time for self-employed association between job satisfaction and life satisfaction is stronger than for full-time employees (model 8, figure 6). It could be explained by the fact that self-employed are more involved in their jobs and are more likely to think about their jobs when they are outside work.

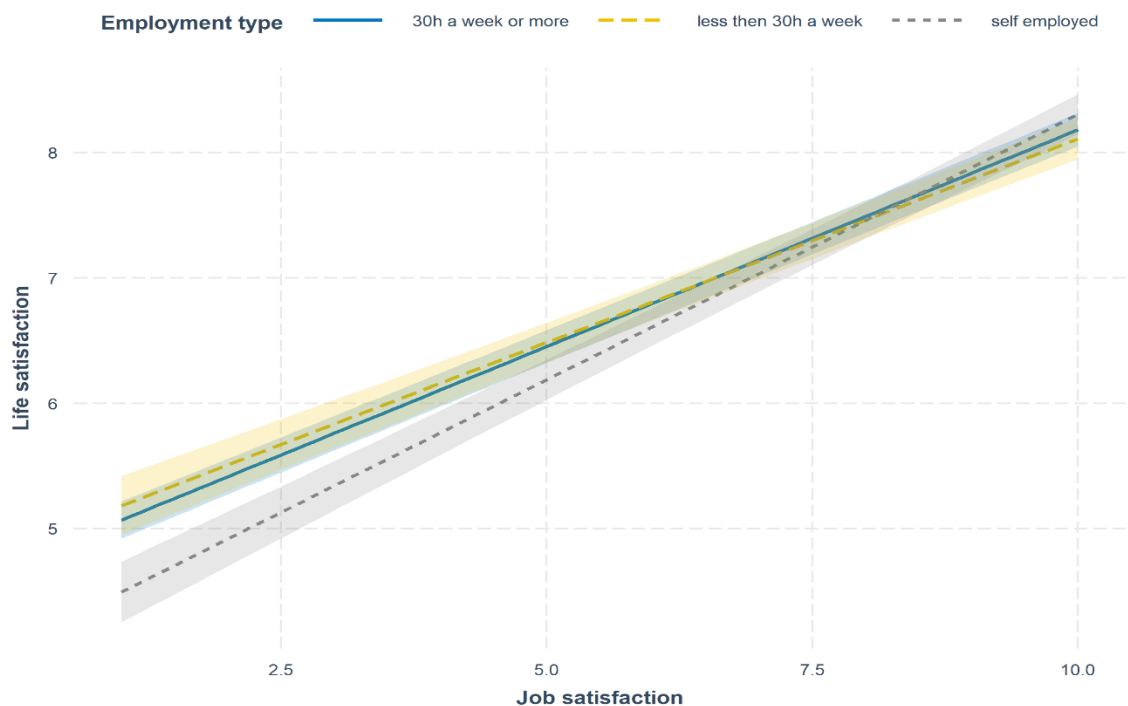


Figure 6. Marginal effect of job satisfaction upon life satisfaction for individuals with different type of employment

More religious individuals associate job satisfaction with life satisfaction less (model 11, figure 7). For individuals for whom God does not play an important role in their life job satisfaction contributes more to life satisfaction. This could be due to the fact that the religiosity is an important sphere of the life for

religious individuals and it reduces the effect of job satisfaction upon life satisfaction.

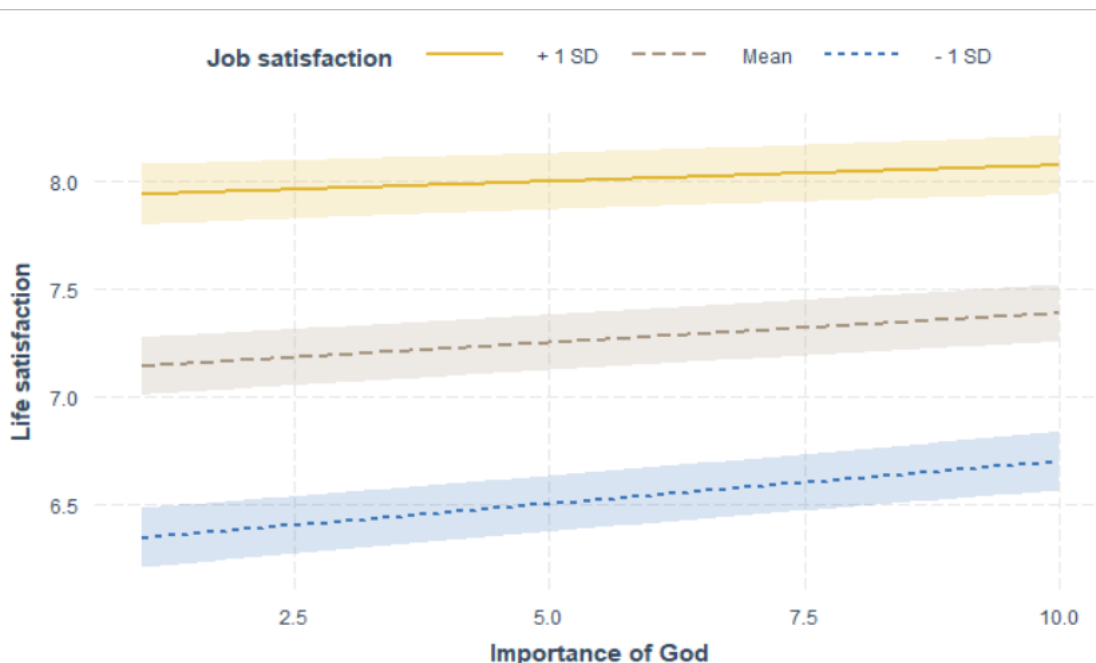


Figure 7. Marginal effect of job satisfaction upon life satisfaction for individuals with different degree of religiosity

The contribution of job satisfaction to life satisfaction does not depend upon the level of GDP per capita (model 12). First, it could be due to the fact that the association between life satisfaction and job satisfaction depends strongly on individual characteristics (both socio-demographic and values). Second, the differentiation in GDP per capita in Europe is present but is not as huge as when we at the countries of the different continents.

Discussion

The current research contributes to the literature on the role of work in life satisfaction. The association between job satisfaction and life satisfaction is very strong. At the same time the degree of contribution of job satisfaction to life satisfaction varies for different types of largely depends upon socio-demographic characteristics but is the same for people with different work motivation and in countries with different GDP per capita.

The study emphasizes the importance of distinguishing the intrinsic and extrinsic values and the important role of work values as a determinant of subjective well-being. This paper contributes to the previous research showing the important role of values in explaining job satisfaction (Kalleberg, 1977) and life satisfaction (Vansteenkiste 2007) by showing that the effect of values on life satisfaction is strong and does not depend on the level of job satisfaction.

Our results confirm findings from the literature that intrinsic motivation increases life satisfaction (Vansteenkiste 2007). It is in line with self-determination theory. Extrinsic values affect negatively life satisfaction. It is possible that extrinsic values are more important to individual that have less favorable situation because they refer more to basic needs (Maslow 1954; Inglehart & Welzel 2005). At the same time neither intrinsic nor extrinsic values moderate the effect of job satisfaction upon life satisfaction.

At the same time characteristics related to the labor market play a role in explaining the contribution of job satisfaction and life satisfaction. The important result is that for higher educated individuals the association between life satisfaction and job satisfaction is stronger which is in line with previous research (Georgellis & Lange 2012; Soboleva 2020). Individuals with high educational level are more qualified and often can invest more in their jobs. Also, self-employed demonstrate higher job involvement whereas part-timers do not differ significantly from full-timers.

For women and married individuals job satisfaction contributes to life satisfaction to a lesser extent whereas the presence of children does not influence the link between life satisfaction and job satisfaction. However, the effect of children should be analyzed in more detail with taking into account the number and age of children. Individuals of younger cohort (18-29 years old) associate job satisfaction with life satisfaction less. The level of religiosity also weakens the link between job satisfaction and life satisfaction. This result contradicts the result of Georgellis and Lange (2012). It is possible that today believing in God does not so strongly associated with traditionalism. It could be to the greater extent reflect the

importance of additional sphere of life. Hence, my general hypothesis that the relative importance of other spheres of life for such people can reduce the effect of job satisfaction upon life satisfaction is confirmed.

Our findings are also of practical significance. Job satisfaction positively influences employee's performance (Bakotic 2016; Luthans et al. 2007). As intrinsic motivation positively influences job satisfaction as well as job outcomes (Vansteenkiste et al. 2007) it contributes to the economic development. Thus, it is important to stimulate the intrinsic motivation and give the opportunities to realize this motivation in the jobs. Otherwise it will negatively impact the well-being of people who share such values.

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Appendix

Table A1. Mean life satisfaction, job satisfaction and the discrepancy between life satisfaction and job satisfaction

Country	Mean life satisfaction	Mean job satisfaction	The difference between life satisfaction and job satisfaction
Bulgaria	6.24	7.41	-1.17
Kosovo	6.77	7.74	-0.97
Georgia	5.97	6.77	-0.8
Ukraine	6.39	7.09	-0.7
Latvia	6.55	7.16	-0.61
Cyprus	7.39	7.95	-0.56
Lithuania	6.64	7.19	-0.55

Hungary	6.64	7.03	-0.39
Turkey	6.42	6.76	-0.34
Belorussia	6.17	6.51	-0.34
Romania	7.09	7.42	-0.33
Germany	7.23	7.55	-0.32
Moldova	6.93	7.23	-0.3
Ireland	7.92	8.2	-0.28
Albania	6.56	6.83	-0.27
Portugal	6.82	7.09	-0.27
Russian Federation	6.77	7.02	-0.25
Czech Republic	7.28	7.5	-0.22
Iceland	8.16	8.36	-0.2
Estonia	6.83	7.01	-0.18
Slovakia	7.49	7.59	-0.1
Italy	7.23	7.29	-0.06
Austria	7.56	7.61	-0.05
Poland	7.47	7.47	0
Belgium	7.73	7.73	0
Bosnia and Herzegovina	7.19	7.17	0.02
Luxembourg	7.82	7.8	0.02
Switzerland	8.13	8.09	0.04
Spain	7.36	7.3	0.06
Croatia	7.15	7.07	0.08
Greece	7.15	7.07	0.08
Northern Cyprus	7.86	7.77	0.09
Northern Ireland	7.86	7.77	0.09
Armenia	5.83	5.72	0.11
France	7.66	7.5	0.16
United Kingdom	7.66	7.5	0.16
Macedonia	7.2	7.02	0.18
Norway	8.22	8.04	0.18
Serbia	7.24	7.04	0.2
Malta	7.95	7.74	0.21
Sweden	7.86	7.62	0.24
Finland	7.8	7.51	0.29
Slovenia	7.75	7.44	0.31
The Netherlands	8.08	7.72	0.36
Montenegro	7.58	7.17	0.41
Denmark	8.46	8.02	0.44

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