

# Traditional versus Secular Values and the Job–Life Satisfaction Relationship Across Europe

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Using data from the European Values Survey (EVS), we examine the relationship between job and life satisfaction across Europe. We find that for the majority of employees job and life satisfaction are positively correlated, thus supporting the spillover hypothesis, whereby attitudes and practices developed in the life domain spill over into the work domain and vice versa. In contrast, we find little support for the compensation hypothesis, whereby employees who are dissatisfied in one domain seek compensatory rewards in the other domain. However, multivariate analysis reveals that the strength of the interaction between job and life satisfaction is mitigated by cultural values and interpersonal trust, as encapsulated in the ‘traditional versus secular values’ index reported in the EVS data. We thus find that predictors of the job–life satisfaction relationship vary across cultures and that such cross-cultural variations are systematically related to salient cultural values and beliefs. The latter findings raise important questions about the universal application of existing theories in the subjective well-being arena.

## Introduction

The interplay between job and life satisfaction has attracted considerable interest across a number of disciplines, including sociology, economics, management and organizational psychology. Such interest is driven by the quest for a better understanding of how individuals’ well-being is affected by the interaction between their life and work domains. Judge and Watanabe (1994) have proposed a methodology to produce a systematic taxonomy and a quantifiable measure of the potential interaction between the two domains, which is based on self-reported job and life satisfaction scores. According to Judge and Watanabe (1994), if job and life satisfaction are unrelated then this is evidence of segmentation between the work and life domains, in that job and life experiences are separated and display little or no

related properties. Feelings and behaviour in one domain are not affecting behaviour and productivity in the other domain (Gupta and Beehr, 1981; Lambert, 1990). If job and life satisfaction are correlated, then this is evidence of spillover or compensation effects between the two domains, depending on whether such a correlation is positive or negative. The spillover hypothesis implies that attitudes and practices developed in the life domain can spill over into the work domain and vice versa, as manifested by a positive correlation between job and life satisfaction. Killing time at work can become killing time in leisure or apathy at work can lead to apathy in family life (Wilensky, 1961). A negative correlation between job and life satisfaction implies that compensation effects are present in situations where workers who are dissatisfied at work seek compensatory rewards outside work by decreasing involvement

in a dissatisfying role and increasing involvement in a more satisfying role (Lambert, 1990; Zedeck, 1992). Judge and Watanabe (1994) test these three hypotheses, using data from the Quality of Employment Surveys for the USA, accounting explicitly for the fact that the form of the relationship between job and life satisfaction may differ across individuals.

In this paper, we use data derived from the European Values Survey (EVS) to re-examine the relationship between job and life satisfaction and to identify patterns of segmentation, spillover or compensation between the work and life domains across 30 European countries. To this end, we apply Judge and Watanabe's (1994) methodology, which accounts for differences in the relationship between job and life satisfaction across individuals, separately for each of the countries in our sample. But, beyond replication of the Judge and Watanabe (1994) study within a multi-country and cross-cultural context, we also adopt a multivariate regression approach to identify the factors affecting the relationship between job and life satisfaction and the propensity of individuals to belong to the segmentation group. A unique feature of the EVS data is that it provides information about respondents' views on secular and traditional values, which allows us to investigate whether attitudes towards religion, society and family life matter as determinants of the functional relationship between job and life satisfaction.

Such deeply engrained cultural values and beliefs have already been explored as powerful predictors of both job and life satisfaction (e.g. Georgellis, Tsitsianis and Yin, 2009; Lange, 2008, 2009, 2010). Previous research in the subjective well-being arena has also acknowledged that the relationship between overall life satisfaction and other satisfaction domains, such as job satisfaction, may vary cross-culturally (Mallard, Lance and Michalos, 1997). However, cultural values and beliefs have yet to feature prominently as potential determinants of the interaction between life and work domains. Lewis, Gambles and Rapoport (2007, p. 367) add that the interaction between life and work domains 'in diverse cultures masks an assumption that this is culture free'. To this end, this paper not only contributes to the growing body of research on work-life interaction and respective segmentation, spillover or compensation effects, but also explicitly addresses the empirical gap in the literature on the

role of cultural values and beliefs as potentially important predictors of the relationship between job and life satisfaction.

## Literature and theoretical background

The interaction between the work and life domains represents a complex and nuanced area of inquiry, which has attracted an enormous and often controversial literature. Although studies have identified and to some extent disentangled the determinants of the interplay between work and life satisfaction, it remains far from clear which conceptual framework best explains the processes through which work and life domains are linked.

Reviewing segmentation, compensation and spillover theories, for example, Lambert (1990, p. 239) observes that 'these processes are treated as competing explanations, even though evidence and logic suggests that all three operate to link work and family'. Lambert (1990) points to a series of studies that argue in support of either indirect influences of work and family life (behaviour or emotions at work, which are carried into family life) or direct effects (job demands, which directly impact on the ability to be involved or satisfied in family life). Interestingly, McNall, Nicklin and Masuda (2010, p. 381) note that, 'in the past, research on the work-family interface has focused on the negative connections between work and family life (e.g. work-family conflict, Greenhaus and Parasuraman, 1999), largely ignoring the positive connections'. However, more recently and beyond the negative connections between work and family life a growing number of authors have added to the literature by reference to the positive connections of work-to-family enrichment and family-to-work enrichment (e.g. Greenhaus and Powell, 2006; Hammer and Hanson, 2006; Hunter *et al.*, 2010; van Steenbergen, Ellemers and Mooijaart, 2007). What is more, positive spillover effects have already been explicitly linked to the work-family enrichment arena (Hanson, Hammer and Colton, 2006).

In review of the literature, the discourse of both work-family conflict and enrichment clearly displays bidirectional characteristics. As such, it is also important to comment on the direction of the causal relationship between job and life satisfaction. If work satisfaction influences non-work attitudes, then job redesign programmes

to enhance job satisfaction will also improve workers' overall quality of life, which is not the case when the causality runs in the opposite direction. Nevertheless, empirical evidence on the causal relationship between job and life satisfaction is generally mixed. Chacko (1983) finds that job satisfaction causes life satisfaction, whilst Schmitt and Mellon's (1980) findings support the inference that life satisfaction causes job satisfaction. As Judge and Watanabe (1993) point out, the inconsistent results in these studies can be attributed to small samples and to the short time period between the longitudinal measurements which may have limited the validity of the causal inferences drawn. Judge and Watanabe (1993) find that job satisfaction and life satisfaction are positively and reciprocally related. Tail, Padgett and Baldwin (1989) provide one of the first meta-analyses of the relationship between job and life satisfaction pointing to the existence of a positive relationship between the two, but offering no clear evidence on the direction of causality. Finally, enrichment between work and family roles has also been shown to occur in both directions – family-to-work and work-to-family. A recent meta-analytical assessment suggests that 'the role from which enrichment originated was more strongly related to various outcomes than the role from which the enrichment was received, which is contrary to results in the work–family conflict literature' (McNall, Nicklin and Masuda, 2010, p. 392). Although beyond the objective of this analysis, it reinforces our earlier notion that the interaction between work and family life is indeed a complex and nuanced area of inquiry.

Turning our attention to this study's primary area of interest, our attempt to explore the impact of cultural values on job and life satisfaction interactions benefits from the ground-breaking work of Hofstede (2001) and, more recently in the economic psychology literature, Rojas (2007), in that both authors have shown ways in which cultural conceptions can be empirically evaluated. Rojas's work employs conceptual-referent theory (CRT), which states that 'each person has a conceptual referent for a happy life – the conception or notion to which the term happiness refers to – and that this referent plays a role in the judgment of her life and in the appraisal of her happiness' (Rojas, 2007, p. 2). What is more, CRT also highlights the importance of heterogeneity, in that cultural, social and upbringing factors lead people to

a different conception of what a happy life is. The study's empirical findings raise important questions about the influence of factors such as culture, education, upbringing and social conditioning. Although different in typology and empirical approach, the conceptual similarities with Hofstede's work are easy to discern.

Hofstede's central hypothesis is that each culture provides the grounds for a different socialization of its members through a socio-educational process, causing 'value sets' or 'mental programmes', which are assumed to be culture-specific. These value sets are thought to impact on the way individuals in each culture perceive and interpret their surroundings, affecting and shaping their expectations, goals, beliefs and ultimately their behaviour in life, including their experiences and behaviours at work.

It follows that cultural groups with different 'mental programmes' hold different values, which lead them to frame experience (including work-related experience and the latter's impact on behaviour in non-work life) in different ways. Not unlike Rojas (2007) and crucial to the present study, Hofstede argues that these cultural values can be empirically identified and assessed, which he attempts on the basis of four value dimensions or typologies differentiating national cultures: power distance; uncertainty avoidance; individualism; masculinity. Accepting these typologies, if such values can be measured, then access can be gained to and comparisons can be made between cultural differences. Hofstede's indices are based on answers given in IBM's international employee attitude survey program, for which between 1967 and 1972 approximately 116,000 questionnaires were obtained from 72 countries (Hofstede, 2001). In contrast to the EVS, for the Hofstede indices only country aggregate scores on these overarching value dimensions are available. One of the few value indicators for which a less-aggregated level of information is available concerns 'work goal importance', closely related to the EVS item about the importance of good pay in a job. Somewhat problematically, Hofstede's approach refers largely to work values, which leads us to question whether values related to work and organizations provide good indicators of national culture. To be fair, the terminology of culture has been measured and applied in a wide variety of contexts, ranging from individual culture and organizational culture to culture as a synonym for 'nation',

'ethnic group' or 'social norm'. In the present study, we utilize an alternative methodological approach and define cultural differences by reference to traditional versus secular-rational values. This differentiation has gained in prominence following the influential work by Inglehart and Baker (2000) who use these definitions to re-evaluate the validity of modernization theory. Although not universally accepted as modernization categorizations (e.g. Haller, 2002; Teorell and Hadenius, 2006) they have informed recent empirical investigations concerned with cultural values and behavioural traits (Halman and Draulans, 2006; Oosterbeek, Sloof and van de Kuilen, 2004).

Sociological scholars have also long been concerned with the impact of work on social life. So note Wilson and Musick (1997, p. 251) that 'Marx and Durkheim both believed that jobs have consequences for workers' lives outside the workplace, and subsequent research by Kohn, Wilensky, and others confirms that complex and self-directed jobs encourage social participation'. From early analyses (Wilensky, 1961) to the present (Grosswald, 2003; Snir and Harpaz, 2002), contributions to the sociological literature include a number of influential studies that examine work-life relations by explicit reference to spillover, segmentation and compensation theories. However, although valuable and insightful in many ways most of these studies are based on national data sets with relatively small sample sizes, which make attempts to arrive at empirical generalizations a difficult task.

## Data and methods

We use data for 30 countries from the 1999–2000 wave of the EVS. The EVS is a large-scale, cross-national survey on basic human values offering a rich source of secondary data on individual values and beliefs across Europe. Information was collected using a stratified multi-stage random sampling procedure taking into account the population size and/or degree of urbanization of the primary sampling units (e.g. statistical regions, districts, census units, electoral registers and central population registers) in each country. In all countries, samples were drawn from the entire population of 18 years and older, with no upper age limit imposed. In order to ensure the samples were representative of the population in

respective countries, quota sampling methods were applied whereby quotas were assigned based on sex, age, occupation and region, using the census data as a guide to the distribution of each group in the population. Representative national samples of each country's population were then interviewed using uniformly structured questionnaires. Fieldwork for most of the European countries was carried out in 1999 using face-to-face interviews. After the fieldwork, data cleaning was carried out by the principal investigators in each country, Tilburg University, the Zentralarchiv in Cologne and JD Systems in Madrid. Data validation was carried out using the documentation, statistical data and survey data cleaning software before building each final country file, followed by semantic analysis to identify inconsistencies and deviations from other country results.<sup>1</sup>

The EVS provides information on work, personal finances, the economy, politics, allocation of resources, contemporary social issues, technology and its effect on society, and attitudes towards family life, religion and traditional values. Questions were also asked about respondents' attitudes towards the importance of work and about the subjective evaluation of their job and life satisfaction. Demographic information includes family income, number of children in the family, size of locality, region of residence, occupation of the head of the household, whether the respondent was the family's main earner, marital status and the respondent's age, sex, occupation, education and union membership. We restrict our sample to salaried employees aged 18–65 not in farming/agriculture or the armed forces, resulting in a sample size of 5397 and 5010 observations for males and females, respectively.

### Measures

*Job and life satisfaction.* Job satisfaction and life satisfaction variables are self-reported ordinal variables on a scale of 1–10, with 1 representing complete dissatisfaction and 10 representing complete satisfaction. The life satisfaction variable is compiled by responses to the question 'All things

<sup>1</sup>For a more detailed description of the EVS survey see Inglehart et al. (2004) and the World Values Survey website (<http://wvs.isr.umich.edu>). Halman (2001) also provides a more detailed discussion of questionnaire development methods and fieldwork.



considered, how satisfied are you with your life as a whole these days?’ Values of the job satisfaction variable correspond to responses to the question ‘Overall, how satisfied or dissatisfied are you with your job?’ The job satisfaction question in the EVS data refers to satisfaction with a specific job with a specific employer covered by specific contractual terms, rather than satisfaction with work or occupation.

Whilst acknowledging the existence of a potential conceptual overlap between job and life satisfaction, the use of the above measures is based on the presumption that the relationship between job and life satisfaction is a highly complex one and varies between groups. Mastekaasa’s (1984) empirical findings, rejecting the multiplicative model of life satisfaction, further quash criticisms regarding such a conceptual overlap. As Mastekaasa explains, it is unrealistic to expect that individuals are aware of what domains contribute the most to their overall life satisfaction, appealing to the true limitations of individuals’ self-insight. Apparently, such limitations are more evident in the case of life satisfaction than in the case of job satisfaction. Based on data from the German Socio-economic Panel, van Praag, Frijters and Ferrer-I-Carbonell (2003) further confirm the complexity of the relationship between job and life satisfaction by showing that life satisfaction is a weighted average of six domain satisfaction measures, with job satisfaction being one of them. The remaining five domains are health, finance, leisure, housing and environment. In the light of such evidence, we proceed with our investigation to uncover the main moderating factors of such a complex relationship between job and life satisfaction, rather than resigning to the prospect of job satisfaction simply being the only or main component of overall life satisfaction.

The more general issue of the use of single-item measures of complex attitude structures remains a controversial one, as such measures tend to have only marginally acceptable internal consistency (see for example Rose, 2005; Wanous, Reichers and Hudy, 1997). On a positive note, the meta-analysis of US data sets by Wanous, Reichers and Hudy (1997) gives the use of single-item measures a cautious thumbs-up. Rose (2005) raises similar concerns on the use of single-item measures but he also adopts a more pragmatic attitude towards the use of such measures and proceeds with his analysis of employee despondency in the UK.

*Control variables.* The EVS data allow us to control for key socio-economic and demographic characteristics based on data collected and collated in a consistent way across a large number of European countries. Given the well-documented differences in labour market opportunities and occupational strategies between men and women, such differences also dominate the work–life balance debate.<sup>2</sup> Indeed, evidence of occupational segregation along gender lines is well documented in the literature and the debate on whether the pay gap between men and women could be attributed to discrimination is still an ongoing one. Thus, we include a sex dummy variable that allows male and female job and life equations to have different intercepts. However, because the inclusion of a dummy variable alone does not allow for the effects of all other factors to vary across men and women, we also estimate multivariate regressions separately for men and women.

The second main factor we control for is income, reported in the EVS as an ordinal categorical variable capturing the relative position of a respondent in the income distribution, i.e. whether a respondent enjoys low, middle or high income within his or her own country.

Our main variable of interest in this context is the traditional/secular-rational values index in the EVS, which allows us to capture the role of culture and religion as important determinants of how individuals perceive the relationship between job and life satisfaction. We use the traditional/secular-rational values index as constructed by Inglehart and Welzel (2005), available in the EVS data set. Inglehart and Welzel (2005) constructed the index based on responses of individuals to a number of questions on their religious beliefs and their attitudes towards work, family and societal values. Low values of the index represent traditional values, reflecting an increased emphasis on the importance of religion, family values, parent–child ties and abortion. A more detailed description of the variables used to construct the index is provided in Appendix A. As the mean values and associated confidence intervals in Figure 1 show, a substantial variability in the traditional–secular values index across countries is evident. Malta is at

<sup>2</sup>Examples of recent studies highlighting differences in how men and women value various job attributes include Georgellis and Lange (2007) and Lange (2008) among others.

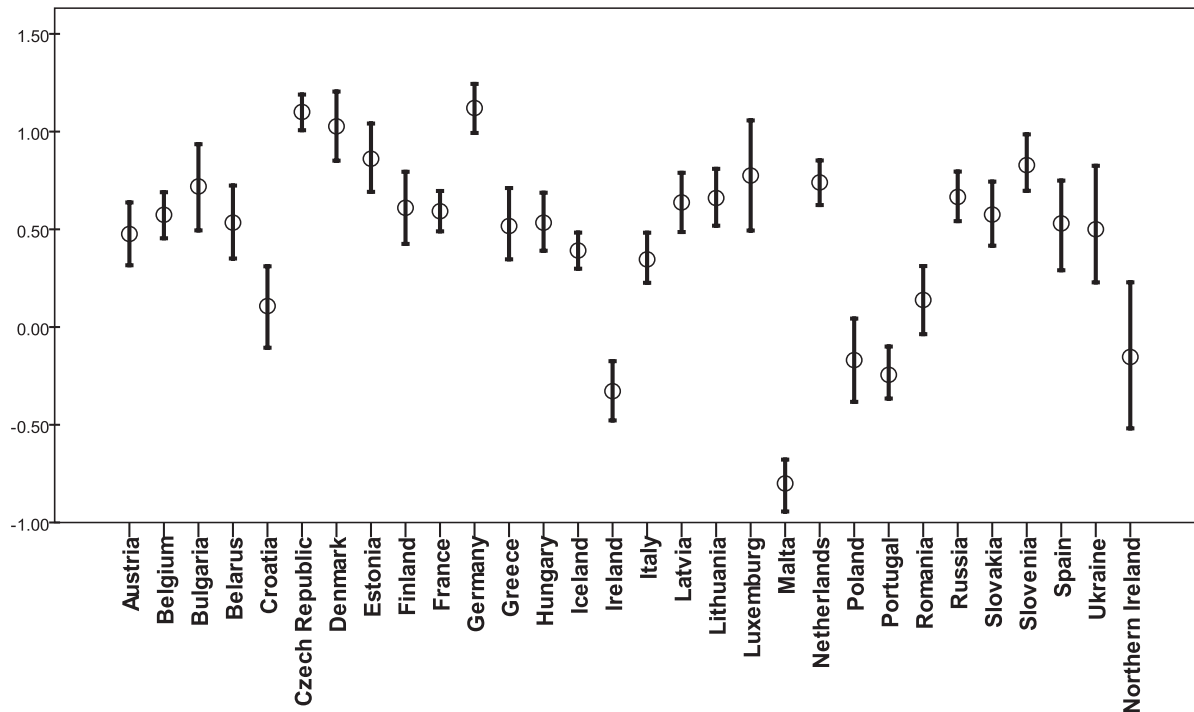


Figure 1. The traditional versus secular values index across Europe

the lower end of the spectrum, along with Ireland, Poland, Portugal and Croatia, all countries with strong religious identities and traditional values. Individuals in these countries assign high values to the importance of God and low scores when it comes to tolerance of homosexuality and abortion. At the higher end of the spectrum are countries such as Denmark and Germany, with more secular values, and some of the emerging economies of Eastern Europe including the Czech Republic, Estonia and Slovenia.

In our regression analysis, we also use the constituent variables of the traditional–secular values index, described in Appendix A, as explanatory variables. Other controls include demographic and labour market characteristics, such as age, education, number of children, marital status, whether the respondent is the main earner in the household, union membership, occupation, whether working part-time and size of the town of residence. The sample means of the main variables used in our analysis are shown in Appendix B. As the sample means indicate, compared with women, men in our sample are on average more likely to be the main earner in the household and less likely to work part-time. They are slightly older, less educated, earning higher income, and

they are more likely to be married than women. Gender differences in values and beliefs are also evident. Men are less likely to value the importance of God, to view abortion as justifiable and to tolerate homosexuality than women, while at the same time they are more likely to sign petitions and feel national pride.

### Analysis

In order to determine spillover, compensation and segmentation groups we follow Judge and Watanabe (1994). This is based on the presumption that, if the job and life domains are segmented, then it is expected that individuals who report job satisfaction scores at the upper (lower) end of the job satisfaction distribution should report life satisfaction scores at the lower (upper) end of the life satisfaction distribution. That is, in the case of segmented work and life domains, individuals occupy substantially different positions in the job satisfaction and life satisfaction distributions.

To capture such a correlation, Judge and Watanabe use a measure of association,  $D1$ , between job satisfaction and satisfaction with life, defined as  $D1 = ||ZLS| - |ZJS||$ , where  $ZLS$  is the standardized life satisfaction score and  $ZJS$  is the

standardized job satisfaction score. Higher values of D1 imply that job satisfaction and life satisfaction are unrelated as the individual occupies a significantly different position in the job satisfaction distribution in her country compared with the respective position in the life satisfaction distribution, thus supporting the segmentation hypothesis. Following Judge and Watanabe (1994), we then sorted individuals within each country based on their D1 scores and computed correlations for consecutive 5% subgroups of lowest to highest D1 scores. Individuals in the lowest 5% subgroup, with low values for D1, report job and life satisfaction scores that are strongly correlated and statistically significant. As we move up to higher 5% subgroups, with higher values of D1, the correlation between job and life satisfaction is weaker and becomes less significant in a statistical sense. Eventually, as D1 values increase, the correlation between job and life satisfaction is weak by definition, implying that job and life domains become segmented. These results are summarized in the second to fifth columns of Table 1. As expected, the correlation between job and life satisfaction for the non-segmented group (with low values of D1) is strong and statistically significant for all countries in our sample. In contrast, the correlation between job and life satisfaction for the segmented group (with high values of D1) is weak and not statistically significant.

The next step is to identify whether, among the non-segmented groups, the correlation between job and life satisfaction is positive (spillover) or negative (compensation). To this end, we calculate a measure of association between job and life satisfaction  $D2 = |ZLS - ZJS|$ , as defined by Judge and Watanabe (1994), for those in the non-segmented group. Low values of D2 indicate a positive correlation between reported job and life satisfaction scores, while high values indicate a negative correlation. Sorting those individuals in the non-segmented group based on their D2 scores, we compute correlations for consecutive 5% subgroups of lowest to highest D2 scores, and we identify a demarcation point between positive and negative correlations, i.e. between spillover and compensation.<sup>3</sup> These results are summarized in the sixth to ninth columns of Table 1. For most countries the cor-

relation between job and life satisfaction is positive and significant, supporting the spillover hypothesis, while only a small proportion of individuals belong to the compensation group with negative and significant correlations.

Thus far, it is evident that we utilize spillover and compensation effects as the only plausible hypotheses for observed relationships between job and life satisfaction. This clearly limits the purpose of our analysis. However, we recognize that there may well be other factors that determine the probability of the job–life satisfaction interlink. To explore these factors further, we extend our analysis and use multivariate regression analysis of D1 against the traditional–secular values index, as well as its constituent variables, as the main regressors of interest. These results are shown in Table 2. In addition, we explore the job–life satisfaction relationship by way of life satisfaction regressions, which include job satisfaction as an explanatory variable. In this context, we pay particular attention to the potentially mitigating power of culture, as defined by traditional and secular values and beliefs. Respective results are presented in Table 3.

#### *Main results*

Taking a closer look at the second to fifth columns of Table 1, we find that 77.8% of workers in Austria belong to the non-segmented group, i.e. with low values for D1. This implies that their reported job and life satisfaction scores are significantly correlated in a statistical sense, with a correlation coefficient  $r_{LS, JS}$  of 0.412. In contrast, only 22.2% of workers belong to the segmentation group. These results are broadly consistent with the results of Judge and Watanabe (1994) based on US data from the 1970s.<sup>4</sup>

A similar pattern emerges when looking at the results for a number of European countries with roughly similar GDP per capita to Austria (e.g. Belgium, Denmark, France, Germany, Italy,

<sup>3</sup>See Judge and Watanabe (1994, pp. 103–106) for a more detailed description of the methodology.

<sup>4</sup>Based on a sample of 804 individuals from the 1973 and 1978 US Quality of Employment Surveys, Judge and Watanabe (1994) found that only about 20% of the individuals in their sample belonged to the segmentation group, with their job and life satisfaction not exhibiting any statistically significant correlation. Among the remaining 80% of individuals in their sample, with a statistically significant correlation between job and life satisfaction, the majority (68%) were classified into the spillover group, with only about 12% belonging to the compensation group.

Table 1. Determining segmentation, spillover and compensation

	Segmented versus non-segmented				Spillover versus compensation			Total sample ( $r_{L,SJS}$ )	Number of observations	
	Non-segmented group ( $r_{L,SJS}$ )		Segmentation group ( $r_{L,SJS}$ )		Spillover group ( $r_{L,SJS}$ )	Lowest D2 scores (%)	Compensation group ( $r_{L,SJS}$ )			Highest D2 scores (%)
	Lowest D1 scores (%)	Highest D1 scores (%)	Lowest D1 scores (%)	Highest D1 scores (%)						
Austria	0.41*	77.8	0.09	22.2	0.86*	64.8	-0.88*	13.1	0.32*	487
Belgium	0.57*	79.1	0.12	2.9	0.85*	7.1	-0.78*	9.1	0.39*	516
Bulgaria	0.83*	44.7	0.18	55.3	0.99*	34.0	-0.94*	1.1	0.44*	188
Belarus	0.79*	49.8	0.30	50.2	0.95*	44.5	-0.96*	5.3	0.39*	319
Croatia	0.74*	34.3	0.18	65.7	0.99*	26.9	-0.96*	7.4	0.34*	312
Czech Republic	0.48*	78.1	0.24	21.9	0.84*	63.8	-0.88*	14.2	0.40*	597
Denmark	0.46*	79.1	-0.06	2.9	0.84*	7.1	-0.95*	8.6	0.25*	303
Estonia	0.65*	78.9	0.02	21.1	0.90*	6.6	-0.75*	18.3	0.45*	251
Finland	0.89*	37.7	0.23	62.2	0.06	NS	-0.11	NS	0.34*	300
France	0.47*	74.0	-0.01	26.0	0.80*	65.9	-0.86*	8.0	0.27*	511
Germany	0.53*	89.2	-0.11	1.8	0.80*	79.6	-0.82*	9.6	0.42*	529
Greece	0.50*	89.7	-0.07	1.3	0.81*	75.6	-0.75*	14.1	0.41*	234
Hungary	0.58*	59.0	0.06	41.0	0.95*	46.9	-0.96*	12.1	0.34*	273
Iceland	0.92*	27.8	0.13	72.2	0.05	NS	-0.23	NS	0.25*	478
Ireland	0.96*	33.6	0.05	66.4	0.14	NS	-0.11	NS	0.28*	277
Italy	0.76*	64.3	0.29	35.7	0.93*	57.6	-0.97*	6.6	0.51*	524
Latvia	0.55*	52.9	0.16	47.1	0.95*	4.7	-0.93*	12.2	0.35*	189
Lithuania	0.66*	49.8	0.05	5.2	0.98*	29.2	-0.44*	2.6	0.32*	209
Luxembourg	0.52*	69.7	-0.03	3.3	0.93*	52.8	-0.91*	16.9	0.27*	195
Malta	0.91*	44.6	-0.04	55.4	0.14	NS	-0.22	NS	0.33*	368
Netherlands	0.41*	93.8	0.33	6.2	0.69*	72.5	-0.04	21.3	0.37*	502
Poland	0.47*	67.8	0.16	32.2	0.98*	53.6	-0.94*	14.2	0.35*	295
Portugal	0.55*	63.5	0.17	36.5	0.91*	54.4	-0.97*	9.1	0.37*	263
Romania	0.56*	54.6	0.14	45.4	0.97*	38.7	-0.93*	16.0	0.37*	269
Russia	0.56*	57.8	-0.14	42.2	0.965*	4.3	-0.88*	17.6	0.27*	752
Slovakia	0.75*	58.8	0.23	41.2	0.98*	37.1	-0.73*	21.3	0.48*	461
Slovenia	0.40*	79.5	0.19	2.5	0.88	62.3	-0.82*	17.2	0.33*	366
Spain	0.63*	39.7	0.31	6.3	0.97*	26.4	-0.98*	5.0	0.41*	239
Ukraine	0.80*	38.3	0.15	61.7	0.98*	31.6	-0.98*	6.6	0.37*	256
Northern Ireland	0.59*	34.1	0.20	65.9	0.07	NS	-0.06	NS	0.32*	138

Notes: D1 =  $\|ZLS\| - \|ZJS\|$  and D2 =  $\|ZLS - ZJS\|$ , where ZLS is the standardized life satisfaction score and ZJS is the standardized job satisfaction score.  
\*Significant at 1%; NS, not significant.



Table 2. Determining segmentation (dependent variable DI)

	All			Males			Females		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	0.370**	0.504**	0.525**	0.327**	0.046**	0.482**	0.398**	0.531**	0.562**
Male	0.006	0.006	0.008						
Age	0.007*	0.008*	0.009*	0.010*	0.010*	0.011*	0.007	0.007	0.008
Age <sup>2</sup>	-0.008	-0.008	-0.010*	-0.011*	-0.012*	-0.013*	-0.006	-0.006	-0.008
Main earner	-0.041**	-0.039**	-0.040**	-0.062**	-0.061**	-0.062**	-0.025*	-0.029	-0.029
Union member	0.006	0.007	0.009	0.003	0.006	0.007	0.004	0.004	0.005
Working part-time	0.046**	0.042**	0.043**	0.098**	0.094**	0.099**	0.034*	0.029	0.029
<i>Number of children</i>									
Children under 5	0.023*	0.022**	0.019*	0.013	0.014	0.011	0.040*	0.038*	0.035*
Children 5–12	0.002	0.001	0.0001	-0.012	-0.012	-0.014	0.014	0.014	0.013
Children 13–17	-0.008	-0.007	-0.008	0.006	0.006	0.006	-0.022	-0.021	-0.021
<i>Marital status</i>									
Married	-0.031*	-0.031*	-0.034*	-0.014	-0.014	-0.014	-0.039	-0.040	-0.044*
Divorced	0.007	0.008	0.012	0.016	0.016	0.021	-0.005	-0.004	-0.001
Separated	0.065	0.066	0.072	0.094	0.094	0.103	0.048	0.049	0.055
Widowed	0.040	0.040	0.041	0.068	0.076	0.078	0.013	0.011	0.014
<i>Education</i>									
Middle	-0.034**	-0.031*	-0.024*	-0.043*	-0.039*	-0.031	-0.024	-0.023	-0.016
Upper	-0.065**	-0.063**	-0.051**	-0.070**	-0.068**	-0.055*	-0.060**	-0.058*	-0.047
<i>Income</i>									
Middle	-0.017	-0.018	-0.017	-0.002	-0.004	-0.002	-0.035*	-0.034	-0.035
Upper	-0.060**	-0.061**	-0.061**	-0.054**	-0.056**	-0.056**	-0.062**	-0.061**	-0.061**
Traditional–secular values index	0.044**	0.041**		0.035**	0.032**		0.055**	0.053**	
<i>Work important</i>									
Very important		-0.143**	-0.150**		-0.145**	-0.154**		-0.140**	-0.146**
Rather important		-0.134**	-0.138**		-0.136**	-0.140**		-0.129**	-0.134**
<i>Traditional–secular values</i>									
Importance of God			-0.004*			-0.004			-0.004
Important to teach children obedience and faith			0.016			0.019			0.013
Abortion justifiable			0.001			-0.001			0.004
National pride			-0.001			0.014			-0.033*
Materialistic priorities			-0.001			-0.008			0.005
Tolerate homosexuality			0.003			0.003			0.002
Abstaining from signing petitions			0.014			0.025			0.003
Trust in others			-0.090**			-0.091*			-0.085*
Adjusted R <sup>2</sup>	0.055	0.057	0.055	0.052	0.054	0.050	0.058	0.060	0.055
Number of observations		10681			5435			5246	

\* $p < 0.05$ ; \*\* $p < 0.01$ . All the numbers reported are the standard regression coefficients. All regressions include size of town, occupational and country dummy variables. Reference categories: single, never married; low education, low income; work not important.

Luxembourg and the Netherlands). In contrast, the proportion of workers in the segmented group tends to be relatively higher in Eastern European lower GDP per capita countries, such as Bulgaria, Belarus, Croatia, Hungary, Latvia, Lithuania, Romania, Russia, Slovakia and Ukraine. Interestingly, the proportion of workers classified in the segmented group also tends to be higher in some of the more secular, less traditional societies,

including Finland and several Eastern European countries (e.g. Bulgaria, Latvia, Lithuania, Russia and Ukraine).<sup>5</sup> Ireland, Northern Ireland and Croatia are notable exceptions with a high pro-

<sup>5</sup>As Figure 1 illustrates, these countries are classified as secular, less traditional, based on their average value of the traditional/secular values index, placing them at the upper end of the traditional/secular values spectrum.

Table 3. Life satisfaction regressions

	All			Males			Females		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	6.835**	6.764**	6.755**	6.685**	6.633**	6.647**	6.882**	6.759**	6.706**
Male	0.006	0.006	0.008						
Age	-0.079**	-0.068**	-0.078**	-0.083**	-0.073**	-0.083**	-0.066**	-0.052**	-0.061**
Age <sup>2</sup>	0.077**	0.061**	0.075**	0.086**	0.072**	0.084**	0.056*	0.037	0.050*
Main earner	-0.105**	-0.077*	-0.085*	-0.047	-0.033	-0.030	-0.185**	-0.158**	-0.185**
Union member	-0.002	0.001	-0.008	-0.037	-0.040	-0.043	0.042	0.053	0.036
Working part-time	0.014	0.017	0.003	0.047	0.072	0.040	0.029	0.025	0.023
<i>Number of children</i>									
Children under 5	0.046	0.015	0.045	0.031	0.007	0.030	0.056	0.013	0.052
Children 5–12	0.028	0.022	0.024	0.076*	0.068	0.072	-0.023	-0.027	-0.026
Children 13–17	-0.003	-0.014	-0.009	-0.025	-0.038	-0.035	0.012	0.004	0.010
<i>Marital status</i>									
Married	0.335**	0.286**	0.321**	0.297**	0.254**	0.275**	0.314**	0.263**	0.293**
Divorced	-0.064	-0.044	-0.079	-0.047	-0.02	-0.042	-0.053	-0.031	-0.072
Separated	-0.362*	-0.326*	-0.369**	-0.369	-0.322	-0.376	-0.333	-0.303	-0.340
Widowed	-0.123	-0.129	-0.137	-0.203	-0.18	-0.183	-0.049	-0.049	-0.063
<i>Education</i>									
Middle	0.044	0.125**	0.049	0.052	0.111+	0.051	0.028	0.143+	0.049
Upper	0.189**	0.329**	0.207**	0.173*	0.276**	0.177*	0.182*	0.368**	0.222*
<i>Income</i>									
Middle	0.075	0.089	0.074	0.130*	0.149*	0.123+	0.025	0.031	0.032
Upper	0.346**	0.370**	0.355**	0.368**	0.396**	0.369**	0.305**	0.317**	0.316**
<i>Work Important</i>									
Very important	0.247	0.221	0.367	-0.069	-0.089	0.005	1.673	1.58	1.932
Rather important	-0.087*	-0.133**	-0.110**	-0.086	-0.139**	-0.108*	-0.086	-0.124*	-0.107*
<i>Job satisfaction (JS)</i>									
JS × traditional–secular values	0.328**	0.332**	0.282**	0.354**	0.356**	0.312**	0.302**	0.307**	0.242**
JS × importance of God									
JS × important to teach children obedience and faith			0.005**			0.006**			0.005**
JS × abortion justifiable			0.0001			-0.002			0.004
JS × national pride			-0.001			-0.001			-0.001
JS × materialistic priorities			0.026**			0.017*			0.034**
JS × tolerate homosexuality			-0.001			0.002			-0.001
JS × abstaining from petitions			0.001			0.001			0.003*
JS × trust			-0.010			-0.020*			0.001
Adjusted R <sup>2</sup>	0.36	0.38	0.36	0.36	0.38	0.36	0.36	0.39	0.37
Number of observations		10681			5435			5246	

\*p < 0.05; \*\*p < 0.01. All the numbers reported are the standard regression coefficients. All regressions include size of town, occupational and country dummy variables. Reference categories: single, never married; low education, low income; work not important.

portion of workers in the segmented group, albeit at the lower end of the traditional–secular values spectrum.

As the results in the sixth to ninth columns of Table 1 show, for the majority of workers in the non-segmented group, spillover effects tend to dominate compensation effects. In the case of Austria, we observe for the spillover group (64.8% of the total) a positive and significant relationship between job and life satisfaction ( $r_{LS, JS} = 0.863$ ),

while the opposite is true for the compensation group with a correlation coefficient  $r_{LS, JS}$  of  $-0.882$ . This is a common pattern across all countries in our sample, with spillover rather than compensation effects being the main reason behind any statistically significant correlations between job and life satisfaction.<sup>6</sup>

<sup>6</sup>In the context of a work–leisure choice model, the notion of compensation is more plausible when job

Although the above analysis allows us to identify segmentation, spillover and compensation groups within each country, disentangling the effect of cultural values from the effect of income and other factors on the propensity of individuals to belong to either the non-segmented or segmented group requires multivariate regression analysis.

Table 2 summarizes the multivariate regression (ordinary least squares) results for assessing the factors that affect the propensity of individuals in our sample to belong in the non-segmented or the segmented group. Columns (1)–(3) present the estimated coefficients based on the pooled sample of both men and women, assuming that gender differences in the propensity to belong to the segmentation group are fully captured by the gender dummy variable (*Male*). However, to assess whether gender is associated with not only differences in the intercept of the regression line but also differences in the slopes, we estimate separate regressions for men and women in columns (4)–(6) and (7)–(9), respectively.<sup>7</sup>

As the estimated coefficients suggest, being the main earner in the household has a negative and significant effect on D1, implying an increased propensity for main earners to belong to the non-segmented group. However, estimating the

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satisfaction affects the marginal utility or the cost of other activities. In this case, we should expect that individuals devote less time to dissatisfying jobs, so that they have more time to spend on satisfying activities, an effect that should be reflected in observed hours of work and time allocation patterns. In the absence of detailed time allocation information in the EVS, we could only indirectly test this hypothesis using available information on time spent with friends, time spent with colleagues from work, time spent with people of one's church, and time spent with people at sports, cultural and community clubs. Simple t tests of the equality of means revealed that unhappiness at work is associated with less time spent with friends, less time spent with people from own church and less time spent with people in sports and social clubs. We found no significant link between low job satisfaction and time spent with colleagues from work. These results are suggestive of the possibility that unhappiness at work spills over to the life domain, which is consistent with the findings in Table 1. Although beyond the scope of the present analysis, a more comprehensive analysis of how job satisfaction impacts upon time allocation patterns would certainly be a fruitful way forward in the work–life conflict debate.

<sup>7</sup>Note that the *Male* dummy variable is omitted in columns (4)–(9).

model separately for men and women reveals that the effect of being a main earner is statistically stronger for men than it is for women. This has been explained by reference to conventional expectations of gender roles, responsibilities in the home and men's sense of adequacy as the family's main breadwinner, with women deriving satisfaction from the ability to access financial resources (Crowley, 1998; Menaghan and Parcel, 1990; Stanley, Hunt and Hunt, 1986). Working part-time increases the propensity of individuals to be in the segmentation group, with an effect that is also stronger for men than women. This perhaps reflects the fact that part-time work may be the result of constraints or inferior labour market opportunities that women are more likely to face compared with their male counterparts.

We find that the presence of pre-school children weakens the link between job and life satisfaction for women consistent with the view that the presence of pre-school children changes working mothers' priorities so that job satisfaction is less likely to affect the life satisfaction domain. In contrast, there is some weak evidence that the presence of teenage children results in a strengthened link between job and life satisfaction for women. Both findings are consistent with results by Kiecolt (2003), which suggest that families with children under age 6 are less likely to find work a haven, whereas having school-aged children including children in their early teens increases the likelihood of high work–home satisfaction. A more direct link between the presence of pre-school children in the household and mothers' labour supply is also well established in the literature. Within a household allocation of time and household production context, the presence of pre-school children and the associated childcare costs results in a specialization within the household whereby women devote proportionally more time to home production rather than market work than men do. Such a specialization could be further reinforced by cultural values that demarcate gender roles in the work and family domains. In a similar vein, and perhaps not surprisingly, married individuals are less likely to belong to the segmented group, with their life and work domains likely to be linked, compared with individuals who were never married (the reference category for marital status).

The results also show that although for both men and women higher educational achievement increases the interplay between life and job satisfaction, such an effect is stronger for men than for women. Certainly, the interplay between job and life satisfaction is not likely to be stronger for women with middle-level educational achievement compared with those with low education. In contrast, even middle-level qualifications strengthen the link between the job and life domains. In a similar vein, the results suggest that, as individuals move up the income distribution scale, the association between job and life satisfaction becomes stronger for both men and women. Our findings on the role of income as a determinant of whether job and life satisfaction are correlated are consistent with findings by Fahey, Whelan and Maitre (2005) who note that across 28 European countries income goes hand in hand with the quality of life. They contend that broadly speaking better off EU countries, including a number of previous communist nations, have a higher quality of life, as measured by both observable and subjective (self-reported) measures, than poor EU countries. However, how income affects the relationship between job and life satisfaction remains a controversial issue, especially in the light of an ongoing debate about whether income could buy happiness. As Easterlin (1975, 2001) argues, income growth does not cause well-being to rise, either for higher or lower income persons. This is because increases in income generate equivalent growth in material aspirations, with a negative effect on well-being. In contrast, Frijters, Haisken-DeNew and Shields (2004) note that significant increases in household income in the regions of East Germany post German unification led to sustained gains in life satisfaction over time, implying that income does buy happiness after all.

The positive and significant coefficient for traditional–secular values suggests that for individuals with less traditional values the association between job and life satisfaction is weaker than for those who hold more traditional values. Inglehart and Baker (2000) explain this result when reporting on a significant and positive correlation between traditional values and the statement ‘Work is very important in a respondent’s life’. They also observe that secular values emphasize the opposite. In columns (2), (5) and (8) we add

whether work is important for individuals as an additional explanatory variable. As the results show, individuals who believe that work is very important or rather important are less likely to belong to the segmentation group, i.e. have high values of D1. This is true for both men and women. What is more, adding the importance of work in the regressions does not mitigate the effect of the traditional–secular values index, whose influence on D1 remains positive and significant.

In columns (3), (6) and (9), we replace the traditional–secular index with variables that were used to construct it in an attempt to identify which one of the constituent components of the index drives the results.<sup>8</sup> It becomes apparent that the impact of interpersonal trust features prominently among these variables. In previous studies, higher levels of trust have been linked with higher levels of well-being and happiness in life, even after controlling for other socio-demographic variables (Helliwell, 2003). Similarly, interpersonal trust in an organizational setting has been shown to have a significant and positive impact on job satisfaction and other workplace attitudes and behaviours (Dirks and Ferrin, 2001). Our results suggest that interpersonal trust also serves as a strong predictor of the probability that job satisfaction and life satisfaction are correlated. As the estimated coefficient indicates, trusting others has a negative effect on D1, implying a higher probability that the work and life domains are related. This finding builds on results by Liou, Sylvia and Brunk (1990) who show that the impact of social trust on work and non-work factors supports the spillover hypothesis.<sup>9</sup> It is also complementary to observations in the psychology and organizational science literature, which link interpersonal trust in a non-work setting to both positive views and behaviours in life and ‘organizational citizenship’, i.e. individual cooperative attitudes and behaviours at the level of the firm (van Dyne *et al.*, 2000; Rotter, 1980).

<sup>8</sup>To avoid potential endogeneity problems, the general happiness variable has been excluded from the list of individual constituent components.

<sup>9</sup>Social trust is measured as an index comprising factor-analysed variables such as faith in others, feelings about social class and the relationship between individuals’ abilities and success.

## Further results

A complementary approach to examining the job–life satisfaction relationship is to run life satisfaction regressions including job satisfaction as an explanatory variable.

Such an approach is consistent with the ‘bottom-up’ view that job satisfaction is one of the components of life satisfaction. Indeed, van Praag, Frijters and Ferrer-I-Carbonnel (2003) show that life satisfaction is a weighted average of six domain satisfaction measures, with job satisfaction being one of them.<sup>10</sup> Building on this assertion, we expect a positive correlation between the job and life satisfaction variables. The aim of the multivariate approach in this section is to identify whether such a correlation is statistically significant. What is more, in the spirit of the value-as-a-moderator model (Oishi *et al.*, 1999), which postulates that individuals weigh value-congruent domain satisfactions more heavily than value-incongruent domain satisfactions, we wish to explore whether the job–life satisfaction relationship is mitigated by salient cultural values and beliefs. Table 3 summarizes the respective results.

Column (1) shows the estimated coefficients of a baseline life satisfaction equation, controlling for standard demographic and labour market characteristics. The job satisfaction estimated coefficient implies a strong positive correlation between the two variables, consistent with the presence of a strong link between the work and life domains. However, when we add an interaction term between job satisfaction and the traditional–secular values index (in column (2)), we find that traditional–secular values exert a statistically significant mitigating effect on the link between job and life satisfaction. As the negative and significant coefficient of the interaction term suggests, the link between job and life satisfaction is weaker for individuals with less traditional values and beliefs. The same pattern emerges in

<sup>10</sup>The remaining five domains are health, finance, leisure, housing and environment. Heady, Veenhoven and Wearing (1991) review the existing controversy in subjective well-being (SWB) research as to whether domain satisfaction measures cause SWB (bottom-up causality) or whether the causality runs the other way from SWB to domain satisfaction measures (top-down causality). They shed light on this debate by using panel data techniques on Australian panel data.

the results based on separate samples for men and women in columns (5) and (8), confirming that predictors of the job–life satisfaction relationship vary across cultures, depending on salient cultural values.

In columns (3), (6) and (9), we interact job satisfaction with the individual components of the traditional–secular values index. Two main effects stand out in these results. Religion, as captured by the importance of God, reinforces the link between the work and life domains. The same is true for national pride, whereby the link between work and life domains is stronger for individuals with an enhanced sense of national pride. There is also some evidence that trusting others reinforces the link between job and life satisfaction.

Taken together, the results of this complementary analysis are broadly consistent with our earlier findings based on the Judge and Watanabe approach, in that there is a strong positive correlation between job and life satisfaction, consistent with the spillover hypothesis. Furthermore, these results also confirm the importance of traditional versus secular values as important mitigating factors of the job–life satisfaction relationship.

## Discussion

Although a number of studies examine the interplay between job satisfaction and life satisfaction, they generally fall short of identifying the proportion or characteristics of individuals by spillover, compensation and segmentation relationships (see for example Bamundo and Kopelman, 1980; Heady, Veenhoven and Wearing, 1991; Iverson and Maguire, 2000; Keon and McDonald, 1982; Near and Rechner, 1993). In this respect, the Judge and Watanabe (1994) study is particularly notable and is replicated in this paper with more recent, multi-country data. In addition, our multivariate analysis offers a number of findings informing the ongoing debate on the processes affecting the work–life interlink and the impact of traditionalism and secularism on socio-economic phenomena (e.g. Alm and Torgler, 2006; Fargher *et al.*, 2008; Guiso, Sapienza and Zingales, 2006; Kamenou, 2008; Stavrou and Kilaniotis, 2010).

It emerges that there is a significant variation and heterogeneity in the proportion of workers



belonging to the segmentation group across European countries. We find that in higher GDP per capita countries only a relatively small proportion of workers (about 20%) belong to the segmentation group, while this proportion is higher in Eastern European and lower GDP per capita countries. The proportion of workers belonging to the segmentation group is also generally higher in more secular, less traditional societies. Interestingly, we find that across all European countries it is spillover rather than compensation that is behind the high correlation (non-segmentation) between the work and life domains. Furthermore, the results based on separate multivariate analyses for men and women confirm the importance of gender as a moderating factor in the interplay between job and life satisfaction. In fact, gender differences in the work–life interlink retain a statistically significant influence even after controlling for culture, as captured by reference to secular versus traditional values. In this respect, our study introduces gender and culture as two important dimensions in the work–life interface debate and in the quest for a better understanding of the processes affecting such an interface.

Specifically, our multivariate analysis reveals that the effect of being the main earner in the household was an increased propensity to belong to the non-segmented (compared with the segmented) group, which was stronger for men than for women. Similarly, the effect of working part-time displayed an increased propensity to be in the segmentation group, which was again statistically stronger for men than women. The effect of the presence of pre-school children, on the other hand, was found to be stronger for women than for men. Such clear demarcation lines could potentially be explained by reference to culture and traditional values. In fact, previous research has argued that differences in gendered work versus social and leisure time preferences can be accounted for by different cultural conceptions (e.g. Manrai and Manrai, 1995). However, it is notable that in our study we explicitly control for cultural values but still arrive at substantial gender differences. We deduce that gender differences in the work–life interlink cannot be fully explained away by different cultural values.

Notwithstanding the limited explanatory role of cultural values in this specific context, our

analysis has shown that predictors of the job–life satisfaction relationship vary across cultures and that such cross-cultural variations are systematically related to salient cultural values. These findings have important implications for existing theories in the subjective well-being arena. What is more, they raise important questions about their universal application. For example, since cross-cultural variations are closely linked to salient values and beliefs, should self-determinist researchers (e.g. Deci and Ryan, 1985) still posit universally desirable goals? In the absence of controlling for cross-cultural variations, is Maslow's (1970) universal need-gratification theory indeed still universally applicable? Although these theories and their assertions have informed discussions and scholarship in the managerial and psychological realm for decades, in view of our findings we suggest that a significant degree of scepticism may be advisable.

#### *Limitations and future directions*

Although we contend that our analysis constitutes a worthwhile endeavour, it is nevertheless important to bring some limitations of our study to the reader's attention. As mentioned earlier and without recapitulating at length, we are constrained by the existence of a potential conceptual overlap between job and life satisfaction and single-item measures of complex attitude structures, which are described in more detail in the data section of this analysis. What is more, our data are cross-sectional in nature, which imposes design limitations to following trends and changes over time and thus restricts our ability to disentangle causality considerations. In the absence of longitudinal data our analysis cannot rely on fixed-effect estimations to control for time-invariant factors. Finally, it is worth mentioning that we examine self-reported data, which are reported to suffer from several biases. We unreservedly acknowledge these constraints, but take comfort from observations by Diener and Suh (1997) and Schimmack and Oishi (2005) who note that self-reported measures of well-being possess adequate validity and reliability.

In terms of scope for future research we suggest that our analysis could be extended to include a larger set of countries, with more salient cultural differences, which we conjecture

will further strengthen our findings on the role of religion, trust and family values as important influences on the job–life satisfaction relationship. Assuming the availability of detailed time allocation information in survey data across countries with salient cultural differences, a more comprehensive investigation of how unhappiness in the work domain could manifest itself in time allocation patterns in the life domain would be of particular interest. Finally, since many economies have experienced economic growth and westernization, cultural adaptation may become an emerging phenomenon. To this end, longitudinal data would add considerable value, and future research could examine societal changes by documenting a possible shift in cross-cultural predictors of the job–life satisfaction relationship within- and across-nation changes over time.

### Appendix A: The traditional–secular values index

Inglehart and Welzel (2005) describe how the index is constructed from using aggregated national-level data for all four waves of the Values Surveys (amounting to 202 nation-per-wave surveys). Their factor analysis to construct the index has been conducted based on the ten variables listed below.

- Q1 Importance of God: ‘How important is God in your life? Please use this scale to indicate, where 10 means very important and 1 means not at all important.’
- Q2 Teach children obedience and faith rather than independence and determination: ‘Here is a list of qualities that children can be encouraged to learn at home. Which, if any, do you consider to be especially important? Please choose up to five.’ The list includes ten qualities, including ‘obedience’, ‘religious faith’, ‘independence’ and ‘determination, perseverance’.
- Q3 Disapproval of abortion: ‘Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card.’ The card shows a 1 to 10 scale where 1 means ‘never justifiable’ and 10 means ‘always justifiable’. Among the statements asked one states simply ‘abortion’.

- Q4 National pride: ‘How proud are you to be French? (Substitute your own nationality for ‘French’).’
- Q5 Respect for authority: ‘I’m going to read out a list of various changes in our way of life that might take place in the near future. Please tell me for each one, if it were to happen, whether you think it would be a good thing, a bad thing, or don’t you mind.’ Among the listed changes is ‘greater respect for authority’.
- Q6 Priority for economic and physical security (materialist values), ‘People sometimes talk about what the aims of this country should be for the next ten years. On this card are listed some of the goals which different people would give top priority. Would you please say which one of these you, yourself, consider the most important?’ After showing the list, the next question is: ‘And which would be the next most important?’ The list includes the following goals: ‘maintaining order in the nation’, ‘giving people more say in important government decisions’, ‘fighting rising prices’ and ‘protecting freedom of speech’.
- Q7 Feeling of unhappiness: ‘Taking all things together, would you say you are [read out]: 1 very happy, 2 quite happy, 3 not very happy, 4 not at all happy.’
- Q8 Disapproval of homosexuality: ‘Please tell me for each of the following statements whether you think it can always be justified, never be justified, or something in between, using this card.’ The card shows a 1 to 10 scale where 1 means ‘never justifiable’ and 10 means ‘always justifiable’. Among the listed statements one simply states ‘homosexuality’.
- Q9 Abstaining from signing petitions: ‘Now I’d like you to look at this card. I’m going to read out some different forms of political action that people can take, and I’d like you to tell me, for each one, whether you have actually done any of these things, whether you might do it or would never, under any circumstances, do it.’
- Q10 Distrusting in other people: ‘Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people? 1 Most people can be trusted, 2 need to be very careful.’

## Appendix B: Sample means

	Males	Females
Age	39.40	38.78
Main earner	0.83	0.40
Union member	0.28	0.27
Working part-time	0.05	0.21
<i>Number of children</i>		
Children under 5	0.22	0.17
Children 5–12	0.36	0.38
Children 13–17	0.29	0.32
<i>Marital status</i>		
Married	0.67	0.61
Divorced	0.05	0.10
Separated	0.01	0.02
Widowed	0.008	0.04
Reference category: single (never married)		
<i>Education (higher qualification)</i>		
Middle (secondary education)	0.49	0.51
Upper (university degree)	0.25	0.28
Reference category: low education		
<i>Income</i>		
Middle (middle 30% in income scale)	0.34	0.32
Upper (top 30% in income scale)	0.40	0.39
Reference category: low income		
<i>Work important</i>		
Very important	0.66	0.62
Rather important	0.31	0.36
Reference category: not important		
Traditional–secular values index	0.50	0.52
<i>Traditional–secular values</i>		
Importance of God (on a scale 1–10)	5.15	5.84
Important to teach children obedience and faith (1 = yes; 0 = no)	0.38	0.36
Abortion justifiable (on a scale 1–10)	4.88	5.16
National pride (1 = very proud; 0 = other)	0.39	0.37
Materialistic priorities (1 = yes; 0 = no)	0.58	0.61
Tolerate homosexuality (on a scale 1–10)	4.44	5.10
Abstaining from signing petitions (1 = yes; 0 = no)	0.18	0.21
Trust in others (1 = yes; 0 = no)	0.37	0.36

## References

- Alm, J. and B. Torgler (2006). 'Culture differences and tax morale in the United States and Europe', *Journal of Economic Psychology*, **27**, pp. 224–246.
- Bamundo, P. J. and R. E. Kopelman (1980). 'The moderating effects of occupation, age, and urbanization on the relationship between job satisfaction and life satisfaction', *Journal of Vocational Behavior*, **17**, pp. 106–121.
- Chacko, T. I. (1983). 'Job and life satisfactions: a causal analysis of their relationships', *Academy of Management Journal*, **26**, pp. 163–169.
- Crowley, S. (1998). 'Men's self-perceived adequacy as the family breadwinner: implications for their psychological, marital, and work–family well being', *Journal of Family and Economic Issues*, **19**, pp. 7–23.
- Deci, E. J. and R. M. Ryan (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. Hillsdale, NJ: Lawrence Erlbaum.
- Diener, E. and E. Suh (1997). 'Measuring quality of life: economic, social and subjective indicators', *Social Indicators Research*, **40**, pp. 189–216.
- Dirks, K. T. and D. L. Ferrin (2001). 'The role of trust in organizational settings', *Organization Science*, **12**, pp. 450–467.
- van Dyne, L., D. Vandewalle, T. Kostova, M. E. Latham and L. L. Cummings (2000). 'Collectivism, propensity to trust and self-esteem as predictors of organizational citizenship in a non-work setting', *Journal of Organizational Behavior*, **21**, pp. 3–23.
- Easterlin, R. A. (1975). 'Will raising the incomes of all increase the happiness of all?' *Journal of Economic Behavior and Organization*, **27**, pp. 35–47.
- Easterlin, R. A. (2001). 'Income and happiness: towards a unified theory', *Economic Journal*, **111**, pp. 465–484.
- Fahey, T., C. T. Whelan and B. Maitre (2005). *First European Quality of Life Survey: Income Inequalities and Deprivation*. Dublin: European Foundation for the Improvement of Living and Working Conditions.
- Fargher, S., S. Kesting, T. Lange and G. Pacheco (2008). 'Cultural heritage and job satisfaction in Eastern and Western Europe', *International Journal of Manpower*, **29**, pp. 630–665.
- Frijters, P., J. P. Haisken-DeNew and M. A. Shields (2004). 'Money does matter! Evidence from increasing real income and life satisfaction in East Germany following reunification', *American Economic Review*, **94**, pp. 730–740.
- Georgellis, Y. and T. Lange (2007). 'Participation in continuous, on-the-job training and the impact on job satisfaction: longitudinal evidence from the German labour market', *International Journal of Human Resource Management*, **18**, pp. 969–985.
- Georgellis, Y., N. Tsitsianis and Y. P. Yin (2009). 'Personal values as mitigating factors in the link between income and life satisfaction: evidence from the European social survey', *Social Indicators Research*, **91**, pp. 329–344.
- Greenhaus, J. H. and S. Parasuraman (1999). *Handbook of Gender and Work*. Thousand Oaks, CA: Sage.
- Greenhaus, J. H. and G. N. Powell (2006). 'When work and family are allies: a theory of work–family enrichment', *Academy of Management Review*, **31**, pp. 72–92.
- Grosswald, B. (2003). 'Shift work and negative work-to-family spillover', *Journal of Sociology and Social Welfare*, **30**, pp. 31–56.
- Guiso, L., P. Sapienza and L. Zingales (2006). 'Does culture affect economic outcomes?' *Journal of Economic Perspectives*, **20**, pp. 23–48.
- Gupta, N. and T. Beehr (1981). 'Relationship among employee's work and nonwork responses', *Journal of Occupational and Organizational Psychology*, **2**, pp. 203–209.
- Haller, M. (2002). 'Theory and method in the comparative study of values: critique and alternative to Inglehart', *European Sociological Review*, **18**, pp. 139–158.

- Halman, L. (2001). *The European Values Study: A Third Wave. Source Book of the 1999/2000 European Values Study Surveys*. Tilburg: EVS/WORC.
- Halman, L. and V. Draulans (2006). ‘How secular is Europe?’ *British Journal of Sociology*, **57**, pp. 263–288.
- Hammer, L. B. and G. Hanson (2006). ‘Work–family enrichment’. In J. H. Greenhaus and G. A. Callanan (eds), *Encyclopedia of Career Development*, Vol. 2, pp. 869–871. Thousand Oaks, CA: Sage.
- Hanson, G. C., L. B. Hammer and C. L. Colton (2006). ‘Development and validation of a multidimensional scale of perceived work–family positive spillover’, *Journal of Occupational Health Psychology*, **11**, pp. 249–265.
- Heady, B., R. Veenhoven and A. Wearing (1991). ‘Top-down versus bottom-up theories of subjective well-being’, *Social Indicators Research*, **24**, pp. 81–100.
- Helliwell, J. F. (2003). ‘How’s life? Combining individual and national variables to explain subjective well-being’, *Economic Modelling*, **20**, pp. 331–360.
- Hofstede, G. (2001). *Culture’s Consequences*, 2nd edn. Thousand Oaks, CA: Sage.
- Hunter, E. M., S. Jansen Perry, D. A. Carlson and S. A. Smith (2010). ‘Linking team resources to work–family enrichment and satisfaction’, *Journal of Vocational Behaviour*, **77**, pp. 304–312.
- Inglehart, R. and W. E. Baker (2000). ‘Modernization, cultural change, and the persistence of traditional values’, *American Sociological Review*, **65**, pp. 19–51.
- Inglehart, R. and C. Welzel (2005). *Modernization, Cultural Change, and Democracy: The Human Development Sequence*. New York: Cambridge University Press.
- Inglehart, R., M. Basáñez, J. Diez-Medrano, L. Halman and R. Luijkx (2004). *World Values Surveys and European Values Surveys, 1999–2001*. Ann Arbor, MI: Institute for Social Research.
- Iverson, R. D. and C. Maguire (2000). ‘The relationship between job satisfaction and life satisfaction: evidence from a remote mining community’, *Human Relations*, **53**, pp. 807–841.
- Judge, T. A. and S. Watanabe (1993). ‘Another look at the job satisfaction–life satisfaction relationship’, *Journal of Applied Psychology*, **78**, pp. 939–948.
- Judge, T. A. and S. Watanabe (1994). ‘Individual differences in the nature of the relationship between job and life satisfaction’, *Journal of Occupational and Organizational Psychology*, **67**, pp. 101–107.
- Kamenou, N. (2008). ‘Reconsidering work–life balance debates: challenging limited understandings of the “life” component in the context of ethnic minority women’s experiences’, *British Journal of Management*, **19**, pp. S99–S109.
- Keon, T. L. and B. McDonald (1982). ‘Job satisfaction and life satisfaction: an empirical evaluation of their interrelationship’, *Human Relations*, **35**, pp. 167–168.
- Kiecolt, K. J. (2003). ‘Satisfaction with work and family life: no evidence of a cultural reversal’, *Journal of Marriage and Family*, **65**, pp. 23–35.
- Lambert, S. J. (1990). ‘Processes linking work and family: a critical review and research agenda’, *Human Relations*, **43**, pp. 239–257.
- Lange, T. (2008). ‘Communist legacies, gender and the impact on job satisfaction in Central and Eastern Europe’, *European Journal of Industrial Relations*, **14**, pp. 327–346.
- Lange, T. (2009). ‘Attitudes, attributes and institutions: determining job satisfaction in Central and Eastern Europe’, *Employee Relations*, **31**, pp. 81–97.
- Lange, T. (2010). ‘Culture and life satisfaction in developed and less developed nations’, *Applied Economics Letters*, **17**, pp. 901–906.
- Lewis, S., R. Gambles and R. Rapoport (2007). ‘The constraints of a “work–life balance” approach: an international perspective’, *International Journal of Human Resource Management*, **18**, pp. 360–373.
- Liou, K.-T., R. D. Sylvia and G. Brunk (1990). ‘Non-work factors and job satisfaction revisited’, *Human Relations*, **43**, pp. 77–86.
- Mallard, A. G. C., C. E. Lance and A. C. Michalos (1997). ‘Culture as a moderator of overall life satisfaction – life facet satisfaction relationships’, *Social Indicators Research*, **40**, pp. 259–284.
- Manrai, L. A. and A. K. Manrai (1995). ‘Effects of cultural-context, gender, and acculturation on perceptions of work versus social/leisure time usage’, *Journal of Business Research*, **32**, pp. 115–128.
- Maslow, A. H. (1970). *Motivation and Personality*. New York: Harper & Row.
- Mastekaasa, A. (1984). ‘Multiplicative and additive models of job and life satisfaction’, *Social Indicators Research*, **14**, pp. 141–163.
- McNall, L., J. Nicklin and A. Masuda (2010). ‘A meta-analytic review of the consequences associated with work–family enrichment’, *Journal of Business and Psychology*, **25**, pp. 381–396.
- Menaghan, E. G. and T. L. Parcel (1990). ‘Parental employment and family life: research in the 1980s’, *Journal of Marriage and the Family*, **52**, pp. 1079–1098.
- Near, J. P. and P. L. Rechner (1993). ‘Cross-cultural variations in predictions of life satisfaction: a historical view of differences among West European countries’, *Social Indicators Research*, **29**, pp. 109–121.
- Oishi, S., E. Diener, E., Suh and R. E. Lucas (1999). ‘Value as a moderator in subjective well-being’, *Journal of Personality*, **24**, pp. 1319–1331.
- Oosterbeek, H., R. Sloof and G. van de Kuilen (2004). ‘Cultural differences in ultimatum game experiments: evidence from a meta-analysis’, *Experimental Economics*, **7**, pp. 171–188.
- van Praag, B. M. S., P. Frijters and A. Ferrer-I-Carbonell (2003). ‘The anatomy of subjective well-being’, *Journal of Economic Behavior and Organization*, **51**, pp. 29–49.
- Rojas, M. (2007). ‘Heterogeneity in the relationship between income and happiness: a conceptual-referent-theory explanation’, *Journal of Economic Psychology*, **28**, pp. 1–14.
- Rose, M. (2005). ‘Job satisfaction in Britain: coping with complexity’, *British Journal of Industrial Relations*, **43**, pp. 455–467.
- Rotter, J. B. (1980). ‘Interpersonal trust, trustworthiness, and gullibility’, *American Psychologist*, **35**, pp. 1–7.
- Schimmack, U. and S. Oishi (2005). ‘The influence of chronically and temporarily accessible information on life satisfaction judgments’, *Journal of Personality and Social Psychology*, **89**, pp. 395–406.
- Schmitt, N. and P. M. Mellon (1980). ‘Life and job satisfaction: is the job central’, *Journal of Vocational Behavior*, **16**, pp. 51–58.



- Snir, R. and I. Harpaz (2002). 'Work-leisure relations: leisure orientation and the meaning of work', *Journal of Leisure Research*, **34**, pp. 178-203.
- Stanley, S. C., J. G. Hunt and L. L. Hunt (1986). 'The relative deprivation of husbands in dual-earner households', *Journal of Family Issues*, **7**, pp. 3-20.
- Stavrou, E. and C. Kilaniotis (2010). 'Flexible work and turnover: an empirical investigation across cultures', *British Journal of Management*, **21**, pp. 541-554.
- van Steenbergen, E. F., N. Ellemers and A. Mooijaart (2007). 'How work and family can facilitate each other: distinct types of work-family facilitation and outcomes for women and men', *Journal of Occupational Health Psychology*, **12**, pp. 279-300.
- Tail, M., M. Y. Padgett and T. T. Baldwin (1989). 'Job and life satisfaction: a reexamination of the strength of the relationship and gender effects as a function of the date of the study', *Journal of Applied Psychology*, **74**, pp. 502-507.
- Teorell, J. and A. Hadenius (2006). 'Democracy without democratic values: a rejoinder to Welzel and Inglehart', *Studies in Comparative International Development*, **41**, pp. 95-111.
- Wanous, J. P., A. E. Reichers and M. J. Hudy (1997). 'Overall job satisfaction: how good are single-item measures?' *Journal of Applied Psychology*, **82**, pp. 247-252.
- Wilensky, H. L. (1961). 'Orderly careers and social participation: the impact of work history on the social integration in the middle mass', *American Sociological Review*, **26**, pp. 521-539.
- Wilson, J. and M. A. Musick (1997). 'Work and volunteering: the long arm of the job', *Social Forces*, **76**, pp. 251-272.
- Zedeck, S. (ed.) (1992). *Work, Families, and Organizations*. San Francisco, CA: Jossey-Bass.

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