

Outline

Are individuals more strongly affected by job insecurity when local economic conditions are worse? Combining data from the European Social Survey (2006) and Eurostat, this paper considers how local economic conditions moderate the association between job insecurity and subjective well-being across Europe. While it is widely acknowledged that individual well-being is negatively associated with job insecurity (e.g. Burchell et al., 1999; De Witte, 1999) and local levels of unemployment (Clark et al., 2010), much less is known about the interaction of these variables. Job insecurity may be associated with depression (Ferrie et al., 2002; Hartley, 1991) or life dissatisfaction (Lim, 1996) but how does the strength of these associations vary in the face of contrasting local conditions? A multilevel modelling approach is used to test a single hypothesis: that the negative association between job insecurity and life satisfaction is amplified when local economic conditions are worse. Contextual effects include unemployment and GDP, measured at the regional and national level.

Findings

The table below presents the unstandardised regression coefficients for five models that test each contextual variable in turn. For each contextual moderator two models are presented: the direct effect of the moderator on life satisfaction and effect of the cross-level interaction (the combined effect of high job insecurity and national unemployment or GDP, over and above their separate effects). The main effect of 'job insecurity' is also included, while all control variables are omitted (these include age, gender, income, reported general health, social support, and household arrangements, amongst others).

Unstandardised coefficients for moderation effects

	1		2		3		4		5	
	Coef.	(S.E.)	Coef.	(S.E.)	Coef.	(S.E.)	Coef.	(S.E.)	Coef.	(S.E.)
<i>Control variables omitted</i>										
Constant	7.486	(0.070)	7.506	(0.111)	7.498	(0.094)	7.512	(0.097)	7.519	(0.104)
Job insecurity (main effect)	-0.486	(0.055)	-0.526	(0.068)	-0.566	(0.069)	-0.487	(0.080)	-0.483	(0.083)
1 Aggregate 'satisfaction with the economy'	0.315	(0.053)								
1 'Satisfaction with economy' x job insecurity	0.212	(0.035)								
2 National unemployment			-0.068	(0.044)						
2 National unemployment x job insecurity			-0.079	(0.029)						
3 Trend in unemployment					-0.050	(0.025)				
3 Trend in unemployment x job insecurity					-0.029	(0.012)				
4 Gross domestic product							0.008	(0.006)		
4 Gross domestic product x job insecurity							0.007	(0.003)		
5 Trend in GDP									0.024	(0.074)
5 Trend in GDP x job insecurity									0.079	(0.079)
σ_{e0}^2	0.052	(0.017)	0.206	(0.079)	0.151	(0.052)	0.184	(0.049)	0.223	(0.092)
σ_{u0}^2	2.352	(0.232)	2.385	(0.249)	2.386	(0.250)	2.357	(0.234)	2.358	(0.234)
-2*log-likelihood	41560.803		38758.660		38758.492		41599.958		41607.991	
N (country)	14		13		13		14		14	
N (individual)	11096		10314		10314		11096		11096	

Source: European Social Survey (2006); Eurostat (2010)
Weighted at the individual level to control for sample design and population size.

As the table shows, job insecurity is significantly associated with life satisfaction in all 5 models. Going from low to high job insecurity is, on average, associated with a 0.48 to 0.57 reduction in life satisfaction, controlling for other variables in the model. Significant interaction effects are observed for four out of the five measures of 'economic climate'. Consistent with expectations, national GDP and the country aggregate of 'satisfaction with the state of the economy' both significantly buffer the association between life satisfaction and job insecurity. Conversely, national unemployment and the trend in unemployment both act as stressors. For individuals reporting 'high' job insecurity, a unit increase in the country aggregate of 'satisfaction with the economy' is associated with an increase in life satisfaction of 0.212, in addition to the independent effects of these variables. The combined effect of 'high' job insecurity and a unit increase in the national unemployment rate is associated with a 0.08 reduction in life satisfaction, on average. Similarly, an increase in the unemployment trend (the average percentage change in the employment rate over 5 years) is significantly associated with a 0.03 reduction in life satisfaction.

These findings are in line with expectations. Positive measures of 'economic climate' (i.e. GDP and the national aggregate of 'satisfaction with the economy') both act a buffer – reducing the association between job insecurity and life satisfaction. Conversely, negative measures of economic climate (i.e. unemployment) act to amplify the association.

References

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- Ferrie, J., Shipley, M., Stansfeld, S. and Marmot, M. (2002) 'Effects of chronic job insecurity and change in job security on self reported health, minor psychiatric morbidity, physiological measures, and health related behaviours in British civil servants: the Whitehall II study', in *British Medical Journal*, 345(6), p. 450
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Data and methods

To take account of the clustering of individuals within countries a multilevel regression approach is used, where the level-1 is individuals and level-2 is countries (N = 11,096 and N = 14, respectively). The dependent variable is life satisfaction, a continuous measure that asks, "all things considered, how satisfied are you with your life as a whole nowadays?" Responses rate from 0 ('extremely dissatisfied') to 10 ('extremely satisfied'). Job insecurity is operationalised using a binary indicator of whether the individual felt it was 'likely' or 'very likely' that they would lose their job in the next 12 months (compared to 'not very likely' or 'not at all likely'). The null model is given in (1), below, where 'satlife' represents life satisfaction (the dependent variable) and σ_{u0}^2 and σ_{e0}^2 represent the proportion of variability in life satisfaction that is attributable to individual and country differences, respectively.

$$\text{satlife}_{ij} \sim N(XB, \Omega)$$

$$\text{satlife}_{ij} = \beta_{0ij}\text{constant}$$

$$\beta_{0ij} = \beta_0 + u_{0j} + e_{0ij}$$

$$[u_{0j}] \sim N(0, \Omega_u) : \Omega_u = [\sigma_{u0}^2]$$

$$[e_{0ij}] \sim N(0, \Omega_e) : \Omega_e = [\sigma_{e0}^2]$$

(1)

$$\text{satlife}_{ij} \sim N(XB, \Omega)$$

$$\text{satlife}_{ij} = \beta_{0ij}\text{constant} + \beta_1(\text{control variables})_{ij} + \beta_2(\text{job insecurity})_{ij} + \beta_3(\text{contextual effect})_j + \beta_4(\text{contextual effect} \times \text{job insecurity})_{ij}$$

$$\beta_{0ij} = \beta_0 + u_{0j} + e_{0ij}$$

$$[u_{0j}] \sim N(0, \Omega_u) : \Omega_u = [\sigma_{u0}^2]$$

$$[e_{0ij}] \sim N(0, \Omega_e) : \Omega_e = [\sigma_{e0}^2]$$

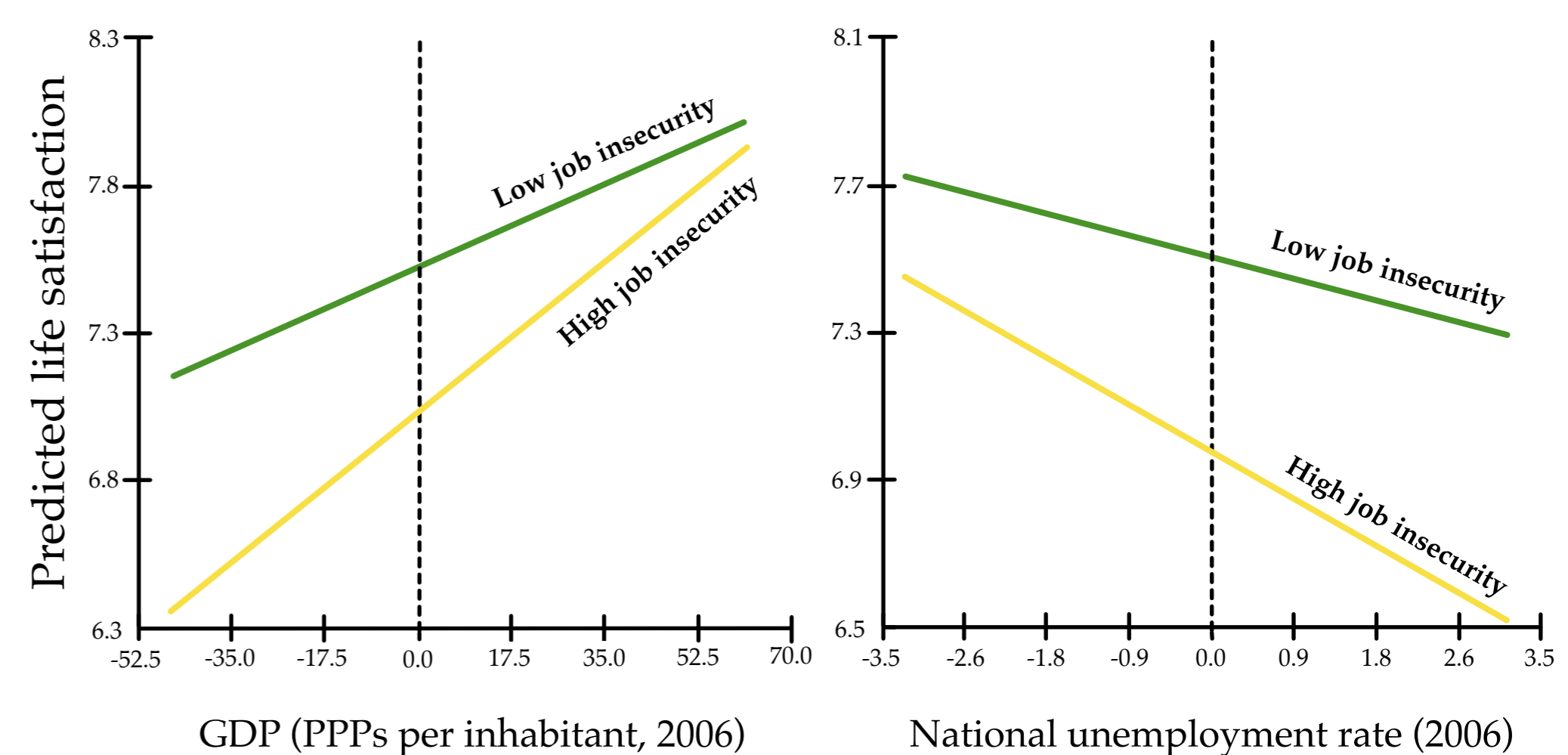
(2)

To test the moderation hypothesis 5 contextual variables measuring 'national economic climate' were considered (listed below). These are sourced from Eurostat and measured at the national level. An interaction term was calculated as the product of the binary 'job insecurity' variable and each contextual moderator. The main effect and interaction term for each measure was included in the model in turn, as shown in equation (2), above.

- 1) Country aggregate level of 'satisfaction with the state of the economy'
- 2) Unemployment rate (2006)
- 3) Average annual rate of change in the unemployment rate (2001-2006)
- 4) Gross domestic product (Purchasing power parities per inhabitant, 2006)
- 5) Average annual rate of change in GDP (2001-2006)

Plotting the interaction effects

The figures below plot predicted life satisfaction (the y-axis) against national GDP and unemployment (the x-axis) for two groups: individuals with high and low job insecurity (the yellow and green lines, respectively).



Several points are worth highlighting:

- In both plots, job insecurity has a negative effect on life satisfaction (since the yellow line is, at all levels of the moderator, below the green line).
- GDP and unemployment are directly associated with life satisfaction, irrespective of the level of job security (since in both plots the two lines follow a consistent direction).
- Crucially, however, the slope of the lines differ: the association between life satisfaction and the contextual variable (GDP or unemployment) differs according to the individual's level of job security.
- The increase in life satisfaction associated with a higher level of job security is greatest when GDP is lowest. Conversely, the decrease in life satisfaction associated with a lower level of job security is greatest when unemployment is highest.

Conclusions

This study has shown that not only are individuals directly affected by national economic conditions, but so too is the association between job insecurity and well-being. Job insecurity is negatively associated with well-being in all countries, but this association is stronger in countries where GDP is lower, unemployment is higher and, on average, people are less satisfied with the 'state of the economy'.