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Effects of unemployment and insecure jobs on youth well-being in Europe: the role of economic development and business cycle fluctuations

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Introduction

In terms of its societal impact, the global financial crisis of 2008 was considered to be the most significant crisis since the Great Depression in 1929 (Rollero and Tartaglia, 2009), and it is often referred to as the Great Recession. Ever since, Europeans, and particularly young Europeans, have been facing a threatening work situation because unemployment rates have increased substantially in most European countries (Chung et al, 2012; Eurostat, 2014). At the same time, temporary employment has followed suit, albeit at a lower speed, but affecting mostly young people.[1,2] Empirical evidence suggests that unemployment and job insecurity have detrimental effects on individuals' well-being, and not only in the general population (for reviews see Sverke et al, 2002; De Witte, 2005; Cheng and Chan, 2008; see McKee-Ryan et al, 2005, for a meta-analysis) but also among young people (see Voßemer and Eunicke, 2015). Hence, it is important to investigate the outcomes of unfavourable labour

1   market conditions for young people in Europe, because employment opportunities

2   mark young individuals' transition to adulthood (Bynner and Parsons, 2002). Any

3   attempt to fully understand the conditions under which young people facing

4   unemployment and job insecurity are particularly vulnerable must also account for the

5   role of macrolevel moderators, given the large variations in social policies and

6   economic growth observed across the different European countries (Voßemer et al,

7   2018).

8   Although it is plausible to think that the strength of the individual-level effects

9   of unemployment and job insecurity on well-being may vary between poorer and

10   richer countries, few studies have looked at potential cross-country differences and

11   the role of macrolevel moderators in understanding this relationship (for example

12   Eichhorn, 2013; Wulfgramm, 2014). Most of these studies focused on the moderating

13   role of labour market policies or the countries' economic conditions, often measuring

14   either GDP per capita or the country-level unemployment rate (UR). However, these

15   two measures may have a completely different meaning when examined as

16   moderators, and they should not be viewed as being interchangeable.

17   First, GDP and UR do not substitute each other, because some countries often

18   experience jobless growth, whereas others may experience a decrease in UR due to a

19   concerted effort by the government without any increase in GDP per capita. Second,

20   conceptually, GDP and UR underline different phenomena. Thus, when they are

1   investigated simultaneously, different mechanisms are being discerned and tested.

2   GDP per capita reflects the level of resources per citizen available in the country such

3   as employment-related (for example, unemployment benefits) or health-related

4   (including health expenditure) resources. The present analysis focuses on GDP as an

5   overall measure that captures all kinds of societal support and the capacity of the

6   government to provide such support. In this way, it captures the broader context in

7   contrast to previous empirical attempts that looked at specific policy measures

8   (Voßemer et al, 2018). Based on conservation of resources (COR) theory (Hobfoll,

9   1989), it is argued that higher levels of GDP may buffer the detrimental effects on

10   well-being of unemployment and job insecurity, because in countries with a higher

11   GDP, people have access to more resources when they face difficult times –

12   irrespective of that country's UR.

13   When the level of resources (as measured by the GDP) is held constant, there

14   are two potential mechanisms to consider regarding the moderating role of UR. On

15   the one hand, based on the principle of social comparison or the norm (see Clark,

16   2003), unemployment is likely to hurt less when there are more unemployed people

17   around, because it is attributed externally and not to one's own, personal failure. On

18   the other hand, from the standard economics perspective, higher UR means fewer

19   prospects of finding a job for those currently unemployed – hence, strengthening the

20   unfavourable effect of own unemployment. In reality though, both mechanisms are

1   likely to be in place, and one can determine only empirically which of the two effects

2   prevails.

3   The current analysis investigates the moderating role of both GDP per capita

4   and UR simultaneously as moderators of the relationship between unemployment/job

5   insecurity and well-being. This attempts to distinguish the economic (that is, resource)

6   effect from the social norm effect. The GDP per capita is expected to represent mostly

7   an economic resource. Even though the UR is likely to combine both economic and

8   social norm considerations, this study expects that the effect of UR will mainly

9   capture the social norm effect when simultaneously controlling for GDP.

10   Furthermore, the study also distinguishes between the moderating role of long-

11   term trajectories and business cycle fluctuations, given their different nature with

12   respect to the formation of individual expectations. Macroeconomics has long been

13   preoccupied with the separation of long-term trends in key indicators from short-term

14   business cycle fluctuations. There are two reasons to think that such a separation is

15   relevant when analysing the moderating effect of macroeconomic conditions on the

16   relationship between employment status and well-being. If one considers the resource

17   availability argument (Hobfoll, 1989), the underlying reason for the separation of the

18   long-term trend from the business cycle fluctuation lies within the state budgeting

19   process. The budget is set annually, based on historic information and future spending

20   forecasts. Therefore, it is more likely that short-term fluctuations will send a weaker

1 signal to individuals with regards to resource availability compared to that from the

2 long-term GDP trajectory. A similar mechanism is likely to be in place with regards

3 to UR: a long-term unemployment trajectory should send a stronger signal to

4 individuals with regards to social comparison than the business cycle fluctuation.

Theory and hypotheses

6 According to relative deprivation theory (Crosby, 1984), the bigger the discrepancy

7 between the outcomes people achieve and the outcomes to which they feel entitled,

8 the greater their feelings of relative deprivation. It has been argued that this

9 experienced relative deprivation results in decreases in well-being (Fryer, 1998).

10 Hence, people are likely to feel deprived when they feel that they are entitled to have

11 a job (and the income resulting from it) that corresponds to their human capital (for

12 example, education, experience, skills), but they are either unemployed or hold an

13 insecure job that does not match their expectations. This feeling of deprivation may

14 explain why unemployment and job insecurity relate to impaired well-being (Sverke

15 et al, 2002; De Witte, 2005; Cheng and Chan, 2008; Norton et al, 2018).

16   Nevertheless, the relationship between unemployment and both job insecurity

17 and well-being is also subject to boundary conditions. For instance, on the individual

18 level, social contacts have been found to buffer unfavourable outcomes of

19 unemployment on well-being, because unemployed people who had more social

20 contacts were better off than those with fewer contacts (Kilpatrick and Trew, 1985).

1   Moreover, with higher (vs lower) levels of work-role centrality (that is, the degree to

2   which work is central to one's life), unemployed individuals were found to experience

3   lower levels of well-being, whereas supportive social relations, available financial

4   resources, and an everyday routine helped unemployed people feel better (McKee-

5   Ryan et al, 2005). The present study argues that country characteristics on the

6   macrolevel, and specifically a country's GDP and UR, may also moderate the

7   relationship between labour market status and well-being.

8   In line with Paul and Moser's (2009) meta-analysis revealing that the negative

9   effects of unemployment on health were weaker in countries with higher (vs lower)

10   GDP, the present study argues that unemployment and job insecurity will be less

11   detrimental for individuals' well-being in countries that are financially better off.

12   COR theory (Hobfoll, 1989) helps to explain the moderating role of a country's

13   economic situation (GDP) on the relationship between unemployment/job insecurity

14   and well-being. This theory posits that individuals strive to preserve and protect their

15   resources and acquire additional resources to address threats in the environment.

16   Thus, resources are important not only for their instrumental value but also for their

17   value in helping individuals cope with stress, prevent well-being impairments, and

18   feel better. Hobfoll (1989, 2002) recognises four types of resource: objects (such as a

19   house or a car), conditions (for example, employment), personal characteristics (such

20   as self-efficacy), and energies (including money). Considering that resources can be

1   found on different levels of analysis (the individual or the societal level), the

2   economic situation of a country can be operationalised as an energy resource on the

3   societal level.

4   A central assumption of COR theory (Hobfoll, 1989, 2002) is that the

5   availability of resources buffers the negative consequences of the threatening or

6   demanding conditions that individuals face. Put differently, when resources are

7   available, individuals may use them to deal with threats in their environment and

8   thereby prevent reductions in their well-being. In countries that flourish economically

9   (that is, are characterised by higher [vs lower] levels of GDP), unemployed

10   individuals or those having an insecure job will have access to an adequate pool of

11   societal resources (for example, unemployment benefits, better welfare system, better

12   health care availability, and so on.). Resource availability on the country level will

13   help them deal more effectively with the demanding condition (that is,

14   unemployment/job insecurity) they are facing and feel less threatened by it, thereby

15   preventing a decline in well-being. In contrast, in countries with lower levels of GDP,

16   the detrimental effects of unemployment and job insecurity on well-being will be

17   stronger, because unemployed individuals or individuals with insecure jobs will have

18   fewer available resources to deal with their precarious work situation. In line with this

19   discussion, it is hypothesised that the strong relationship between unemployment/job

1   insecurity and impaired well-being (unhappiness, dissatisfaction) will be weaker in

2   countries with higher GDP than in countries with lower GDP (Hypothesis 1).

3   Relative deprivation theory (Crosby, 1984) assumes that people feel entitled to

4   certain outcomes or conditions (for instance, having a job). However, the entitlement

5   to certain outcomes is determined not only by individual beliefs but also by social

6   comparisons that form individuals' social identities. According to social identity

7   theory (Tajfel and Turner, 1986), individuals choose to belong to groups that project a

8   positive identity to them when compared to an out group. In this context, people in

9   insecure labour market positions will experience a decline in well-being mainly when

10 they compare themselves to those employed with secure jobs. This is because upward

11 social comparisons or comparisons with others who are better off result in lower self-

12 regard (Tesser et al, 1988). However, irrespective of GDP levels, in countries where

13 UR is higher, people in insecure labour market positions are likely to change their

14 comparison group in order to protect their self-evaluation and self-regard. In this

15 context, unemployed people and people experiencing high job insecurity are more

16 likely to compare themselves with others who are in a similar labour market situation

17 (that is, unemployed people or people with insecure jobs) and thus protect themselves

18 from decreasing well-being.

19   This suggestion is also in line with attribution theory (Fiske and Taylor, 1991)

20 which illustrates how individuals gather information from the environment to explain

1   specific events. People in unfavourable employment conditions (unemployed or in

2   insecure jobs) are more likely to assign the cause of their condition to the environment

3   that is outside of their control (external attribution), and not to internal aspects such as

4   their personal characteristics (for example, lack of skills) or motives (too lazy to look

5   for a job or a better job). This is more likely to happen in countries with a higher UR

6   in which it is common to be unemployed or have an insecure job, thereby making

7   external attribution more plausible. When the cause of one's position in the labour

8   market is attributed externally and not internally, the negative effects of

9   unemployment and job insecurity on well-being will be less severe. In contrast,

10   people who are unemployed or have insecure jobs in a country in which UR is low

11   (where relatively few people are unemployed or have insecure jobs) are more likely to

12   attribute their condition to themselves (internal attribution) and, thus, the effects on

13   their well-being will be particularly unfavourable.

14   There is evidence showing that in more deprived environments characterised

15   by higher URs, the impact of individual unemployment on well-being is weaker

16   (Clark, 2003; Shields et al, 2009). However, it should also be noted that more recent

17   evidence from Oesch and Lipps (2013) showed no support for the moderating role of

18   UR on the link between individual unemployment and well-being in Germany and

19   Switzerland. Moreover, in a study of the 28 OECD countries in the period 1999–2009,

20   Stavrova et al (2011) found support for the moderating role of the norm effect but

1   only for societal injunctive norms (what a society approves or disapproves of) but not

2   for descriptive norms (the national level of unemployment). However, these latter

3   studies did not account for the full period of the financial crisis in which the impact of

4   descriptive norms in the form of a country's level of unemployment may have

5   become more prominent for individuals. Thus, on the basis of this analysis, it is

6   hypothesised that the positive relationship between unemployment/job insecurity and

7   impaired well-being (unhappiness, dissatisfaction) will be weaker in countries with a

8   higher UR than in countries with a lower UR (Hypothesis 2).

9   Finally, it is important to consider that a country's current economic position

10   can consist of two components: a permanent or long-term economic trajectory and

11   transitory business cycle fluctuations. In this respect, a country on a positive long-

12   term economic trajectory may have more resources to buffer the negative effects of

13   individual unemployment, irrespective of whether it is currently experiencing a

14   downturn due to business cycle fluctuations. Likewise, a country on a negative long-

15   term economic trajectory that experiences a sudden economic boom may not make

16   this resource available to buffer the effect of individual unemployment/job insecurity

17   due to the transitory nature of this increase in resources. Moreover, if the increase in

18   unemployment is due to business cycle fluctuation in an otherwise low UR country, it

19   may be less likely to moderate the effect of individual unemployment on well-being.

1   From a psychological perspective, it could be argued that individual attitudes

2   are more likely to be affected when individuals are exposed to a message that is more

3   persuasive (Crano and Prislin, 2006). In this context, a change (a message) is more

4   likely to persuade individuals and alter how they view the economic development of

5   their country and how they react to it if it is systemic and develops into a long-term

6   trajectory. For instance, in countries that are worse off economically but experience

7   an unexpected positive change, this change is more likely to make people optimistic

8   when it translates into a long-lasting positive trend. In that sense, an individual's well-

9   being in response to their own unemployment and job insecurity will be less sensitive

10   to business cycle fluctuations than to their country's position on its long-term

11   trajectory. Thus, the hypothesis is that the long-term economic trajectory will have a

12   stronger moderating effect on the positive relationship between unemployment/job

13   insecurity and impaired well-being than business cycle fluctuations – that is,

14   deviations in macrolevel UR and GDP from their respective long-term trends

15   (Hypothesis 3).

16   A number of studies have concluded that men and women differ in how they

17   experience unemployment, with unemployed women suffering fewer negative

18   consequences mainly because of other complementary roles they are expected to fulfil

19   inside the family (Paul and Moser, 2009). Connell (1991, 1995) has argued that work

20   is primarily essential for the identity of men in order for them to successfully

1   accomplish their role as 'breadwinners', to achieve independence, and to participate

2   in social and public life. However, some scholars have questioned these differences

3   between genders (Russell and Barbieri, 2000; Isaksson et al, 2004), arguing that

4   women's experiences of unemployment have not been studied adequately. Moreover,

5   other scholars have argued that the previous reasoning reflects traditional ideologies

6   regarding gender roles and ignores the significant socio-economic changes in

7   women's participation in the labour market as well as the heterogeneity of the female

8   experience (for example, women's differences with respect to education, social class,

9   and marital status) (Russell and Barbieri, 2000). Because previous studies have been

10   inconclusive regarding the role of gender in how unemployment and job insecurity

11   affect individual well-being, the present study accounts for gender differences when

12   testing hypotheses in an attempt to shed light on previous non-systematic findings.

13   This responds to calls (for example, Russell and Barbieri, 2000) stressing the need to

14   link women's unemployment to macrolevel conditions (such as a country's welfare

15   state) in order to better elucidate possible sources of gender gaps.

16   ## Method

17   ### Microdata

18   The study employed data from the European Social Survey (ESS). The ESS is carried

19   out every two years and examines a range of issues such as employment, income,

20   education, housing, family, health, work–life balance, life satisfaction, and other

1   attitudes and behaviours. The present study used data from 35 countries covering all

2   available waves (2002–14) and focused on young people only (aged 15–29). It ran

3   separate regressions for males and females.

4   ## Microlevel variables

5   *Unhappiness* was measured by reversing participants' responses on a one-item

6   happiness scale ('How happy are you, taking all things together?'). Participants rated

7   this item on an 11-point scale ranging from 1 (*very unhappy*) to 11 (*very happy*). After

8   reversing responses, high scores indicate high levels of unhappiness.

9   *Dissatisfaction with life* was measured by reversing participants' responses to

10   a one-item, overall life satisfaction scale ('How satisfied are you currently with your

11   life, in general?'). Participants rated this item on an 11-point scale ranging from 1

12   (*very dissatisfied*) to 11 (*very satisfied*). After reversing responses, high scores are

13   indicative of high levels of dissatisfaction.

14   *Employment status* was measured by means of self-reports on an indicator

15   variable distinguishing between those employed (0) and those unemployed (1).

16   *Job insecurity* indicated respondents' job contract type; more specifically,

17   people were asked whether their job was permanent or temporary (permanent vs

18   limited contract). Temporary contract workers were considered as having an insecure

19   job.

1   *Control variables*. In all specifications, the study controlled for participants'

2   age (in years) and age squared, secondary or tertiary education completion, and

3   indicators for being married/living with partner or being separated/divorced. It also

4   controlled for other labour market indicators with a list of dummy variables: being

5   discouraged from work, being in education, being retired, doing housework, or labour

6   market status identified as 'other'. Income (measured in deciles) was also included as

7   a control variable to ensure that any potential negative effect observed in well-being

8   outcomes is net of the individual income effect. If after controlling for income, the

9   effects of unemployment or insecure employment were still to be observed, this

10   would indicate that their impact goes beyond individual financial inconvenience, and

11   thereby helps to explain the route to possible stigma related to these experiences. Due

12   to a change in the survey design from income being expressed as a 12-category

13   variable relevant to each country and its currency (between 2002 and 2006) to it being

14   expressed in deciles in euros (between 2008 and 2014), income deciles for the years

15   2002–06 were imputed using uniform random values.[3] Furthermore, all specifications

16   account for yearly fixed effects.

17   ## Macrolevel moderators

18   *Economic situation*. The economic situation on the country level was measured by

19   two indicators: the country's UR and the level of country's GDP (at purchasing power

20   parity, per capita, in thousands of 2011 international dollars, natural log of). Both

1 were demeaned to allow a meaningful interpretation of the main effects in the

2 specifications with interactions (Wooldridge, 2016). Data regarding the countries' UR

3 for the years 1998–2014 is the share of unemployed (according to the International

4 Labour Organisation (ILO) measure[4]) in the total labour force (World Bank, 2016a).

5 The per capita GDP includes all final goods and services produced within a country in

6 a given year at their purchasing power parity value (PPP), divided by the average

7 population of the same year (World Bank, 2016b).

Strategy for the analysis

9 Hypothesised effects were tested across ages and genders by constructing two

10 different model specifications. The models were run using the whole available sample

11 (2002–14 in 35 countries) of young individuals (15–29 years old) as mixed-effects

12 multilevel regressions with three levels: individuals (Level 1) nested in years (Level

13 2), and nested in countries (Level 3) separately by gender.

14   Model 1:

15 $$Y_{itj} = \beta_0 + LM_{itj}\boldsymbol{\beta}_1 + LM_{itj}*Macro_{tj}\boldsymbol{\beta}_2 + Macro_{tj}\boldsymbol{\beta}_3 + I_{itj}\boldsymbol{\beta}_4 + X_{itj}b_X + T_t b_T + c_j + u_{tj} + \grave{o}_{ijt}$$

16   (1)

17   Model 2:

18 $$Y_{itj} = \beta_0 + LM_{itj}\boldsymbol{\beta}_1 + LM_{itj}*MacroII_{tj}\boldsymbol{\beta}_2 + MacroII_{tj}\boldsymbol{\beta}_3 + I_{itj}\boldsymbol{\beta}_4 + X_{itj}b_X + T_t b_T + c_j + u_{tj} + \grave{o}_{ijt}$$

19   (2)

1   where Y_{itj} is the dependent variable (variables representing well-being:

2   unhappiness or dissatisfaction with life) of young person i in year t in country j. LM_{itj}

3   is a vector of dummy variables indicating types of labour market status that includes

4   the variables of interest: being unemployed, in an insecure job, and controls for other

5   labour market statuses. The study was particularly interested in the effects of

6   unemployment and job insecurity and their interactions with macrolevel moderators.

7   The difference between Model 1 and Model 2 is how macrolevel moderators are

8   defined. $Macro_{tj}$ stands for a vector of macrolevel moderators: demeaned natural log

9   of GDP level per capita in PPP values and demeaned country-level UR. $MacroII_{tj}$

10   stands for country-level GDP trend and residual term along with country-level UR

11   trend and residual term. All trend and residual measures were also demeaned

12   following the procedure described in Wooldridge ([2010]). I_{itj} stands for individual

13   level of income. X_{itj} is a vector of individual level controls, c_j, u_{tj} and $\grave{o}_{ijt}$ correspond to

14   different level error terms. All regressions were run separately by gender.

15   *Economic trend (MacroII).* To separate the nature of the signal individuals

16   receive from the macroeconomic indicators into anticipated and unanticipated parts,

17   both UR and GDP were decomposed using two different filtering methods: (a) linear

18   filtering with first-order polynomial only, which separates time-series data into trend

19   and cyclical components (Burns and Mitchell, [1946]); and (b) the Hodrick–Prescott

20   filter, which additionally allows for the smoothed-curve representation of the trend

1 (compared to the linear trend in (a)). This is achieved through modifying parameters

2 to adjust for the trend sensitivity to short-term fluctuations (Hodrick and Prescott,

3 1997). Comparing both ways of constructing the trend works as a sensitivity analysis,

4 because it allows an investigation of whether the method of operationalising the trend

5 introduces any significant differences in the results. The linear and Hodrick–Prescott

6 filtered (Hodrick–Prescott [HP] procedure described in Baum, 2004) trends of UR and

7 GDP growth and their residuals were derived separately for each country using

8 macroeconomic data for the years 1996–2014. The acquired values were merged with

9 the rest of the ESS data, and only 2002–14 data were used due to ESS availability.

10 The natural log of a country's GDP per capita levels at PPP values and actual

11 unemployment rates were used to derive trends and residuals over time.

12   When considering the main effects as points of reference, it should be

13 acknowledged that one has to be careful regarding the magnitude of the estimated

14 main effects of unemployment and job insecurity. These main effects are likely to be

15 subject to possible endogeneity – a possibility that unhappier individuals or those who

16 are more dissatisfied with life will be more likely to end up in unemployment or an

17 insecure job. However, the literature has now shown that the causal mechanism is

18 present in this relationship, albeit at a somewhat smaller magnitude (Kassenboehmer

19 and Haisken-DeNew, 2009). However, with regard to the main effects of per capita

20 GDP and the UR and their interactions with individual unemployment and job

1 insecurity, it is plausible to think that these macrolevel effects are exogenous to

2 individual decisions, and, hence, the coefficient estimates on the interaction terms will

3 be consistent (Nizalova and Murtazashvili, 2016).

Results

5 Summary statistics for both individual and macroeconomic variables for male and

6 female samples are presented in Table 2.1.

7 Table 2.1: Here

8   Hypotheses 1 and 2 were tested simultaneously for each dependent variable.

9 Hypothesis 3 was tested in a separate analysis. Table 2.2 presents results for Model 1

10 (Hypotheses 1 and 2) and Table 2.3 presents results for Model 2 (Hypothesis 3). Each

11 table compares outcomes for males and females on both unhappiness and

12 dissatisfaction with life. As expected, being unemployed or having an insecure job

13 was found to significantly increase youth unhappiness and life dissatisfaction relative

14 to being employed in a secure job (Table 2.2). In countries with average GDP and

15 UR, the effect of unemployment was stronger than that of job insecurity for both

16 genders and both measures of well-being (unhappiness: 0.656 vs 0.053 for males and

17 0.385 vs 0.097 for females; life dissatisfaction: 0.904 vs 0.083 for males and 0.659 vs

18 0.109 for females[5]). Both effects, and particularly the effect of unemployment, were

19 larger for life dissatisfaction than for unhappiness. Results also suggested that

20 unemployment had a considerably larger effect on young men than insecure

1 employment, whereas the difference between the two effects was much smaller for

2 young women.

3 Table 2.2: Here

4   In Model 1 (Table 2.2), an increase in GDP level was associated with lower

5 unhappiness and life dissatisfaction for the employed men and women (the reference

6 group) in a statistically significant way. However, the economic significance of the

7 effect was quite low – 1 per cent increase in GDP per capita was associated with a

8 0.008-point decrease on an 11-point unhappiness scale for employed men and 0.009

9 for employed women. The corresponding effects on life dissatisfaction were 0.013

10 and 0.012 respectively. Higher UR related significantly to increased unhappiness and

11 dissatisfaction with life: a 1 per cent increase in UR was associated with a 0.030-point

12 increase in unhappiness for employed men and a 0.034-point increase in unhappiness

13 for employed women. Similar effects are observed for life dissatisfaction.

14   With respect to the moderating effects, when controlling for UR, GDP was

15 found to be a statistically significant moderator of the relationship between

16 unemployment and both unhappiness and life dissatisfaction for women, of insecure

17 employment and unhappiness for women, and of the relationship between

18 unemployment and life dissatisfaction for men. Whereas GDP was found to

19 exacerbate the effect of unemployment on both unhappiness and dissatisfaction with

20 life (which goes against Hypothesis 1), it reduced the effect of job insecurity (which

21 supports Hypothesis 1) – albeit the latter effect was statistically significant only for

1   unhappiness in both men and women and for life dissatisfaction in women. In terms

2   of magnitude, a 1 per cent increase in GDP per capita increased the effect of being

3   unemployed on life dissatisfaction for men by 0.005 points (0.452/100), which is

4   about 0.05 per cent of the main effect of unemployment (Column 2). For women, it

5   was a 0.004-point effect for both unhappiness (0.409/100) and life dissatisfaction

6   (0.449/100), which corresponds to respectively 1.3 per cent and 0.8 per cent of the

7   main effect. The moderating effects were larger in relative terms for job insecurity.

8   For example, for men, a 1 per cent increase in GDP was associated with a reduction in

9   the effect of an insecure job on life dissatisfaction by 0.002 points (-0.183/100), which

10   constitutes 4 per cent of the main effect. UR had a statistically significant moderating

11   effect only on the relationship between insecure employment and unhappiness for

12   both genders. Results showed that the relationship between job insecurity and

13   unhappiness turned negative for those living in countries with higher levels of

14   unemployment, which is in line with Hypothesis 2.

15   Although the moderating effects of macroeconomic indicators were relatively

16   small at the margin, many of them were statistically significant when evaluated as the

17   average values of these indicators. Hence, the effects were explored across the whole

18   spectrum of possible values of the macroeconomic variables in graphical form.

19   Figures 2.1 (results for males) and 2.2 (results for females) show graphs based on

20   simulations of the effects of being unemployed or in an insecure job (evaluated with a

1   95 per cent confidence interval), allowing for either GDP or UR to vary while holding

2   all other variables constant at the average values. The upper two rows in Figures 2.1

3   and 2.2 shows results for unhappiness; the lower two rows, for life dissatisfaction.

4   The first graph in each row presents the predicted levels of each well-being indicator

5   for those employed, unemployed, and in insecure employment varying by the GDP or

6   UR measured as the deviation from the mean. The second graph in each row presents

7   how the difference in unhappiness or life dissatisfaction of those unemployed and in

8   insecure jobs varies by GDP/UR (again in terms of deviation from the mean) from

9   those employed in secure positions. This is effectively a marginal effect of being

10   unemployed or in insecure employment evaluated at different levels of

11   macrovariables. The moderating effects of GDP are presented in odd rows; those of

12   UR are presented in even rows.

13   Figure 2.1: Here
14   Figure 2.2: Here

15   The graphs show that the overall levels of unhappiness/life dissatisfaction

16   decrease with higher GDP and lower UR for all three groups. However, they decrease

17   at a lower rate for the unemployed than for the other two groups. With regards to

18   moderating effects, the findings are the following: (a) holding UR constant, GDP

19   exacerbates the relationship between unemployment and both unhappiness and

20   dissatisfaction with life for men and women; (b) holding GDP constant, UR has a

21   weaker, but still exacerbating effect on the relationship between unemployment and

1   well-being (virtually flat curves for the unemployed with intersecting confidence

2   intervals); (c) although the effect of job insecurity on well-being is much smaller,

3   where there is an effect, it is mitigated by GDP (in accordance with Hypothesis 1) and

4   UR (in accordance with Hypothesis 2). Overall, the evidence regarding the

5   moderating effects supports Hypothesis 1 and Hypothesis 2 with regards to job

6   insecurity but not unemployment.

7   With regard to Hypothesis 3, Model 2 decomposes GDP and UR into long-

8   term trends and shocks (or business cycle fluctuations) using either linear trend or

9   Hodrick–Prescott filters (linear: odd columns; Hodrick–Prescott: even columns, in

10   Table 2.3). The results using both methods were quite similar. A higher GDP trend

11   was found to significantly reduce the unhappiness and life dissatisfaction of employed

12   youth. These effects were comparable to those obtained for the level values of these

13   measures in Model 1. An unexpected increase in a country's GDP level had a

14   significant negative effect on life dissatisfaction only in young employed females. The

15   situation is reversed for UR: the long-term trend had no effect on the well-being of

16   employed youth, whereas the unexpected increase in UR was found to increase both

17   unhappiness and life dissatisfaction in employed men, but not in employed women.

18   Table 2.3 Here

19   The findings related to job insecurity are similar to the main analysis and more

20   in line with Hypothesis 3 (if the effects are statistically significant). None of the

21   macrovariables had a statistically significant moderating effect with respect to life

1 dissatisfaction in men. However, there were significant moderating effects of GDP

2 (UR) trends, but not residuals, for unhappiness for men in insecure employment and

3 for both measures of well-being for women in insecure employment, albeit they are

4 small in magnitude.

Discussion

6 The aim of the current empirical analysis was to understand under which specific

7 conditions unemployment and job insecurity are particularly damaging for the well-

8 being of young Europeans. To this end, the ESS dataset was used to investigate

9 whether specific macrolevel factors, and particularly the country's economic situation

10 (that is the country's UR and GDP), moderate the individual-level effect of

11 unemployment and job insecurity on two well-being indicators: unhappiness and life

12 dissatisfaction. One advantage of the current analysis is that it also investigated trends

13 and business cycle fluctuations in the macrolevel moderators and how these determine

14 the effects of labour market conditions on well-being. Furthermore, it accounted for

15 potential differences in gender in the examined effects. The implications of the main

16 study findings will now be discussed.

Main effects

18 In line with relative deprivation theory (Crosby, 1984) and previous empirical

19 evidence (Sverke et al, 2002; De Witte, 2005; Cheng and Chan, 2008), unemployment

20 and job insecurity were found to relate positively to unhappiness and life

1   dissatisfaction in countries with average GDP and UR, even when controlling for

2   one's individual income. When people feel that they are qualified to have a job or a

3   better (that is, more secure) job but do not have one, they feel deprived, and this has

4   negative consequences for their well-being (Harari et al, 2017) making them more

5   unhappy and less satisfied with their lives.

6   Interestingly, the present analyses shed light on potential gender differences

7   regarding the impact of unemployment and job insecurity on youth well-being.

8   Results revealed that being unemployed is more detrimental for the well-being of

9   males, whereas having an insecure job is more detrimental for the well-being of

10   females. The former finding is in line with the traditional views regarding gender

11   roles that assign a 'breadwinner' role to men (Connell, 1991, 1995). Accordingly,

12   when men are considered responsible for earning, they experience impairments to

13   their well-being when they do not have the means (employment) to satisfy their role.

14   However, results also revealed that being in an insecure job position is more

15   detrimental for the well-being of women than that of men.

16   Turning to the main effects of the macrolevel indicators on individuals' well-

17   being, results showed that a higher GDP expressed either in level values or as trends

18   and shocks related to better well-being outcomes (lower unhappiness and life

19   dissatisfaction). These results support the assumption based on COR theory (Hobfoll,

20   1989) that country-level GDP can be viewed as an energy resource at the societal,

1   macrolevel of analysis. When this resource is available, well-being is enhanced. Also,

2   the well-being of young employed Europeans is worse when they live in countries

3   with higher UR, possibly because they may be less likely to find a job that is in line

4   with their skills and qualifications resulting in higher relative deprivation (Crosby,

5   1984).

Moderating effects

7   When it comes to the moderating effects of GDP, based on COR theory (Hobfoll,

8   1989), the strong relationship between unemployment/job insecurity and impaired

9   well-being (unhappiness, job dissatisfaction) was expected to be weaker in countries

10 with higher (vs lower) GDP. Higher GDP implies availability of societal resources,

11 which could, according to COR theory, be used by individuals to deal more

12 effectively with threatening conditions (unemployment or job insecurity). The

13 analyses revealed some significant interaction effects, but not all were in line with

14 expectations. Unexpectedly, GDP was found to exacerbate the effect of

15 unemployment on life dissatisfaction (for both genders) and on unhappiness (for

16 females). However, we found that GDP mitigated the effect of an insecure job on

17 unhappiness for both genders. These results suggest that Hypothesis 1 holds for those

18 with insecure employment but not for those who are unemployed. Availability of

19 economic resources at the country level does not help individuals when they are

20 excluded from the labour market, but it does help them when they have an insecure

1   job. This could mean that there are other resources at play (for example,

2   psychological support) that may matter more for unemployed individuals. However,

3   these were not investigated in the present analysis.

4   Regarding Hypothesis 2, based on social identity theory (Tajfel and Turner,

5   1986), those unemployed or with insecure jobs living in a country with high

6   unemployment rates were expected to be more likely to compare themselves with

7   those in unfavourable labour market conditions (unemployed people or people with

8   insecure jobs) and that this would prevent reductions in well-being. In other words,

9   the relationship between unemployment/job insecurity and life

10 dissatisfaction/unhappiness was expected to be weaker in countries with higher

11 unemployment rates. Results partially confirmed this hypothesis for insecure

12 employment, but not for unemployment.

13   To explain these findings, it is important to consider the role of relative

14 comparisons. Clark et al (2008) found that happiness relates negatively to others'

15 income and to own past income. In the context investigated here, it is conceivable that

16 in times when many people in a country experience unfavourable working conditions

17 (high UR), the negative effect of job insecurity on well-being may be mitigated by

18 relative comparisons. Namely, and in line with attribution theory (Fiske and Taylor,

19 1991), individuals with insecure jobs are more likely to compare themselves with

20 others who also experience high levels of insecurity, and to attribute their situation to

1 the external environment. In contrast, when everyone has a job, having an insecure

2 job may be taken as being a failure or being lazy (Furnham, 1982). Under such

3 conditions, those working in insecure jobs are more likely to be affected negatively.

4 When many people are affected by unemployment or a (growing) bad economic

5 situation, having an insecure job may be as good as having a secure one. This is in

6 line with Da Costa and Dias (2014) who suggested that ever since the start of the

7 financial crisis, there is an increasing tendency to attribute individuals' (economic)

8 failure to external societal forces rather than their own characteristics (internal

9 attribution). Attributing one's unfavourable job situation to the environment protects

10 ones self-worth and self-efficacy, which consequently prevents health and well-being

11 impairment (Schwarzer et al, 1997). However, the same argument does not apply to

12 the effect of unemployment on well-being. The present findings suggest that the

13 financial worry related to the availability of jobs has a stronger effect than that of

14 social comparison in the case of a higher macro unemployment rate. Unexpectedly,

15 unemployment proved to have a stronger effect on impaired well-being at higher GDP

16 levels. Potentially, this can be explained by relative deprivation theory rather than by

17 the standard economic considerations of availability of resources.

18   An important contribution of this study is that it also investigated the role of

19 long-term economic trajectories and business cycle fluctuations as moderators of the

20 relationship between labour market status and youth well-being. It hypothesised that

1   long-term economic trajectories (in GDP and UR) would have stronger moderating

2   effects on the relationship between unfavourable labour market conditions and

3   impaired well-being than business cycle fluctuations (sudden and abrupt changes in

4   GDP and UR). It argued that a country on a positive long-term economic trajectory

5   may have more resources to buffer the negative effects of individual unemployment

6   irrespective of whether it is currently experiencing a downturn due to business cycle

7   fluctuations. In a similar vein, a country on a negative long-term economic trajectory

8   that experiences a sudden economic boom may not make this resource available to

9   buffer the effect of individual unemployment/job insecurity due to the transitory

10   nature of this increase in resources.

11   The evidence regarding the moderating role of long-term GDP and UR

12   trajectories and business cycle fluctuations was rather mixed. A higher GDP trend, but

13   not the residual, significantly reduced both unhappiness and life dissatisfaction for

14   employed young men. For women, the same was true for unhappiness, but in the case

15   of life dissatisfaction, the GDP residual also had an effect on the employed. Findings

16   were different for UR. In the case of UR, the sudden increase was more relevant in

17   increasing young employed men's unhappiness, whereas the long-term trend did not

18   seem to have an effect. In the case of life dissatisfaction, both components of UR

19   were found to have a similar effect on employed men. With regards to the moderating

20   effects, both the long-term trajectory and the residual of GDP exacerbated the

relationship between unemployment and both measures of impaired well-being for men and life dissatisfaction for women. In the case of female unhappiness, the two components worked in the opposite direction: whereas the long-term GDP trend exacerbated the effect of unemployment, the GDP residual actually mitigated it. For the UR, the findings were similar for both men and women – the long-term trend component had a small effect on the relationship between unemployment and life dissatisfaction and unhappiness for men, but the unexpected increase in UR dramatically exacerbated these effects.

In conclusion, this chapter has provided new findings on the moderating effects of macrolevel conditions under which unemployment and insecure labour market positions affect the well-being of young Europeans. Results showed that the economic situation of a country affects the strength of the relationship between unemployment/job insecurity and health/well-being. These results provide insights not only for theory development but also for developing policies aiming to protect the well-being of young Europeans.

References

Baum, C.F. (2004) 'HPRESCOTT: Stata module to implement Hodrick–Prescott filter for timeseries data', Statistical Software Components S447001, Boston: Boston College Department of Economics.

Burns, A.F. and Mitchell, W.C. (1946) 'Effects of trend adjustment on cyclical measures', in A.F. Burns and W.C. Mitchell (eds) *Measuring Business Cycles*, Cambridge: National Bureau of Economic Research, pp 270–309.

Bynner, J. and Parsons, S. (2002) 'Social exclusion and the transition from school to work: The case of young people not in education, employment, or training (NEET)', *Journal of Vocational Behavior*, 60(2): 289–309.

Cheng, G. and Chan, D.K.-S. (2008) 'Who suffers more from job insecurity? A meta-analytic review', *Applied Psychology: An International Review*, 57(2): 272–303.

Chung, H., Bekker, S. and Houwing, H. (2012) 'Young people and the post-recession labour market in the context of Europe 2020', *Transfer: European Review of Labour and Research*, 18(3): 301–17.

Clark, A. (2003) 'Unemployment as a social norm: Psychological evidence from panel data', *Journal of Labor Economy*, 21(2): 323–51.

Clark, A.E., Frijters, P. and Shields, M.A. (2008) 'Relative income, happiness and utility: An explanation for the Easterlin paradox and other puzzles', *Journal of Economic Literature*, 46(1): 95–144.

Connell, R.W. (1991) 'Live fast and die young: The construction of masculinity among young working-class men on the margin of the labour market', *Australia and New Zealand Journal of Sociology*, 27(2): 141–71.

1   Connell, R.W. (1995) *Masculinities*, Cambridge: Polity Press.

2   Crano, W.D. and Prislin, R. (2006) 'Attitudes and persuasion', *Annual Review of*

3   *Psychology*, 57(1): 345–74.

4   Crosby, F. (1984) 'Relative deprivation in organizational settings', *Research in*

5   *Organizational Behavior*, 6: 51–93.

6   Da Costa, L.P. and Dias, J.G. (2014) 'Perceptions of poverty attributions in Europe: A

7   multilevel mixture model approach', *Quality and Quantity*, 48: 1409–19.

8   De Witte, H. (2005) 'Job insecurity: Review of the international literature on

9   definitions, prevalence, antecedents and consequences', *SA Journal of*

10   *Industrial Psychology*, 31(4): 1–6.

11 Eichhorn, J. (2013) 'Unemployment needs context: How societal differences between

12   countries moderate the loss in life satisfaction for the unemployed', *Journal of*

13   *Happiness Studies*, 14(6): 1657–80.

14 Eurostat (2014) 'Archive: Impact of the economic crisis on unemployment',

15   Available from: http://ec.europa.eu/eurostat/statistics-

16   explained/index.php/Archive:Impact_of_the_economic_crisis_on_unemploym

17   ent [Accessed 26 July 2017].

18 Fiske, S.T. and Taylor, S.E. (1991) *Social cognition* (2nd edn), New York: McGraw-

19   Hill.

1   Fryer, D. (1998) 'Labour market disadvantage, deprivation and mental health', in

2   P.J.D. Drenth, H. Thierry and C.J. de Wolff (eds) *Handbook of Work and*

3   *Organizational Psychology*, Vol. 2, Hove: Psychology Press, pp 215–27.

4   Furnham, A. (1982) 'Explanations for unemployment in Britain', *European Journal*

5   *of Social Psychology*, 12(4): 335–52.

6   Harari, M.B., Manapragada, A. and Viswesvaran, C. (2017) 'Who thinks they're a big

7   fish in a small pond and why does it matter? A meta-analysis of perceived

8   overqualification', *Journal of Vocational Behavior*, 102: 28–47.

9   Hobfoll, S.E. (1989) 'Conservation of resources: A new attempt at conceptualizing

10   stress', *American Psychologist*, 44(3): 513–24.

11 Hobfoll, S.E. (2002) 'Social and psychological resources and adaptation', *Review of*

12   *General Psychology*, 6(4): 307–24.

13 Hodrick, R. and Prescott, E.C. (1997) 'Postwar U.S. business cycles: An empirical

14   investigation', *Journal of Money Credit and Banking*, 29(1): 1–16.

15 Isaksson, K., Johansson, G., Bellaagh, K. and Sjoberg, A. (2004) 'Work values among

16   the unemployed: Changes over time and some gender differences',

17   *Scandinavian Journal of Psychology*, 45(3): 207–14.

18 Kassenboehmer, S. and Haisken-DeNew, J. (2009) 'You're fired! The causal negative

19   effect of entry unemployment on life satisfaction', *The Economic Journal*,

20   119(536): 448–62.

1 Kilpatrick, R. and Trew, K. (1985) 'Life-styles and psychological well-being among
2   unemployed men in Northern Ireland', *Journal of Occupational Psychology*,
3   58: 207–16.
4 McKee-Ryan, F.M., Song, Z., Wanberg, C.R. and Kinicki, A.J. (2005) 'Psychological
5   and physical well-being during unemployment: A meta-analytic study',
6   *Journal of Applied Psychology*, 90(1): 53–76.
7 Nizalova, O. and Murtazashvili, I. (2016) 'Exogenous treatment and endogenous
8   factors: Vanishing of omitted variable bias on the interaction term', *Journal of*
9   *Econometric Methods*, 5(1): 71–78.
10 Norton, E.C., Nizalova, O. and Murtazashvili, I. (2018) 'Does past unemployment
11   experience explain the transition happiness gap?', *Journal of Comparative*
12   *Economics*, 46(3): 736–53.
13 Oesch, D. and Lipps, O. (2013) 'Does unemployment hurt less if there is more of it
14   around? A panel analysis of life satisfaction in Germany and Switzerland*',*
15   *European Sociological Review*, 29(5): 955–67.
16 Paul, K.I. and Moser, K. (2009) 'Unemployment impairs mental health: Meta-
17   analyses', *Journal of Vocational Behavior*, 74(3): 264–82.
18 Rollero, C. and Tartaglia, S. (2009) 'Preserving life satisfaction during the economic
19   crisis. What factors can help?', *Psicologia Politica*, 39: 75–87.

1   Rowley, K.M. and Feather, N.T. (1987) 'The impact of unemployment in relation to

2   age and length of unemployment', *Journal of Occupational Psychology*, 60(4),

3   323–32.

4   Russell, H. and Barbieri, P. (2000) 'Gender and the experience of unemployment', in

5   D. Gallie and S. Paugam (eds) *Welfare Regimes and the Experience of*

6   *Unemployment in Europe*, Oxford: Oxford University Press, pp 307–33.

7   Schwarzer, R., Bäßler, J., Kwiatek, P., Schröder, K. and Zhang, J.X. (1997) 'The

8   assessment of optimistic self-beliefs: Comparison of the German, Spanish, and

9   Chinese versions of the general self-efficacy scale', *Applied Psychology: An*

10   *International Review*, 46(1): 69–88.

11   Shields, M., Price, W.S. and Wooden, M. (2009) 'Life satisfaction and the economic

12   and social characteristics of neighbourhoods', *Journal of Population*

13   *Economy*, 22(2): 421–43.

14   Stavrova, O., Schlösser, T. and Fetchenhauer, D. (2011) 'Are the unemployed equally

15   unhappy all around the world? The role of the social norms to work and

16   welfare state provision in 28 OECD countries', *Journal of Economic*

17   *Psychology*, 32(1): 159–71.

18   Sverke, M., Hellgren, J. and Naswall, K. (2002) 'No security: A meta-analysis and

19   review of job insecurity and its consequences', *Journal of Occupational*

20   *Health Psychology*, 7(3): 242–64.

Tajfel, H. and Turner, J.C. (1986) 'The social identity theory of inter-group behavior', in S. Worchel and L.W. Austin (eds) *Psychology of Intergroup Relations*, Chicago: Nelson-Hall, pp 33–48.

Tesser, A., Millar, M. and Moore, J. (1988) 'Some affective consequences of social comparison and reflection processes: The pain and pleasure of being close', *Journal of Personality and Social Psychology*, 54(1): 49–61.

Voßemer, J. and Eunicke, N. (2015) *The Impact of Labor Market Exclusion and Job Insecurity on Health and Well-Being Among Youth: A Literature Review.*. EXCEPT Working Papers, WP No. 2, Tallinn: Tallinn University. http://www.except-project.eu/working-papers/

Voßemer, J., Gebel, M., Täht, K., Unt, M., Högberg, B. and Strandh, M. (2018) 'The effects of unemployment and insecure jobs on well-being and health: The moderating role of labor market policies', *Social Indicators Research*, 138(3): 1229–57.

World Bank (2016a) *Unemployment* [indicator] Available from: http://data.worldbank.org/in dicator/SL.UEM.TOTL.ZS [Accessed 20 August 2016].

World Bank (2016b) *GDP, PPP* [indicator] Available from: http://data.worldbank.org/indicator/NY.GDP.MKTP.PP.CD [Accessed 20 August 2016].

1   Wooldridge, J.M. (2010) *Econometric Analysis of Cross Section and Panel Data* (2nd

2   edn), Cambridge, London: MIT Press Books, The MIT Press.

3   Wooldridge, J.M. (2016) *Introductory Econometrics: A Modern Approach* (6th edn),

4   Mason: South-Western.

5   Wulfgramm, M. (2014) 'Life satisfaction effects of unemployment in Europe: The

6   moderating influence of labour market policy', *Journal of European Social*

7   *Policy*, 24(3): 258–72.

8   Table 2.1: Descriptive statistics for the samples (by gender)

	Males			Females	
	Mean	*SD*		Mean	*SD*
Dependent variables:					
Unhappiness	3.505	1.802		3.460	1.854
Life dissatisfaction	3.761	2.092		3.782	2.104
Explanatory variables:					
Macro variables:					
GDP level (ln)	10.395	0.416		10.360	0.433
Unemployment rate	8.093	3.883		8.196	3.837
Macro II variables:					
GDP level (trend-lin)	10.374	0.433		10.347	0.437
GDP level (res-lin)	0.012	0.051		0.012	0.052
Macro unemployment (trend-lin)	8.173	3.251		8.281	3.219
Macro unemployment (res-lin)	-0.08	2.234		-0.085	2.230
GDP level (trend-hp)	10.385	0.42		10.348	0.437
GDP level (res-hp)	0.011	0.047		0.011	0.048
Macro unemployment (trend-hp)	8.152	3.241		8.26	3.21

	Male				Female	
Macro unemployment (res-hp)	-0.059	2.1			-0.064	2.101
LM status of interest:						
Unemployed	0.069	0.254			0.056	0.23
Insecure employment	0.265	0.441			0.274	0.446
Other variables:						
Discouraged from work	0.023	0.149			0.021	0.145
In education	0.335	0.472			0.334	0.472
Retired	0.002	0.042			0.001	0.037
Housework	0.008	0.087			0.132	0.339
Other LM status	0.031	0.173			0.027	0.162
Income	5.627	2.874			5.299	2.858
Age	23.033	4.074			23.222	04.042
Age squared	547.13	184.37			555.58	183.69
Secondary education	0.713	0.452			0.645	0.479
Tertiary education	0.244	0.429			0.306	0.461
Married	0.192	0.394			0.297	0.457
Divorced	0.011	0.105			0.025	0.156
Year 2004	0.14	0.347			0.142	0.349
Year 2006	0.123	0.329			0.122	0.327
Year 2008	0.176	0.381			0.181	0.385
Year 2010	0.157	0.363			0.16	0.366
Year 2012	0.168	0.374			0.171	0.377
Year 2014	0.093	0.291			0.086	0.281
No. of observations	18,375				19,211	

1 Table 2.2: Effect of micro- and macroindicators and their interactions on
2 young male and female well-being (Model 1)

	Male		Female	

	Unhappiness	Dissatisfaction with life	Unhappiness	Dissatisfaction with life
	(1)	(2)	(3)	(4)
Income	-0.067**	-0.087**	-0.078**	-0.094**
	(0.005)	(0.005)	(0.005)	(0.005)
Unemployed	0.656**	0.904**	0.385**	0.659**
	(0.054)	(0.062)	(0.060)	(0.068)
Insecure job	0.053+	0.083*	0.097**	0.109**
	(0.030)	(0.034)	(0.030)	(0.034)
GDP level (ln, d-mean.)	-0.836**	-1.313**	-0.857**	-1.222**
	(0.130)	(0.164)	(0.150)	(0.175)
*Unemployed	0.193	0.452**	0.409**	0.449**
	(0.125)	(0.142)	(0.152)	(0.170)
*Insecure job	-0.183*	-0.149	-0.255**	-0.155
	(0.092)	(0.104)	(0.092)	(0.103)
Macr. unempl. (d-mean.)	0.030**	0.026*	0.034**	0.032**
	(0.010)	(0.012)	(0.010)	(0.012)
*Unemployed	0.016	0.021	0.005	0.024
	(0.013)	(0.015)	(0.015)	(0.017)
*Insecure job	-0.023**	-0.007	-0.026**	-0.011
	(0.009)	(0.010)	(0.009)	(0.010)
N (Individuals)	18,375		19,211	
N (Years)	155		155	
N (Countries)	35		35	

Note: Significance levels: ** p < 1%, * p < 5%, + p < 10%.

Table 2.3: Effect of micro- and macroindicators and their interactions on young male and female well-being (Model 2)

	Male				Female			
	Unhappiness		Life dissatisfaction		Unhappiness		Life dissatisfaction	
	Lin	HP	Lin	HP	Lin	HP	Lin	HP
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Income	-0.067**	-0.067**	-0.087**	-0.087**	-0.077**	-0.077**	-0.094**	-0.094**
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
Unemployed	0.663**	0.663**	0.908**	0.907**	0.393**	0.394**	0.683**	0.685**
	(0.054)	(0.054)	(0.062)	(0.062)	(0.061)	(0.061)	(0.068)	(0.068)
Insecure job	0.053+	0.053+	0.082*	0.082*	0.098**	0.098**	0.110**	0.111**
	(0.030)	(0.030)	(0.034)	(0.034)	(0.030)	(0.030)	(0.034)	(0.034)
GDP level (trend)	-0.885**	-0.894**	-1.314**	-1.327**	-0.876**	-0.878**	-1.266**	-1.265**
	(0.132)	(0.132)	(0.173)	(0.172)	(0.155)	(0.155)	(0.182)	(0.182)
*Unemployed	0.189	0.185	0.473**	0.466**	0.305*	0.296+	0.392*	0.381*
	(0.129)	(0.130)	(0.147)	(0.148)	(0.155)	(0.155)	(0.173)	(0.173)
*Insecure job	-0.179+	-0.178+	-0.090	-0.085	-0.263**	-0.261**	-0.157	-0.155
	(0.095)	(0.095)	(0.108)	(0.109)	(0.096)	(0.096)	(0.108)	(0.108)
GDP level (res)	-0.472	-0.328	-0.762	-0.589	-1.249	-1.254	-2.261*	-2.294+
	(0.893)	(0.956)	(1.056)	(1.134)	(0.944)	(1.012)	(1.110)	(1.193)
*Unemployed	1.971	2.079	2.614+	2.605	-1.855	-2.258	2.360	2.418
	(1.384)	(1.516)	(1.577)	(1.727)	(1.570)	(1.725)	(1.756)	(1.929)
*Insecure job	-0.669	-0.745	0.489	0.598	-0.473	-0.520	-0.617	-0.589
	(0.814)	(0.893)	(0.928)	(1.019)	(0.821)	(0.901)	(0.920)	(1.010)
Macr. unem. (trend)	0.015	0.013	0.029	0.025	0.026	0.026	0.016	0.017
	(0.016)	(0.016)	(0.021)	(0.020)	(0.018)	(0.018)	(0.022)	(0.021)
*Unemployed	0.001	-0.000	0.012	0.011	-0.032+	-0.035+	-0.009	-0.014
	(0.017)	(0.017)	(0.019)	(0.019)	(0.019)	(0.019)	(0.021)	(0.021)

*Insecure job	-0.019+	-0.018+	0.009	0.010	-0.027*	-0.027*	-0.009	-0.009
	(0.011)	(0.011)	(0.012)	(0.012)	(0.011)	(0.011)	(0.012)	(0.012)
Macr. unem. (res)	0.040*	0.045**	0.033+	0.036+	0.023	0.024	0.020	0.019
	(0.016)	(0.017)	(0.019)	(0.020)	(0.018)	(0.019)	(0.020)	(0.022)
*Unemployed	0.066*	0.071*	0.064+	0.067+	0.034	0.040	0.108**	0.121**
	(0.029)	(0.031)	(0.033)	(0.036)	(0.032)	(0.034)	(0.036)	(0.038)
*Insecure job	-0.037*	-0.039*	-0.021	-0.024	-0.026	-0.027	-0.019	-0.019
	(0.017)	(0.018)	(0.020)	(0.021)	(0.018)	(0.019)	(0.020)	(0.021)
N (Individuals)	18,375				19,211			
N (Years)	155				155			
N (Countries)	35				35			

1   Note: Lin = linear, HP = Hodrick–Prescott. Significance levels: $** - <1\%$, $* - <5\%$, $+ - <10\%$.

2   Figure 2.1: Moderating effects of macroeconomic indicators on well-being in men

3   Figure 2.2: Moderating effects of macroeconomic indicators on well-being in women

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[1] https://ec.europa.eu/eurostat/web/products-eurostat-news/-/WDN-20180813-1

[2] https://ec.europa.eu/eurostat/web/products-eurostat-news/-/DDN-20170502-1

[3] For an explanation of the method, see: http://www.talkstats.com/threads/european-social-survey-income-variable.44664/

[4]

http://ww2.prospects.ac.uk/cms/ShowPage/Home_page/Main_Menu___News_and_information/Graduate_Market_Trends/Definitions_of_International_Labour_Organisation_measures/p!edXbLa

[5] All reported differences were statistically significant on the 1% level.