OECD Employment Outlook 2014

Chapter 3. How good is your job? Measuring an assessing job quality - Further Material

The following pages provide supplementary material for the analysis presented in Chapter 3 of OECD Employment Outlook 2014.

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ANNEX. 3.A3 ANALYSING THE RELATIONSHIP BETWEEN LABOUR MARKET INSECURITY AND WELL-BEING: A MICRO-ECONOMIC ANALYSIS

1. Introduction

There is considerable empirical evidence that unemployment risk and insurance have important consequences for workers' subjective well-being. Much of this literature is devoted to studying the implications of unemployment risk on reported life satisfaction or happiness. These studies typically approximate the risk of unemployment by the actual unemployment rate, without differentiating between its constituent determinants (i.e. the probabilities of becoming unemployed and the expected duration of unemployment). For example, Helliwell and Huang (2011) find that each percentage point increase in the unemployment rate has the equivalent well-being effect of a 3% reduction in household income among the employed in Canada. They also assert that this indirect well-being effect of unemployment even exceeds its direct effect among the unemployed due to the much larger number of individuals concerned. Boarini et al. (2014) and OECD (2014b) find somewhat similar results using data for 32 OECD countries from the Gallup World Poll.

Most studies that have included insurance into the analysis concentrate on its role for reducing the well-being gap between the employed and the unemployed (Di Tella et al., 2003; Sjöberg, 2010; Helliwell and Huang, 2011). Importantly, these studies do not specifically focus on the on total effect of insurance on the employed and the unemployed which includes both the common effect of insurance on the two groups and the differential effect between the two groups. Young (2012), for example, exploits information on individual employment-unemployment transitions in the United States to find that insurance eligibility mitigates the adverse well-being effects of unemployment only to a small degree. While the author suggests that the magnitude of the estimated effect reflects the fact that insurance cannot absorb the non-pecuniary cost of unemployment, it may also be the case that unemployment insurance has a broadly similar impact on both the employed and the unemployed.

This annex sheds new light on the empirical relationship between labour market insecurity and subjective well-being based on internationally comparable individual-level data. To this end, Section 2 of this annex documents the data sources used and the definition of the key variables. To get a first idea of the relationship between labour market insecurity and worker well-being, Section 3 proceeds with a brief discussion of some basic descriptive statistics. Section 4 presents the empirical methodology to analyse the relationship between labour market insecurity and worker well-being in more detail. The empirical results are discussed in the main chapter.

2. Data sources and variable definitions

Multi-dimensional population surveys are able to convey a much richer picture of labour market developments than aggregate data, especially if they contain multiple observations of the same individuals. Unfortunately, such panel datasets are typically limited to a single country and not internationally comparable, while international population surveys are few and far between and relate

typically to only specific aspects of the analysis. However, two international surveys offer a surprisingly good match in terms of country coverage, sample period and information content at the same time. The first of these is the European Union Statistics on Income and Living Conditions (EU-SILC) which contains extensive information on individuals' income conditions and labour market status in a revolving panel setting. We use it to measure unemployment risk (through monthly transition rates in and out of employment) and unemployment insurance (through the loss in individuals' income due to unemployment) by socioeconomic group on a yearly basis for the 2005-2010 period. The other survey we rely on is the bi-annual European Social Survey (ESS) that contains repeated cross-sectional information on a wide range of subjective questions and a rich set of socio-economic controls. We use it to obtain different measures of self-reported well-being by worker group for 2006, 2008 and 2010.

The correspondence of socio-demographic status variables across EU-SILC and ESS makes it possible to define identical groups of economically active individuals in both datasets. In particular, we differentiate between workers based on their :

- sex (male, female),
- age category (15-29, 30-49, 50-64),
- educational background (lower secondary, upper secondary, tertiary),
- type of employment contract (permanent employee, temporary employee, self-employed),
- working hours (full-time, part-time), and
- current employment status (employed, unemployed).

This information is directly contained in relevant categorical variables in the respective datasets. Importantly, employment characteristics refer to the present job when employed or the last job when unemployed. The employment characteristics of the last job before unemployment are obtained through a combination of longitudinal information on individuals' employment histories in EU-SILC and backward-looking questions in ESS. Using these categorical variables, one can merge the two datasets at the group level to create a consistent semi-aggregated dataset covering a large number of European countries. [1]

Measuring the risk of unemployment using EU-SILC is fairly straightforward as the employment status of sampled individuals is available on a monthly basis. We therefore simply calculate the monthly job-losing probability as the share of employed workers that become unemployed from a given month to the next. Similarly, the monthly job finding probability represents the share of those who start their employment spell in a given month relative to the stock of unemployed in the previous month. These monthly probabilities are then averaged over the year to obtain annualized figures. Calculating the ratio of the two probabilities yields a measure of the overall risk of unemployment at the group level.

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[1] The consistency of the resulting dataset depends on the representative nature of the two datasets at the country and group level. While the survey design of the two datasets ensures representativeness at the national level, it cannot be excluded that some inconsistencies arise at the group level due to average differences in the characteristics of the sampled individuals across groups in the two datasets.

As regards unemployment insurance, we take a rather innovative approach. In order to account for both the accessibility of benefits and the generosity and duration of unemployment benefits, we measure effective insurance at the micro level as the degree to which income losses associated with unemployment are absorbed by the tax and benefit system. In particular, we focus on year-to-year changes in various income categories of those who have been continuously employed in a given year but spent at least a month in unemployment in the following year. For these individuals, we compare proportionate losses, from one year to the next, between labour income on the one hand and broader income concepts that include benefits on the other. Specifically, the richness of income data in the EU-SILC allows us to focus on various aspects of the taxes and benefits system such as:

- *Unemployment-related benefits* that include full and partial unemployment benefits, early retirement for labour market reasons as well as severance and redundancy payments;
- *All personal and household benefits* that make up gross household income including unemployment benefits, sickness and disability benefits, family and housing allowances;
- *All taxes and benefits* that determine households' disposable income.

For each of these insurance margins, effective insurance is calculated as one minus the ratio of proportionate losses in post-transfer income and labour income, respectively. For example, if a recently unemployed worker's labour income decreases by 50% and his or her's post-transfer income by 30%, this means that 40% of the income loss associated with unemployment is absorbed through insurance (1-30/50).

While the concepts of unemployment risk and insurance used here are similar in spirit to those used in the main chapter of the Employment Outlook to document labour market insecurity across countries, there are also many important differences. Despite these differences the pairwise correlations across countries are surprisingly high, exceeding 0.7 in the case of both unemployment risk and unemployment insurance (see Figure 3.A3.1).

Figure 3.A3.1 Comparing micro-level data and aggregate indicators
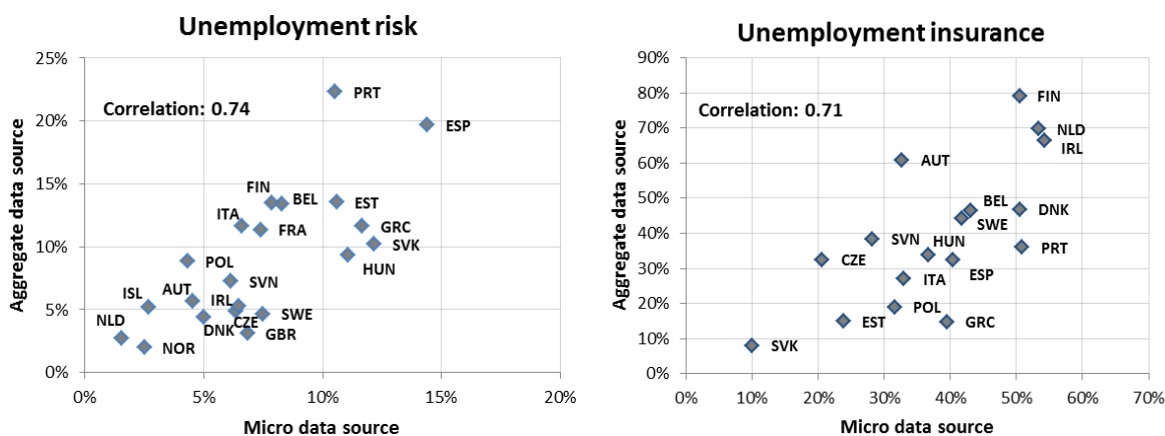
Labour market insecurity is defined as the risk of unemployment times one minus effective unemployment insurance.

3. Descriptive statistics

To get a first idea of the role of labour market insecurity for worker well-being, Figure 3.A3.2 below shows related the proposed objective indicator of labour market insecurity to different subjective measures of worker well-being across countries. Panel A shows using data for 2010 that labour market insecurity is negatively and significantly correlated with reported life satisfaction, with a correlation coefficient of -0.45. Qualitatively similar results are obtained with respect to job satisfaction and perceived job security. Panel B further shows that higher labour market insecurity is positively and significantly associated with the stated importance of having a secure job.
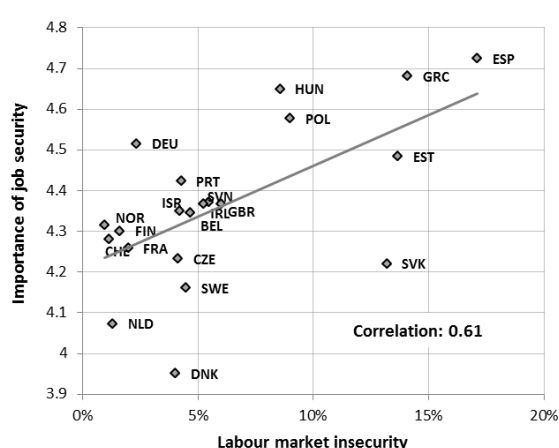
Figure 3.A3.2 Relationship between objective and subjective measures of insecurity across countries

Country averages, 2010

Panel A. Life satisfaction
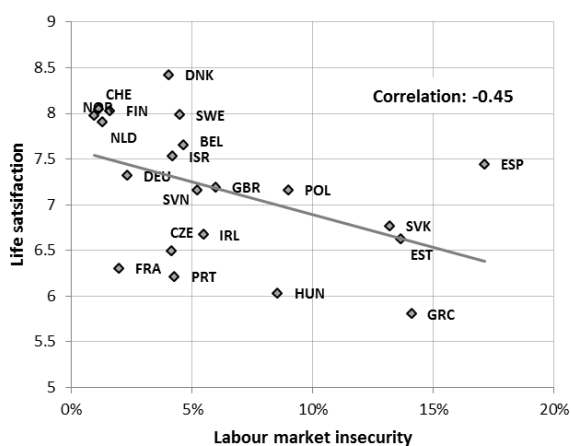
Panel B. Importance of job security

4. Empirical methodology

In order to analyse the role of unemployment risk and insurance for subjective well-being, the following linear regression model is estimated:

$$y_{it} = \alpha_1 RISK_{it} + \alpha_2 INSURANCE_{it} + \alpha_3 RISK_{it} * INSURANCE_{it} + \alpha_4 Z_{it} + \varepsilon_{it},$$

where subscript i refers to a combination of socio-economic group and country and subscript t to year. The dependent variable y stands for subjective well-being and is measured by the standardized score of life satisfaction. The right-hand side of the equation features one or several measures of unemployment RISK (unemployment rate, log job losing rate, log job finding rate), one of several

measures of public INSURANCE and a set of control variables Z (log household labour income, as well as age, education, country and time dummies). The model also contains an interaction term between RISK and INSURANCE that captures the potential compensating effect of insurance against the impact of the risk of unemployment on well-being. ε represents a random disturbance term. The empirical model above is estimated with OLS using labour-force shares within countries as weights.