Pre-prints of the DFG Research Unit "Horizontal Europeanization"

2013 - 01

What determines subjective poverty?

An evaluation of the link between relative income poverty measures and subjective economic stress within the EU

Franziska Buttler

DFG Research Unit *Horizontal Europeanization*
Fakultät I • Carl-von-Ossietzky-Universität Oldenburg • 26111 Oldenburg • Germany

Available Online at http://www.horizontal-europeanization.eu/downloads/pre-prints/PP_HoEu_2013-01_buttler_subjective_poverty.pdf

Abstract: The interaction between income poverty and individual socio-economic characteristics is widely discussed in contemporary sociological research. However, still relatively little is known about individual socio-demographic and institutional conditions and their impact on subjective feelings of poverty. This paper contributes to this debate. We analyse to what extent income poverty determines subjective poverty across Europe. The starting point of this paper is the observation that the relationship between income poverty and subjective poverty varies substantially across the European countries. It is hypothesized that feelings of subjective poverty are not only affected by individual or contextual factors. Rather, it is assumed that the importance of monetary resources in determining subjective poverty varies substantially across EU countries. We stress the importance of income poverty relative to the national and EU-wide income distribution in explaining subjective poverty. We derive explicit hypotheses and test them with data from the eighth wave of the European Union Statistics on Income and Living Conditions (fielded in 2011). Based on unconditional models as well as a conditional multivariate logistic-regression with cross-level interaction terms for 28 EU nation-states, we find that subjective poverty in less prosperous countries can be predicted more accurately by an EU-poverty threshold, whereas the national poverty line predicts subjective poverty more accurately in prosperous countries does not seem to determine subjective poverty properly in any of the considered European nation-states. The main finding of this paper is the asymmetric effect of monetary resources on subjective poverty across the EU-countries. Thus, we conclude that future European poverty research should renounce the established national and EU-wide poverty thresholds, turning instead towards subjectively perceived income poverty thresholds. Thereby, it becomes possible to evaluate living standards in European countries appropriately and to define a data-driven minimum acceptable standard of living in the EU.

Key words: subjective poverty, relative income poverty, European standard of living

Contact:
Franziska Buttler
Jean Monnet Centre for Europeanisation and Transnational Regulations
Carl von Ossietzky University Oldenburg
2611 Oldenburg
Fon: +49 (0)441 798 4621
franziska.buttler@uni-oldenburg.de

Table of Contents

1 Introduction 4

2 Literature review 6

2.1 Poverty measurement and definitions 6

2.2 State of the art and research questions 7

2.3 Hypotheses 9

3 Data and variables 12

4 Empirical findings 14

4.1 The relationship between income poverty and subjective poverty across the EU states 14

4.2 The individual determinants of subjective poverty across time 16

5 Conclusion 22

6 Appendix 25

7 References 26

1 Introduction

The primary objective of this article is the examination of differences in the distribution of subjective poverty across the EU countries, with subjective poverty being defined as people´s overall subjective evaluation of their own financial situation. This interest is motivated by the existence of a high cross-country variation in subjective poverty and social exclusion (Nolan & Whelan, 2010: 319; Böhnke, 2010: 307; Mau et. al. 2012: 675). In the past decade, subject-oriented research has become more prevalent in inequality and poverty research. Nowadays the mere description and explanation of objective living-conditions and unequally distributed resources is often supplemented with the subjective perception and evaluation of the individual´s life-circumstances (Halleröd et.al, 1997: 214; Hradil, 2001: 277; Sachweh, 2013: 7).[1] This helps firstly to understand and reconsider the appropriateness of currently established poverty measures in cross-national sociological research on poverty and inequality. Secondly, subjective poverty measures are an appropriate way to capture the variation of subjectively perceived acceptable minimum living standards in the European countries, whereas conventional relative income poverty measures do not adequately depict varying degrees of satisfaction with financial resources. With respect to processes of Europeanisation, researchers on poverty and inequality are generally interested in the convergence or divergence of living standards in the EU (Atkinson et. al. 2005). Others conjecture an emerging European reference frame when it comes to questions of how individuals assess their living conditions, well-being, social inclusion, or financial situation (Delhey & Kohler, 2007; Böhnke, 2007; Heidenreich & Härpfer, 2010). However, most of this research focuses merely on country-specific macro-factors such as GDP, national median income or poverty rates whereas individual factors, which may dominate macro-factors, are often neglected. Furthermore, established poverty thresholds (e.g. 60% of the *national median* income) which are of importance for the characterisation of the poor within a nation-state are commonly transferred to the EU-level (60% of the *EU-wide median* income), which leads to massive differences in poverty rates across European countries, with post-communist countries reporting the highest and Scandinavian countries the lowest EU-wide income poverty rates.

[1] The declared objective is the extension of traditional social stratification measures with a subjective evaluation of patterns of inequality. This notion has been emphasized particularly by research on social milieus and lifestyle research (Sachweh, 2012).

The aim of this paper is the investigation of the individual and contextual determinants of subjective poverty. Furthermore, we wish to problematise predefined income poverty thresholds at the EU level, as it is commonly acknowledged that money does not have a uniform effect on subjective well-being across different countries (Delhey & Kohler, 2007: 398). We contribute to discussions on subject-oriented research on poverty by analysing an individual's income position within the EU after controlling for standard individual as well as various macro factors. The research questions driving this study are as follows:

- In how far does the relationship between income poverty and subjective poverty differ across the EU-member states?
- Which impact does the nation-state have on subjective poverty?

These questions will be answered by concentrating on individuals´ subjective evaluation of their own financial situation using EU-SILC data including 28 European countries.[2]

The structure of the paper is as follows: In the next section, working definitions of poverty will be provided, the debate on subjective poverty in Europe will be summarised and our hypotheses will be presented. Thereafter follows a brief description of the data and methodological procedures used in this research. The penultimate section shows our empirical findings and exposes the problems of predefined poverty thresholds in cross-national research. A summary and discussion of the major findings will be provided in the final section, and methodological conclusions for future cross-national sociological poverty research will be drawn.

[2] For more details on the underlying EU-SILC data set and various data transformations, see chapter 3 (Data and variables).

2 Literature review

2.1 Poverty measurement and definitions

People are considered as living in poverty if their income and resources are so limited that they are precluded from participating in the activities commonly approved by the society in which they live (Townsend, 1979: 88; European Commission, 2004). Central for the measurement of poverty is the `at risk of poverty line´ that is derived from the net disposable household income which includes the income of all household members after taxes and social contributions, divided by the weighted factor of all household members, called `equivalent net disposable household income´.[3] In general, the poverty threshold is set at 60% of the median equivalent net disposable household income of a certain country (Atkinson et. al. 2002; Marlier et. al. 2007). This definition establishes a relative understanding of income poverty, meaning that income poverty is defined with reference to the income distribution of the country where a certain individual lives.

In the European context, however, an additional income poverty measure which assesses income poverty relative to the income distribution of the entire EU is useful (Fahey, 2007; Kangas & Ritakallio, 2007: 122), as the process of political and social integration of Europe has created a common political and economic system, which has an impact on the structuration of inequalities. Additionally, a common social space that affects the perception and evaluation of the life-circumstances and identifications of the European population is assumed to have emerged (Kuhn, 2011; Dickes et al. 2010; Beck & Grande, 2004; Heidenreich, 2006; Pichler, 2008). Considering this process, the EU poverty threshold is set at 60% of the median equivalent net disposable household income of the *aggregated EU population*.[4] Hence, treating people as poor when they fall below *60% of the EU-median income* takes a

[3] The weighting factor of the modified OECD scale assigns all household members a particular weight according to their age. The reason for that procedure is the assumption that more household members reduce the costs for durable goods. Furthermore, it is assumed that children have lower costs of living than adults and that the household income is equally portioned to all household members. The modified OECD Scale assigns a value of 1 to the first adult in the household, 0.5 to each additional adult and 0.3 to each child under 14. The division of the total disposable household income by the household weighting factor assigns each household member an identical amount of money (Fusco, et. al, 2010: 135).

[4] Next to the monetary concepts of poverty, Townsend (1979) introduced the concept of *material deprivation* which investigates the lack of particular resources that result in exclusion from the standard of living. Material deprivation stands in a close relationship with monetary under-provision, as those who have limited monetary resources have less capabilities to afford material goods such as cars, washing machines or other durable goods (Fusco et. al., 2010: 138). As these measures are assumed to be highly correlated (Israel,

possible shift of comparative living standards in the EU into account. This is crucial for an analysis of a ´minimum acceptable standard of living` in the EU (European Commission, 2004).

The notion of subjective poverty was first proposed in the 1970s (Goedhart et al., 1977; Van Praag et al., 1980). Whereas income poverty is based on external criteria, subjective poverty is based on individual perceptions and evaluations of external circumstances (Walker, 1987: 216; Goedemé & Rottiers, 2011: 80). Subjective poverty is defined as a considerably low level of satisfaction with one's life situation or with particular *life domains* such as income, health, leisure time, environment or social integration (Van Praag & Ferrer-i-Carbonell, 2005; Böhnke, 2008: 137). Similar to the relative income definition, subjective poverty has a relative component as well. It has been shown that not just the objective reality influences the evaluation of one´s living situation, but that the comparison with other people's living standards plays a role as well (Festinger, 1954; Delhey & Kohler, 2007). Therefore, one could conclude that subjective poverty is defined in a rather complex, vague and commutable manner in the literature. Since this study investigates the impact of *national* and *EU-wide* predefined income poverty thresholds on subjective poverty, we operationalise subjective poverty as "subjective economic stress" (Whelan & Maître, 2009) or as Goedemé and Rottiers (2011) put it, as "a feeling that you do not have enough to get along" (2011: 80). By this it becomes possible to observe the varying impact of objective income on subjective income satisfaction in a cross-national perspective.

2.2 State of the art and research questions

Research on poverty and inequality in the EU-context conjectures an emerging European frame of reference when it comes to questions about subjective individual assessments of life satisfaction, well-being (Delhey & Kohler, 2006: 351; 2007: 399), satisfaction with working conditions (Münch & Büttner, 2006: 65; Drobnič et al. 2010), belonging and social inclusion (Böhnke, 2007: 304) or satisfaction with one's current financial situation (Nolan & Whelan, 2010: 317; Heidenreich & Härpfer, 2010: 254, Kangas & Ritakallio, 2007). Our aim, however, is not to postulate a European point of reference with respect to income satisfaction. Similarly to Goedemé and Rottiers (2011: 85) we are convinced that our operationalisa-

2013), no special attention is given to the latter concept of material deprivation. For more information on the concept, see Townsend (1979), Nolan & Whelan (2010) and Atkinson & Marlier (2010).

tion of subjective poverty is not appropriate for investigating publicly oriented (that means generalised) perceptions of a European minimum acceptable standard of living. The question "Are you able to make ends meet?" is privately oriented and focuses on the individual level. Therefore, it seems problematic for us to derive generalised European aspirations about a European minimum acceptable living standard.

Fahey (2007) presents a strong correlation between the mean subjective poverty rate and the income poverty rate across the EU countries measured at 60% of the EU-wide median net income. By contrast, the relationship between the income poverty rate measured at 60% of the national median net income and the mean of subjective poverty remains weak. Since a higher share of people fall below the EU-wide income poverty line in poor EU states, Fahey suggests "[…] a strong sense of deprivation (…) in the poorer compared with the richer states in the EU" (2007: 44). However, Fahey concentrates solely on country-specific characteristics (such as mean material deprivation scores or poverty rates) in explaining subjective poverty. Even when those factors are important in explaining life satisfaction (Wilkinson & Pickett, 2009), Fahey neglects the impact of individual socio-demographic characteristics such as age, gender, educational degree or the income position of an individual, which may dominate the effects of country-specific macro-variables. Thus, the relationship between the actual income situation of an individual and his/her subjective evaluation of it is neglected.

Mau et al. (2012) investigate subjective socio-economic insecurity and focus explicitly on both contextual and individual factors.[5] Furthermore, they apply a multi-level method that can deal with the heteroskedasticity of pooled data sets by taking cross-country variations into account. The main finding of their study is a quite large variation of perceptions of subjective insecurity among the 20 countries in their sample. The bulk of the variance can be explained by the socio-economic characteristics of the respondents (2012: 22), underlining the importance of individual characteristics. Nevertheless, nation-state-specific factors are still of relevance even when individual factors are included in the model. Multi-level models, however, do not provide detailed information on the exact effects of variables per country.

[5] "Studies show that the extent to which a social situation is perceived to be secure depends on cultural factors (Douglas and Wildavsky, 1982; Furedi, 2006), while others demonstrate that it depends on the way individuals are accustomed to (in)security and capacities to cope with insecurity (Tulloch and Lupton, 2003; Gerhold, 2009). However, one can assume that institutional and socio-economic factors might also matter" (Mau et al., 2012: 656).

Thus, we do not get to know to what extent the effect of income on subjective socio-economic insecurity varies across countries.

However, if we wish to draw conclusions about a ´minimum acceptable standard of living´ in Europe, it is important to analyse the effect of countries with respect to their sign and magnitude. The lack of individual control variables and the scarcity of explicit investigations of income effects across countries are the core aspects we address in this paper. Our key question addresses the determinants of subjective poverty with a special emphasis on income: How does the link between relative income poverty and subjective economic stress differ across European countries? In order to answer this question, we proceed stepwise. First, the unconditional relationship between income poverty and subjective economic stress is explored. Next, we apply inferential statistics which provide insights about the individual and country-specific determinants of subjective economic stress. Here, we control for various socio-demographic and country-specific aspects such as GDP per capita, employment rate and social expenditures[6] as well as cross-level interaction terms for the individual income position within the EU for each European country using multivariate LOGIT regression models.

2.3 Hypotheses

Income poverty leads to reduced possibilities of economic, social and cultural participation. It is assumed that persons who fall below the *national poverty line* more often report difficulties to make ends meet and thus to feel subjectively poor. As shown above, the income position relative to the *EU-median* income is of importance as well when people evaluate their financial situation.

Although our operationalisation of subjective poverty does not allow conclusions about a European reference framework that defines a minimum acceptable standard of living, we are aware of the fact that an income below the *EU-wide* poverty line is in absolute terms rather low. Hence, one can assume that subjective poverty affects predominantly people in countries with a high share of citizens earning a low income, namely an income below the

[6] Mettler & Soss (2004) highlight the importance of institutional settings for citizens´ opinions. Cantillon (2011) emphasised the importance of GDP per capita, social expenditures and employment rate as crucial factors for the investigation of the policy-target `Europe 2020 agenda´, which aims at the convergence of growth, employment and poverty across EU-countries. (2011: 432).

EU poverty threshold. Nevertheless, one must also consider the income distribution of nation-states when assessing the explanatory power of income. In affluent countries, a low fraction of people lives below the EU-poverty line. Here one could assume that the national poverty line is a better predictor of subjective poverty. In order to grasp the relationship between income poverty and subjective poverty, the extent of the overlap between people feeling subjectively poor and people falling below the *national* and *EU-wide* poverty threshold is investigated. We test the following hypotheses:

> *H1: For people in less prosperous countries the EU-wide poverty line is a better predictor of subjective poverty than the national poverty line.*
>
> *H2: For people in prosperous countries the national poverty line is a better predictor of subjective poverty than the EU-wide poverty line.*

The inferential part of this paper combines various socio-demographic and country-specific factors. Previous studies have shown the importance of country-specific factors in determining subjective poverty. The affluence (e.g. GDP per capita) of a country has a dominant influence on the quality of life (Delhey & Kohler, 2007: 397). Furthermore, it has been shown that high government redistributive efforts (e.g. social expenditure) reduce the share of people living under the poverty line (Gough et al., 1997; Garret & Mitchel 2001). Additionally, the labour market is a central locus of income distribution. Hence, a high employment rate (especially of women) can lift people out of poverty (Kenworthy, 2004; Cantillon, 2013). By including individual socio-demographic factors, the manifold determinants of subjective poverty can be examined across countries. It has been shown that females have a lower work-intensity and earn less money than their male counterparts. Also lowly educated persons are at a higher risk to experience income poverty. A further aspect that contributes to low-wage risks is a migrant background (Grimshaw, 2011). Furthermore, it is commonly agreed that young people and unskilled workers have an especially high risk of facing income poverty (Peña-Casas & Latta, 2004). Next to gender, age, educational degree and occupational class, one needs to consider the household composition as well. It has been shown that single-parents have a higher risk of experiencing income poverty than two-adult households without children, which have a considerably lower risk of income poverty (Cantillon, 2011). As subjective poverty is operationalised by the evaluation of income, it is assumed that all individual factors which increase the risk of income poverty also increase the risk of subjective

poverty. A summary of the expected sign of the partial effect of these control variables can be found in Table 1. In addition to these socio-demographic individual factors, an investigation of the specific effects of income poverty (relative to the *national median* and relative to the *EU-median*) on subjective poverty across the EU-countries will be undertaken. Delhey & Kohler state that "money is a road to individual happiness everywhere, but the effect is stronger in some places than in others" (2007: 398). In order to capture these country-specific effects of *EU-income* poverty, cross-level interaction terms are included for each country to capture potential differences among people who fall below the EU-poverty threshold and those above the threshold. Hence, we test for potential asymmetric subjective poverty effects as a function of the EU-wide poverty threshold in each country and additionally control for contextual effects. An asymmetric effect of an income below the *EU-poverty line* on subjective poverty across the EU countries indicates that the 60% EU-median income poverty line is not an appropriate measure for the often presumed minimum acceptable standard of living in the EU. To analyse the varying effect of income on subjective poverty across countries, the following hypothesis will be tested:

> *H3: The effect of income below the EU-poverty threshold differs with respect to its sign and magnitude across the European countries.*

Dependent Variable "*Subjective Poverty*" ("Able to make ends meet")	
Independent Variables	***Expected sign of the partial effect***
Individual factors	
Gender (male=0; female=1)	+
Age	-
Educational degree (low=1; medium=2; high=3)	-
Occupational status (from elementary occupations to high-skilled non-manual work)	-
Migration experience	+
Income position relative to national median	-
Income below EU-poverty line (0=above EU-median; 1=below EU-Median)	+
Single HH (Ref.)	
Household without child(ren)	-
Single parent	+
Two adults with child(ren)	-
Country-specific factors	
Economic performance (GDP in PPP per capita)	-
Social expenditures (as % of GDP)	-
Employment rate (as % of all persons aged 15-64)	-

Table 1: Expected influences of the selected variables for the multivariate logistic regression

3 Data and variables

The individual data we use come from the eighth wave of the European Union Statistics on Income and Living Conditions (EU-SILC)[7] and correspond to the survey year 2011. The cross-sectional data consist of 28 countries[8] with 201.612 observations. Individuals aged below 16 and individuals who are not classified as household heads were excluded. In principle, subjective poverty is a household variable which takes all household members as equivalent to the value of the household head. If we want to make inferences about factors that determine subjective poverty, it is however problematic to include also those individuals who have not had the chance to evaluate their financial situation. Therefore, only data from the household head, defined as the person who responded to the EU-SILC questionnaire, but no other household members are taken into consideration in the following analysis.

Our dependent variable, which measures subjective economic stress as our approximation of subjective poverty, is a categorical outcome variable operationalised by the item hs120: *"Thinking of your household's total income is your household able to make ends meet, namely, to pay for its usual necessary expenses?"* In answering this question, respondents can choose among six answers: (a) "with great difficulty", (b) "with difficulty", (c) "with some difficulty", (d) "fairly easy", (e) "easily", (f) "very easy". In order to obtain a binary outcome which takes "0" for no difficulties and "1" for difficulties in making ends meet, the answers "a" and "b" were recoded to "1"=difficulties. All other values received the value "0" for no difficulties in making ends meet.[9] This procedure is necessary as we are not interested in the intensity of subjective poverty. Rather, we simply wish to know whether persons get along with their equivalent net income or not.[10]

[7] The EU-SILC database is currently the most comprehensive internationally comparable database within Europe. Nevertheless, it has some problems concerning the strategies used for collecting the data or the problem of underrepresented foreigners, elderly and young children (Lohmann, 2010; Frick & Krell, 2010, Hauser, 2007).

[8] The 27 countries considered are Austria, Belgium, Bulgaria, Switzerland, Cyprus, Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Greece, Hungary, Italy, Island, Lithuania, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Sweden, Slovenia and the United Kingdom. Luxembourg was excluded due to its outlier position, as it would distort the estimators in the inferential part of this paper (Kangas & Ritakallio, 2004).

[9] Robustness checks have been conducted for the binary outcome variable. The results in the following analyses do not change when we construct a binary outcome variable with "with great difficulty", "with difficulty" and "with some difficulty" as outcomes for subjective economic stress.

[10] This variable captures merely whether an individual perceives his/her income as sufficient for making ends meet. Hence, it captures whether an individual has a `minimum standard of living´ according to his/her indi-

Socio-demographic variables which may explain subjective poverty were taken from the EU-SILC database. We included *gender*, *age*, *educational degree*, *occupational status, migrant background*, and a variable that captures the relation of an individual´s equalised household net income in relation to the median income of the country in which the individual lives. This variable is named *"Income position relative to national median*".[11] To control for the household composition, the compositions "*single household*", "*single parent*", "*household without child(ren)*" and "*Two adult household with child(ren)*" were created.

Our key variable, "*Income below EU poverty line"*, is a dummy variable which accounts for potential EU-wide poverty threshold effects. It takes the value 1 if an individual's net equivalent income is below the EU poverty line, and otherwise zero. In order to capture country-specific threshold effects, as described before, we construct an interaction term,

$$IT\_country_i = "below\_EU\_poverty\_line" * country_i$$

where *country* is a dummy which takes the value 1 for country *i* and else zero. This constitutive term of an interaction shows the impact of this term when the other constitutive terms are zero (Brambor et. al., 2006). The Netherlands are taken as the reference country.

Context variables were included to capture country-specific effects on the outcome variable. These comprise *GDP* (Gross Domestic Product per capita expressed in PPP), *social expenditures* (as a percentage of GDP per capita) and *employment rate* (as a percentage of all persons aged 15-64). These country-specific macro factors are taken from Eurostat. For more information about the recoding of these variables, see Table 6 in the Appendix.

---

vidual needs. That means: by definition, this variable cannot contribute to a deeper understanding of poverty in terms of general or universal criteria about a `minimum acceptable standard of living´ in the EU.

[11] We took a natural logarithm of all income-related variables and GDP per capita, first to linearize possible non-linear relationships and second to simplify the interpretation of the coefficients (Kohler & Kreuter, 2005).

4 Empirical findings

4.1 The relationship between income poverty and subjective poverty across the EU states

Before we start with the investigation of the relationship between income poverty and subjective poverty across the EU member states, an overview of the frequency of subjective poverty across the European countries is provided. Figure 1 depicts the prevalence of subjective poverty in 2011. One can see a high cross-country variation. Whereas just 8% feel subjectively poor in Norway, the value is much higher in Bulgaria (63%). The share of people feeling subjectively poor is relatively low in the Scandinavian and Continental European countries. Higher subjective poverty rates can be found especially in the Eastern European as well as in some Southern European countries. This points toward contextual specificities which may have an influence on subjective poverty. Those countries which are generally perceived as affluent have lower subjective poverty rates, and those which are commonly apprehended as less prosperous have higher subjective poverty rates.

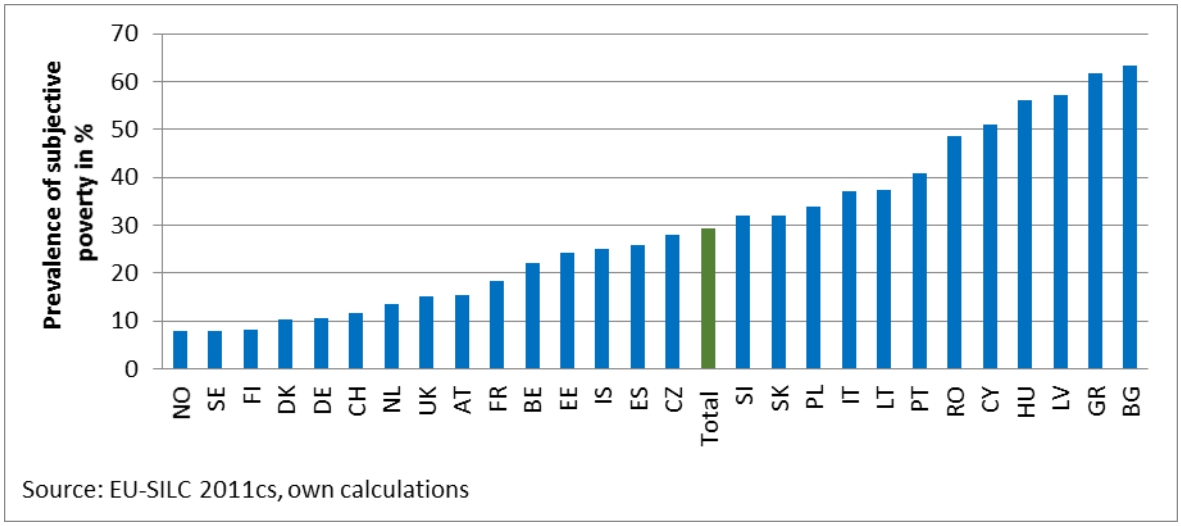

Figure 1: Share of subjective poverty in 27 EU countries (2005 and 2010)

Figure 2 shows firstly the percentage of those who experience subjective poverty and fall below the *national poverty threshold.* Secondly it also shows the percentage of those feeling subjectively poor and falling below the *EU-poverty threshold*. Income poverty goes along with difficulties to pay the rent and afford other goods and services. Also, it limits the chances to participate in cultural and social activities. Therefore, one could assume that subjective poverty goes along with income poverty. The summary statistics, however, display a much more complex picture. Only 12% - 54% of those who feel subjectively poor are income-poor

relative to their national poverty line (blue dots). This means that the majority of people who are affected by subjective poverty are not affected by income poverty in their home country. Hence, the majority of those feeling subjectively poor are not necessarily income-poor in their national context.

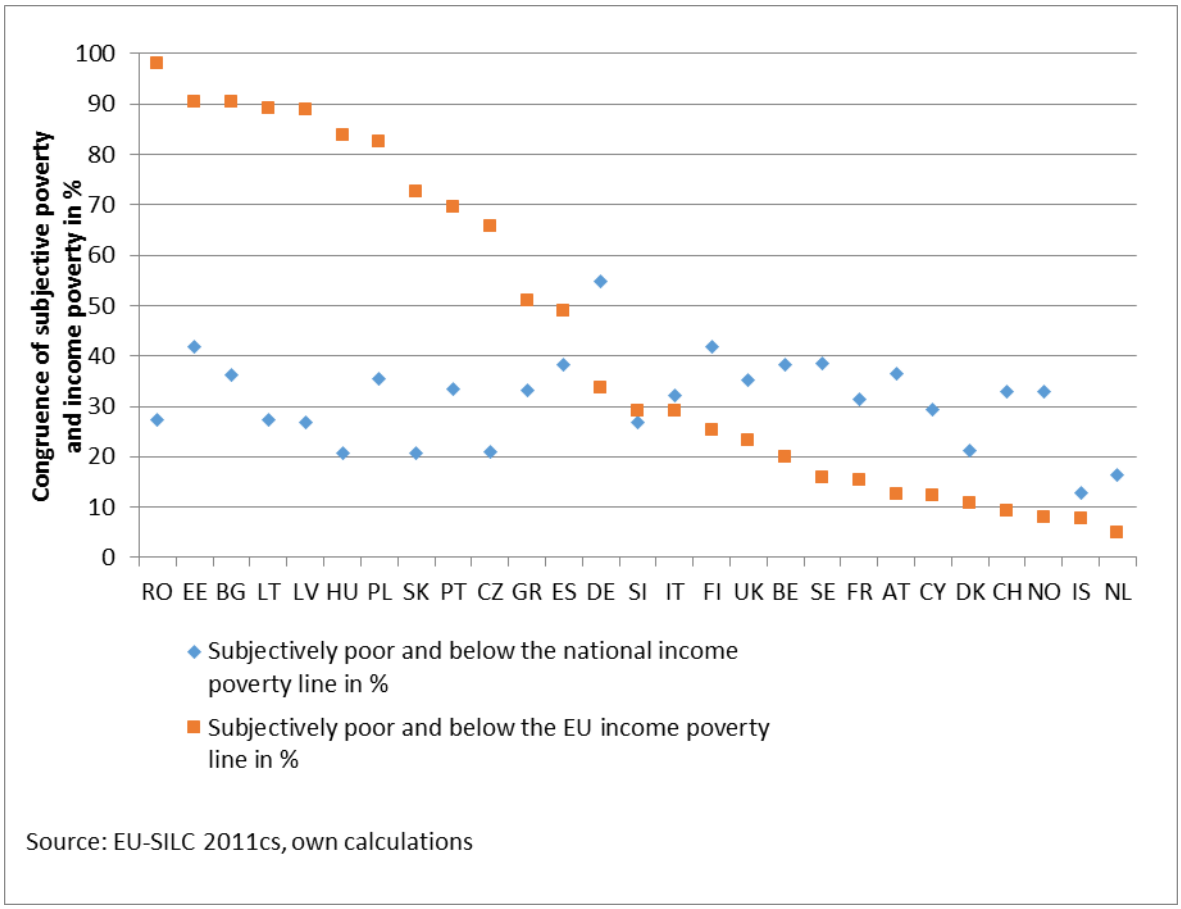

Table 2: Percentage of experienced subjective poverty among those falling below the 60% median income threshold of their home country and those falling below the 60% median income threshold of the EU 2011.

Furthermore, the left side of Figure 2 shows a high congruence between subjective poverty and experienced *EU-wide income poverty* (orange dots). In Bulgaria, for example, only 36% of those feeling subjectively poor fall below the *national poverty line*, whereas 90% of the subjectively poor fall below the *EU-wide poverty line*. This means that the *EU-poverty threshold* seems to predict subjective poverty more accurately in poor countries such as Romania, Bulgaria, Lithuania, Hungary, Portugal and Greece. This impression is further reinforced when we look at the right side of Figure 2. Here we can see that the congruence between those who feel subjectively poor and those who fall below the national poverty line

(blue dots) is larger in prosperous countries. Whereas 55% of the subjectively poor are income-poor relative to the *national income distribution* in Germany, just 33% of the subjectively poor are income-poor relative to the *EU-wide income distribution*. A similar congruence can be seen in Finland, Belgium, Sweden and Austria. Thus, in these countries, the EU-wide poverty threshold seems to be less important in explaining subjective poverty compared to the national poverty threshold.

To sum up, Figure 2 implies two distinct insights. First, the majority of those feeling subjectively poor are not necessarily income-poor relative to their home country. Second, whereas the *EU-wide poverty line* seems to be more important in determining subjective poverty in less prosperous countries, the *national poverty line* seems to predict subjective poverty more accurately in prosperous countries. Hence, hypotheses *H1* and *H2* can be confirmed. This observation could be explained by the high share of people living below *the EU-wide poverty threshold* in less affluent Eastern and Mediterranean European countries, and implies nothing else but the outstanding importance of absolute income in determining subjective poverty.

Still, it remains unclear which individual factors explain subjective poverty additionally to the unconditional income position relative to the *national* and *EU-median*. The next section deals with various individual and contextual factors that contribute to the determination of subjective poverty.

4.2 The individual determinants of subjective poverty across time

In a next step, we apply a multivariate logistic regression in order to discover further conditional individual and country-specific determinants of subjective poverty. In contrast to the simple descriptive statistics presented before, we obtain information about the conditional effects of variables on subjective poverty after controlling for various influences. Table 2 shows the estimates of three consecutive logistic regressions based on data for 2011. In order to grasp the country-specific effects of our *EU-poverty threshold* measure, cross-level interaction terms were included for each country, as described before. The Netherlands serve as the reference country.

Model 1 in Table 2 includes only regressors at the individual level. The marginal effects depict the slope of the regression line taking all independent variables constant to the mean,

and allow the comparison of the strength of effects within and across models (Mood, 2009; Best & Wolf, 2012). In model 2, we add cross-level interaction terms between a country and the information whether an individual earns *below the EU-poverty threshold*. Model 3 merges models 1 and 2 together with macro variables such as GDP per capita, social expenditures and employment rate. These three steps of analysis make the investigation of the concrete effects of country-characteristics on subjective poverty possible and account for possible threshold effects which may vary across countries. Thereby, it is possible to deal with countries not just as oversimplified contexts whose characteristics become translated into variables (e.g. GPD per capita, social expenditures, employment rate), but rather to deal with countries as objects of our study (Kohn, 1987: 714). This approach enables us to test the generality of the direction of the effect of our key variable "*Income below the EU-poverty line*" across European countries.

The results of model 1 show that all individual variables have the expected sign and are significant at the 1% level. We find that females have a higher risk of feeling subjectively poor compared to men, holding the other variables constant. The age effect is negative[12] and a higher educational degree as well as a higher occupational status in the labour market is negatively associated with the likelihood to feel subjectively poor. A person with a migrant background is at a higher risk to feel subjectively poor. Looking at the household composition, one can see that persons in a two-adult household with and without children have a lower risk of feeling subjectively poor compared to single persons. Single parents have a higher risk of feeling subjectively poor than single persons. The ratio of individual income to the national median income captures the effect of the relative income position. The results indicate that an increase in relative income reduces subjective poverty. The dummy capturing the threshold effect whether one lives below the EU-wide poverty threshold takes a positive value and is significantly different from zero. The positive sign of the variable "*below the EU-median income*" implies that on average, the risk to feel subjectively poor is significantly higher for individuals with an income below the EU poverty-line across all countries, which is as expected. We refrain from a deeper interpretation here, as the individual variables serve primarily as control variables. Nevertheless, the estimation results on the individual level

[12] Nevertheless, age has presumably a non-linear effect, as young and old people are generally at higher risk of income poverty, which effects the income evaluation to a certain extent.

remain relatively stable even after controlling for additional country-specific effects, as models 2 and 3 show.

The results in model 2 imply that the effect of a person earning an income below the EU-poverty line on the probability of feeling subjectively poor, conditional on the other explanatory variables at the individual level, is higher in Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Estonia, Spain, France, Greece, Hungary, Italy, Island, Lithuania, Latvia, Poland, Portugal, Romania, Slovenia and Slovakia relative to the Netherlands. In contrast, we find negative marginal effects for Switzerland, Denmark, Finland, Norway and Sweden, which means that the probability to feel subjectively poor for persons falling *below the EU-threshold* is lower in these countries compared to the reference country. This may be due to missing predefined macro influences which are not accounted for yet. As mentioned above, contextual factors such as the affluence of a country or the generosity of a welfare state also contribute to the explanation of subjective poverty and may be accountable for the described country differences in the EU-poverty line threshold effect.

Therefore, we add further country-specific macro variables in model 3 to control for these potential effects. The added macro variables comprise GDP per capita, social expenditures and the employment rate. The coefficients on the individual level keep their sign and remain stable with respect to their significance levels. The contextual macro-characteristics have the expected sign and all three marginal effects are significantly different from zero: an increase in GDP per capita, the employment rate and social expenditure reduces the risk of subjective poverty, even after controlling for individual explanatory variables. The estimation results for the cross-level interaction terms provide some interesting insights. It should be kept in mind that the estimates in model 3 are now *conditional* after controlling for additional effects on the macro level. A comparison of models 2 and 3 shows that for some countries, the estimated coefficient of the cross-level interaction effect has switched its sign. We find that the coefficients for Belgium, Bulgaria, Czech Republic, Estonia Spain, France, Italy, Lithuania, Latvia, Poland Romania, Slovenia and Slovakia have turned from positive to negative. An income below the EU-wide poverty line in Austria, Hungary, Island and Portugal has lost its significance. This means that in those countries, an income *below the EU-wide poverty threshold* has no significantly different effect on subjective poverty than in the reference country, the Netherlands. Overall, before controlling for effects at the macro-level, the con-

ditional risk of feeling subjectively poor for people *below the EU poverty line* in the above-listed countries (holding all other variables constant) was found to be higher compared to the reference country, the Netherlands. Yet after controlling for these macro-effects, the conditional risk to feel subjectively poor is now lower relative to the reference. The Mc Fadden R^2 indicates that model 3 is the most sophisticated, with an R^2 of 0.23.

This result emphasizes the importance of the considered macroeconomic variables. We argue that the risk to feel subjectively poor in the aforementioned countries can partly be traced back to the importance of these macro-factors. Model 3 controls for these macro-effects and shows a reduced risk to feel subjectively poor in the above-described countries relative to the reference country which is characterised by a high GDP per capita, high social expenditures and a high employment rate. At this stage, we cannot state why the risk to feel subjectively poor for people with an *income below the EU poverty line* in low-income countries such as Bulgaria or Lithuania decreases relative to the Netherlands after controlling for macro-factors. This finding may be explained, for instance, by cultural aspects such as loose or tight family bounds, cultural patterns of the acceptance of complaints about income, or recently experienced economic growth (Leibig & Valet & Schupp, 2010). This however cannot be explained in this work. Rather, the analysis shows the remarkable heterogeneity of income effects across countries, which emphasizes the importance of a reconsideration of appropriate operationalisations of a “minimum acceptable standard of living” in the EU.

In sum, the logistic-regressions in Table 3 provide a much more complex picture of the individual and contextual determinants of subjective poverty, which enables us to look at the social phenomenon of subjective poverty in a more differentiated and sophisticated manner. Individual variables yield the expected sign and are constantly significant at the 1% level. The most striking result is the confirmation of the asymmetric effect of earning an income below the EU-poverty threshold across all individuals and countries. We find significant differences among countries with respect to the magnitude of this asymmetric effect. Thus, hypothesis *H3* can be confirmed.

Subjective poverty	***Model 1 2010*** *Margin Std.Err*	***Model 2 2010*** *Margin Std.Err*	***Model 3 2010*** *Margin Std.Err*
Individual variables			
Gender	0.044***	0.041***	0.042***
	(21.01)	(18.76)	(19.34)
Age	-0.001***	-0.001***	-0.001***
	(-13.73)	(-19.35)	(-18.68)
Educational degree	-0.065***	-0.064***	-0.056***
	(-37.57)	(-34.17)	(-30.35)
Occupational status	-0.031***	-0.026***	-0.025***
	(-33.05)	(-26.55)	(-24.70)
Migrant background	0.048***	0.075***	0.083***
	(13.00)	(20.27)	(22.40)
Ratio of income in relation to national income	-0.077***	-0.143***	-0.177***
	(-32.37)	(-46.69)	(-51.93)
Income below EU-poverty line	0.242***	n.s.	0.127***
	(96.77)		(10.12)
Ref. Single person			
Household without child(ren)	-0.16***	-0.029***	-0.031***
	(-6.16)	(-10.80)	(-11.63)
Single parent	0.084***	0.093***	0.09***
	(16.21)	(17.91)	(17.32)
Two adults with child(ren)	-0.009**	-0.01**	-0.014***
	(3.10)	(-3.28)	(-4.61)
Context variables			
GDP per capita			-0.175***
			(-12.83)
Social expenditures			-0.011***
			(-18.42)
Employment rate			-0.009***
			(-25.73)
Cross-level interaction terms			
IT_Austria		0.039*	n.s
		(2.27)	
IT_Belgium		0.105***	-0.062***
		(6.86)	(-3.95)
IT_Bulgaria		0.42***	-0.064***
		(31.55)	(-4.24)
IT_Switzerland		-0.082***	-0.083***
		(-4.36)	(-4.33)
IT_Cyprus		0.338***	0.088***
		(19.87)	(5.11)
IT_Czech Republic		0.143***	-0.151***
		(10.92)	(-10.99)
IT_Germany		n.s.	-0.066***
			(-4.72)
IT_Denmark		-0.115***	-0.126***
		(-5.27)	(-5.86)
IT_Estonia		0.08***	-0.275***
		(5.84)	(-18.78)
IT_Spain		0.058***	-0.22***
		(4.35)	(-15.45)
IT_Finland		-0.11***	-0.203***
		(-6.85)	(-12.76)
IT_France		0.092***	-0.029*
		(6.38)	(-1.96)

Table 2: Logistic regression for subjective poverty as a function of individual characteristics and national contexts.

Table 2: Continued.

Subjective poverty	***Model 1 2010*** *Margin Std.Err*	***Model 2 2010*** *Margin Std.Err*	***Model 3 2010*** *Margin Std.Err*
IT_Greece		0.416***	0.114***
		(29.71)	(7.78)
IT_Hungary		0.369***	n.s.
		(28.81)	
IT_Italy		0.194***	-0.048***
		(14.82)	(-3.46)
IT_Island		0.079***	n.s.
		(4.15)	
IT_Lithuania		0.201***	-0.188***
		(14.89)	(-13.01)
IT_Latvia		0.351***	-0.722***
		(26.52)	(-5.00)
IT_Norway		-0.166***	-0.19***
		(-5.20)	(-5.76)
IT_Poland		0.194***	-0.21***
		(15.16)	(-15.01)
IT_Portugal		0.209***	n.s.
		(15.23)	
IT_Romania		0.291***	-0.186***
		(22.17)	(-12.47)
IT_Sweden		-0.102***	-0.141***
		(-5.67)	(-7.94)
IT_Slovenia		0.185***	-0.07***
		(13.63)	(-5.05)
IT_Slovakia		0.171***	-0.211***
		(12.63)	(-14.43)
IT_United Kingdom		n.s.	-0.137***
			(-9.37)
R^2	0.16	0.21	0.23
aic	2.00e+05	1.87e+05	1.83e+05
bic	2.00e+05	1.87e+05	1.83e+05
N	201612	201612	201612
Significance: * p<0.05; ** p<0.01; *** p<0.001			

5 Conclusion

The main objective of this paper was to investigate the determinants of subjective poverty, operationalised as subjective economic stress in the EU. A special focus lay on the explanatory power of the external criterion "income" as well as the internal subjective evaluation of it. We observed individual and country-specific characteristics which contribute to explaining subjective poverty, and formulated hypotheses to deepen our knowledge of the explanatory factors of subjective poverty and assess the poverty measures currently established in cross-national poverty research in the EU.

By means of summary statistics, we found that the majority of people feeling subjectively poor are not affected by *national income poverty.* The overlap of persons feeling subjectively poor and falling below the *EU poverty threshold* is larger in less affluent countries such as Estonia, Hungary, or Greece than in more affluent countries. In prosperous countries, the *national poverty threshold* seems to be a better predictor of subjective poverty. This could be explained by the relatively high standard of living in prosperous countries like Germany, Norway or the Netherlands. Also with respect to the high share of people falling below the *EU-wide poverty line* in less affluent Eastern and Mediterranean countries, we can conclude that absolute income seems to be the best predictor of subjective poverty.

The main results of the multivariate logistic regression with cross-level interaction terms can be summarised as follows: Individual variables have the expected sign and are constantly significant at the 1% level. At the macro-level, we observed that GDP per capita, social expenditures and the employment rate correlate negatively with subjective poverty. These contextual factors are of outstanding importance for determining subjective poverty. After controlling for these factors, people living under the *EU-poverty line* in Belgium, Bulgaria, Czech Republic, Estonia, Spain, France, Italy, Lithuania, Latvia, Poland, Romania, Slovenia and Slovakia are even less likely to feel subjectively poor compared to the reference country, the Netherlands. Hence, the asymmetric effect of earning an income below the EU-poverty threshold across all individuals and countries can be confirmed. We cannot state why the impact of living *below the EU poverty-line* on the risk of feeling subjectively poor is lower in the above-named countries relative to the Netherlands. Imaginable are different cultural aspects such as loose or tight family bounds, cultural patterns of the acceptance of com-

plaints about income, or economic growth in recent years. By testing the generality of the effect of income below the EU-wide poverty threshold across European countries (and with respect to Delhey and Kohler [2007]), we confirm that an individual´s income does not have the same effect on subjective poverty across all countries. In contrast to Mau et al. (2012), we can more precisely designate the concrete countries in *which income below the EU-poverty threshold* has a positive and a negative effect before and after controlling for contextual variables, thereby contributing to a deeper understanding of a ´minimum acceptable standard of living´ in Europe.

More precisely, asymmetric effects highlight firstly that past research must be treated with some caution, as most researchers did not appropriately account for the problem of potential heteroskedasticity due to threshold effects. This might have led to flawed estimates and significance tests as well as theoretical conclusions. Secondly, we can draw methodological conclusions based on the above-described heterogeneous observations. With the effect of the *EU-wide poverty line* being not constant across all European countries, we must admit that the EU-wide poverty threshold, set at 60% of the median income of the aggregated EU population, is not an adequate measure to capture a presumed "minimum acceptable standard of living in the EU" (European Commission, 2004). Rather, future sociological poverty research with a cross-national perspective should renounce the established national and EU-wide poverty thresholds and should turn instead towards subjectively perceived income poverty thresholds.[13] Only by this is it possible to evaluate living standards in European countries appropriately and to define the minimum acceptable standard of living in the EU. Therefore, future research might ask: At which absolute income level does subjective poverty not decline substantially anymore? Or: Which absolute income is necessary to protect people from subjective poverty? By addressing these questions, EU-SILC could serve to identify subjective income poverty thresholds and combine them with the income distribution of the European Union.

Last but not least, some limitations and restrictions of our empirical analysis should be mentioned to highlight which aspects should be considered in future research on subjective economic stress. First of all, we must keep in mind that the survey question on which our de-

pendent variable is based differs between countries to some degree, which makes its comparison across countries nontrivial. Nevertheless, our dependent variable is widely used and EU-SILC is currently the most comprehensive internationally comparable database in Europe. Additionally, we want to emphasize that our analysis should be seen as a first step towards an empirical problematisation of predefined poverty measures. Our call for a data-driven poverty threshold goes hand in hand with an extension of the underlying meaning of subjective poverty. In order to account for the complex measure of subjective poverty (operationalised as economic stress), one should also take into consideration other financial stressors such as the "ability to face unexpected expenses", "arrears on utility bills" or "arrears on mortgage or rent payment". For reasons of simplicity and parsimony, the narrow definition of subjective poverty used in this article is however adequate for our claim.

To sum up, the above-described complex picture of the determinants of subjective poverty contributes to subject-oriented research in Europe, thereby enabling us to enlarge our knowledge of objective living-conditions in the European countries and their subjective evaluation. A major implication of this research is the renouncement of predefined income poverty lines in the European Union, as those are an inadequate measure for capturing the ´minimum acceptable standard of living´ in the European social space.

[13] Van den Bosch (2001) distinguishes four approaches for identifying the poor. First, the consensual income method, second the consensual standard of living method, third income evaluation and forth the income satisfaction method.

6 Appendix

Variables	Operationalisation	Data source
Dependent variable		
Subjective poverty	Difficulties and great difficulties in making ends meet with current household total income	EU-SILC (hx120)
Independent individual variables		
Gender	Male and female (ref. category)	EU-SILC (rb090)
Age	Age of respondent	EU-SILC (rx020)
Educational degree[14]	Highest ISCED level attained (low=ISCED 1&2; medium=ISCED 3&4; high=ISCED 5&6)	EU-SILC (pe040)
Occupational status[15]	Occupational status classified by ISCO88 (elementary occupations=ISCO88 91-93; skilled manual occupations=ISCO88 61-81; low-skilled non-manual occupations= ISCO88 41-52; high-skilled non-manual occupations = ISCO88 11-33)	EU-SILC (pl050)
Migration background	Respondent with foreign nationality or born abroad (ref. category residents)	EU-SILC (pb210; pb220a)
Single household	One person Household (ref. category)	EU-SILC (hx060)
Household without child(ren)	Two adults with no dependent child(ren)	EU-SILC (hx060)
Single parent Household	One adult with dependent child(ren)	EU-SILC (hx060
Two adult household with child(ren)	Two adults with dependent child(ren)	EU-SILC (hx060)
Ratio of income in relation to national income	Equivalent household net income in PPP divided by national median income	EU-SILC (hx090) Eurostat (PPP-purchasing poverty parities)
Below EU-poverty threshold	Equalized household net income in ppp below 60% of the EU-wide income median	EU-SILC (hx090)
Below national income poverty threshold	Equalized household net income in ppp below 60% of the national income median	EU-SILC (hx090)
Independent country-specific variables		
GDP	Gross Domestic Product in PPP per capita	Eurostat
Social expenditures	Social expenditures in % of GDP	Eurostat
Employment rate	Employment rate as % of all persons aged 15-64	Eurostat

Table 4: Individual- and country specific variables, data sources and operationalisation.

[14] Highest educational degree attained. ISCED is an international standard classification of education that allows comparisons of educational degrees between countries. It distinguishes pre-primary education, primary education, lower secondary education, upper secondary education, post-secondary non tertiary education, first and second stage of tertiary education.

[15] The occupation is classified by ISCO88 which is an international standard classification of occupations that allows the identification of social classes. The occupational classes applied here are elementary occupations, skilled manual occupations, low-skilled non-manual occupations and high-skilled non-manual occupations. These classifications where derived according to a scheme suggested by Pintelon & Cantillon & Van den Bosch & Whelan (2011).

7 References

Atkinson, A. B. & Cantillon, B. & Malier, E. & Nolan, B. (2002). *Social Indicators: the EU and Social Inclusion*. Oxford: Oxford University Press

Atkinson, A. B. & Cantillon, B. & Marlier, E. & Nolan, B. (2005). Taking Forward the EU Social Inclusion Process. Vol. 1. Report. An independent report commissioned by the Luxembourg Presidency of the Council of the European Union. Luxembourg: Government of the Grand Duchy of Luxembourg. URL: http://www.eu2005.lu/fr/actualites/documents_travail/2005/06/13socialreport/report.pdf (last accessed: 27.02.2013)

Atkinson, A. B. & Marlier, E. (Ed.) (2010). *Income and living conditions in Europe*. Luxembourg: Publications Office of the European Union

Beck, U. & Grande, E. (2004). *Das kosmopolitische Europa. Gesellschaft und Politik in der Zweiten Moderne*. Frankfurt am Main: Suhrkamp.

Best, H. & Wolf, C. (2012). Modellvergleich und Ergebnisinterpretation in Logit- und Probit-Regressionen. In*: Kölner Zeitschrift für Soziologie und Sozialpsychologie* 64: 377-395

Brambor, T. & Clark, W. & Golder, M. (2006). Understanding interaction models: Improving empirical analyses. Political Analysis 14(1): 63-82

Böhnke, P. (2007). Feeling left out. Patterns of social integration and exclusion. In: Alber, J. & Fahey, T. & Saraceno, C. (Ed.) *Handbook of Quality of life in the Enlarged European Union*. New York: Routledge. 304-327

Böhnke, P. (2008). Are the poor socially integrated? The link between poverty and social support in different welfare regimes. In: *Journal of European Social Policy* 18(2): 133-150

Cantillon, B. (2011). The paradox of the social investment state: growth, employment and poverty in the Lisbon era. In: *Journal of European Social Policy* 21:432-449

Delhey, J. & Kohler, U. (2006). Europäisierung sozialer Ungleichheit. Die Perspektive der Referenzgruppen-Forschung. In: Heidenreich, M. (Ed*.) Die Europäisierung sozialer Ungleichheit. Zur transnationalen Klassen- und Sozialstrukturanalyse.* Frankfurt am Main: Campus. 339-358

Delhey, J. & Kohler, U. (2007). Where we stand in Europe. Citizen perceptions of European country rankings and their influence on subjective well-being. In: Alber, J. & Fahey, T. & Saraceno, C. (Ed.) *Handbook of Quality of life in the Enlarged European Union*. New York: Routledge. 385-404

Dickes, P. & Fusco, A. & Marlier, E. (2010). Structure of National Perceptions of Social needs Across EU Countries. In: *Social Indicators Research* 95: 143-167

Douglas, M. & Wildavsky, A. (1982). *Risk and Culture: An Essay on the Selection of Technological and Environmental Dangers.* Barkeley, CA: University of California Press.

Drobnič, S. & Beham, B. & Präg, P. (2010). Good Job, Good Life? Working Conditions and Quality of Life in Europe. In: *Social Indicators Research* 99: 205-225

European Commission (2004). Joint Report on Social Inclusion 2004. Luxembourg. Office for official Publications of the European Communities. http://ec.europa.eu/employment_social/social_inclusion/docs/final_joint_inclusion_report_2003_en.pdf (last accessed: 27.02.2013)

Festinger, L. (1954). A Theory of Social Comparison Processes. In: *Human Relations* (7): 117-140

Frick, J. R. & Krell, K. (2010). Measuring Income in Household Panel Surveys: A Comparison of EU-SILC and SOEP. In: *SOEP Papers on Multidisciplinary Panel Data Research* (263): 1-42

Furedi, F. (2006). *Culture of fear Revisited: Risk-taking and the morality of Low Expectation.* 4th Edition. London: Continuum

Garret, G. & Mitchell, D. (2001). Globalization, government spending and taxation in the OECD. In: *European Journal of Political* Research 39 (2): 145-177

Gerhold, L. (2009). *Umgang mit makrosozialer Unsicherheit: zur individuelle Wahrnehmung und Bewältigung gesellschaftlich-politischer Phänomene*. Lengerich: Pabst

Goedemé, T. & Rottiers, S. (2011). Poverty in the Enlarged European Union. A Discussion about Definitions and Reference Groups. In: *Sociology Compass* 5 (1): 77-91

Goedhart, Th., Halberstadt, V., Kapteyn, A. and van Praag, B.M.S. (1977). The Poverty Line: Concept and Measurement. In: *The Journal of Human Resources* (12): 503-520

Gough, I. & Bradshaw, J. & Ditch, J. & Eardley, T. & Whiteford, P. (1997). Social Assistance in OECD-countries. In: *Journal of European Social Policy* 7 (1): 17-43

Grimshaw, D. (2011). *What do we know about Low-Wage Work and Low-Wage Workers? Analyzing the Definitions, Patters, Causes and Consequences in International Perspectives.* Geneva: ILO.

Halleröd, B. & Bradshaw, J. & Holmes, H. (1997). Adapting the consensual definition of poverty. In: Gordon, D. & Pantazis, C. (Ed*.) Breadline Britain in the 1990s. Aldershot*: Ashgate: 213-235

Hauser, R. (2007). Probleme des deutschen Beitrags zu EU-SILC aus der Sicht der Wissenschaft. Ein Vergleich von EU-SILC, Mikrozensus und SOEP. In: SOEPpapers on Multidisciplinary Panel Data Research (69): 1-21

Hradil, S. (2001). Eine Alternative? Einige Anmerkungen zu Thomas Meyers Aufsatz „Das Konzept der Lebensstile in der Sozialstrukturforschung". In: *Soziale Welt* 52: 273-282

Heidenreich, M. (2006). Die Europäisierung sozialer Ungleichheit zwischen nationaler Solidarität, europäischer Koordination und globalen Wettbewerb. In: Heidenreich, M. (Ed.) *Die Europäisierung sozialer Ungleichheit. Zur transnationalen Klassen- und Sozialstrukturanalyse*. Frankfurt am Main: Campus

Heidenreich, M. & Härpfer, M. (2010). Einkommensungleichheiten in der Europäischen Union. Ihre inner- und zwischenstaatliche Dynamik und ihre subjektive Bewertung. In: Eigmüller, M. & Mau, S. (Ed.) *Gesellschaftstheorie und Europapolitik. Sozialwissenschaftliche Ansätze zur Europaforschung.* Wiesbaden: VS-Verlag. 245-273

Israel, S. (2013). Material deprivation – An analysis of cross-country differences and European convergence. forthcoming

Kangas, O. E. & Ritakallio, V. (2007). Relative to What?: cross-national picture of European poverty measured by regional, national and European standards. In: *European Societies* 9(2): 119-145

Kenworthy, L. (2004). *Egalitarian capitalism*. New York: Russell Sage Foundation.

Kohler, U. & Kreuter, F. (2005). *Data Analysis Using Stata*. Lakeway Drive: Stata Press

Kohn, M. (1984). Cross-national Research as an Analytic Strategy. In: *American Sociological Review* 52: 713-731

Kuhn, T. (2011). Europa ante portas: Border residence, transnational interaction and Euroscepticism in Germany and France. In*: European Union Politics* 13(1): 94-117

Liebig, S. & Valet, P. & Schupp, J. (2010). Perceived income justice depends on the economy. In: *Weekly Report German Institute for Economic research* 24(6): 188-192

Lohmann, H. (2010). Comparability of EU-SILC Survey and Register Data: the Relationship among Employment, Earnings and Poverty. In*: Journal of European Social Policy* 21(1): 1-18

Marlier, E. & Athinson, A. & Cantillon, B. & Nolan, B. (2007). *The EU and Social Inclusion. Facing the challenges*. Bristol: The Policy Press

Mau, S. & Mewes, J. & Schöneck, N.M. (2012). What determines subjective socio-economic insecurity? Context and class in comparative perspective. In: Socio-Economic Review 10 (4). 655-682

Mettler, S. & Soss, J. (2004). The Consequences of Public Policy for Democratic Citizenship: Bridging Policy Studies and Mass Politics. In: *Perspectives on Politics* 2 (1). 55-73

Mood, C. (2009). Logistic regression: Why We Cannot Do What We Think We Can Do, and What We Can Do About It. In: *European Sociological Review* 26(1): 67-82

Münch, R. & Büttner, S. (2006). Die europäische Teilung der Arbeit. Was können wir von Emile Durkheim lernen? In: Heidenreich, M. (Ed.) *Die Europäisierung sozialer Ungleichheit*. Frankfurt am Main: Campus. 65-107

Nolan, B. & Whelan, C.T. (2010). Using Non-Monetary Deprivation Indicators to *Analyze Poverty and Social Exclusion: Lessons from Europe? In: Journal* of Policy Analysis and Management 29 (2). 305-325

Peña-Casas, R. & Latta, M. (2004). *Working Poor in the European Union*. Luxembourg: European Foundation for the Improvement of Living and Working Conditions.

Pintelon, O. & Cantillon, B. & Van den Bosch, K. & Whelan, C.T. (2011). The Social Stratification of Social Risks: Class and Responsibility in the ´New´ Welfare State. *Discussion Paper Series Geary* WP2011/23, University College Dublin. 1-21

Pichler, F. (2008). How real is Cosmopolitism in Europe? In: *Sociology* 42 (6): 1107-1126

Sachweh, P. (2013). Symbolische Grenzziehung und subjektorientierte Sozialstrukturanalyse. Eine empirische Untersuchung aus einer Mixed-Methods-Perspektive. In: *Zeitschrift für Soziologie* 42 (1): 7-27

Townsend, P. (1979). *Poverty in the United Kingdom. A Survey of Household Resources and Standards of Living.* Middlesex: Penguin Books

Tulloch, J. & Lupton, D. (2003). *Risk and everyday Life*. London: Sage

Van den Bosch, K. (2001). *Identifying the Poor Using Subjective and Consensual Measures*. Aldershot: Ashgate.

Van Praag. B.M.S. and Ferrer-i-Carbonell, A. (2005). A Multi-dimensional Approach to Subjective Poverty. Working Paper for the conference: The Measurement of Multidimensional Poverty. Theory and Evidence of the International Poverty Centre. Brasilia. 1-36
URL: http://www.iae.csic.es/investigatorsMaterial/a71312152653archivoPdf62069.pdf
(last accessed: 25.04.2013)

Van Praag, B.M.S., Goedhart, Th. and Kapteyn, A. (1980). The Poverty Line – A Pilot Survey in Europe. In: *The Review of Economics and Statistics* 62(2): 461-465

Walker, R. (1987). Consensual Approaches to the Definition of Poverty: Towards an Alternative Methodology. In: *Journal of Social Policy* 16(2): 213-226

Whelan, C. T. & Maître, B. (2009). Europeanization of inequality and European reference groups. In: *Journal of European Social Policy* 19 (2): 117-130

Wilkonson, R.G. & Pickett, K. (2009*). The Spirit Level: Why equality is better for everyone*. London: Penguin Books