Adaptation to Poverty in Long-Run Panel Data

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PARIS SCHOOL OF ECONOMICS
ECOLE D'ECONOMIE DE PARIS

WORKING PAPER N° 2014 – 01

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This version: January 2014

Abstract

We consider the link between poverty and subjective well-being, and focus in particular on potential adaptation to poverty. We use panel data on almost 45,800 individuals living in Germany from 1992 to 2011 to show first that life satisfaction falls with both the incidence and intensity of contemporaneous poverty. We then reveal that there is little evidence of adaptation within a poverty spell: poverty starts bad and stays bad in terms of subjective well-being. We cannot identify any causes of poverty entry which are unambiguously associated with adaptation to poverty.

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* We thank Silke Anger, Francesco Devicienti, Alessio Fusco, Markus Grabka, Carol Graham, Peter Krause, Nico Pestel and seminar participants at CEPS, CORE, DIW, Duisburg-Essen, ECINEQ (Bari), Flinders, the Franco-Swedish Program in Philosophy and Economics Well-being and Preferences Workshop (Paris), the Griffith University 2nd Workshop on Economic Development and Inequality, IARIW (Boston), IUSSP (Busan), Keio, the LABEX OSE Rencontres d'Aussois, Manchester, Osaka, Potsdam, Queensland, Queensland University of Technology, SFI/KORA (Copenhagen), VID (Vienna) and the Well-being and Public Policy conference (Reading) for many valuable suggestions. The German data used in this paper were made available by the German Socio-Economic Panel Study (SOEP) at the German Institute for Economic Research (DIW), Berlin: see Wagner *et al*. (2007). Neither the original collectors of the data nor the Archive bear any responsibility for the analyses or interpretations presented here.

1. Introduction

The relationship between an individual's income and their subjective well-being has been the focus of much empirical work, both within and across countries, and both at a single point in time and over time. This existing research has come to three main conclusions: *1)* within each country at a given point in time, richer people are more satisfied with their lives, with additional income increasing satisfaction at a decreasing rate; *2)* within each country over time, rising average income often does not substantially increase satisfaction with life; and *3)* across countries, on average, individuals living in richer countries are more satisfied with their lives than are those living in poorer countries (see, amongst many others, Blanchflower and Oswald, 2004, Clark *et al*., 2008*b*, Diener and Biswas-Diener, 2002, Diener *et al*., 2010, Di Tella and MacCulloch, 2006, Easterlin, 1995, Frey and Stutzer, 2002, and Senik, 2005).

The vast majority of the empirical research in the fast-growing field of subjective well-being research has been resolutely atemporal, with some measure of current well-being being correlated with the current levels of explanatory variables. This applies both to the analysis of income, and of other commonly-analysed correlates of well-being, such as marital or labour-force status. However, at the same time there is a common suspicion in Economics, and likely across Social Science in general, that the past matters: it is not only where you are now, but also how you got there. In this context, there has been particular interest in adaptation, whereby judgments of current situations may depend on the experience of similar situations in the past: as such higher past levels of a certain experience may partly offset current levels of the same experience, due to changing expectations (Kahneman and Tversky, 1979).

While it is possible to look for evidence of adaptation via revealed preferences (either experimentally or using survey data, as in Hotz *et al*., 1988), recent work has appealed to subjective well-being data in this context. Here, well-being at time t is related to the individual explanatory variables measured not only at the same point in time, but also with respect to their past (or even future) values. As such, it is possible to trace out the profile of well-being around a particular event. This event could be a pay rise, a marriage, a divorce, migration, or the entry into unemployment, amongst others (see Clark *et al*., 2008*a*, Clark and Georgellis, 2013, Frijters *et al*., 2011, Nowok *et al*., 2013, and Oswald and Powdthavee, 2008). This literature has broadly concluded in favour of adaptation for many life events, but not for unemployment. In particular,

Clark *et al*. (2008*a*) show that the duration of unemployment does not matter in well-being terms for those who are still currently unemployed.

Perhaps surprisingly, we still arguably only know little about adaptation to income. Using the same SOEP data as we do, Di Tella *et al*. (2010) show that complete adaptation to rising income occurs within four years (see also Di Tella and MacCulloch, 2010). This result is proposed as one possible explanation of the Easterlin (1974) paradox (that average life satisfaction remains constant within a country despite consistent economic growth). An earlier contribution (Clark, 1999) suggests that adaptation to changes in labour income (while staying in the same job at the same firm) in British Household Panel Survey (BHPS) data occurs within one year.

Both of these contributions analyse income as a continuous variable, and analyse all income changes. We here consider not all incomes, but specifically the event of entry into low income or poverty. This analysis of poverty as a state allows us to use exactly the same empirical techniques as have been used to plot out any adaptation to divorce, marriage and unemployment (for example) in data from the SOEP (Clark *et al*., 2008*a*), the BHPS (Clark and Georgellis, 2013) and the Household Income and Labour Dynamics in Australia (HILDA) survey (Frijters *et al*., 2011).

We are interested in possible adaptation to low income or poverty for two reasons. First, because it has seemingly hitherto been neglected in the related empirical work, and is of obvious policy importance. Second, and at a far broader level, there is a vibrant ongoing debate about subjective well-being as a possible complementary measure of progress (a useful recent discussion appears in Fleurbaey and Blanchet, 2013). One mooted drawback to any such use is that self-reports may not adequately reflect the individual's true level of well-being. In particular, negative shocks may lead individuals to revise their understanding of the subjective response scale. If this process takes time we will then automatically see adaptation or bouncing back of well-being scores. However, this will not reflect what individuals actually feel.

In the specific context of poverty, Sen (1990, p. 45) writes "*A thoroughly deprived person, leading a very reduced life, might not appear to be badly off in terms of the mental metric of utility, if the hardship is accepted with non-grumbling resignation. In situations of longstanding deprivation, the victims do not go on weeping all the time, and very often make great efforts to take pleasure in small mercies and cut down personal desires to modest — 'realistic' —*

proportions. The person's deprivation then, may not at all show up in the metrics of pleasure, desire fulfillment, etc., even though he or she may be quite unable to be adequately nourished, decently clothed, minimally educated and so on." This critique is sometimes referred to as that of the 'happy slave', whereby self-reports are an inadequate measure of real welfare.

Alternatively, it could be the case that subjective well-being scores are indeed good measures of individual welfare: movements in such scores over time will then reflect real phenomena. Finding evidence of real adaptation to poverty still raises a number of ethical concerns, especially among development specialists: if there is adaptation to income then we should arguably worry less about the poor and the deprived (for an extensive discussion, see Clark, 2009) and policy should put less emphasis on poverty eradication. The question here is of which measure to act upon: Does the report of an adequate level of subjective well-being mean that we should ignore individuals' objective difficulties?

This interest in adaptation to poverty has not been matched by empirical analysis: both of the problems outlined above (real adaptation to poverty and shifting response scales[1]) are moot if there is actually no empirical evidence of adaptation. We here fill this gap, using almost 20 years of large-scale panel data. We first show that, as might be expected given existing work on income and well-being, poverty *per se* is associated with lower life satisfaction. Regarding adaptation, we find only little evidence that the poor say that, over time, they are satisfied with less. The (lack of) adaptation results are robust to various model specifications, and to concerns about selection into poverty length. The degree of adaptation depends to some extent on the reasons why people entered into poverty in the first place, although we cannot identify any common cause of poverty entry that is associated with well-being adaptation.

The remainder of the paper is organized as follows. Section 2 briefly reviews the question of poverty measurement and presents the SOEP panel data that we use. Section 3 then describes the results, and Section 4 concludes.

[1] These two phenomena correspond to what Kahneman (1999) calls the hedonic and satisfaction treadmills.

2. Measuring poverty and Data

The seminal contribution to poverty measurement is Sen (1976), who distinguishes two fundamental issues: *(i)* identifying the poor in the population under consideration; and *(ii)* constructing an index of poverty using the available information on the poor.

The first problem has been dealt with in the literature by setting a poverty line and identifying as poor all individuals with incomes below this threshold. The way in which this poverty line is determined remains very much debated and differs considerably from one country to another (for an extensive survey see World Bank, 2005, Chapter 3). In this paper we follow the European Union approach, in which the poverty line equals 60% of the national median equivalent income. It is hard to know whether this is the "right" poverty line, and we carry out robustness checks to this extent below.

Regarding the second issue, the aggregation problem, many indices have been proposed which capture not only the fraction of the population which is poor or the incidence of poverty (the headcount ratio), but also the extent of individual poverty and inequality amongst those who are poor.

Let $x = (x_1, x_2, ..x_n)$ be the distribution of income among *n* individuals, where $x_i \geq 0$ is the income of individual *i*. For expositional convenience we assume that the income distribution is non-decreasingly ranked, that is, for all x, $x_1 \leq x_2 \leq .... \leq x_n$. We denote the poverty line by *z*. For any income distribution, x, individual i is said to be poor if $x_i < z$. The normalized deprivation of individual i who is poor with respect to z is given by their relative shortfall from the poverty line, i.e.

$$d_i^{\alpha} = \left(\frac{z - x_i}{z} \right)^{\alpha} \qquad [1]$$

where $\alpha \geq 0$ is a parameter. When $\alpha = 0$, the only dimension of poverty which counts is its incidence, as normalized deprivation is equal to one for all of the poor. When $\alpha = 1$, normalized deprivation also reflects the intensity of poverty with a higher value of *d* being assigned to poorer individuals. The normalized deprivation score for the rich, those whose incomes (weakly) exceed *z*, is always set equal to zero.

The empirical analysis is carried out using one of the most extensively-used panel datasets in the literature on subjective well-being, the German Socio-Economic Panel (SOEP). The SOEP

is an ongoing panel survey with yearly re-interviews (see http:// http://www.diw.de/en/soep). The starting sample in 1984 was almost 6,000 households based on a random multi-stage sampling design. A sample of about 2,200 East German households was added in June 1990, half a year after the fall of the Berlin wall. This gives a very good picture of the GDR society on the eve of the German currency, social and economic unification which took place on July 1st 1990. In 1994-95 an additional subsample of 500 immigrant households was included to capture the massive influx of immigrants since the late 1980s. An oversampling of rich households was added in 2002, improving the quality of inequality analyses, especially at the upper end of the distribution. Finally, in 1998, 2000 and 2006 three additional population representative random samples were added, boosting the overall number of interviewed households in the 2000 survey year to about 13,000, covering approximately 24,000 individuals aged over 16.

We look at poverty and well-being over the period 1992 (the first wave of data for which annual income information is available for the East German sample) to 2011. The initial sample consists of all adult respondents with valid information on income and life satisfaction, leaving us with approximately 350,000 observations on about 46,000 individuals in East and West Germany.

We use annual equivalent household income, via an equivalence scale with an elasticity of 0.5 (i.e. the square root of household size). The poverty line per year is then set at 60% of the country-level median equivalent household income. An individual is poor if the income of her household is below this value.[2] The 60% income level is calculated from the SOEP using sampling weights, so that we are not affected by the over-sampling described above. Individuals in the SOEP are interviewed at the beginning of the year, and report income received in the previous year, so that income in the 2011 wave, say, refers to that received in 2010. As we use household income to calculate poverty, we cluster all our standard errors at the household-wave level in the empirical analysis.

Our dependent well-being measure, life satisfaction, is measured on an 11-point scale. Subjects were asked the following question: *"In conclusion, we would like to ask you about your*

[2] For example, the 2000 value of our calculated annual SOEP poverty line for a household of four individuals was around 20 000 Euros.

satisfaction with your life in general, please answer according to the following scale: 0 means completely dissatisfied and 10 means completely satisfied: How satisfied are you with your life, all things considered?" The life satisfaction score for individual *i* in year *t* is denoted below by wb_{it}.

As in much of the well-being literature, we estimate fixed-effects regressions, allowing us to control for unobserved individual characteristics and the potential different use of the underlying satisfaction scale across individuals. The general model is:

$$wb_{it} = \alpha_i + \gamma_t + \beta C_{it} + \theta PI_{it} + \epsilon_{it} \qquad [2]$$

where C_{it} is the set of time-varying individual covariates and PI_{it} is some poverty measure at the individual level. With the fixed effect in [2], the coefficients are identified off of within-subject variations. We use "within" fixed-effect linear regressions (as justified in Ferrer-i-Carbonell and Frijters, 2004).

The variables in C_{it} are age (eight age groups, from 16-20 to 80+ years old), marital status, labour-force status, residency in East or West Germany, education (high school, less than high school and more than high school), number of children in the household and wave dummies. The individual fixed-effect captures all time-invariant variables, including sex and immigration status. The analysis is carried out both for the whole sample and then separately for men and women, inspired by work showing that adaptation to various life events differs by sex (see, for example, Clark *et al*., 2008*a*).

The descriptive statistics appear in Table 1. Our 351,000 observations correspond to almost 45,800 subjects, who are thus observed on average almost 8 years each. The majority of the sample is of working age and is either married (63%) or single (22%). Most individuals have high-school education (61%), while 19% continued to a higher degree. Six out of ten respondents are in work at the time of the survey. Around 12% of observations correspond to respondents whose equivalent income was below 60% of the yearly median household income that year: these are the observations corresponding to the poor in our empirical analysis. The d^1 figure shows that individuals living in poor income had equivalent household income that was on average 24% below the poverty line (=0.028/0.117). The average value of our dependent variable, life satisfaction, is close to seven on the zero to ten scale, indicating that there are no striking ceiling or floor effects on average.

3. Regression Results

3.1 Life satisfaction and the incidence and intensity of poverty

We start with the simplest question: the effect of contemporaneous poverty on subjective well-being. We are not aware of any work relating income poverty and life satisfaction in a multivariate setting. We here consider both the incidence and intensity of poverty (d^0 and d^1 in the terminology above). Table 2 shows the results from fixed-effect regressions of life satisfaction.

The control variables in these regressions attract the expected coefficients: life satisfaction is U-shaped in age, at least up until age 80. The educated, especially women, are significantly more satisfied. Those who marry (the omitted category here) are more satisfied, while widowhood, divorce and separation are associated with lower life satisfaction, especially for men. With respect to labour-force status, unemployment has a large negative estimated coefficient, as is common in the literature.

More novel, and central to our research question, are the coefficients on the poverty measures. At the top of Table 2, both the incidence (d^0) and intensity (d^1) of poverty are significantly negatively correlated with life satisfaction. The estimated effect of poverty in Table 2 is large in size. An individual who lives in a household that is just below the poverty line (so that d^0=1 and d^1 is almost zero) has a life satisfaction score that is 0.124 points lower than the same person when they are not poor; this effect is of the same magnitude as the happiness boost from marriage. An individual who lives in a household with an income that is half of the poverty line (so that d^0=1 and d^1, the normalized distance from the poverty line, is 0.5) has a life satisfaction score that is 0.124 + 0.5*0.447 = 0.347 points lower than the same person when not poor. This figure is about as large as the drop in satisfaction following separation.

Much empirical work has revealed a positive relationship between income and various measures of subjective well-being, both in cross-section and panel data. The results in Table 2 show that this relationship also pertains in low-income situations.

3.2 Adaptation to poverty

While individuals in poverty (according to the EU definition) report sharply lower levels of well-being than when they are not in poverty, Table 2 does not tell us anything about the well-

being time profile of those who enter poverty: well-being could go down and stay down, bounce back, or indeed deteriorate with the duration of the poverty spell.

We investigate adaptation by splitting the currently poor up into groups according to how long ago they entered poverty. We dice the d^0 dummy from Table 2 into six new dummy variables describing poverty of different durations: these indicate, for the currently poor, whether the individual entered poverty within the past year, 1-2 years ago, and so on, up to five or more years ago. If the individual adapts, then the estimated coefficients should become progressively smaller with duration, since having entered poverty longer ago has a more muted effect on life satisfaction than having become poor more recently.

The sample of the poor in our adaptation analysis is restricted to those for whom we observe the first entry into poverty while in the panel (otherwise they are left-censored and we do not know for how long they have been poor),[3] and it is only this first spell that is taken into consideration. We thus compare the life satisfaction of the same individual pre-poverty to that during their first observed poverty spell. This is the same method applied to unemployment, marriage, divorce, widowhood and children in SOEP data by Clark *et al*. (2008*a*).

Table 3 shows the results of this analysis. The estimated coefficients there, which are also plotted in Figure 1, show that poverty is associated with significantly lower well-being whatever its duration. The estimated coefficients are all significant and float around the -0.2 to -0.3 mark. We can test whether the estimated coefficients on poverty duration of greater than one year are different to that of zero to one year, in all three of Table 3's regressions. There are only two significant differences: for durations of 1-2 years and 3-4 years for men, but in both cases these estimated coefficients are more negative than that on poverty duration of 0-1 year.[4] In general there is no evidence of adaptation to poverty here: poverty starts off bad and pretty much stays bad.

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[3] Equally, if the individual is missing for one or more years during a poverty spell, all observations after the missed year(s) are dropped. This applies to only 63 individuals in our data.

[4] There is a mild upturn after five or more years of poverty for women (although this is not significant). This is concentrated amongst women aged 50 or more, and may well be linked to widowhood: see our discussion in Section 3.4.

3.3 Adaptation and poverty intensity

Figure 1 suggests no adaptation to poverty. However, poverty as a state is arguably fundamentally different to the other life events that have so far been considered in the adaptation literature. An individual can be more or less poor, whereas this distinction does not really apply to unemployment or widowhood, for example. This matters here: Figure 1 could reflect a composite of adaptation to the state of poverty (d^0 above) combined with a rising intensity of poverty (d^1) over time. To check, we introduce the contemporaneous intensity of poverty into Table 3's regressions. As in Table 2, the estimated coefficient on d^1 is negative and significant. Crucially, its addition makes no difference to the estimated profile of well-being over time depicted in Figure 1. Changing intensity is not masking adaptation.

3.4 The causes of poverty

The results that we presented above on (the lack of) adaptation to poverty are new in the literature. Or are they? It is fair to say that many movements into poverty happen for a reason. In addition, existing work on adaptation using subjective well-being data has emphasised one particular event to which there is little or no adaptation: unemployment. If most poverty entries are associated with job loss, then we have arguably not added much new.

We investigate by identifying five broad categories of events that can happen to individuals at the time of their poverty entry: unemployment, loss of partner (via divorce, separation or widowhood), retirement, disability, and increasing family size. These are picked up by identifying any changes in labour-force, marital or disability status as well as household size between *t-1* and *t*, when the individual also entered poverty between *t-1* and *t*. None of these are absorbing states, of course, and being divorced at the time of poverty entry does not mean that the individual remains divorced over the entire poverty spell.

Figure 2 summarises the results. In the top-left panel there is no evidence that the adaptation profile of those who entered poverty via unemployment is much different from that of those who did not (although the former mostly have a greater drop in well-being, consistent with the estimated coefficient on unemployment in Table 2). It turns out that less than one out of eight of our poverty entries are accompanied by entry into unemployment. The lack of adaptation to income poverty is then not just reflecting the lack of adaptation to unemployment.

The figure on the top right is somewhat different, and shows a quite varied set of coefficients for those who enter poverty via retirement (around 13% of our poverty entries). The question of the health and well-being effects of retirement has led to a fairly ambivalent set of findings as to whether well-being consequently rises or falls (a recent example is Hetschko *et al*., 2014). Equally, the middle-left panel does show a sharp bounce-back in life satisfaction for individuals whose poverty entry coincides with the loss of their partner (via widowhood, separation or divorce: under 7% of poverty entries). This mirrors the very marked movements in well-being following divorce and widowhood in the general SOEP population reported in Clark *et al*. (2008*a*).

The middle-right panel then considers entry into poverty via disability (10% of entries). There is quite a lot of variability in these estimates, with longer-duration poverty sometimes being estimated as worse than shorter-duration poverty, and sometimes better. There is no evidence of a systematic rising trend over time however.

The bottom-left panel considers poverty entry via larger household size (this is germane as our poverty measure relies on equivalent income). More people in the household most typically refer to more children here. Existing work on adaptation to children in the SOEP has underlined a fall in well-being after childbirth, followed by something of a happiness recovery (see Clark *et al*., 2008*a*). This is apparent in our graph, with a greater drop in satisfaction on entering poverty for the one in five observations in which this is associated with increased household size. If we factor out the adaptation to children, the dashed line looks similar to the unbroken line. After five or more years of poverty, the well-being effect of those who entered via increased household size is the same as that for those who did not.

Last, the bottom-right panel in Figure 2 compares individuals who entered poverty at the same time as any of the five events above to those who entered for other reasons: this turns out to split the sample up almost fifty-fifty. The weighted sum of the five other panels, as it were, produces an adaptation profile that is pretty flat in both cases. We have not then identified any cause of poverty entry that is sufficiently common to act as a synonym for poverty (and therefore poverty adaptation) in our SOEP respondents.

3.5 Which poverty line?

The analysis of poverty and well-being requires the definition of the former. We do not run into such problems with marriage or unemployment, for example. So far we have followed EU practice by taking a relative poverty line at 60% of the median of equivalent income per year. Although this is standard, we want to be sure that our results are not unduly dependent on this figure.

The poverty line we used above is unanchored. It changes from year to year due to movements in the distribution of household income. As such, individuals can enter poverty while experiencing a rise in nominal income, but also while enjoying higher real income (this depends on how income changes at the median). However, we would not typically think of poverty entry and higher real income as being synonymous.

We can avoid this phenomenon by using an anchored poverty line. We take the distribution of income in our first year (here 1992) to calculate a poverty line. This latter is then updated over time using movements in the CPI. Those who enter poverty must then have experienced a fall in real equivalent income. The use of this anchored poverty line in the analysis summarised in Tables 2 and 3 makes practically no difference to our results.

Second, we can be concerned about measurement error in income. Some of those who we record as entering poverty may not actually in fact have done so. One way to see whether this matters is to drop individuals whose income is only just under the poverty line. This of course is equivalent to using a poverty line that is not 60% of median equivalent income, but a somewhat lower figure.

There are any number of ways of doing this, and we don't have much in the way of guidance. Any lower poverty line reduces the number of the poor, and there is some danger of ending up with small cell sizes (given our requirement that entry be observed, and use of fixed effects). We dropped individuals who were within five per cent of the poverty line (i.e. used a poverty line of 57% of the median). This had no impact on our qualitative results, and in particular we continue to find no evidence of adaptation.

Last, poverty as defined here is a relative concept. But relative to whom? As is normal, we have so far used information on the national income distribution. An alternative is to calculate poverty lines at the State (Lander) level. The equivalents of Tables 2 and 3 here show poverty

coefficients that are very mildly larger in absolute terms, but which exhibit exactly the same qualitative characteristics.

3.6 Selection out of poverty?

Our regressions include individual fixed effects. As such, they are not affected by worries that "happier" individuals are less likely to be poor, or remain in poverty for shorter durations. The poverty coefficients in Table 3 come from comparing the same individual with poverty of 3-4 years duration and 4-5 years duration, for example. This within-subject analysis is still affected by selection, however, as individuals who exit poverty within four years cannot be used for the above estimate. In general, while most of the poor can be used to calculate the coefficient on poverty of 0 to 1 year, those who are used for the calculation of longer-duration coefficients become increasingly selected.

The question then is what would the adaptation profile of those who exit poverty earlier have looked like? By definition we do not know. Resilient individuals might adapt to poverty, for example, and also have a better chance of recovering their health or finding a new (or better) job. In this case the bias is against finding adaptation. Alternatively, those whose subjective well-being is falling more sharply might exit the survey altogether, producing a bias towards finding adaptation in this case.

Exit from poverty is not random in our data, and is quicker for the better-educated, the elderly and the youngest (results not reported). We can see whether the results are somehow dependent on people who leave poverty the earliest by progressively dropping shorter-duration poverty spells. The results appear in Table 4. The first column of this table reproduces the overall adaptation estimates using the whole sample from Table 3. Column 2 then drops information on all poverty spells of two years or less. Columns 3 and 4 carry out an analogous procedure for spells of under four years and under five years.

The results show that shorter poverty spells are on average somewhat less harmful, in that the coefficients are a little more negative in columns 2-4 than in column 1. But they are remarkably similar in terms of the estimated shape: none of the columns reveal any evidence of adaptation. Selection out of poverty does not then seem to bias our conclusions.

3.7 Is poverty different from any drop in income?

We last ask whether the well-being movements associated with poverty entry are different in nature from those occurring around any fall in income.[5] We calculate "income-drop spells" as starting when nominal equivalent income falls between *t* and *t+1*, with the spell continuing until time $t+\tau$ when income weakly exceeds income at time *t*. We re-estimate equations as in Table 3 which include duration dummies for the income-drop spells, plus an interaction revealing for the income drop spell being a poverty spell.

The results (available) on request show that individuals report lower well-being consequent on any drop in income, and do not seem to adapt during the income-drop spell. However, we do identify an additional negative well-being effect from a poverty spell over and above that of experiencing an income drop. Broadly speaking, a poverty spell is about twice as bad, in life satisfaction terms, as a non-poverty income-drop spell.

4. Conclusion

We have here used SOEP data to analyze the effects of poverty on individual well-being, and show that both the incidence and intensity of poverty reduce life satisfaction. Our main results relate to adaptation. The negative effects of poverty are not ephemeral: there is no evidence that individuals adapt to poverty. This conclusion is not dependent on the definition of the poverty line, nor does it only reflect the lack of adaptation to unemployment found in existing literature, nor does it seem particularly biased by selection into poverty of different durations.

Whether we believe that movements in subjective well-being over time reflect real phenomena or not, the key message from this paper is that individuals at the bottom of the income distribution do not say that they have adapted to their situation. The candidate happy slaves in the SOEP turn out to be not so happy after all.

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[5] We expect these "income-drop" spells to produce lower subjective well-being: both because they are associated with lower income, and because individuals dislike losses *per se*. See Boyce *et al*. (2013) for evidence from the SOEP in this respect.

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Figure 1: Adaptation to poverty in SOEP data.

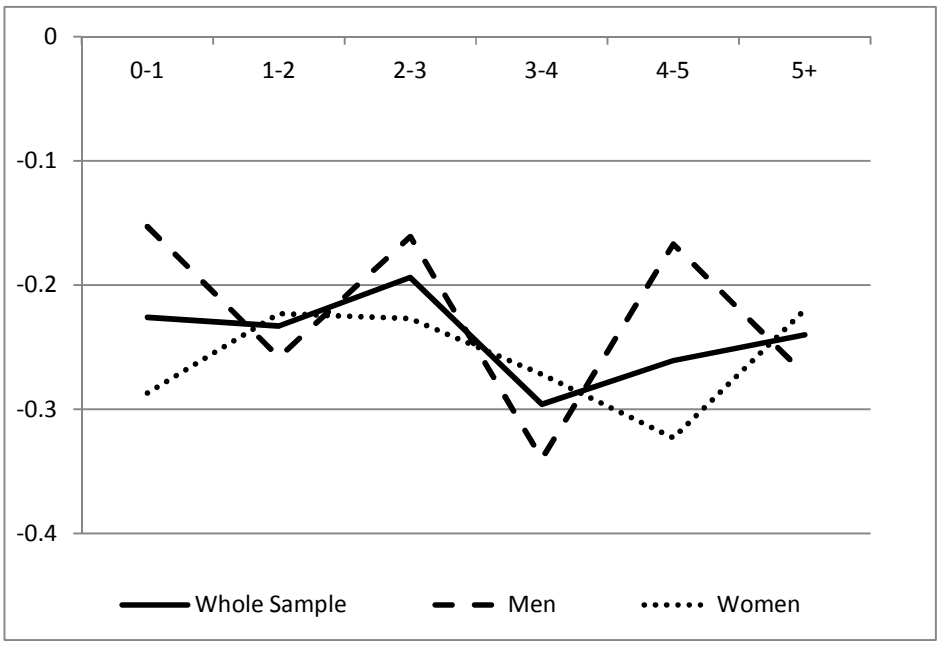

Figure 2: Adaptation to poverty, by the events causing poverty.

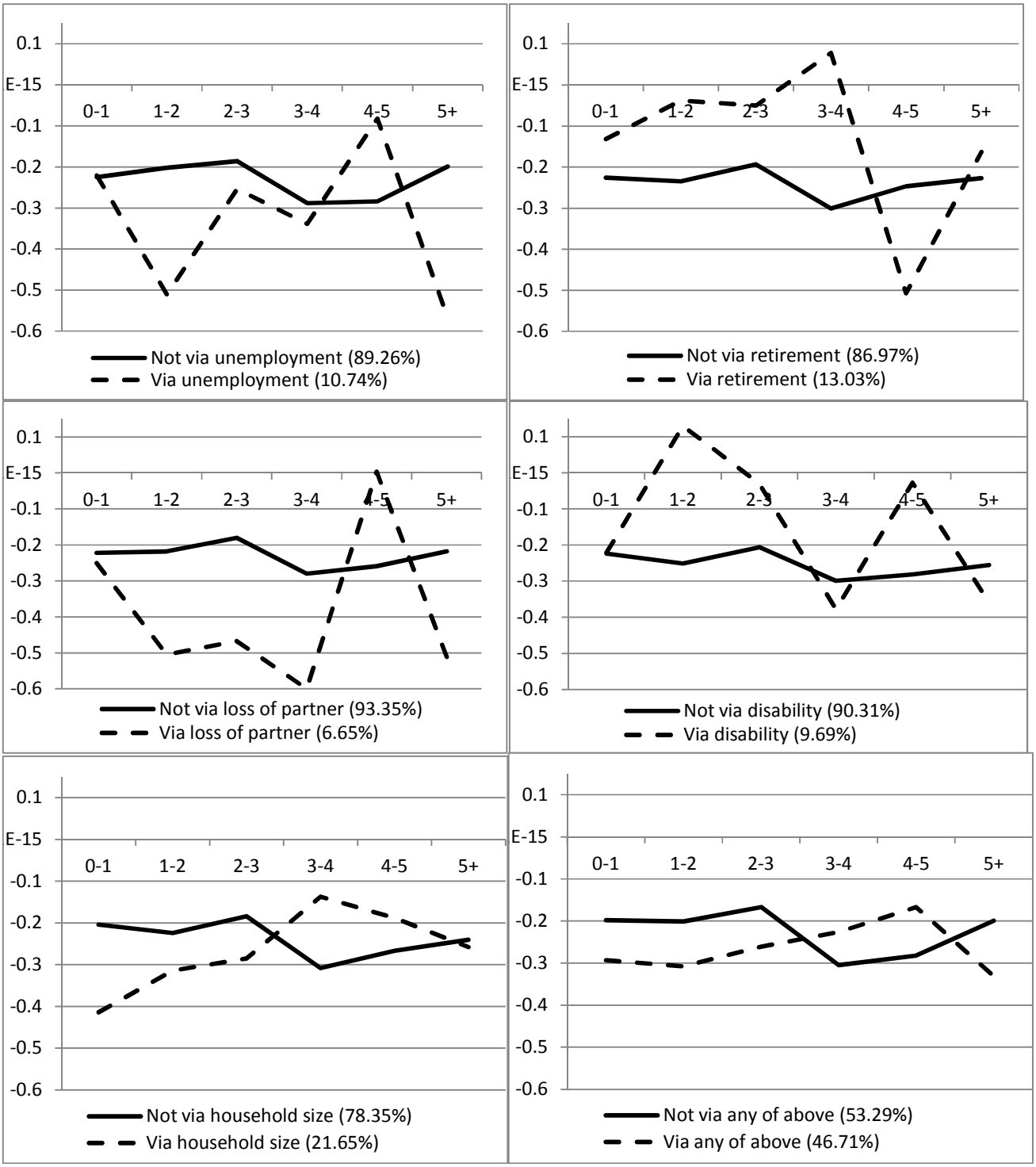

Table 1: Descriptive Statistics

Variable	Mean	Standard deviation
Life satisfaction (0-10)	6.950	1.791
Below poverty line (d^0)	0.117	0.322
Relative poverty gap (d^1)	0.028	0.102
Employed	0.590	0.492
Unemployed	0.056	0.229
Retired	0.166	0.372
Inactive	0.188	0.391
Age: 16-20	0.034	0.180
Age: 21-30	0.155	0.362
Age: 31-40	0.193	0.395
Age: 41-50	0.197	0.398
Age: 51-60	0.170	0.375
Age: 61-70	0.144	0.351
Age: 71-80	0.081	0.272
Age: 80+	0.027	0.161
Female	0.480	0.500
Education < high school	0.204	0.403
Education = high school	0.605	0.489
Education > high school	0.191	0.393
No. children in HH	0.554	0.915
Married	0.631	0.482
Single	0.216	0.412
Widowed	0.066	0.249
Divorced	0.068	0.252
Separated	0.017	0.130
East	0.253	0.435
Number of observations	350,683	
Number of subjects	45,778	

Table 2: Life Satisfaction and Poverty Incidence and Intensity: Fixed Effects Regressions.

	Whole Sample	Men	Women
d^0	-0.124***	-0.120***	-0.129***
	(0.016)	(0.022)	(0.019)
d^1	-0.447***	-0.339***	-0.521***
	(0.050)	(0.073)	(0.060)
Unemployed	-0.650***	-0.783***	-0.517***
	(0.014)	(0.020)	(0.020)
Retired	-0.129***	-0.223***	-0.052**
	(0.015)	(0.021)	(0.021)
Inactive	-0.124***	-0.249***	-0.041***
	(0.009)	(0.015)	(0.012)
Age: 16-20	0.063**	0.186***	-0.058
	(0.030)	(0.041)	(0.041)
Age: 21-30	-0.018	0.018	-0.056**
	(0.020)	(0.027)	(0.027)
Age: 31-40	-0.004	0.024	-0.033**
	(0.012)	(0.016)	(0.017)
Age: 51-60	0.024*	0.008	0.038**
	(0.013)	(0.018)	(0.018)
Age: 61-70	0.233***	0.259***	0.218***
	(0.021)	(0.028)	(0.028)
Age: 71-80	0.084***	0.047	0.122***
	(0.028)	(0.039)	(0.039)
Age: 80-max	-0.247***	-0.309***	-0.193***
	(0.041)	(0.059)	(0.055)
Educ = high school	0.012	-0.028	0.052**
	(0.015)	(0.022)	(0.020)
Educ > high school	0.097***	0.062**	0.119***
	(0.020)	(0.030)	(0.027)
Single	-0.145***	-0.112***	-0.148***
	(0.017)	(0.022)	(0.023)
Widowed	-0.233***	-0.327***	-0.187***
	(0.028)	(0.049)	(0.033)
Divorced	-0.049**	-0.088***	-0.006
	(0.021)	(0.030)	(0.028)
Separated	-0.344***	-0.460***	-0.234***
	(0.028)	(0.039)	(0.037)
East Germany	-0.261***	-0.224***	-0.288***
	(0.037)	(0.050)	(0.047)
No. children in HH	0.014**	0.014*	0.005
	(0.006)	(0.007)	(0.007)
Constant	7.489***	7.483***	7.474***
	(0.025)	(0.034)	(0.031)
R^2	0.03	0.04	0.03
N	350,683	168,370	182,313

Table 3: Adaptation to Poverty: Fixed Effects Regressions.

	Whole Sample	Men	Women
Poverty 0-1 Years	-0.226***	-0.153***	-0.287***
	(0.021)	(0.028)	(0.026)
Poverty 1-2 Years	-0.233***	-0.258***	-0.223***
	(0.033)	(0.047)	(0.041)
Poverty 2-3 Years	-0.194***	-0.161**	-0.227***
	(0.041)	(0.063)	(0.050)
Poverty 3-4 Years	-0.296***	-0.340***	-0.272***
	(0.054)	(0.079)	(0.065)
Poverty 4-5 Years	-0.261***	-0.167*	-0.323***
	(0.065)	(0.100)	(0.078)
Poverty over 5 Years	-0.240***	-0.272***	-0.220***
	(0.055)	(0.083)	(0.064)
R^2	0.03	0.04	0.03
N	294,476	145,609	148,867

Notes: Robust standard errors in parentheses; All regressions include all of the non-poverty controls in Table 2; * $p<0.1$; ** $p<0.05$; *** $p<0.01$.

Table 4: Adaptation to Poverty and duration of the poverty spell: Fixed Effects Regressions.

	All	Spells of over 2 years	Spells of over 3 years	Spells of over 4 years
Poverty 0-1 Years	-0.226***	-0.262***	-0.257***	-0.295***
	(0.021)	(0.046)	(0.059)	(0.071)
Poverty 1-2 Years	-0.233***	-0.305***	-0.274***	-0.331***
	(0.033)	(0.044)	(0.057)	(0.067)
Poverty 2-3 Years	-0.194***	-0.235***	-0.210***	-0.166**
	(0.041)	(0.043)	(0.054)	(0.069)
Poverty 3-4 Years	-0.296***	-0.340***	-0.332***	-0.377***
	(0.054)	(0.055)	(0.056)	(0.067)
Poverty 4-5 Years	-0.261***	-0.315***	-0.306***	-0.318***
	(0.065)	(0.066)	(0.067)	(0.068)
Poverty over 5 Years	-0.240***	-0.293***	-0.285***	-0.297***
	(0.055)	(0.057)	(0.058)	(0.059)
R^2	0.03	0.03	0.03	0.03
N	294,476	246,097	240,893	238,053

Notes: Robust standard errors in parentheses; All regressions include all of the non-poverty controls in Table 2; * $p<0.1$; ** $p<0.05$; *** $p<0.01$.