

ONE SIZE FITS ALL? WELL-BEING, MEASUREMENT  
AND GROWTH\*

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ABSTRACT

Well-being research is burgeoning. But there is no agreement on which measure of well-being is to be preferred, nor in which circumstances. We here briefly discuss some of the issues and a number of preliminary results from our ongoing work. We conclude by wondering whether de-growth will necessarily reduce well-being.

**Keywords:** Positive and Negative Well-being, Booms and Busts, De-growth.  
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INTRODUCTION

In a development that would have been almost unthinkable in Economics even twenty years ago, the analysis of subjective well-being measures has started to become reasonably mainstream. Some of the associated developments are discussed in Clark (2018). One common empirical approach is the use of subjective well-being measures to establish the

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determinants of life satisfaction or happiness: these determinants commonly include individual-level variables such as income, labour-force status, marital status, education, age, gender and so on. Another strand of the literature has related individual well-being to aggregate variables at the regional or country level, such as income inequality, inflation, interest rates, aggregate unemployment and environmental variables such as pollution, crime and green spaces. This latter literature helps provide values for societal investments in common goods that is arguably a useful complement to traditional analyses from revealed preferences or contingent evaluation. Last, subjective well-being has also appeared as an explanatory variable for observed future outcomes, including job quitting, health, geographical mobility, marriage, divorce and fertility. This work has helped to establish the validity of well-being measures: if they were not comparable from one individual to another then we would not be able to predict which of two married individuals would subsequently split up (for example) based on the comparison of their current levels of subjective well-being.

This type of analysis has been growing fast. But in a sense there is an embarrassment of riches. There is not only one well-being measure, but many; and the “best” measure may be context-dependent. It may not be the case that one size (of well-being measure) fits all.

There are by now many dozens if not hundreds of ways of measuring well-being. These can broadly be split up into three groups: cognitive/evaluative measures (such as life satisfaction or happiness with one’s life overall); hedonic measures of positive and negative affect (sometimes called mood variables); and eudaimonia, which captures a number of aspects of life, including meaning and purpose.<sup>1</sup> Examples of these three types of measure can be found in the UK Annual Population Survey, run by the Office of National Statistics (ONS), which includes four individual subjective well-being questions. These are

- 1) “Overall, how satisfied are you with your life nowadays?”
- 2) “Overall, how happy did you feel yesterday?”
- 3) “Overall, how anxious did you feel yesterday?”
- 4) “Overall, to what extent do you feel the things you do in your life are worthwhile?”

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<sup>1</sup> Eudaimonia broadly refers to the idea of flourishing or developing human potential, as opposed to pleasure, and is designed to capture elements such as mastery, relations with others, self-acceptance and purpose: see, for example, RYFF (1989).

All of these are answered on 0 to 10 scale, where 0 is “not at all” and 10 is “completely”. Question 1) here is cognitive/evaluative, questions 2) and 3) refer to recent affect or mood, and question 4) is Eudaimonic.

An additional distinction between the well-being questions that appear in surveys is that some measures are couched in positive terms (such as questions 1), 2) and 4) of the ONS measures above), while others are negative (such as question 3)).

Almost all empirical analysis of the determinants of individual subjective well-being use one well-being measure only, and so estimate a single set of regression coefficients describing the correlations with explanatory variables like income and education. In the research programme that is discussed here (some of these results appear in Clark and Cetre 2016 and 2019), we expand the existing analysis in two ways. We first ask whether these estimated correlations are the same for measures of well-being and ill-being (i.e. measures that ask about positive and negative well-being). We then consider potential contextual effects in the estimated well-being relationships and ask whether these are the same in periods of economic booms and busts.

## 1. WHICH MEASURE OF WELL-BEING?

What is the best way of measuring well-being? While the answer here is to a certain extent dependent on the question that is being asked, there has been some general work that compares different well-being measures as reported by the same individual at the same point in time. Clark (2016) and Clark and Senik (2011) both use data from the Wave 3 of the European Social Survey, in which measures of happiness, life satisfaction and Eudaimonia all appear. The approach taken in these two contributions is to see how similar are the correlates of these three variables: in other words, if a variable such as education or unemployment is correlated with life satisfaction, is it also correlated in the same direction with affect and eudaimonia? Although there is no standard metric to establish how “similar” the determinants of these three well-being variables are, the estimated coefficients in the three well-being regressions do turn out to be quite close to each other.<sup>2</sup>

One of the aims in Clark and Cetre (2016) is to extend the scope of this kind of analysis beyond Europe, using worldwide data from the Gal-

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<sup>2</sup> CLARK (2016) takes the same approach using the various subjective well-being measures in first the British Household Panel Survey and then the British ONS data.

lup Corporation. They especially wonder if the correlates of measures of well-being and measures of ill-being, as reported in survey data, are mirror images of each other (so that a variable that is significantly associated with higher well-being will also be associated with lower ill-being).

The data that is used here comes from the Gallup World Poll, covering 163 countries from 2006 to 2013, with around 1000 annual respondents per country. This data includes a number of wellbeing questions. Life satisfaction is measured by the Cantril ladder:

Please imagine a ladder, with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?

The modal answer to this question is the mid-point, five, and is somewhat left-skewed with more people reporting values of 6-10 than 0-4.

The Gallup data also includes a measure of positive affect from the following five questions:

“Did you feel rested yesterday?”;

“Were you treated with respect all day yesterday?”;

“Did you smile or laugh a lot yesterday?”;

“Did you learn or do something interesting yesterday?”;

“Did you experience the following feelings during a lot of the day yesterday? How about enjoyment?”.

The Gallup codebook notes that “All items are recoded so that positive answers are scored as a 1 and all other answers (including don’t know and refused) are scored as a 0. If a record has no answer for an item, then that item is not eligible for inclusion in the calculations. The record’s final score is the mean of valid items multiplied by 100”. As such, this scores ranges from 0 to 100. Over half of Gallup respondents have positive affect (so-defined) in the 75-100 range. The measure of negative affect is calculated analogously from the five questions

“Did you experience the following feelings during a lot of the day yesterday? How about... physical pain?”, “... worry?”, “... sadness?”, “... stress?” and “.. anger?” the distribution of negative affect is somewhat of the mirror of that of positive affect, with just over 40% of respondents with a value of zero (so that they did not experience any of these five negative emotions the day before they were interviewed).

These three measures of subjective well-being and ill-being are not that strongly correlated with each other, with the correlation coefficients being equal to: 0.27 for life satisfaction and positive affect,  $-0.19$  for life satisfaction and negative affect, and  $-0.39$  for positive and negative affect.

To see how these measures are correlated with a “standard” set of explanatory variables Clark and Cetre (2016) run regressions of well-being on the following control variables: sex, age, age-squared, couple status, having children under 15 at home, log household income, two educational dummies, labour-force status, religion dummies, and wave and region dummies. We refer the readers to their tables, and here provide a summary of the main results. As is very commonly found, higher life satisfaction is associated with conventional success variables, such as higher income, better education and having a partner.<sup>3</sup> The estimated coefficients on these success variables when positive emotions are analysed are smaller, as indeed are all of the estimated correlations. Education increases positive emotions more than it reduces negative emotions. Being male reduces negative emotions more than it increases positive emotions or life satisfaction; children at home increase negative emotions more than they reduce positive emotions. In general, both positive emotions and negative emotions are less well-explained than is life satisfaction.

To extend the scope of this kind of analysis beyond Europe, Clark and Cetre (2016) compare developed to developing countries. In particular, in the group of developing countries they include Latin America, the Middle East, Africa, South East Asia, South Asia and East Asia, except for Japan; the developed countries are the European Union, the US, Canada, Japan, Australia and New Zealand. Their results show that, in general, male and age have larger effects in developed countries: in particular the very common U-shape in age is more pronounced in richer countries. Equally, having a partner is more strongly correlated with measures of subjective well-being in developed countries, as is income. The other explanatory variables are similar in size across the parts of the world.

Clark and Cetre also carry out a comparative analysis using data from the UK (BHPS), Germany (SOEP), Australia (HILDA) and the European Union (ESS). Some of their empirical findings are notably consistent across these four different datasets, regarding the correlations of control variables with different measures of subjective well-being. Among the consistent findings, we have the following.

- The following variables are more strongly related to life satisfaction than to positive or negative affect: unemployment, age and partner status.
- Income is more strongly related to life satisfaction than to affect in three of the four datasets examined.

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<sup>3</sup> CLARK *et al.* (2018) provide a survey of a number of common findings in the subjective well-being literature.

- Being male reduces negative emotions more than it increases positive emotions or life satisfaction; children at home increases negative emotions more than they reduce positive emotions.

## 2. WELL-BEING, GROWTH AND DE-GROWTH

Inspired by the title of the Fondazione Einaudi's workshop, we explored the relationship between well-being, as measured by life satisfaction, and (de)growth, asking in particular if the correlates of well-being change in recession periods and if money matters more in times of crisis.

We use data from the World Bank to distinguish periods of growth (in which  $GDP_t > GDP_{t-1}$ ) from periods of recession (in which  $GDP_t < GDP_{t-1}$ ). We analyse these relationships using data from the UK (BHPS), Germany (SOEP) and Australia (HILDA). The recession periods identified over the time period of these datasets are:

- (UK) BHPS: 2000, 2001, 2008 and 2009.
- (Germany) SOEP: 1984, 1989, 1993, 1996, 1997, 1999, 2000, 2009, 2010, 2012 and 2015.
- (Australia) HILDA: 2009, 2014, 2015 and 2016.

We also analyse the relationship between the alternative concept of affect and (de)growth. Unfortunately, affect is not measured in BHPS, is measured in the SOEP only from 2013 onwards, while in HILDA individuals are asked yearly. We use the average frequency in the past four weeks of being angry, worry and sad to measure negative affect and the frequency of being happy for positive affect in the SOEP, while for HILDA the average frequency in the past four weeks of being nervous and feeling down measures negative affect and the frequency of being happy and feeling calm positive affect.

In Figures 1 to 3 we plot the size of the coefficients of the explanatory variables of life satisfaction, distinguishing between growth and de-growth periods in these three countries. The dependent life satisfaction variable in all three figures is standardised, so that these correlations are expressed in terms of standard deviations of life satisfaction (for example, in Figure 1 unemployment in the UK is associated with lower life satisfaction of around one-third of a standard deviation).

Overall, and perhaps surprisingly, we find no large differences in what matters for life satisfaction over the economic cycle. There are some differences between countries, and in particular between Germany and the other two countries, as far as the size of the coefficients is concerned: be-

ing unemployed in Germany has a larger detrimental effect, while being out of the labour force matters less. In addition, a high level of education has a positive correlation with life satisfaction only in Germany, while the effect of retirement there is insignificant. It is worth underlining, however, that these German differences (from other countries) with respect to labour-market status and education are the same in growth and de-growth periods.

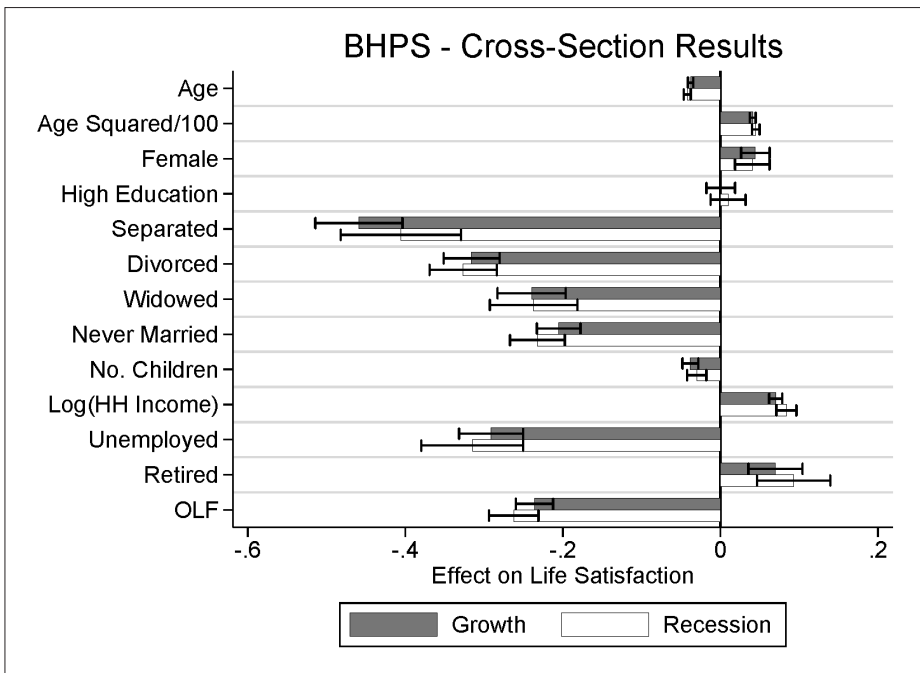


Figure 1. Life Satisfaction during Growth and De-growth in the UK.

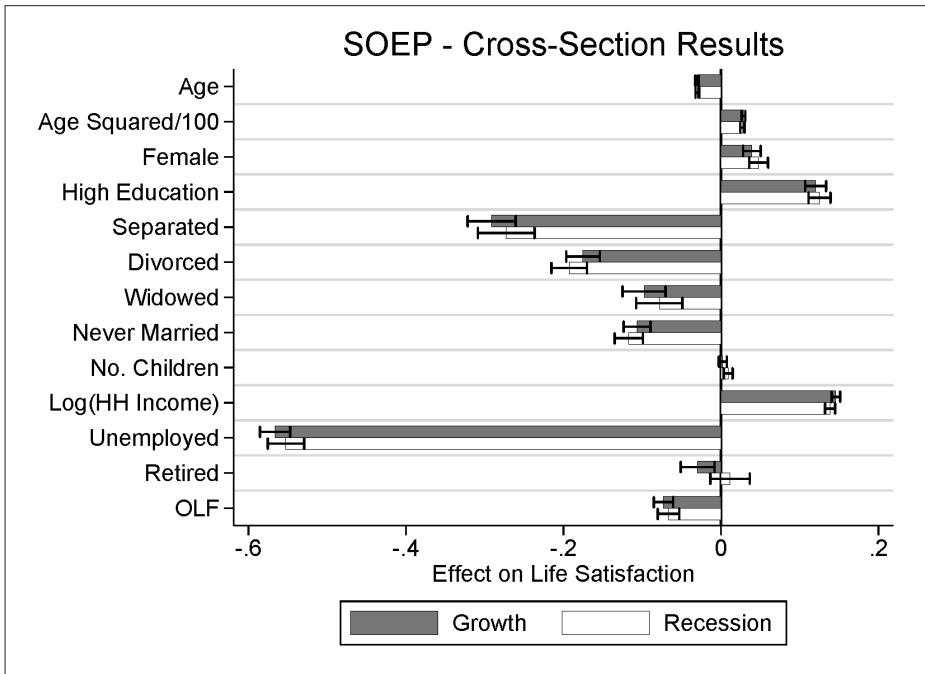


Figure 2. Life Satisfaction during Growth and De-growth in Germany.

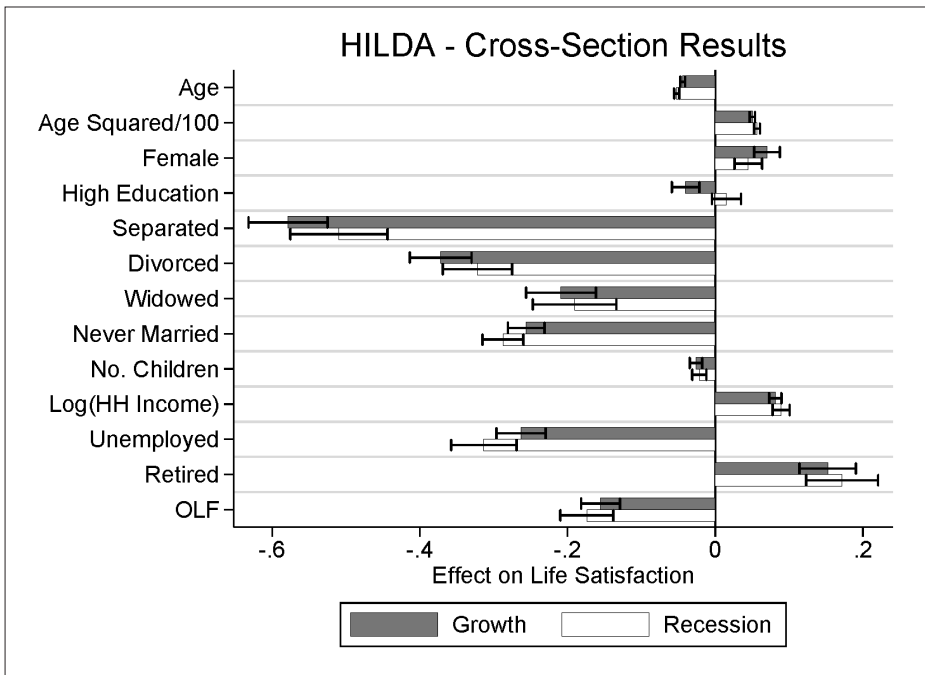


Figure 3. Life Satisfaction during Growth and De-growth in Australia.



Similar results hold for affect, as shown in Figures 4 and 5: the size of the coefficients of the determinants of affect are the same in growth and de-growth periods, while there are some differences between the two countries as far as the size of the coefficients is concerned.

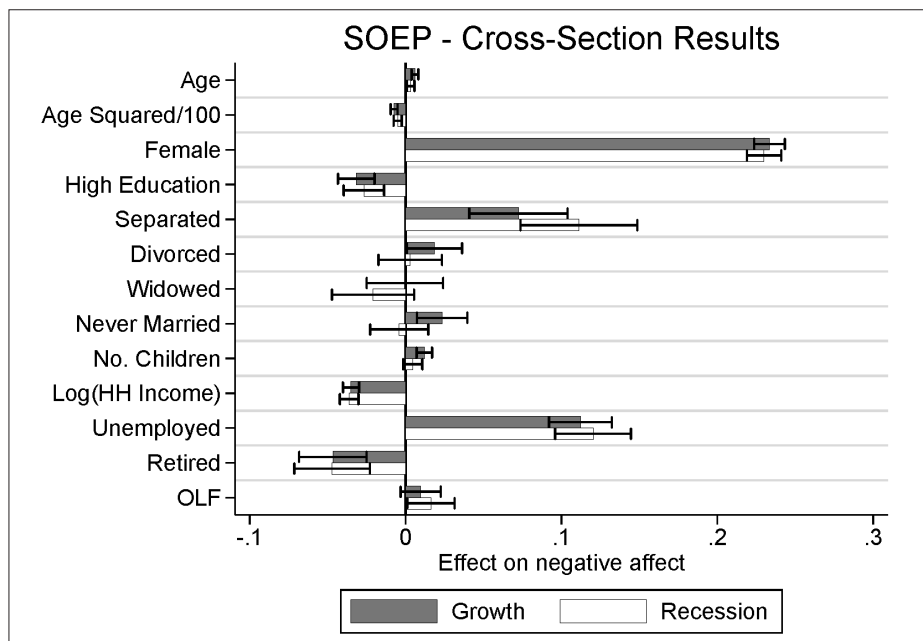
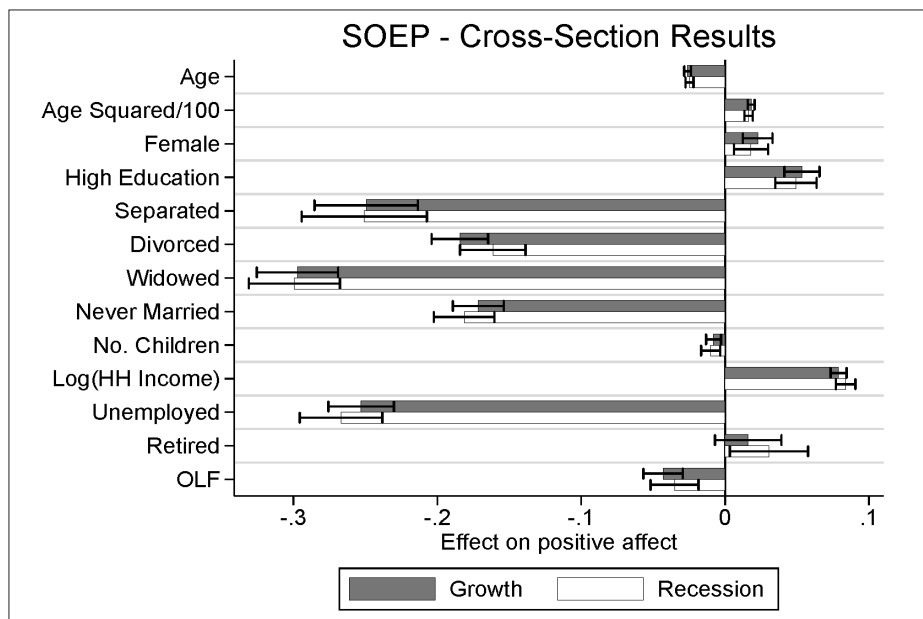


Figure 4. Affect during Growth and De-growth in Germany.

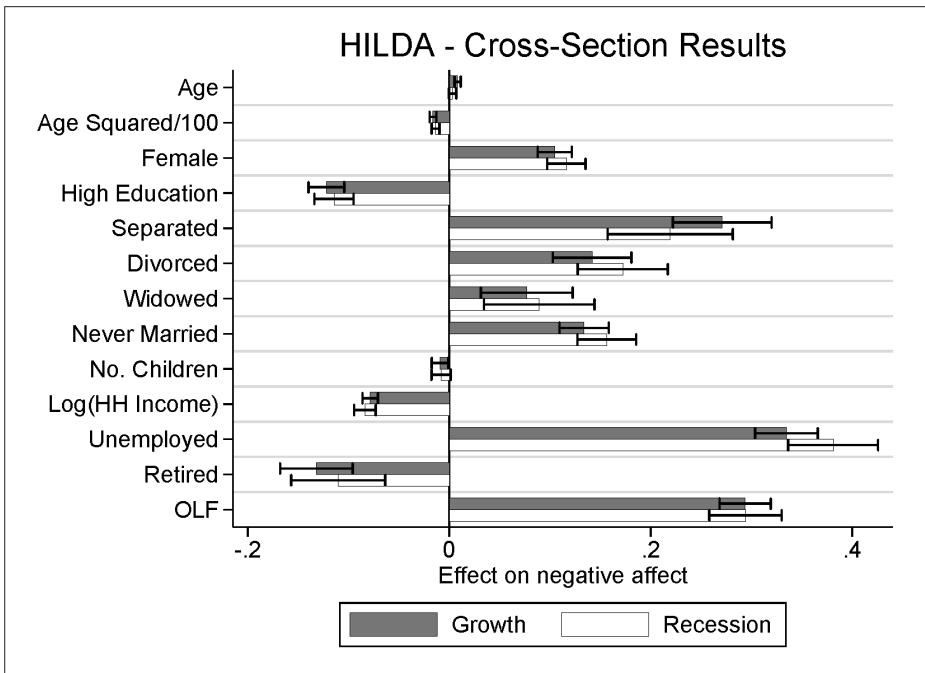
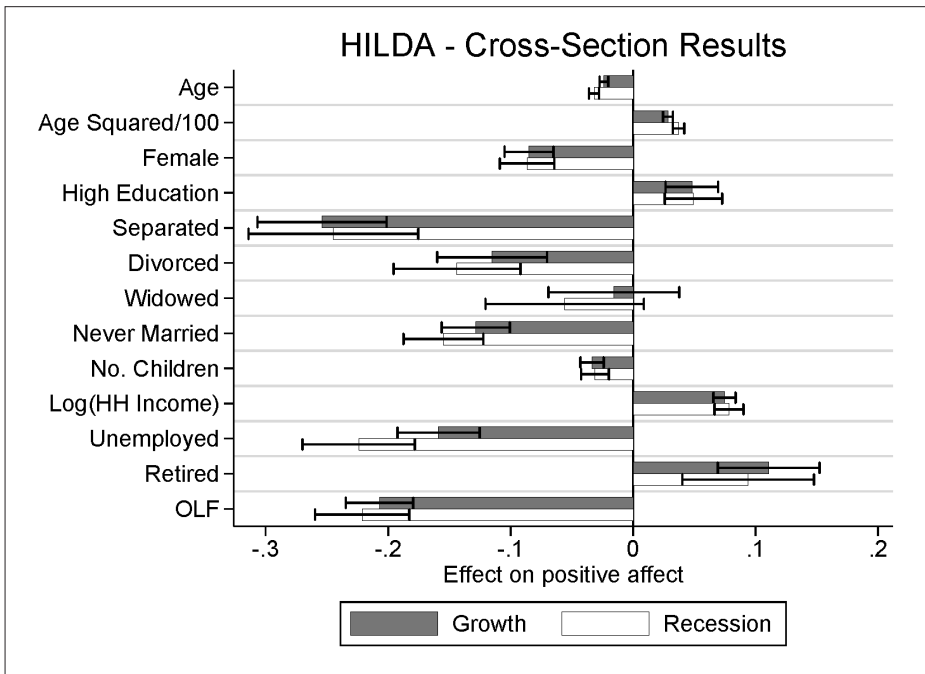


Figure 5. Affect during Growth and De-growth in Australia.

### 3. CONCLUSIONS AND POLICY RECOMMENDATIONS

One of the main conclusions reached in the subjective well-being literature is that higher income at the individual level is associated with greater well-being. But this finding does not suffice to inform public policy about the societal well-being returns from higher GDP. The same literature has also concluded that: 1) individuals compare to others, with the higher income for others being detrimental to one's own well-being; 2) individuals adapt to income gains, so that over time the positive effect of an income gain on subjective well-being vanishes. In both cases, higher GDP will not produce lasting higher societal well-being. Empirically, the macro time series on GDP and subjective well-being do look uncorrelated in many countries: economic growth does not bring greater life satisfaction.<sup>4</sup>

While this finding is consistent with adaptation to income in general, it does not necessarily apply to all income movements. In particular, individuals do not adapt to falls in income, nor to entry into poverty: as such, income growth is here different to income de-growth. Higher incomes may not increase income in the longer run (when we get used to them) but lower income may permanently reduce well-being.

Regarding comparisons to others, there has been a lot of work on relative income (see Clark and D'Ambrosio 2015 and the references therein), relative cars (Kuhn *et al.* 2011, and Winkelmann 2012) and relative house sizes (Bellet 2019). This has all considered rises in the phenomenon in question. There is relatively little work on falls in these areas. De Neve *et al.* (2018) find that periods of economic growth bring about well-being, but that this effect is asymmetric: busts reduce well-being more than booms raise it. This finding is consistent with relative effects/adaptation for rises in income, but less so for falls in income.

Will de-growth work (in happiness terms)? It will do so if we adapt to losses as much as we do to gains, or if we care only little about absolute income or consumption (*i.e.* in richer/less materialistic societies). Last, de-growth will reduce subjective well-being less the more we care more about relative standing. In this case, where comparisons to others take on a predominant role, we can tax income or consumption without affecting well-being: Envious societies are ripe for de-growth.

The above discussion has assumed that de-growth produces the same percentage fall in income for all societal members. In this case, the in-

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<sup>4</sup> Some recent numbers appear in CLARK *et al.* (2018). A useful summary of this debate is given in EASTERLIN (2017).

comes of those to whom we compare will fall by the same percentage figure, no matter the composition of the reference group. We actually know relatively little about reference groups (an exception is Clark and Senik 2010), and in particular whether individuals compare upwards or downwards. If comparisons are upwards and focussed only on the small percentage of the richest in society, then de-growth that is concentrated at the top will both reduce inequality and increase societal well-being. On the contrary, if comparisons are downwards and focussed on the poorest, a fall in income in this latter group will increase inequality but also be associated with greater societal well-being. This is one of the reasons why the relationship between inequality and subjective well-being is ambiguous (Clark and D'Ambrosio 2015). In any case, if de-growth is to be concentrated amongst certain groups, it seems essential to know the anatomy of income comparisons before any we can be certain about the ensuing effects on societal well-being.

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