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On the happiness roller-coaster with SDR 2.0 data

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Abstract

The Survey Data Recycling database version 2.0 (SDR 2.0) offers a major resource for comparative and longitudinal research on subjective well-being. By harmonizing information from multiple international survey programmes, SDR 2.0 provides individual-level data on more than 4.4 million respondents across 156 countries over the period 1966–2017. In addition to harmonized measures of life satisfaction, happiness, social capital, political participation, and socio-demographic characteristics, the database includes extensive metadata and quality-control indicators documenting source data and harmonization procedures. This paper showcases SDR 2.0 as a resource for subjective well-being research and illustrates its methodological potential by revisiting old and new issues in the well-being literature. We describe the database, the harmonization efforts and whether survey-quality and harmonization controls are systematically associated with reported life satisfaction. We further discuss the limitations of the harmonized income variable and assess a strategy to approximate household income from external data. Finally, we provide selected examples of how SDR 2.0 can be used to revisit central questions in the subjective well-being literature, including the happiness equation, the Easterlin paradox, the role of trust in moderating the income-happiness relationship, and convergence in life satisfaction over time. Our results show that SDR 2.0 substantially expands the empirical possibilities for cross-national and longitudinal research on subjective well-being.

1 Introduction

Comparative research on subjective well-being has long relied on a relatively small number of international survey programmes. These sources have collectively contributed to advancing the literature, but each programme is limited by its own geographic coverage, time span, questionnaire design, and

measurement techniques. As a result, researchers interested in long-run and cross-national patterns of life satisfaction and happiness often face a trade-off between temporal coverage, country coverage, and measurement comparability.

The Survey Data Recycling database version 2.0 (SDR 2.0) addresses this limitation by integrating and harmonizing information from multiple publicly available international survey projects, such as the Barometer series, the European Social Survey, the European Quality of Life Survey, and European Values Study and the World Values Survey, to mention a few. The result is a database that covers a large number of countries worldwide. This heterogeneity creates opportunities for large-scale comparative analysis, although coverage varies substantially across regions and over time. Some regions, especially Europe and North America, are better represented than others, while parts of Africa and other areas of the Global South are less consistently observed. Hence, the resulting database offers an unusually broad empirical basis to analyze subjective well-being, social capital, political participation, and socio-demographic characteristics across countries and over time. Moreover, the SDR 2.0 also includes harmonization controls and source-data quality indicators, allowing researchers to evaluate how measurement features and data-quality issues may affect empirical results.

The aim of this paper is to introduce the SDR 2.0 as a resource for subjective well-being research. We use selected research questions and common issues in the literature to illustrate the opportunities and challenges associated with using SDR 2.0 for research on life satisfaction and happiness, and profit of this new source of data to shed light on some new issues. Our contribution is to introduce SDR 2.0 to the community of researchers on subjective well-being, indicating some ways in which the data can be used, what types of questions it may help answer, and what forms of caution and adjustments are required when working with harmonized multi-source survey data.

In particular, in this paper we firstly describe the database and discuss the harmonization efforts, and how to use them for subjective well-being studies. Second, we examine whether survey-quality and harmonization controls are systematically associated with reported life satisfaction. Third, we discuss the limitations of the harmonized income variable and assess a strategy to approximate household income from external data. Fourth, we provide selected examples of how SDR 2.0 can be used to revisit central questions in the subjective well-being literature, including the standard happiness equation, the Easterlin paradox, and the role of trust in moderating income-happiness relationship. Finally, we explore the convergence in life satisfaction over time using β- and σ-convergence. The first refers to the possibility that life satisfaction grows slower in countries in which the initial stock of life satisfaction

is higher; σ-convergence, the second one, refers to the possibility that within and between country dispersion of life satisfaction decreases over time.

Overall, our results show that SDR 2.0 substantially expands the empirical possibilities for cross-national and longitudinal research on subjective well-being.

2 The Survey Data Recycling database

SDR 2.0 is a multi-country, multi-year database designed to support comparative research using existing international survey data. It was developed within the Survey Data Recycling project, with the support from the Ohio State University and the Institute of Philosophy and Sociology of the Polish Academy of Sciences (Tu et al., 2023; Slomczynski et al., 2023). The database is intended to expand the scope of comparative social science research by integrating information from surveys that were originally conducted as separate projects.

SDR 2.0 harmonizes information from 23 international survey projects, corresponding to 174 project waves and 3,329 national surveys. The database covers 156 countries over the period 1966–2017 and includes more than 4.4 million individual respondents. It provides harmonized - i.e. comparable across different surveys - measures of political participation, social capital and subjective well-being (happiness and life satisfaction), as well as socio-demographic variables, along with control indicators for source data quality and harmonization procedures[1].

A central feature of SDR 2.0 is that the harmonization process is seen as part of the data structure. Ensuring the comparability of individual answers from a multitude of datasets from all over the world is not an easy task. A number of issues may arise in this process, such as variability bias and errors due to representation and measurement. Additionally, creating a harmonized dataset can lead to information loss, as some data may be reduced to the lowest common denominator. The extensive and detailed documentation accompanying the data allows users to keep track of the methodological choices made in the harmonization process. Additionally, the dataset contains a number of variables reflecting the quality of the original data sources.

To harmonize variables expressed in different scales, and with various wordings, the team created a new variable which is a linear transformation of the original scale to match a common metrics, and for most variables a

[1] As an example, it is thanks to the harmonization work conducted within the framework of the SDR 2.0 that the issue of duplicated data in public opinion surveys became known (Sarracino and Mikucka, 2017a).

new one which reflects the respondent's position in a country's distribution in a given year and survey project. The first method is widely used in social sciences because it does not alter the mean value of a variable and it minimises the differences between the standard deviation of the two variables. The second one is new and offers a relative measure of the variable of interest. The comparability of relative variables over time and countries, however, can be challenging.

In addition, each harmonized variable is accompanied by various quality control variables to keep track of the scale of the original variable, its length, polarity and whether it is ascending or descending. The quality control variables also flag anomalous realizations, and observations that should not be possible according to the questionnaire. Harmonisation controls further capture basic features of the source question scales. The source data quality controls capture specific problems found in the source variables, such as suspicious values of response age or household size. Additional quality control variables include the identification of potentially duplicated observations, observations with non unique identifiers, and observations with missing identifiers.

The database is free and accessible online, in SPSS ad STATA files, and it consists of three main files. The MASTER file contains the individual-level harmonized data, including target variables, harmonization controls, and some respondent-level quality indicators. The PLUG-SURVEY file contains survey-level information, including indicators of source-data quality and technical variables needed for merging. The PLUG-COUNTRY file provides country and regional identifiers. This structure allows users to combine individual-level substantive variables with metadata about survey design, data quality, and harmonization procedures.

The metadata included in SDR 2.0 are especially valuable for subjective well-being research. Measures of life satisfaction and happiness are known to be sensitive to question wording, scale length, response categories, survey mode, cultural context, and translation. SDR 2.0 allows researchers to control for, and inspect, several of these features. For example, harmonization controls identify properties of the original response scale, such as the number of response categories, whether the scale is ascending or descending, and whether the scale is unipolar or bipolar. Source-data quality indicators flag potential issues such as duplicate records, non-unique identifiers or missing identifiers.

3 Quality controls and life satisfaction

One of the distinctive advantages of SDR 2.0 is the availability of variables documenting the quality of source data and the properties of the harmonized survey items. In this section, we examine whether these quality-control and harmonization variables are associated with reported life satisfaction. The purpose of this exercise is methodological: we ask whether features such as scale length, scale direction, polarity, duplicate observations, non-unique identifiers, or survey programme are systematically related to life satisfaction scores.

We estimate a model in which individual life satisfaction is regressed on a set of time dummies, quality-control and harmonization indicators, together with country dummies and survey-programme controls. The full model can be written as:

$$LS_{ictp} = \alpha + \beta Q_{ictp} + \gamma H_{ictp} + \delta_c + \pi_p + \lambda_t + \varepsilon_{ictp}, \tag{1}$$

where LS_{ictp} denotes the harmonized life satisfaction score of individual i in country c, year t, and survey programme p. Q_{ictp} is a vector of source-data quality indicators, including flags for duplicate records, non-unique identifiers, and missing identifiers. H_{ictp} is a vector of harmonization controls describing the original life satisfaction item, including scale length, scale direction, and scale polarity. δ_c denotes country fixed effects, λ_t denotes 5-year bin time dummies, while π_p denotes survey-programme fixed effects. The regression is estimated using sample weights, and standard errors are clustered at the country-survey-year level. We regress life satisfaction on the various controls step-wise, that is, we start with time dummies indicating 5 year bins, then we add the harmonization controls, and then we remove them in favor of survey program controls, and lastly we regress life satisfaction on all controls together. For brevity, we included the full table of results in the Appendix A (table 8), and report the coefficients of the first and last model in the coefficient plot in figure 1. In particular, figure 1 shows the relationship between the five year period dummies and quality controls with life satisfaction. The orange dots show the coefficients of the time dummies when controlling only for country fixed effects. These indicate that on average life satisfaction has had a downward trend between 1980s and 2000, and it has instead increased in the last decade of observation between early 2000s and 2017. Importantly, however, the composition of the sample changed across decades as countries have been interviewed in different surveys at different times. The figure should therefore be interpreted with caution.

The figure further reports the estimated coefficients from the full life sat-

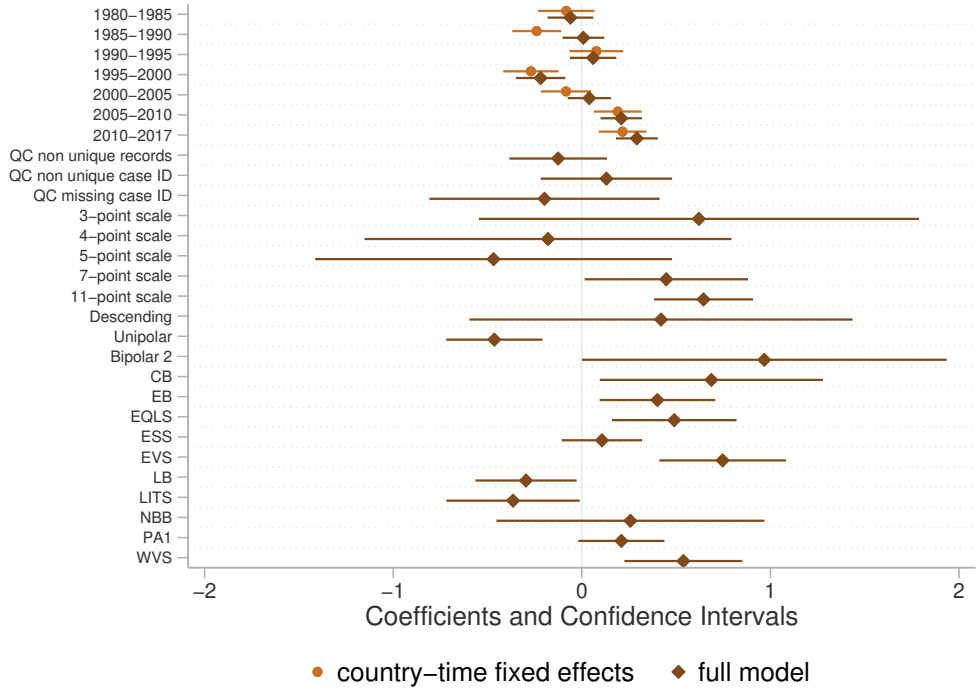
isfaction equation, that is, one in which we regress well-being on all time and country dummies, as well as the full list of quality controls, scale characteristics and survey program dummies (model depicted in brown squares). Noticeably, the inclusion of either quality control variable or survey program control does not alter the overall trend in life satisfaction. The results of the regressions with either quality control variable entered separately are shown in columns 2 - 4 in table 8 in the Appendix.

Figure 1 suggest that most source-data quality indicators do not appear to be strongly or consistently associated with life satisfaction, except for the 11-point life satisfaction scale, which appears to be positively associated with reported life satisfaction relative to the omitted 10-point scale category. This suggests that asking the life satisfaction question on the 11-point scale increases the probability of reporting a higher well-being compared to using a 10-point scale.

Survey-programme indicators also appear to matter. Some European surveys attract a positive and statistically significant coefficients. This may reflect the different position of the subjective well-being questions in the questionnaire - for instance, it is well established that asking about financial conditions before subjective well-being affects how people report their well-being. Easterlin and O'Connor (2022), as an example, noticed that in the World Values Survey waves 3 and 4 satisfaction with the household's financial situation was asked before overall life satisfaction, and that this ordering is associated with an average reduction of almost 0.5 points on the 1–10 life-satisfaction scale. This is why it is preferable to include subjective well-being questions at the beginning of the questionnaire.

Table 8 in the Appendix confirms that even when controlling for source-data quality alone, or for length and polarity of the life satisfaction scale, the time dummies coefficients remain overall stable, and are not affected significantly by the inclusion of quality controls. Hence, we can conclude that firstly, controlling for time and country dummies is already explaining much of the over-time variation in life satisfaction, and that quality controls add only a small explanatory power (the adjusted R^2 increases from approximately 0.13 to around 0.15) or distortion to the reporting function; and secondly that, even when country fixed effects are included, there are some characteristics of the survey programs that affect the way life satisfaction is reported.

Figure 1: Time, quality controls and life satisfaction.



Note: The dependent variable is harmonized life satisfaction. Estimates are based on OLS regressions with survey weights and clustered standard errors.
Source: authors' own elaboration of SDR 2.0 data.

4 Handling the harmonized income variable

Income is among the most used variables in subjective well-being research, but it is also one of the most difficult to harmonize across international surveys. Respondents' income is collected using various response formats, income brackets, and household definitions. Surveys may ask for individual income, household income, income recorded on a continuous scale, income categories or even country-specific income deciles. These differences pose substantial challenges for comparative analysis.

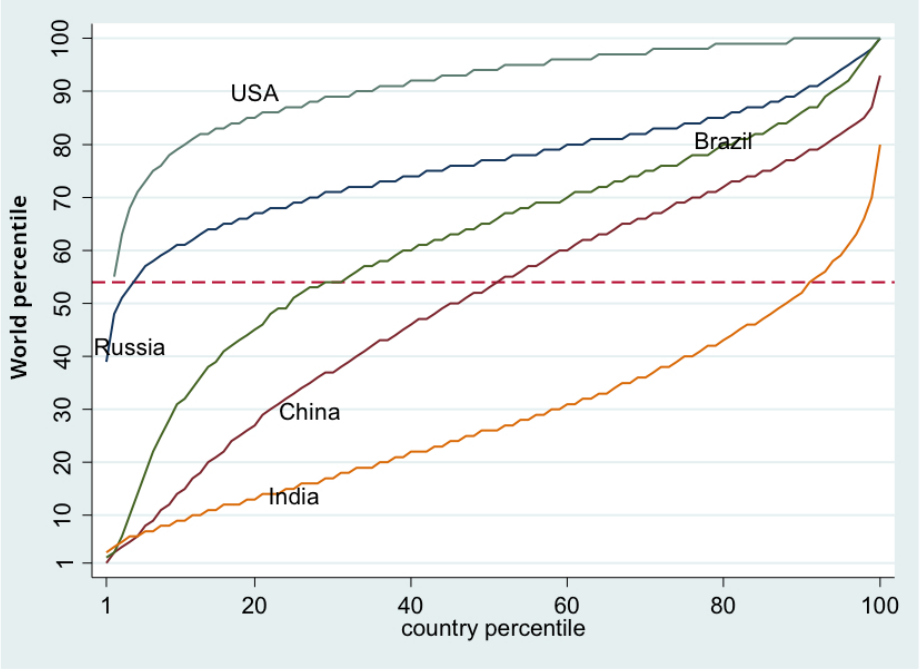
In the SDR 2.0, the new harmonized income variable captures the respondent's relative position in the income distribution of a given country, year, and survey programme. This solution allows income information from heterogeneous surveys to be integrated into a common format. However, it also changes the interpretation of the variable. The harmonized income measure is a relative income-position variable rather than a measure of absolute household income. A respondent located in a low percentile of the income distribution in a high-income country may have a very different absolute income from a respondent located in the same percentile in a lower-income country.

Figure 2 illustrates this problem. Relative income positions are informative about within-country standing, but they cannot be interpreted as comparable absolute income levels across countries or over time: in absolute terms it makes a large difference if someone is in the 20th percentile in India or in the United States. Hence, for research questions focused on social comparisons, this variable is an advantage. For research questions requiring an absolute income measure, it is a limitation. The good news is that it is possible to reverse-engineer absolute income starting from the knowledge of individuals' standing in the income distribution.

By providing information on the national income distribution, the harmonized income variable indicates how many respondents fall within each percentile of the distribution. Hence, it is possible to recover an approximate measure of absolute income using data on the share of gross domestic product (GDP) per capita held by people in various percentiles of the income distribution. The World Development Indicators of the World Bank provides this information for the years between 1966 and 2019, for various countries and years. Using the following equation, it is possible to create a new variable attributing the share of income held by a respondent in a given percentile by multiplying GDP per capita by the respondent's household size.

$$Y_{ipct} = share_GDPpc_{pct} \cdot \frac{(GDPpc_{ct} \cdot hhsize_{ipct})}{100} \tag{2}$$

Figure 2: Illustration of the incomparability of income percentiles across countries. The same relative position in the income distribution can correspond to very different absolute income levels across countries.

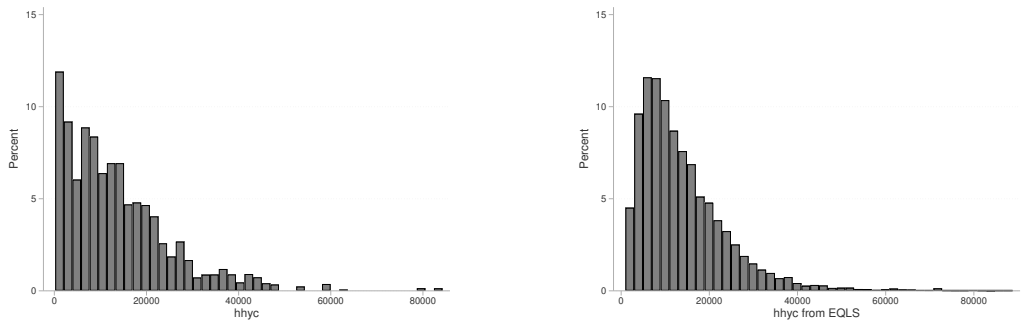


Source: https://www.demos.org/blog/income-inequality-interview-branko-milanovic

In this equation , i denotes respondents, p is the respondent's income-position group, and c and t denote country and year. GDP per capita is measured in real 2017 US dollars using Penn World Table data, while distributional information is drawn from World Bank income-share indicators.

This reconstruction strategy has two main limitations. First, the adjustment assumes that each household member has equal weight. Because SDR 2.0 does not provide sufficient information on household composition across all source surveys, it is not possible to apply a standard equivalence scale consistently. Second, the World Bank provides information for broad income groups only. As a result, the reconstructed income variable is discrete and compresses variation, especially at the bottom and top of the income distribution.

Figure 3: Comparison between reconstructed household income in SDR 2.0 and original household income in EQLS Wave 3.



(a) Reconstructed household income from SDR 2.0, EQLS Wave 3

(b) Original household income from EQLS Wave 3

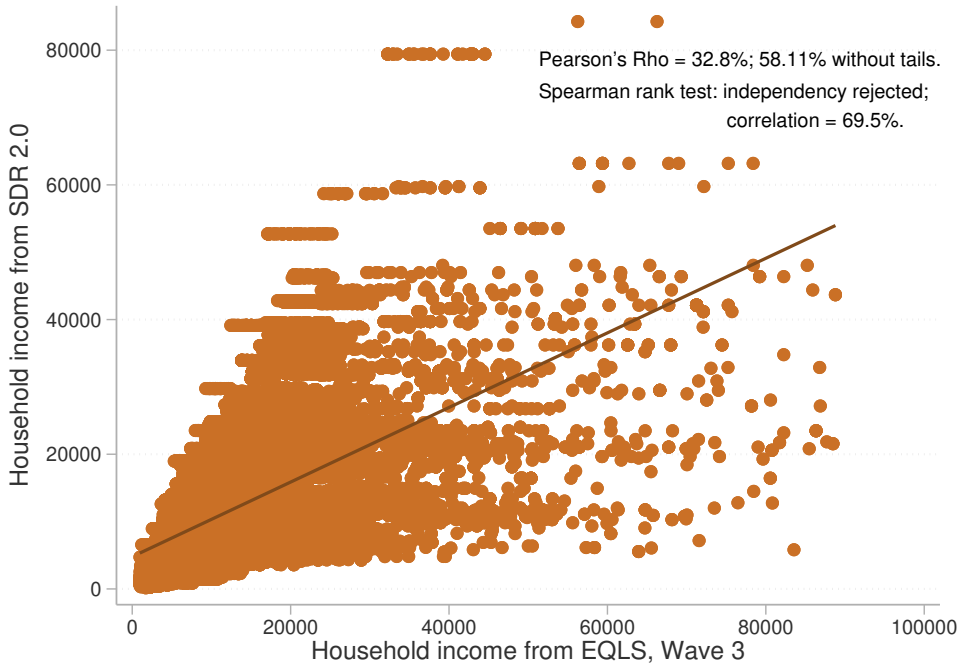
Source: own elaboration of SDR and EQLS Wave 3

Figure 3 compares the distribution of reconstructed household income in SDR 2.0 (panel a) with the original household-income variable from the 2011 wave of the European Quality of Life Survey (panel b). The comparison is useful because EQLS provides high-quality household income information, on a continuous scale rather than in categories of income as most surveys do, making it possible to assess how closely the reconstructed SDR measure approximates the original variable.

The two distributions are overall similar, but not the same: this suggests that the transformation is not perfect, but closely approximates the actual income distribution. As expected, the reconstructed variable is less dispersed (i.e., has shorter tails, especially in the upper part of the distribution) and less skewed than the original income measure. Figure 4 illustrates the association

between the recovered and the original income variables, as well as the line of best fit. The relationship is positive, but the dispersion around the fitted line is substantial. The figure confirms that the reconstructed variable captures broad differences in income position while smoothing variation within income groups.

Figure 4: Association between reconstructed SDR income and original EQLS income.



Note: The EQLS income variable has been truncated at 500,000 US dollars for comparability.

The statistics reported in table 9 in Appendix B indicate that the median household income in SDR 2.0 data is \$9.8 thousand US dollars, while the true median is \$11.7 thousand. The mean is estimated to be \$12.22 thousand, while the true mean is \$16 thousand euro (roughly \$18000). Overall, the reconstructed SDR income variable has a lower mean, lower median, substantially lower standard deviation, and much lower skewness than the original EQLS variable.

Table 1 reports a formal t-test of the difference of the means after excluding the bottom and top 1% of the income distribution (654 individuals). The table shows that the income from the SDR2.0 has a mean of 12,584.38, which

Table 1: Difference in means between reconstructed SDR income and original EQLS income.

Variable	Obs	Mean	Std. err.	Std. dev.	[95% conf. interval]
Household income (SDR 2.0)	31,530	12,584.38	55.80	9,907.96	[12,475.01, 12,693.75]
Household income (EQLS)	31,530	14,069.49	58.55	10,395.82	[13,954.74, 14,184.24]
Combined	63,060	13,326.93	40.55	10,181.85	[13,247.46, 13,406.41]
diff = mean(SDR) - mean(EQLS)		-1,485.11	80.88		[-1,643.63, -1,326.59]

is statistically significantly smaller than the " true" income mean (14,069.49). The reconstructed SDR income variable is also characterized by a smaller variation than the original variable, due to information that is missed when using income deciles to retrieve the income data. However, a Spearman rank test rejects the hypothesis that the two income variables are independent at 1% significance level with a correlation coefficient of 69.5% (N = 32175). The standard Pearson correlation is 32.8% in the unrestricted sample, and 58.11% when the bottom and top 1% of the income distribution are excluded. The large difference in correlation coefficients when the tails of the distribution are excluded suggests that the recovered variable does not correctly reproduce the variability of the data at the lower and upper end of the distribution. This is because the new variable is based on the average values of the income deciles by country and year.

To assess the consequences of using the various income measures – original, harmonized or reconstructed – in regression analysis, Table 2 compares three standard subjective well-being regressions. The first uses the original EQLS income variable, the second uses the harmonized SDR income-position variable, and the third uses the transformed household income variable. This allows us to assess what kind of error a user would incur in when using the harmonized or transformed variables instead of the original income one.

Results suggest that using the harmonized variable in a standard subjective well-being regression would lead to an estimation error. The point estimate of the harmonized income variable is 0.015 (or 0.016 if controls are not included), whereas the true income variable attracts a coefficient of 0.48 (or 0.55 if controls are not included). However, the reconstructed variable provides point estimates that are not statistically different from the true value (0.46 and 0.50 in the regressions with and without controls, respectively).

In sum, although different from the original variable, the transformed household income is a considerable improvement over the harmonized one provided in the SDR 2.0 - especially in regression analysis. Moreover, constructing the variable reflecting respondents' household incomes, turns the

Table 2: Consequences of alternative income measures for estimated income coefficients. The analysis is restricted to EQLS (Wave 3), and SDR 2.0 (EQLS, Wave 3) data.

Panel A – without controls			
	Original	**Harmonized**	**Reconstructed**
Coefficient	0.553***	0.016***	0.508***
t-stat	9.57	16.91	18.3
Adj. R^2	0.129	0.14	0.132
N	32,118	32,118	32,118
Panel B – with controls			
Coefficient	0.488***	0.015***	0.463***
t-stat	8.62	16.19	18.48
Adj. R^2	0.151	0.159	0.149
N	31,794	31,794	31,794
N clusters	33	33	33

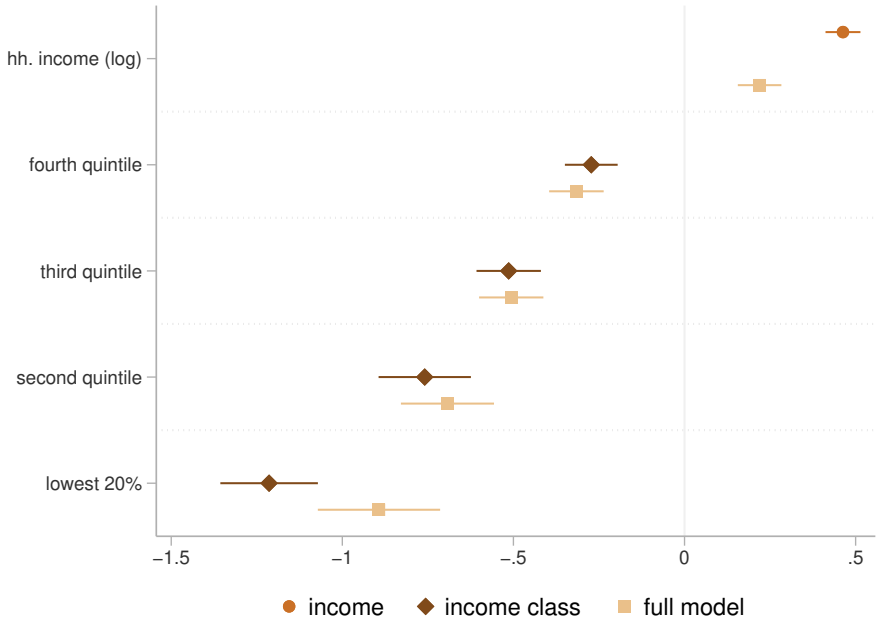
Note: OLS regressions with standard errors clustered by country. Controls include age, age squared, gender, education, and marital status. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

harmonized income variable in a measure of the respondents' relative position in the income distribution, i.e., a social comparisons measure.

Figure 5 illustrates how SDR 2.0 can be used to distinguish absolute and relative income mechanisms (Ferrer-i Carbonell, 2005; Clark, 2018; Jebb et al., 2018; Bartolini et al., 2023). The model labelled "income" estimates the association between household income and life satisfaction. The model labelled "income class" estimates differences across income-quintiles. The model labelled "full model" includes both household income and income-position categories. All regressions include controls for age, age squared, gender, education, martial status, country and year dummies. The attenuation of the coefficients in the full model (displayed as squares) suggests that absolute income and relative income position capture overlapping, but distinct dimensions of economic status: one's own income and social comparisons.

These results show that using SDR 2.0 data together with the World Development Indicators and Penn World tables data, along with some assumptions on how income is distributed within households, it is possible to recover usable income data. It is important to remember that the new variable is not able to reproduce the exact distribution of actual income, especially

Figure 5: Life satisfaction, absolute income, and relative income in SDR 2.0.



Note: OLS regressions with clustered standard errors. Controls include age, age squared, gender, education, marital status, country fixed effects, and year fixed effects. 95% confidence intervals.

at the lower and upper ends of the distribution. However, the harmonized income-position variable is well suited for research on relative standing and social comparisons. In the following, we use the recovered income variable to estimate the well-known well-being regression.

5 Some old and new results

5.1 The happiness equation

Since the early days of the subjective well-being literature, researchers have been running what came to be known as "happiness regressions" - regression models in which subjective well-being is related to socio-demographic characteristics, income, social capital, marital status, employment, and various other control variables (Clark and Oswald, 2002). This research provided results that, at least in part, have consolidated over time. For instance, we know that subjective well-being is positively associated with individuals' social relations, employment and marital status (Frey and Stutzer, 2002; Dolan et al., 2008; Helliwell and Putnam, 2004; Xu et al., 2023). Research has shown that richer people are on average happier than others (Gardner and Oswald, 2007), and that this relation weakens at higher income levels, suggesting decreasing marginal returns of income (Frey and Stutzer, 2002; Kahneman and Deaton, 2010; Killingsworth et al., 2023; Jebb et al., 2018). Moreover, the literature has established that social comparisons mostly negatively affect well-being (Luttmer, 2005; Clark et al., 2008; Bárcena-Martín et al., 2017; Bartolini et al., 2023), as do unemployment (Winkelmann and Winkelmann, 1998; Clark and Oswald, 1994; O'Connor, 2020), and social isolation (Hong et al., 2023; Goodfellow et al., 2022).

SDR 2.0 allows us to estimate a happiness regression equation on one of the longest set of repeated cross-sections. Three main features stand out: first, it provides two harmonized measures of subjective well-being, namely life satisfaction and happiness, while preserving information on the original scales; second, the SDR 2.0 is free, making it accessible to all researchers; third, it allows researchers to include various measures of survey quality among the controls (as seen in table 8 in the appendix). For illustrative purpose, we run a series of regressions of harmonized life satisfaction on socio-demographic information, as well as on quality control variables (see table 3).

All regressions are estimated using Ordinary Least Squares (OLS), and include country and year fixed effects (not shown from brevity), sampling weights, and robust standard errors clustered by country, year and survey.

Table 3: A standard life satisfaction regression using SDR 2.0.

	(1)		(2)		(3)		(4)	
Female	0.0839***	(8.31)	0.0907***	(9.08)	0.129***	(12.93)	0.128***	(12.89)
Age	-0.0849***	(-29.83)	-0.0841***	(-30.76)	-0.0863***	(-34.65)	-0.0869***	(-35.04)
Age squared	0.000810***	(31.89)	0.000797***	(32.70)	0.000841***	(37.66)	0.000845***	(38.01)
Years in education	0.0589***	(22.32)	0.0474***	(18.25)	0.0203***	(9.80)	0.0209***	(9.96)
Married	0.538***	(33.02)	0.539***	(32.95)	0.391***	(21.66)	0.408***	(22.90)
Cohabiting	0.205***	(8.45)	0.218***	(8.96)	0.110***	(4.90)	0.116***	(5.15)
Separated or divorced	-0.282***	(-12.24)	-0.250***	(-11.02)	-0.161***	(-7.37)	-0.152***	(-6.96)
Widowed	-0.128***	(-5.86)	-0.118***	(-5.45)	-0.0372	(-1.65)	-0.0244	(-1.09)
Rural area	0.129***	(8.42)	0.125***	(8.29)	0.166***	(11.94)	0.154***	(11.54)
Trust			0.692***	(40.89)	0.638***	(39.75)	0.642***	(39.94)
Household income					0.235***	(7.42)	0.226***	(7.28)
income class 4					-0.302***	(-19.36)	-0.300***	(-19.32)
income class 3					-0.479***	(-20.76)	-0.478***	(-20.75)
income class 2					-0.642***	(-22.29)	-0.647***	(-22.64)
income class 1					-0.730***	(-11.86)	-0.743***	(-12.36)
QC age value							-1.701***	(-4.51)
QC non unique records							-0.176	(-0.95)
11-point scale							0.0682	(0.39)
EQLS							-0.382*	(-2.04)
Observations	358827		358827		358827		358827	
Adjusted R^2	0.229		0.248		0.269		0.270	
Year dummies	Yes		Yes		Yes		Yes	
Country dummies	Yes		Yes		Yes		Yes	
Quality Controls	No		No		No		Yes	

Note: Countries included in the analysis are: Albania, Armenia, Austria, Azerbaijan, Belgium, Bulgaria, Canada, Croatia, Cyprus, Czech Republic, Denmark, Egypt, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iceland, Ireland, Israel, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Russian Federation, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, United Kingdom, and United States.
t statistics in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

The specifications progressively introduce socio-demographic variables, trust, income and reference income (measured as income categories), and lastly quality-control variables (in column 4). The list of quality controls includes two dummies flagging if the household and age variables have any out-of-scale values, a dummy indicating whether there are non-unique records, a dummy indicating if there are missing identifiers, the full list of survey programme dummies, a dummy indicating the polarity of the life satisfaction variable and the length of the original life satisfaction scale.

Once controlling for all socio-demographic characteristics as well as country and year dummies, almost all the quality control variables are dropped due to collinearity. This suggests that standard controls allow to account for most issues related to the quality of the survey data that may induce measurement errors, and that many quality indicators do not provide additional independent explanatory power. Indeed, we notice that the adjusted R^2 is almost the same in the last two columns, which differ solely for the inclusion of the quality control variables.

The results for socio-demographic controls broadly reproduce several standard findings from the subjective well-being literature. Women report slightly higher life satisfaction in all specifications, with coefficients ranging from 0.083 to 0.128. Age is negatively associated with life satisfaction, while age squared is positive. Married or co-habiting respondents are on average hap-

pier than those who declared to be single. The divide is particularly high in the most basic model (column 1) and it reduces with the addition of further controls. For instance, the premium associated to being married goes from 0.54 to 0.40, whereas the one associated to co-habiting nearly halves. We observe a similar reduction in the coefficient on the dummies for being separated or divorced, and being widowed. In both cases the coefficients are negative and significant, but their magnitude decreases with the inclusion of additional controls and, in the case of widowhood, the coefficient becomes not statistically significant. Interestingly, the change in significance is due to the inclusion of income, both absolute and relative, in the model. This is the only case in which the inclusion of income affects the estimated coefficients of the socio-demographic controls. Trust in others attracts a large and statistically significant coefficient, ranging between 0.692 and 0.642, making it among the strongest correlates of life satisfaction, together with being married.

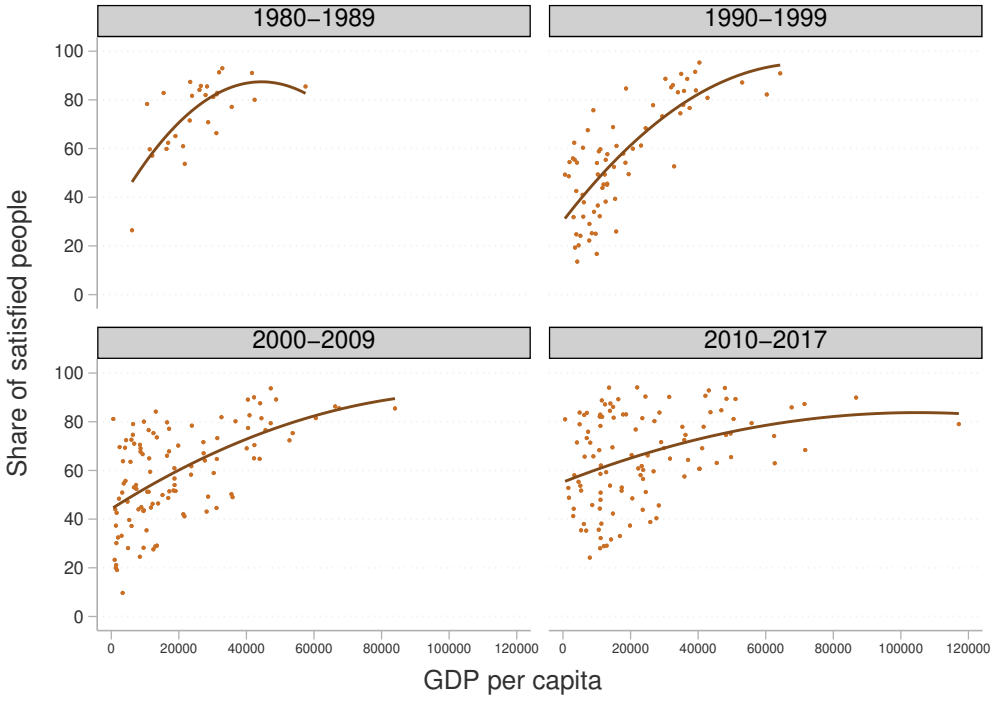
The log of household income (measured with the recovered income variable, as explained in the previous section) attracts a positive and statistically significant coefficient, confirming the well-known positive relationship between income and subjective well-being. The coefficient gets smaller in magnitude when the quality controls are included, but it remains substantial (a 10% increase in income is associated with an approximately 0.02 points increase in life satisfaction). We also include the original income class variable from the SDR 2.0. Given that we include both household income and income class, the latter can be interpreted as relative income (as illustrated in Section 4). As expected, respondents in the lowest income quintile are on average less happy than those in the richest quintile, as are all those in the remaining three quintiles. These associations are sizeable, as, for instance, moving from the highest to the lowest income quintile is associated with a 0.73 points lower life satisfaction.

5.2 The Easterlin paradox

The Easterlin Paradox refers to the evidence that, although Gross Domestic Product and subjective well-being are positively correlated across countries, the relationship weakens or even disappears in the long run (Easterlin and O'Connor, 2022; Easterlin, 2017, 1974). Figure 6 provides an example of the positive cross-sectional relationship between GDP per capita and life satisfaction by decade. Noticeably, there are not many survey studies that allow to check the consistency of this relationship over long periods of time. As countries were not all surveyed since the beginning, the country composition changes across decades. In the top left quadrant, depicting the years between

1980 and 1989, the sample of analysis includes mostly developed European and North American countries. In the bottom right quadrant, showing the years between 2010 and 2017, the sample is composed of countries from the Global South and countries that have experienced a great level of expansion since the 1990s, such as China and India. Independently from the quadrant we consider, we observe that GDP per capita correlates positively with the share of satisfied people. The relationship is curvilinear, showing the expected decreasing marginal returns from GDP, and it tends to flatten in the most recent years, driven also by the inclusion of countries in which life satisfaction is fairly high despite low levels of GDP per capita. Here, we measure the share of satisfied people as the share of respondents indicating a life satisfaction score higher than 7 on a 10 point scale.

Figure 6: Cross-country association between household income and the share of people satisfied with their lives by decade.



Note: the share of respondents satisfied with their lives is defined as the number of respondents with a life satisfaction score higher or equal to 7 on a 10-point scale.
Source: own elaboration of SDR 2.0 and Penn World Table 10.01 data.

How does this relation change when we bring in the time dimension? For

the first time, the long-time series provided in the SDR 2.0 allow us to analyze this relationship over a period of nearly forty years. Figure 7 shows the relationship between the share of people that are satisfied with their lives, defined as in the previous figure, and GDP per capita across world regions. What we observe is that GDP per capita has been increasing over time for almost all regions (except Africa and Latin America and the Caribbean), whereas the share of satisfied people displays different trends depending on the region. In the last few decades, in Asia, Africa and Latin America, life satisfaction has shown a slight increase; in Europe, Oceania and North America however the trends have been mostly flat or declining. Overall, these figures suggest that the paradox is only observed in North America, Oceania and Europe, whereas in other regions there seems to be a positive relationship between growth and happiness. This is an intriguing result because it suggests that individuals can live happy lives independently of economic growth (Sarracino et al., 2026; Mikucka et al., 2017). This is a merely suggestive conclusion warranting a more in-depth analysis. Nonetheless, it shows another avenue through which SDR 2.0 can support subjective well-being research.

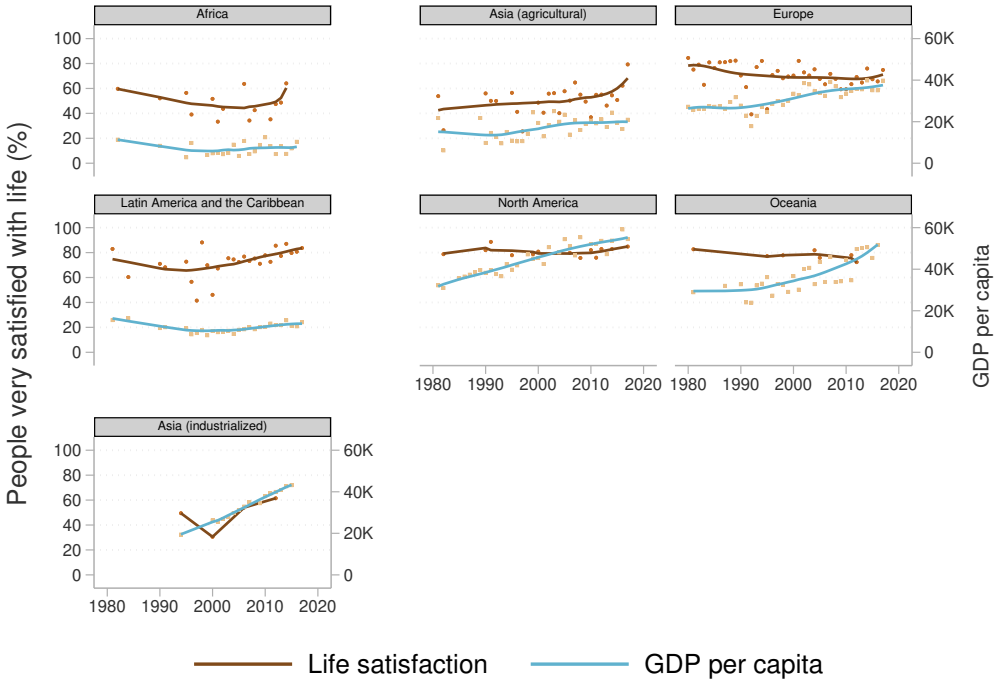
Since the Easterlin paradox holds in the long run, we took advantage of the long time-series made available by the SDR 2.0 to see how the relationship over time changes when considering various time horizons. Specifically, we compute life satisfaction and GDP growth rates over short, medium, long, and very long intervals and estimate the following regression specification:

$$\Delta_{t-(t-i)} LifeSat_c = \alpha + \beta_1 \cdot \Delta_{t-(t-i)} GDPpc_c + \lambda_t + \mu_r + \varepsilon_c \qquad (3)$$

where t indicates years; i indicates various length of time to account for short (1 year), medium (5 years), long (10 and 15 years) and very long-term (30 years) periods; c indicates countries; $\Delta_{t-(t-i)}$ indicates a growth rate computed between t and $t-i$, of the share of people satisfied with their lives as well as of GDP per capita; λ_t and μ_r are year and region fixed effects; ε_c is a random error term clustered at country level. Results are shown in table 4. As done for the figures, we measure high satisfaction with the share of respondents indicating a life satisfaction score higher or equal to 7. The regressions are all estimated on a fixed sample of 14 countries for which we have a long enough time series to compute the 30 year long changes in GDP per capita and life satisfaction.

The estimates are positive across all specifications, indicating that higher growth rates in GDP per capita are generally associated with increases in the growth of the share of respondents satisfied with their lives over time. However, the strength and statistical significance of the association vary with the time horizon considered. The relationship is positive and statistically

Figure 7: Association between GDP per capita and the share of people satisfied with their lives by world region.



Note: The share of respondents satisfied with their lives is defined as the number of respondents with a life satisfaction score higher or equal to 7 on a 10-point scale.
Source: own elaboration of SDR 2.0 and Penn World Table 10.01 data.

significant over short horizons: the coefficients for one- and five-year changes are respectively 0.297 and 0.394, significant at 10 and 5%, respectively. At longer horizons, the estimated coefficients become substantially smaller and statistically insignificant. These results confirm previous findings indicating that economic growth is associated with changes in life satisfaction in the short run, whereas the association weakens and eventually disappears in the very long run.

Table 4: Association between GDP per capita growth and growth in the share of satisfied people over various time horizons.

	Growth rate of life satisfaction (%)						
	1 year	5 years	8 years	10 years	15 years	20 years	30 years
GDP growth$_{t-1}$	0.297*						
	(1.81)						
GDP growth$_{t-5}$		0.394**					
		(2.18)					
GDP growth$_{t-8}$			0.319				
			(1.64)				
GDP growth$_{t-10}$				0.266			
				(1.55)			
GDP growth$_{t-15}$					0.0931		
					(1.68)		
GDP growth$_{t-20}$						0.0191	
						(0.62)	
GDP growth$_{t-30}$							0.0205
							(0.39)
N observations	446	397	359	328	269	222	145
R^2	0.523	0.460	0.467	0.493	0.470	0.465	0.414
N countries	14	14	14	13	14	14	14

Note: all models include year and region fixed effects, and robust standard errors clustered by country. The included countries are: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain, Switzerland, United Kingdom, and United States.
t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.3 Trust and the relationship between income and life satisfaction

A further advantage of SDR 2.0 is that it allows researchers to examine the joint role of income and social capital for subjective well-being. In the following, we study whether trust - a widely used measure of social capital - moderates the association between life satisfaction and both absolute and

relative income. The underlying hypothesis is that trust reduces the importance of income and social comparisons for subjective well-being. This analysis builds on earlier works by Bárcena-Martín et al. (2017) and Bartolini et al. (2023), while using a larger set of countries and years. We estimate a specification analogous to Bartolini et al. (2023), in which life satisfaction is regressed on household income, income class, trust, and their interactions. The estimated regressions further include year and country dummies, as well as quality controls.

In our analysis, income reflects the absolute amount of money of a household, and we interpret income class as a measure of social comparisons, since it identifies whether respondents occupy lower or higher positions relative to others in the same income distribution. Trust is the harmonised trust variable provided in the SDR 2.0. The original trust question in the survey programs asked if people can generally trust others, and the scale in the harmonized variable takes value 0 when people report to have low trust in others, and 1 if they report high trust. The main hypothesis is that trust weakens the association between life satisfaction and both absolute income and relative income position.

Table 5 reports the results of the life satisfaction regressions. Column 1 estimates the baseline association between life satisfaction, absolute and relative income, trust, and socio-demographic controls. Column 2 introduces interaction terms between trust and income, and between trust and income class, allowing us to test whether the income–life satisfaction gradient differs by level of trust.

Consistently with Bárcena-Martín et al. (2017) and Bartolini et al. (2023), we find that both household income and trust are positively associated with life satisfaction. By contrast, lower income groups are negatively associated with life satisfaction relative to the highest income group (the omitted category): respondents in lower positions of the income distribution report lower life satisfaction, and the magnitude of this penalty increases as income position declines.

The interaction terms (reported in column 2) suggest that the income–life satisfaction gradient is weaker among respondents who report higher trust. In other words, the marginal association between income and life satisfaction is smaller for high-trust respondents than for low-trust respondents. A similar pattern appears for income groups: the life satisfaction penalty associated with belonging to lower income groups is smaller among respondents with higher trust.

Figure 8 presents the marginal effects implied by the interaction model. The left panel shows the association between income and life satisfaction among respondents with low trust, while the right panel shows the corre-

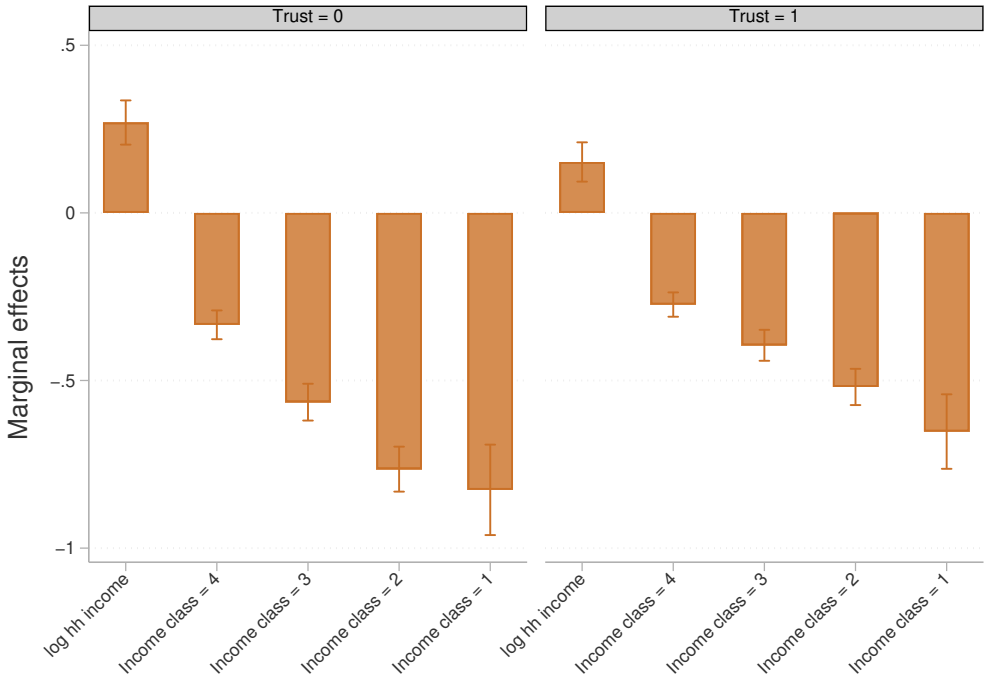
Table 5: Does trust moderate the relationship between income and life satisfaction?

	(1)		(2)	
Female	0.128***	(12.89)	0.127***	(12.83)
Age	-0.0869***	(-35.04)	-0.0861***	(-34.53)
Age squared	0.000845***	(38.01)	0.000837***	(37.44)
Household size	-0.104***	(-8.78)	-0.101***	(-8.70)
Education years	0.0209***	(9.96)	0.0213***	(10.10)
Single			Reference category	
Married	0.408***	(22.90)	0.416***	(23.52)
Cohabiting	0.116***	(5.15)	0.125***	(5.55)
Separated or divorced	-0.152***	(-6.96)	-0.149***	(-6.85)
Widowed	-0.0244	(-1.09)	-0.0121	(-0.54)
Rural	0.154***	(11.54)	0.156***	(11.74)
Log household income	0.226***	(7.28)	0.270***	(8.03)
Trust	0.642***	(39.94)	1.627***	(7.86)
Trust * Log Household Income			-0.118***	(-5.83)
Income class = 5			Reference category	
Income class = 4	-0.300***	(-19.32)	-0.334***	(-15.29)
Trust * Income class = 4			0.0604*	(2.28)
Income class = 3	-0.478***	(-20.75)	-0.565***	(-20.22)
Trust * Income class = 3			0.170***	(6.41)
Income class = 2	-0.647***	(-22.64)	-0.764***	(-22.41)
Trust * Income class = 2			0.245***	(7.74)
Income class = 1	-0.743***	(-12.36)	-0.826***	(-12.04)
Trust * Income class = 1			0.174**	(3.24)
N	358827		358827	
Adjusted R^2	0.270		0.271	
Year dummies	Yes		Yes	
Country dummies	Yes		Yes	
Quality controls	Yes		Yes	

Note: All models include dummies for survey programme; dummies flagging any out-of-scale values for household size and age; dummies for duplicate records, non-unique identifiers or missing identifiers; dummies for scale length, direction, and polarity; year and country fixed effects, and robust standard errors clustered by country. t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

sponding association among respondents with high trust. The relative importance of a person's income is reduced from 0.270 to 0.152, equivalent to a 43% reduction, when moving from low to high trust. Similarly, we find that the negative effect of social comparisons is lower when people have higher social capital. The negative relative effects of income class on life satisfaction are reduced (moderated) by 18% , 25% , 32% and 21% respectively for the four income groups.

Figure 8: Marginal effects of income on life satisfaction by trust.



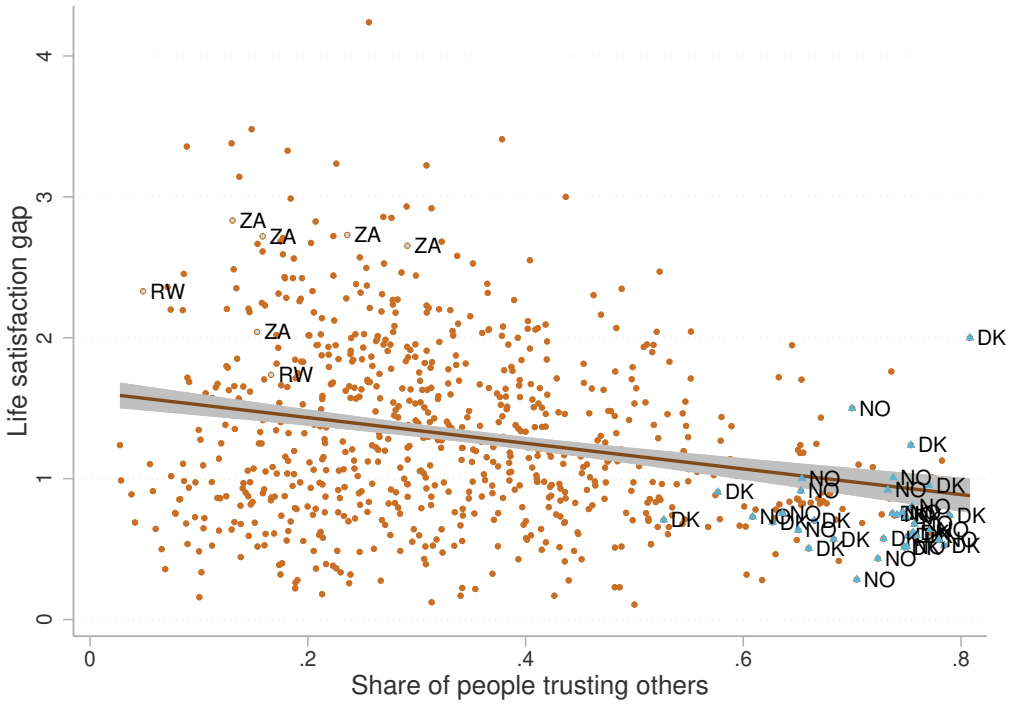
Source: own elaboration of SDR 2.0.

This results suggests that if trust reduces the importance of one's own income and relative position, then high-trust societies may also display lower well-being differences across income groups, namely between rich and poor people - as already indicated by Bartolini et al. (2023). We check if this is the case also in SDR 2.0 data. In our analysis, the life satisfaction gap is the difference in the average life satisfaction between the first and fifth income quintile by country.

Figure 9 shows the association between trust (aggregated by country)

and the life satisfaction gap between high- and low-income respondents. The downward trending line suggests that countries with higher shares of people trusting others tend to have smaller well-being gaps between income groups. For instance, in South Africa, where the share of people trusting others is between 20 and 40%, the life satisfaction gap between rich and poor people is about 3 points. In high trust countries, such as Norway, where the share of people trusting other is above 65%, the life satisfaction gap is less than 1 point.

Figure 9: Life satisfaction gap between rich and poor respondents by levels of trust.



Source: own elaboration of SDR 2.0.

We check whether the association between trust and the life satisfaction gap persists after accounting for GDP per capita in table 6. Results confirm that trust is negatively associated with life satisfaction gap. GDP per capita is also negatively associated with the life satisfaction gap when entered separately from trust (column 3), but its coefficient appears to weaken and lose statistical significance when trust is included (column 2), whereas trust

maintains its negative and significant effect.

Table 6: Life satisfaction gap, trust, and GDP per capita.

	(1)	(2)	(3)
Share of people trusting others	-0.566*	-0.586*	
	(-1.75)	(-1.84)	
Log GDP pc		-0.315	-0.335*
		(-1.60)	(-1.69)
N	780	763	763
Adjusted R^2	0.531	0.534	0.531

Note: All regressions include year and country fixed effects.
t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

5.4 Convergence in life satisfaction

Convergence has received relatively limited attention in the subjective well-being literature. Welsch and Bonn (2008) examine convergence in life satisfaction across EU countries, while Chen and Hsu (2024) study happiness catch-up across eight European countries. More recently, Gonzalez-Cuatianquis (2026) applies both β- and σ-convergence methods to life satisfaction across European cities. Related work by Sarracino and Mikucka (2017b) finds little evidence of convergence in social capital across European countries, showing that convergence questions have also been explored for one important determinant of subjective well-being.

SDR 2.0 allows researchers to examine whether countries are moving toward common levels of subjective well-being over time or if the trajectories are diverging. This question is important because convergence in life satisfaction would suggest that countries starting from lower levels of well-being are catching up with countries where life satisfaction has typically been higher. Conversely, the absence of convergence, or the presence of divergence, would indicate that subjective well-being remains unevenly distributed across countries, even over long periods of economic, social, and institutional change. Studying convergence therefore shifts the focus from the correlates of individual life satisfaction to the evolution of subjective well-being as a societal outcome.

We consider two complementary convergence patterns. The first is β-convergence, which asks whether countries with lower initial levels of life sat-

isfaction experience faster subsequent growth in life satisfaction than countries starting from higher levels. Evidence of β-convergence would imply a catching-up process: initially less satisfied countries would improve more rapidly, narrowing the distance from countries with higher initial well-being. The second is σ-convergence, which concerns the dispersion of life satisfaction across countries, that is, whether cross-country differences in life satisfaction actually become smaller over time. These two concepts allow us to examine whether subjective well-being is following a process of international equalization, whether countries are maintaining persistent well-being gaps, or whether differences in life satisfaction are widening.

5.4.1 β-convergence

To test for beta-convergence, we estimate whether changes in life satisfaction are associated with initial levels of life satisfaction:

$$\Delta_{t-(t-i)} LifeSat_c = \alpha + \beta LifeSat_{c,t-i} + \lambda_t + \delta_c + \varepsilon_c, \tag{4}$$

where $LifeSat_{c,t-i}$ denotes the initial level of life satisfaction in country c, and $\Delta_{t-(t-i)} LifeSat_c$ denotes the change in the share of people reporting high life satisfaction over the relevant time horizon. We account for short (1 year), medium (5 years), long (10 and 15 years), and very long (30 years) term changes in life satisfaction. Lastly, λ_t and δ_c are year and country fixed effects; ε_{ct} are robust standard errors clustered at country level. As before, we measure high satisfaction with the share of respondents indicating a life satisfaction score higher or equal to 7 on a 10 point scale. A negative coefficient on initial life satisfaction would be consistent with beta-convergence: countries with higher initial life satisfaction experience slower subsequent change, while countries with lower initial life satisfaction experience faster change.

Results in table 7 indicate a strong negative association between initial life satisfaction and subsequent change, consistently with the hypothesis of β-convergence. This indicates that life satisfaction changes less in countries with initially high levels of life satisfaction, compared to those with higher initial levels.

5.4.2 σ-convergence

We next examine σ-convergence in life satisfaction, which focuses on how dispersion of life satisfaction changed over time. In particular, σ-convergence occurs if cross-country variance in life satisfaction decreases over time. To reduce noise due to irregular country observations, we compute the variance

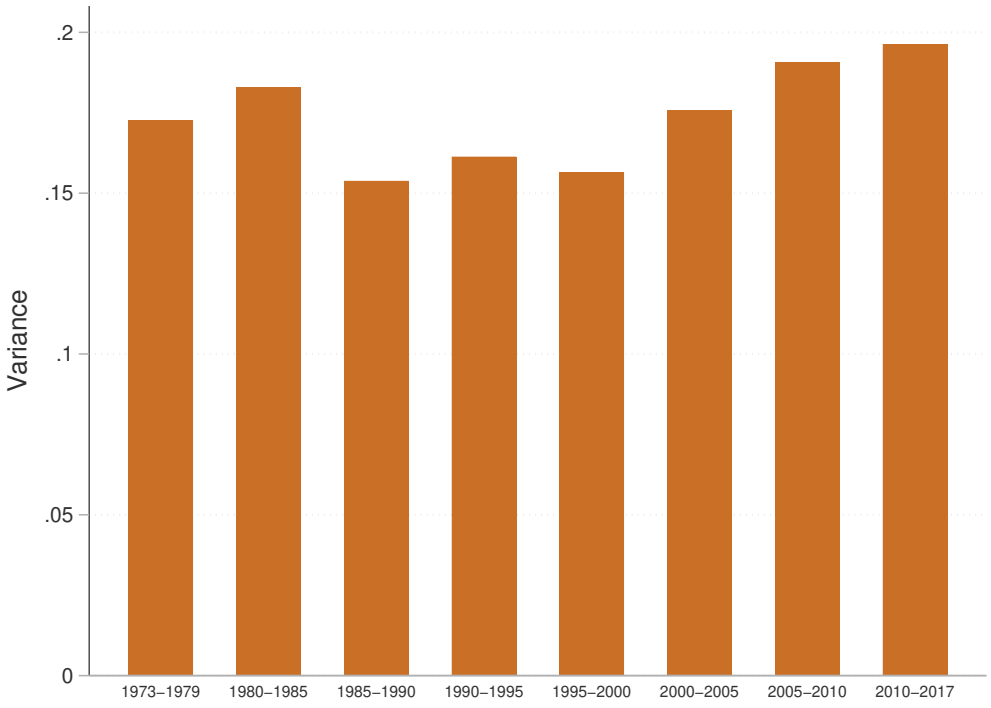
Table 7: β-convergence in life satisfaction across countries.

	Changes in the share of satisfied people				
	1 year	5 years	10 years	15 years	30 years
Share satisfied$_{t-1}$	-0.666***				
	(-10.01)				
Share satisfied$_{t-5}$		-0.854***			
		(-19.27)			
Share satisfied$_{t-10}$			-0.978***		
			(-29.05)		
Share satisfied$_{t-15}$				-1.149***	
				(-23.31)	
Share satisfied$_{t-30}$					-0.941***
					(-6.42)
N	1118	964	708	468	169
R^2 within	0.579	0.657	0.749	0.778	0.797
R^2 between	0.384	0.100	0.139	0.291	0.000147
R^2 overall	0.270	0.263	0.373	0.455	0.157
Year dummies	Yes	Yes	Yes	Yes	Yes
Country dummies	Yes	Yes	Yes	Yes	Yes

Note: The share of satisfied people is defined as the number of respondents with a life satisfaction score higher or equal to 7 on a 10-point scale.
t statistics in parentheses. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

at five-year intervals beginning in 1980. We first do this across all countries available in each period, and then separately by world regions.

Figure 10: Sigma-convergence in life satisfaction.



Note: the share of respondents satisfied with their lives is defined as the number of respondents with a life satisfaction score equal or above 7 on a 10 point scale.
Source: own elaboration of SDR 2.0.

Figure 10 shows how the variance of life satisfaction changed over time. The worldwide comparison does not provide evidence of σ-convergence. If anything, dispersion appears to have increased in recent decades. Specifically, cross-country dispersion increases in the 1990s and grows throughout the whole period up to 2017. This pattern suggests that countries have not become more similar in terms of the share of people satisfied with their lives. Instead, differences across countries appear to have widened and then stabilized at a higher level. It is possible that the increased dispersion in the levels of life satisfaction is the result of growing disparities within countries over time. Future research could use SDR 2.0 to investigate the potential impact of the rich-poor divide on this trend.

6 Conclusion

This paper introduced SDR 2.0 as a free resource for subjective well-being research. SDR 2.0 expands the scope of comparative well-being analysis by harmonizing individual-level information from multiple international survey programmes across a long historical period and a large number of countries. Its main advantage is not only the breadth of its substantive coverage, but also the availability of harmonization controls and source-data quality indicators that allow researchers to inspect the measurement properties of the data, evaluate the practical consequences and apply the relevant corrections.

The analyses presented in this paper are illustrative examples of the many ways in which SDR 2.0 can be fruitful for research on subjective well-being. First, quality-control and harmonization variables can be incorporated directly into analyses of subjective well-being. Most of these variables do not appear to dominate or change the well-known results in the well-being literature. However, we found that scale length and survey-programme differences may matter in some specifications. Second, income measurement remains a central challenge. The harmonized SDR income variable is not directly usable for analysis. However, a good approximation of household income can be reconstructed using secondary data from World Bank. Third, standard well-being regressions estimated with SDR 2.0 reproduce several well-known results, including positive associations between life satisfaction, income, trust, and marital status, and the negative association between social comparisons and life satisfaction. Fourth, SDR 2.0 allows researchers to revisit major topics in the literature, including the Easterlin paradox, the moderating role of trust for income and social comparisons, and convergence in life satisfaction.

At the same time, the paper highlights several limitations. SDR 2.0 is an integrated multi-source database, not a balanced panel generated by a single survey design. Country and regional coverage vary over time, and the availability of key variables differs across survey programmes. Some regions are underrepresented, especially in fully specified models requiring income, trust, and socio-demographic controls. Moreover, and perhaps most importantly, the SDR data does not include any information on employemnt, which could have provided additional insights into the relationship between work and well-being.

Future research can build on SDR 2.0 in several directions. Methodologically, researchers can further examine how harmonization decisions affect substantive estimates. The database can be used to study long-run trends in life satisfaction, the role of social capital in shaping well-being, the interaction between economic development and subjective well-being, and the evolution

of well-being inequalities within and across countries. Future extensions of the database would be especially valuable if they improved the availability of employment-related variables and harmonized income measures. Importantly, SDR 2.0 is accompanied by extensive documentation that allows any researcher to easily integrate additional variables to the harmonized dataset. Overall, SDR 2.0 offers a powerful tool for subjective well-being research.

A Quality controls complete results

Table 8: Quality-control and harmonization variables as predictors of life satisfaction

	(1)		(2)		(3)		(4)		(5)	
1973-1979	0	(.)	0	(.)	0	(.)	0	(.)	0	(.)
1980-1985	-0.0824	(-1.08)	-0.0893	(-1.16)	-0.0330	(-0.58)	-0.192*	(-2.46)	-0.0602	(-0.98)
1985-1990	-0.239***	(-3.63)	-0.245***	(-3.71)	-0.0357	(-0.70)	-0.188**	(-2.65)	0.00831	(0.15)
1990-1995	0.0770	(1.06)	0.0641	(0.87)	0.0718	(1.28)	-0.110	(-1.46)	0.0601	(0.96)
1995-2000	-0.270***	(-3.60)	-0.281***	(-3.70)	-0.260***	(-4.14)	-0.393***	(-5.01)	-0.218**	(-3.26)
2000-2005	-0.0836	(-1.24)	-0.0948	(-1.37)	-0.0995*	(-1.99)	-0.133	(-1.87)	0.0396	(0.68)
2005-2010	0.191**	(2.96)	0.179**	(2.74)	0.0792	(1.71)	0.0577	(0.83)	0.209***	(3.73)
2010-2017	0.216***	(3.35)	0.205**	(3.12)	0.120**	(2.60)	0.131	(1.88)	0.292***	(5.15)
QC non unique records			-0.183	(-1.23)					-0.126	(-0.95)
QC non unique case ID			0.242	(1.22)					0.130	(0.73)
QC missing case ID			-0.204	(-0.89)					-0.198	(-0.64)
3-point scale					0.580	(1.19)			0.621	(1.04)
4-point scale					0.308	(0.68)			-0.179	(-0.36)
5-point scale					-0.389	(-0.87)			-0.468	(-0.97)
7-point scale					-0.205	(-1.43)			0.448*	(2.03)
11-point scale					0.244***	(7.50)			0.646***	(4.83)
Descending					-0.186	(-0.41)			0.420	(0.81)
Unipolar					-0.587***	(-14.40)			-0.464***	(-3.56)
Bipolar 2					0.0496	(0.11)			0.968*	(1.96)
AMB							0	(.)	0	(.)
ASES							-0.269*	(-2.37)	0	(.)
CB							-0.0248	(-0.17)	0.687*	(2.28)
EB							-0.0246	(-0.28)	0.401*	(2.56)
EQLS							0.251**	(2.68)	0.490**	(2.91)
ESS							0.513***	(5.74)	0.107	(0.98)
EVS							0.507***	(5.17)	0.747***	(4.36)
ISJP							0.219	(1.31)	0	(.)
LB							-0.756***	(-17.51)	-0.296*	(-2.16)
LITS							-0.274**	(-2.74)	-0.364*	(-2.02)
NBB							0.197	(0.76)	0.258	(0.71)
NEB							0.267	(1.22)	0	(.)
PA1							0.461***	(3.98)	0.210	(1.80)
WVS							0.304***	(4.25)	0.538***	(3.38)
Observations	2472943		2472943		2472943		2472943		2472943	
Adjusted R^2	0.138		0.138		0.151		0.155		0.156	

Note: all models include country fixed effects, sampling weights, and robust standard errors clustered by country, year and survey program.
t statistics in parentheses. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

B Income

Table 9: Comparison between reconstructed SDR income and original EQLS income.

	SDR 2.0	EQLS, Wave 3
Obs.	32,175	32,175
Median	9773.175	11674.79
Mean	12217.1	16004.28
Std. Dev.	9917.056	25551.59
Skewness	1.68	14.36

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