SATISFACTION WITH DEMOCRACY - General Target Variable Report (GVR)

1. General Information

We provide two harmonized measures of respondents' satisfaction with democracy: T_DEMSAT_11 and T_DEMSAT_DISTRIB. Section 3.2 outlines the harmonization rules for each target variable.

T_DEMSAT_11 measures respondents' reported satisfaction with democracy on an 11-point scale. Target values range from 0 (lowest degree/intensity of satisfaction) to 10 (highest degree/intensity of satisfaction).

T_DEMSAT_DISTRIB measures the relative position of a respondent in the distribution of satisfaction with democracy in a given source survey (national sample). The scores of this target variable are percentiles within the national sample that indicate what share of respondents reports the same or lower satisfaction than the individual.

Both target variables are accompanied by harmonization control variables that capture special features of the source variables: non-standard source question wording (C_DEMSAT_NONSTANDARD), scale length (C_DEMSAT_LENGTH), scale direction, (C_DEMSAT_ASCEND) and scale polarity (C_DEMSAT_POLARITY) (see Table 1.1 and Section 3.3).

The target variable report for Satisfaction with Democracy is accompanied by the following Excel documents:

- The Detailed Variable Report (DVR) T_DEMSAT_DVR_SDR2.xlsx. DVR Excel files in SDR2 systemize all information about source variables that were used for harmonization into a given target variable of the SDR2 database;
- A Crosswalk Table (CWT): T_DEMSAT_CWT_SDR2.xlsx. CWT Excel files in SDR2 contain details about mapping of source values to target values.

Table 1.1. Satisfaction with Democracy: Description of the Target, Source, and Control Variables

	Variable description	Variable name	Variable values[a]
Target variable	Satisfaction with democracy (11-point scale)	T_DEMSAT_11	0 = Lowest degree 10 = Highest degree
	Satisfaction with democracy (distribution-preserving scale)	T_DEMSAT_DISTRIB	0 = Lowest percentile point in distribution 100 = Highest percentile point in distribution

Source variables			See: T_ DEMSAT _DVR_SDR2.xlsx and T_ DEMSAT _CWT_SDR2.xlsx
Control variables	Source nonstandard question wording	C_DEMSAT_NONSTANDARD	0 = Standard question working and answer options 1 = Question wording includes "How democratic is the country" 2 = Question wording includes "How well democracy works in the country" 3 = Question wording includes "How democracy is developing"
	The length of the rating scale (i.e. number of answer options) that the source variable uses	C_DEMSAT_LENGTH	4 = 4-point scale 5 = 5-point scale 10 = 10-point scale 11 = 11-point scale
	Source values: scale direction	C_DEMSA _ASCEND	0 = Descending 1 = Ascending
	Polarity of source rating scale	C_DEMSAT_POLARITY	1 = Unipolar (satisfied) 2 = Bipolar (satisfied/dissatisfied)

[a] Missing values are assigned according to the SDR2 missing codes schema, provided in the Appendix.

2. Survey Projects

Source variables that we used in harmonization of T_DEMSAT appear in 15 survey projects: ABS, AFB, AMB, ARB, CB, CDCEE, CNEP, EB, ESS, EVS, ISSP, LB, NBB, NEB, and WVS, 101 waves and 1757 national surveys. The data cover 148 countries and years from 1973 to 2017.

3. General Rules and Procedures

3.1. Source data description

To construct the target variables T_DEMSAT_11 and T_DEMSAT_DISTRIB, we use source items about respondents' reported satisfaction with the way democracy works in their country. We apply a broader definition of satisfaction with democracy that includes both perception and evaluation of the democratic situation in the country. In this way, we take for harmonization source items that do not use the term "satisfaction" but still refer to the evaluation of the political regime.

Typical questions in the source surveys are: *Are you completely satisfied or completely dissatisfied with the way in which democracy is working in _____ (country e.g. Hungary) today?* (CDCEE_1_2); *Are you very satisfied, fairly satisfied, not very satisfied, or not at all satisfied with the way democracy is functioning in (nation)?* (EB); *And on the whole, how satisfied are you with the way democracy works in [country]?* (ESS).

Typical questions in the source surveys that do not use the term "satisfaction" are: *In your opinion, to what extent is your country democratic?* (ARB); *All in all, how well or badly do you think the*

system of democracy in (R's country) works these days? (ISSP_1996); *On the whole, on a scale of 0 to 10 where 0 is very poorly and 10 is very well. How well does democracy work in [COUNTRY] today?* (ISSP_2014).

3.2. Rules of transformation of source variables into target variables

To construct the 11-point scale and distribution-preserving target variables, we first create preparatory scales. This involves recording the values of the source scales using the consecutive numbers *k*, where *k* ranges from 1 to *n*. The value 1 of the preparatory scale corresponds to the lowest satisfaction with democracy, and higher scores correspond to higher satisfaction (ascending direction). Each preparatory scale is of the same length as the source scale it was derived from.

3.2.1 Constructing the 11-point target scale

To construct the 11-point target scale, we use the preparatory scales and assign scores to them in the interval from 0 to 10, according to the following linear transformation:

$$l(k) = \frac{10}{n*2} + (k-1) * \frac{10}{n}$$

where: $l(k)$ is a target score corresponding to the preparatory score *k*, and *n* is the number of *k*-values.

This process involves "stretching" preparatory (and thus, source) scales that have fewer than 10 points and keeping 11-point scales as such. Figure 3.2.1 and Table 3.2.1 depict transformations using this type of rescaling.

Figure 3.2.1. Transformation of source values into the target 11-point scale with 0 to 10 range

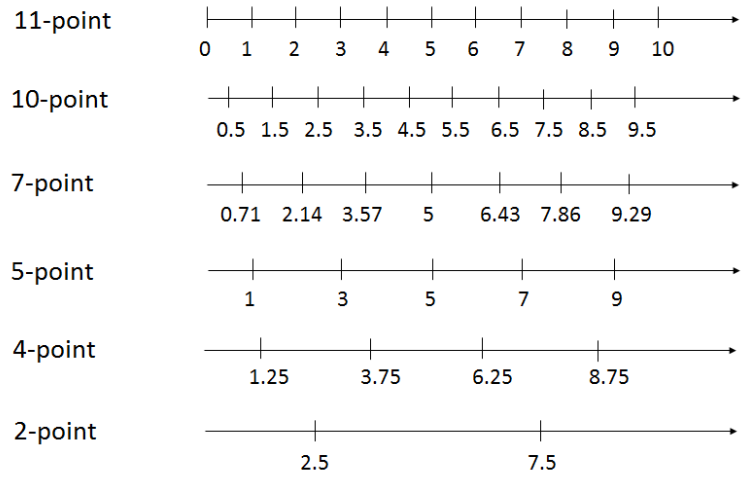

Table 3.2.1. Creating the 11-point scale (from 0 to 10), with median and mean values 5, and minimized inter-scale differences in the variability

Source scale length	Recodes	Median Mean	Average of absolute deviations	Variance	Standard deviation
11-point	0,1.0, 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0	5.0	2.72	10.00	3.16
10-point	0.5, 1.5, 2.5, 3.5, 4.5, 5.5, 6.5, 7.5, 8.5, 9.5	5.0	2.50	8.25	2.87
7-point	0.7, 2.1, 3,6, 5.0. 6,4, 7.9, 9,3	5.0	2.46	8.25	2.87
5-point	1.0, 3.0, 5.0, 7.0, 9.0	5.0	2.40	8.00	2.83
4-point	1.25, 3.75, 6.25, 8.75	5.0	2.50	7.81	2.80
3-point	1.7, 5.0, 8.3	5.0	2.20	7.26	2.69
2-point	2.5, 7.5	5.0	2.50	6.25	2.50

3.2.2 Constructing the distribution-preserving target scale

To construct the distribution-preserving target scale, we take into account respondents' position in the distribution of reported satisfaction with democracy values in a given national sample. For an *n*-point preparatory scale, for values *k* that range from 1 to *n*, where X_i is the percent distribution of the variable in sample *s*, *k* is recoded to:

$$k = \sum_{i=1}^{k-1} \quad X_i + \frac{X_k}{2}$$

The distributional score for the answer option *k* is the sum of percentiles of all previous answer options up to *k-1* plus half of the percentile of the answer option *k*.

For a given sample, each scale point of the distribution target scale corresponds to the midpoint of the cumulative distribution of scores *k* (see Table 3.2.2). Put differently, the scores of the distributional target scale are percentiles that indicate what share of respondents within a national sample reports the same or lower value than the individual. The target variable is computed using unweighted samples.

Table 3.2 illustrates how we transform **preparatory** variables (which recode **source** variables' values in ascending direction) with 5 response options into the distribution-based target variable.

Table 3.2. Example of the distribution-based transformation of 5-point preparatory variables into T_DEMSAT_DISTRIB.

Preparatory variable	Percentage distribution	Cumulative percentage	Interval	Interval lower bound plus interval midpoint	Target value (rounded to

values, based on source values k	X_k	**distribution** $\sum_{i=1}^{k} X_i$	$\sum_{i=1}^{k-1} X_i$	$\sum_{i=1}^{k-1} X_i + \frac{X_k}{2}$	**integer)**
1 = lowest satisfaction	10.68	10.68	0	= 10.68/2 = 5.34	5
2	32.75	43.44	10.68	= (10.68 + 32.75)/2 = 27.05	27
3	32.11	75.55	43.44	= (43.44 + 32.11)/2 = 59.49	59
4	21.69	97.23	75.55	= (75.55 + 21.69)/2 = 86.39	86
5 = highest satisfaction	2.77	100	97.23	= (97.23 + 2.77)/2 = 98.61	99

Missing values and different situations that warrant to be treated as missing data are coded according to the SDR2 missing codes schema, provided in Table A.1 in the Appendix.

3.3. Methodological variables that accompany Satisfaction with Democracy

We provide four harmonization control variables that capture specific features of 'satisfaction with democracy' source variables (see Table 1.1):

1. C_DEMSAT_NONSTANDARD captures nonstandard wording of source questions. It takes the value 0 if the source question wording is standard, i.e., about *satisfaction with democracy* (e.g., EB_0_2, ESS_1). It takes the value 1 if respondents were asked *how democratic* their country is (e.g., ARB_1, CB_2011). It takes the value 2 if respondents were asked *how well* democracy works in their country (e.g., ISSP_2004). The measure takes the value 3 if the question specified satisfaction with the way democracy is *developing* in your country (e.g., EVS_1_4, WVS_1_6).
2. C_DEMSAT_LENGTH is a nominal variable that identifies the length (i.e. number of answer options) of any given source scale used to construct T_DEMSAT_11 and T_DEMSAT_DISTRIB. It takes the following values: 4, 5, 10, 11.
3. C_DEMSAT_ASCEND is dichotomous. It takes the value 1 for source scales whose values are in ascending order (i.e. response options are ordered from least to most satisfaction); it takes the value 0 when source scale values are in descending order (i.e. response options are ordered from most to least satisfaction).
4. C_DEMSAT_POLARITY is coded 1 if the source scale is unipolar (e.g. from *not at all satisfied* to *very satisfied*), and 2 if the scale is bipolar (e.g. from *very dissatisfied* to *very satisfied*). For nonstandard source questions that do not have scales with *satisfied/dissatisfied* labels (e.g.,in ARB/1 the scale is from "complete dictatorship" to

"complete democracy"), we use the SDR missing code CINAP since this control does not apply (see SDR2 missing codes schema in the Appendix).

4. Special Cases

In AFB_1/2/3/4/5/6 and CNEP_3_MZ, response options include “my country is not a democracy,” “country is not a democracy” or “Mozambique is not a democracy.” In all cases, we assign the minimum value to this category (merged with “not at all satisfied”).

In CNEP_4_ES, CNEP_4_ID, CNEP_4_MX, CNEP_4_US and CNEP_4_ZA, “not a democracy” and “not at all satisfied” were merged by survey provider.

In ARB_1, response options include “complete dictatorship”, “complete democracy” and “there is no democracy”. We merge “complete dictatorship” with “there is no democracy” and assign the minimum values to this category. We assign the maximum value to “complete democracy”.

Appendix A: Codes for missing values in SDR2

In the SDR database v.2 we identify different situations that warrant to be treated as missing data. Table A.1 lists all SDR2 missing value codes:

Table A.1. Codes for missing values in SDR2

SDR tag [a]	**SPSS (STATA) codes**	**Label**
		Standardized source codes for missing values
DK	-1 (.a)	Don't know
NA	-2 (.b)	No answer
REF	-3 (.c)	Refusal
DU	-4 (.d)	Don't understand the question
DNR	-5 (.e)	Any combination of DK, NA, REF, DU
INAP	-6 (.f)	Inapplicable
NEC	-7 (.g)	Not elsewhere classified
		SDR created codes for missing values
UNFIT	-8 (.h)	Source value does not fit to target
ERR	-9 (.i)	Errors in source data and undocumented source values
COMBI	-10 (.j)	Different missing codes on multiple sources taken for a target
CINAP	-11 (.k)	For control variables only: inapplicable
INSUF	-12 (.l)	For survey: Insufficiently defined response categories
QNA	-13 (.m)	For survey: Question not available

[a] Abbreviations for the labels corresponding to the SDR2 codes for missing values. These tags are used in the Crosswalk Table (CWT) files (Excel) that accompany documentation of SDR2 target variables.

In exceptional situations when codes for missing data listed in Table A.1 cannot be used, we apply a system missing <null> value.