methods, data, analyses | Vol. 14(1), 2020, pp. 91-126 DOI: 10.12758/mda.2019.07

Micro- and Macro-level Determinants of Participation in Demonstrations: An Analysis of Cross-national Survey Data Harmonized Ex-post

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Abstract

This paper investigates micro- and macro-level determinants of participation in demonstrations worldwide, focusing on the role of resources and grievances across different democratic contexts. The analysis relies on a data set stemming from the ex-post harmonization of five international survey projects covering 100 countries between 1989 and 2009: Americas Barometer, Asia Europe Survey, European Values Study, International Social Survey Programme, and the World Values Survey. Results provide mixed support for previous findings and point to new insights. First, I find that the positive association between education and participation in demonstrations is stronger in democratic countries than in non-democracies, but there is no evidence of similar variation in the case of income. Second, the effect of trust in parliament is U-shaped, and more pronounced in non-democracies compared to democracies. Overall the findings indicate that the role of resources as well as disaffection with the political system in explaining participation in demonstrations depends on the political context, thus emphasizing the importance of incorporating both levels of analysis in theoretical and empirical models. The paper concludes with a discussion of the opportunities and challenges associated with ex-post harmonization of survey data.

Keywords: political participation, education, trust in state institutions, democracy, survey data harmonization, cross-national research

Political participation figures prominently in social science research as an avenue for citizens to communicate their views and to voice protest or support for political leaders. Much of cross-national research on political participation has been carried out in wealthy democracies, and this has shaped our understanding of the subject. Substantially less is known about determinants of participation in non-democratic and economically less-developed countries, and especially how they compare to those observed in democracies. This paper addresses long-standing questions in research on political behavior that pertain to the role of resources and grievances across political contexts (Cichocka et al., 2017; Dalton, Van Sickle, & Weldon, 2010), thus contributing to debates on the micro- and macro-determinants of political participation.

To extend the coverage and increase the representation of less democratic and economically developed countries, I rely on ex-post harmonized survey data from the Survey Data Recycling project (SDR, Slomczynski et al., 2017). Ex-post harmonization refers to procedures applied to existing data sets that were not created with comparability in mind, to transform original data sets in a way that enables us to analyze them as a single data source (Wolf, Schneider, Behr, & Joye, 2016). In this paper I use a subset of the SDR v.1 data (Slomczynski, Jenkins et al., 2017) consisting of five cross-national survey projects: Americas Barometer, Asia Europe Survey, European Values Study, International Social Survey Programme, and the World Values Survey. Together the data cover 100 countries between 1989 and 2009.

Results support prior findings about the positive association between individual resources – education and income – and participation in demonstrations, and further show that the association between education and participation is substantially stronger in democratic than in non-democratic countries. The findings related to the role of political trust are more complex and point to new insights: I find that

Acknowledgments

I would like to thank Kazimierz M. Slomczynski, J. Craig Jenkins, Joshua K. Dubrow, Przemek Powałko, and Robin Krauze for their help at various stages of preparing the paper, as well as the editor and the anonymous reviewers whose comments have greatly improved this manuscript.

This work was supported by the Institute of Philosophy and Sociology of the Polish Academy of Sciences (grant number 2017/S/05), the 2017 Silverman Research Support Award from the Department of Sociology at The Ohio State University, and the Visiting Scholar Program at the Chemnitz University of Technology.

Replication materials are available at https://osf.io/xadtn/.

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trust is associated with the probability of demonstrating in a U-shaped way, and this pattern is more pronounced in non-democratic countries than in democracies.

The paper begins by presenting theoretical considerations on the role of resources, grievances, and the political context for political participation. Next, I describe the analytic strategy, including the harmonized survey data, as well as the process of arriving at the final data set for analysis. Since ex-post survey data harmonization is not a standard procedure in the social sciences, I discuss the harmonization strategy and the harmonization process of the survey variables used in this paper and the associated advantages and risks in some detail. After a description of the models, I turn to the results, followed by a discussion of the theoretical and methodological implications of the study. Beyond describing analyses using data from a specific harmonization project, the issues discussed in this paper are more broadly applicable to analyzing survey data characterized by varying quality and methodology.

Determinants of Participation in Demonstrations

Like most social phenomena, political participation results from a combination of factors, both individual and contextual, and is best analyzed in a multilevel theoretical framework (Dalton et al., 2010). Theories explaining political participation generally focus either on factors that enable participation by facilitating or removing barriers, or on factors that motivate participation by spurring opposition. According to the civic voluntarism model, political participation is enabled by the presence of resources (Berinsky, 2002; Brady, Verba, & Schlozman, 1995; Verba, Schlozman, & Brady, 1995). These resources can be of different kinds, including economic, but also civic skills, and the general expectation is that individuals with greater resources will be more likely to participate. The second approach, applied most often to contentious political participation, conceptualizes participation as motivated by grievances, which push people to go out into the streets and demand change (van Stekelenburg & Klandermans, 2013; Wilkes, 2004). Grievances are most frequently related to economic hardship, both absolute and relative (Klandermans, van der Toorn, & van Stekelenburg, 2008), but can also result from personal or political dissatisfaction (Muller, Jukam, & Seligson, 1982).

The Role of Resources: Income and Education

When focusing on economic well-being, the two theoretical approaches lead to contradictory hypotheses. While in the resource approach income is expected to be positively associated with the probability of participation, the grievance approach predicts a negative association. Empirical studies tend to support the first claim,

and find that individuals with higher income are more likely to participate in politics, both in conventional and unconventional activities (Loose & Jae, 2011; Marsh & Kaase, 1979; Quaranta, 2015).

However, not all resources are economic. Research has repeatedly shown that the better educated are more likely to engage in behaviors commonly associated with active citizenry: membership in voluntary associations (Putnam, 2000), protest behavior (Dalton et al., 2010), contacting politicians (Aars & Strømsnes, 2007), and reporting crimes to the police (Botero, Ponce, & Shleifer, 2012). Viewing education as a resource, explanations typically emphasize the cognitive costs of participation that are easier to overcome for educated individuals, who have better knowledge of the political system, can evaluate the performance of state institutions more accurately, and - in the case of under-performance - are better equipped to take action (Ceci, 1991; Marks, 2013; Winship & Korenman, 1997).

Political Trust as Grievance or as Resource

The relationship between political trust and political participation depends on the type of participation (see Gabriel, 2017, for a review). Protest behavior is considered more likely among individuals with low political trust, who reject conventional or "conformist" modes of participation and are more likely to engage in unconventional, elite-challenging activities, or withdraw from participation altogether (Citrin, 1974). In this sense, low trust constitutes a grievance against the political system. On the other hand, some level of trust in state institutions seems to be necessary for a person to engage in any political activity whose success depends on state responsiveness, which makes trust a resource that enables action (Cichocka et al., 2017).

Empirical studies provide mixed evidence. Some studies in Europe find a negative effect of political trust on protest activities, such as participation in demonstrations, boycotts, and signing petitions (Braun & Hutter, 2016; Kaase, 1999; Marien & Christensen, 2013; Marien & Hooghe, 2011). Another analysis of data from European countries found a positive effect of trust in the national parliament on "soft protest" (Dubrow, Slomczynski, & Tomescu-Dubrow, 2008). Yet another study, this time with a global scope, identified no effect of trust in parliament on protest participation (Dalton et al., 2010). Meanwhile, analyses by Cichocka and colleagues (2017) found a negative quadratic association between trust in state institutions and engaging in normative collective action. According to them, individuals having the least trust do not believe in the responsiveness of the state to protest, while those with very high trust exhibit a level of support which leaves little to protest against.

The Role of the Political Context

The same forms of political participation may have a different meaning depending on the political context. In democratic countries, activities such as attending demonstrations or wearing badges are legal, legitimate and generally safe, and have largely become part of the normal repertoire of politics (Dubrow et al., 2008; Newton & Montero, 2007). In authoritarian regimes, the same activities may be illegal and have a high chance of being repressed.

Considerations of contextual factors that shape political participation focus on the role of political opportunities, with theoretical expectations depending on whether the emphasis is on the enabling or on the motivating role of the context. Some scholars argue that openness of the political system, approval of mass participation, and responsiveness to protesters' demands, will encourage more participation (Eckstein & Gurr, 1975; Tarrow, 2011). Others claim that closed political systems that discourage civic engagement will increase protest participation if institutionalized channels are not accessible (Kitschelt, 1986). The differences in the mechanisms leading to political participation in democratic and non-democratic countries may result in a different composition of participants with regard to resources and grievances, as discussed above.

Hypotheses

If regime openness is generally associated with increased participation, it can be expected that the effect is stronger for individuals with more resources, and this is so for two reasons. First, these individuals are better equipped to identify and navigate the opportunities created by the political system. Second, in the case of low political openness and the potential for state repression, those with more resources have more to lose. Consequently, I expect that *the positive association between individual resources – education and income - and participation in demonstrations is stronger in more democratic countries than in less democratic ones* (Hypothesis 1a and 1b for the effects of education and income, respectively).

The role of political trust is also expected to vary across political contexts, in part due to the likely different nature of political participation following Kerbo's (Kerbo, 1982) distinction between movements of crisis and movements of affluence. *In non-democratic countries*, where collective action is discouraged or prohibited, *I expect high levels of political trust to be associated with regime loyalty and low propensity to participate in demonstrations* (Hypothesis 2). In these countries the distrust and dissatisfaction of citizens may accumulate and erupt in the form of mass demonstrations despite the fear of state repression, resulting in higher levels of participation in demonstrations among individuals with low political trust. On the other hand, following Cichocka et al. (2017), I expect that *in democratic countries*

the probability of participation is higher among individuals with medium levels of political trust than those with the highest and lowest trust levels (Hypothesis 3).

Analytic Strategy

Opportunities and Challenges of Survey Data Harmonization

Most empirical research of social and political issues focuses on democratic countries, largely because of the limited availability of survey data necessary to measure values, attitudes and participation from countries outside of the WEIRD (Western, Educated, Industrialized, Rich, and Democratic, cf. Henrich, Heine, & Norenzayan, 2010) zone (Kołczyńska, 2014; Slomczynski & Tomescu-Dubrow, 2006). Even beyond Europe, single survey programs do not include sufficient countries to analyze social and political phenomena on a global scale. To address this problem, the Survey Data Recycling project (SDR, Slomczynski & Tomescu-Dubrow, 2018; Słomczyński et al., 2016) set out to develop tools for combining data from many cross-national survey projects that were not intended to be comparable via ex-post harmonization, and for using the resulting harmonized data in substantive analyses.

The primary advantage of ex-post survey data harmonization is the increased coverage of countries and time points in the harmonized data set compared to data sets of single survey projects. This creates new opportunities for comparative research by enabling comparisons between countries and regions that are not covered by the same survey project, as well as over time. Associated costs are related to the increased methodological variation in the harmonized data set, including in the formulation of survey questions, the properties of response scales, or the sample types. All these factors can affect sample distributions of respondents' answers, and are a potential risk to the validity of conclusions stemming from analyses of ex-post harmonized data.

The SDR project proposes to address this issue by recording methodological information about the original (source) surveys as separate variables in the harmonized data set. This strategy is similar to the one employed by Milanovic in the *All the Ginis* data set of income inequality measures, where dummy variables distinguish between Gini coefficients that can potentially be incomparable (Milanovic, 2014). The methodological adjustment variables are of two types: harmonization controls and quality controls (Slomczynski & Tomescu-Dubrow, 2018). Harmonization controls are created during the harmonization of source variables and accompany each target (harmonized) variable. They capture properties of survey items that would be lost in the process of recoding or rescaling source variables into target variables, such as the length of response scales or characteristics of question wording. Harmonization controls are item-specific, i.e., they are constructed

individually for each target variable on the basis of the relevant methodological literature, which helps to identify the important features of items that are worth preserving, and following a review of source items in existing surveys to understand the variation in their design.

Quality control variables address the inter-survey variation in the methodology of the survey process or the quality of the data. Quality controls are either constructed on the basis of the available survey documentation (codebooks, study descriptions, technical reports) and describe important elements of the survey lifecycle, such as type of sample, or are derived from data records in the source data files to flag irregularities, such as duplicated records. Both types of control variables can be used in two ways: for the selection of surveys that meet pre-defined criteria or directly in the substantive models designed to test the hypotheses of the relationship between the chosen measures.

To sum up, while ex-post harmonization of surveys generally includes steps as presented below (cf. Granda et al., 2010; Wolf et al., 2016), the process employed in the SDR project includes additional stages marked in *italics*:

(1) concept definition:

a defining the target concept(s) to be measured with the survey variables, guided by the research question(s) and theoretical framework;

b based on this definition, developing a preliminary coding scheme or choosing a coding scale for the harmonized (target) variable;

(2) data preparation:

a identifying survey projects that meet the requirements regarding the presence of questions corresponding to the concepts identified in step 1.a, the target population and representativeness, and potentially other factors, and gathering their data and documentation;

b *examining the methodological variation among the gathered survey projects with regard to the design of the survey items of interest and the overall survey process on the basis of the survey documentation;*

c *describing surveys in terms of their methodology (e.g., sample type) and constructing survey quality indicators (e.g., the presence or absence of quality assurance procedures, proportion of duplicated cases);*

d identifying the candidate source variables, that is relevant question items in the gathered source surveys that correspond to the target concept(s) defined in step 1.a;

e *examining the variation in the design of the selected survey items given the literature on survey methodology and the effects of item design on respondents' answers;*

f *identifying relevant dimensions of variation between the survey items (e.g., related to item wording, response options or scales, position in the questionnaire, filtering) to be captured by harmonization control variables;*

g adjusting the coding scheme or scale of the harmonized (target variable) based on the observed variation in the survey items;

(3) harmonization:

a transforming (recoding) source variables into target variable(s) using the coding scheme established in step 2.g;

b *constructing harmonization control variables to capture the properties of source variables that would be lost in the process of recoding (e.g., details of original question wording or original length or direction of response scales), identified in step 2.f;*

(4) checking the target variable for errors and documentation of the whole process.

Data

The Survey Data Recycling v.1 data set (Slomczynski et al., 2017) stems from ex-post harmonization following procedures described above of selected variables from 22 international survey projects. The following sections describe the steps and decisions a researcher needs to make to prepare a data subset for analysis. These decisions deal with (1) the selection of surveys and cases from the harmonized SDR data set, and (2) accounting for methodological variation, including differences in survey quality and the variation in item design, across surveys.

Data Selection

Availability of variables. Not every national survey in the SDR data contains items measuring all the necessary concepts, so the availability of appropriate variables is the first criterion in the selection of surveys for analysis. Further constraints can be imposed by the selection of certain methodological features of some of these variables, which I discuss below.

Out of the 1721 national surveys in the SDR Master file, of the surveys carried out in 1989 or later, the period I will analyze in this paper[1], 646 national surveys have all the individual-level variables I want to include in models: participation in demonstrations (as the dependent variable), education, income, and trust in parliament (as individual-level independent variables), and age and gender (as controls).

1 Prior to 1989 data coverage is strongly skewed towards Western democracies, with little variation among the covered countries.

Sub-national samples. Some cross-national survey projects provide data for samples that are representative for sub-national populations, e.g., for a given region of the country. For example, the International Social Survey Programme typically has separate samples for East and West Germany. In the SDR v.1 data, national surveys are defined at the lowest possible level giving preference to sub-national samples where available. These include: Bosnia-Herzegovina (separate samples for the Federation of Bosnia and Herzegovina and Republika Srpska), Belgium (Flanders and Wallonia), Germany (East and West Germany), the United Kingdom (Great Britain and Northern Ireland), and Israel (separate samples for the Jewish and Arab populations). Most frequently, both split-up samples are provided, so that the entire territory of the given country is covered. To use data from split samples in an analysis of individuals nested in countries, I calculate additional weights proportional to the split samples' shares in the country's population. Occasionally, however, only one of the split samples is available, for example Belgium-Flanders in ISSP/2004, or Great Britain (without Northern Ireland) in ISSP/2014 or WVS/5. These "orphaned" samples are dropped from the analysis for two reasons. First, because of the lack of comparable contextual data on the level of the sub-national units. Second, because including them would mean that, for example, respondents from Belgium-Flanders are sometimes considered part of Belgium and sometimes – part of Belgium-Flanders, depending on the survey project, which creates difficulties for modeling. After eliminating the "orphaned" samples and combining sub-national samples into whole-nation samples, I am left with 628 surveys.

Selection on the properties of survey questions: **Participation in demonstrations.** The formulation of items that aim to capture political participation varies across projects, but they generally have the following form: *Have you performed [action type] in the last [time period]*?, where the time period ranges from "12 months" or "1 year" through 2, 3, 4, 5, 8, and 10 years to questions without any time frame (SDHT, 2017, pp. 79–84). Logically, the probability of a positive answer depends, among other things, on the time length the questions ask about. For any individual, the probability of participating in a demonstration in the last 5 years is greater or equal to the probability of participating in a demonstration in the last 12 months. This is why, when harmonizing data from different surveys, information

about the time span mentioned in the question must be recorded, and either used for the selection of data for analysis or accounted for when modeling the data[2].

It is unclear how the probability of participating in demonstrations depends on the time span due to at least two complicating factors. First, opportunities to demonstrate are not uniformly distributed in time. While occasional massive demonstration waves attract a substantial proportion of the population, there are also quieter times with fewer and less prominent events. Second, using retrospective questions introduces recall effects including temporal displacement, i.e. telescoping: respondents tend to report events earlier or later than they actually happened (Gaskell, Wright, & O'Muircheartaigh, 2000; Janssen, Chessa, & Murre, 2006; Neter & Waksberg, 1964). Human memory errors, including telescoping, but also omissions and overreporting, are related to age and education, as well as to the length of the time period and the frequency and salience of events (Ayhan & Işiksal, 2004). It is also possible that accuracy in reporting participation by respondents varies across cultures (Bernard, Killworth, Kronenfeld, & Sailer, 1984).

Since explicit modeling of recall effects across countries and cultures, time, and survey mode, is outside of the scope of this work, I restrict the data to surveys where questions asked about participation in demonstrations are without a time frame. This formulation is the most frequent among surveys in the SDR data set (SDHT, 2017), which provides sufficient variation in key country-level independent and control variables (quality of democracy, economic development), as well as large (and global) country coverage. Survey questions asking about participation in demonstrations "ever" can be understood as capturing a respondent's opinion about the legitimacy and perceived efficacy of the given form of participation, instead of actual past behavior in a temporal sense. Perceived efficacy is considered one of the main explanations for collective action (cf., Klandermans & van Stekelenburg, 2013, for a review), so this interpretation of the "ever" items is compatible with my theoretical framework.

Apart from the number of years in the question, items on participating in demonstrations in the selected subset also differ with regard to one other feature identified as potentially influencing respondents' answers: whether the question about participation in demonstrations mentioned other forms of participation in addi-

2 The formulation in the original questions can also vary within the same project wave, but across countries. One example are questions V100-V103 in World Values Survey Wave 5, which ask about recent participation in four activities: petitions, boycotts, demonstrations, and "other". According to the Master Questionnaire (WVS, 2005), the question is about participation in the last five years, but an analysis of country questionnaires reveals that in Hong Kong the question asked about the last 12 months, in Zambia about the last year. In Jordan there seems to be no indication of the time frame, and the question is missing from the questionnaire (and the data) from China, Colombia, Egypt, Guatemala, Iran, Iraq, Italy, Spain, and New Zealand. With the exception of China, all the other eight surveys contained the variable on participation in demonstrations "ever".

tion to demonstrations. For example, the project Asia Europe Survey asked about attending a "a protest, march or demonstration" (Inoguchi, 2008, p. 17). Mentioning other forms of participation next to demonstrations in the same question could be expected to yield a higher share of positive answers compared to a similar question that asks only about participation in demonstrations (Kołczyńska & Slomczynski, 2018), so surveys where questions about participation in demonstrations have this property are flagged with a control variable.

Non-unique records. Duplicate cases, or non-unique records, are a potential threat to data quality. In the SDR v.1 data set, the problem of duplicates was identified and analyzed by Slomczynski, Powałko, and Krauze (2017). Given the typical survey sample sizes and the number and types of survey items, encountering identical records can be considered a miracle or an error. Either way, they should be treated with suspicion.

In the SDR v.1 data set non-unique records are marked with a flag. Since non-unique records occur in the subset selected for analysis in this paper, I opted for the following strategy: surveys with more than five percent of duplicates are removed from the analysis, while in surveys with less than five percent of non-unique records, I drop all superfluous records following the recommendation of Sarracino and Mikucka (2017). The remaining subset consists of 332 national surveys.

Survey multiplets. Another issue that requires consideration are situations where more than one survey containing the necessary questions (after selecting the desired formulations) was carried out in the same country in the same year. Including them together in the models would increase the inequality in country coverage, and more frequently surveyed countries would weigh disproportionately on model estimates. To avoid this, from each country-year I selected only one sample with the largest proportion of cases without missing values on the variables of interest[3]. The resulting subset of the SDR data set used in the remainder of this paper includes data from 319 national surveys from five survey projects: editions 2004, 2006 and 2008 of the Americas Barometer (Americas Barometer, 2012), Asia Europe Survey (Inoguchi, 2001), editions 2, 3, and 4 of the European Values Study (European Values Study, 2011), International Social Survey Programme edition 2004 (ISSP Research Group, 2012), and editions 2, 3, 4, and 5 of the World Values Survey (World Values Survey, 2009). The list of countries by project edition is presented in Appendix A.

Accounting for Methodological Variation Across Surveys

As already mentioned, there is considerable methodological variation across survey projects, as well as between national surveys within the same project, with regard to many aspects of the survey process, as well as with regard to the resulting survey quality. The goal is to identify factors that can potentially affect the distribution of the variables of interest.

Item non-response. Item non-response, or the proportion of cases for which substantive responses for a given variable are not available, can be considered an indicator of the quality of the survey item (Groves, 1989), because it captures two aspects of item quality: the ability of the given item to elicit responses from respondents, and the extent to which the variable represents the variation in the measured characteristic in the population. To account for this, I include item non-response in the dependent variable as a control in the regression models.

Type of survey sample. All national surveys in SDR v.1 have samples coded on the basis of available documentation into seven categories: simple/stratified random sampling, multi-stage random sampling with individual register, multistage-random sampling with address register, samples with a random route component, samples with a quota component, and samples with inadequate or missing sampling descriptions. I include a control variable corresponding to the sample type to account for the possible systematic differences across national surveys relying on different types of samples.

Variables

Trust in parliament

The question about trust in the national parliament is the most popular survey items on political trust (Kołczyńska & Slomczynski, 2018). The harmonized variable "trust in parliament" used in this study was constructed in two steps (SDHT, 2017, pp. 49–55). First, variables originally coded on a descending scale were reversed so that in all variables lower scores mean less trust and higher scores - more trust. Second, variables were transformed into the target 0-10 scale. This transformation assumed that for scales shorter than 11 points each source value was assigned the mean of the corresponding range of values on the target 0-10 scale. For example, if the original scale had five points, the lowest value corresponds to the range between 0 and 2 on the 0-10 scale and was assigned the value of 1.

A control variable records the length of the original response scales in trust in parliament items in the source data, which in the case of the current analysis included questions with a 4-, 5-, and 7-point scales. Since the length of the original response scales influences the distribution of respondents' answers, and especially the differences between odd- and even-numbered scales can have an effect on the comparability of responses to the trust item, this control variable is included in models.

Education

To measure education, I use the target variable "Education level" from the SDR data set, which is harmonized on the basis of source variables indicating respon-

dents' educational attainment in terms of levels (SDHT, 2017, pp. 26–31). I recoded the levels into years by assigning to every level of education the mean number of years of schooling as suggested by UNESCO (2013; see also Słomczyński et al., 2016, pp. 181–182).

The SDR data set contains a second measure of education – "Years of schooling" – harmonized independently from "Education level" on the basis of questions asking about the number of years of schooling completed by the respondent, or the respondent's age at completion of education (SDHT, 2017, pp. 32–36). In surveys, in which "Education level" is not available, I used "Years of schooling" instead. Such cases are flagged with a control variable.

I chose to rely on "Education level" as the primary source of information about respondent's education and use "Years of schooling" to fill in gaps, because "Years of schooling" was in many cases calculated from responses to questions asking about respondent's age of completion of (taken together with respondent's year of birth or age), which is sensitive to the effects of returning to school by adults and more prone to errors.

Household income

The SDR data set does not contain any measure of individual economic status, so this variable was harmonized independently, in order to distinguish between the effects of economic status and of education (Kołczyńska & Powałko, 2019). The substantial variation in how the survey question about household income is asked (net or gross income, weekly, monthly, or annual income) and especially in how the responses are recorded (exact values, categories, quantiles) makes it hardly possible to harmonize household income in terms of assigning each respondent a monetary value in some common metric. Instead, the harmonized income variable was constructed by normalizing the original scale to the 0-100 range. Thus, the target variable "household income" captures the relative position of the respondent within the given national sample. It needs to be emphasized that this target variable does not allow for mean comparisons across samples.

Democracy

When looking at the whole spectrum of political regimes from autocracies to institutionalized democracies, the level of democracy may be treated as a less precise but appropriate indicator of the openness and responsiveness of the regime as well as of the probability of repression (Davenport & Armstrong, 2004). To measure democracy, I use Freedom House "Freedom in the World" ratings for Political Rights and Civil Liberties (Freedom House, 2016). The advantage of this indicator is its wide use in quantitative social science research, which lends credibility and offers global coverage. The Freedom House codes Political Rights and Civil Liberties on a scale from 1 to 7, where 1 represents the most and 7 the least freedom. I

use a sum of these measures, reversed so that the resulting variable is an indicator of democracy, not of the lack of democracy. The final variable is coded from 0 to 12, where 0 corresponds to the lowest, and 12 to the highest level of freedoms and liberties[4].

Control variables

In order to avoid attributing the effect of economic conditions to democracy, I control for GDP *per capita* using data from the World Bank's World Development Indicators (WDI, 2017)[5]. I also control for age and gender, which are known to be associated with political participation. Descriptive statistics for all individual-, macro-level, and methodological variables in their original metrics are presented in Table 1.

Models

To estimate the effects of micro- and macro-level factors, and their interactions, on reported participation in demonstrations, I estimate a series of three-level binary regression models, building up from the base model (Model 1) which takes the following form for individual *i* in country-year *j* in country *k*:

$$logit\left(participation_{ijk}\right) = \gamma_{000} + \gamma_{100} education_{ijk} + \gamma_{200} income_{ijk} +$$

$$\gamma_{300} trust_{ijk} + \gamma_{010} democracy_{jk} + \gamma_{x00} controls + r_{0jk} + u_{00k}$$

where γ_{000} is the global intercept, γ_{100}, γ_{200}, and γ_{300} are the coefficients for individual-level education, income, and trust in parliament, respectively, γ_{010} is the coefficient for country-year-level democracy, and γ_{x00} represents all coefficients for control variables at different levels, including substantive and methodological controls. Finally, r_{0jk} and u_{00k} are the random intercept terms.

Subsequent models each add an element of complexity. Model 2 adds a squared term for trust in parliament to test for quadratic effects of trust on participating in demonstrations. Models 3-5 include single cross-level interactions between the level of democracy and education, income, and trust in parliament, respectively.

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4 The Czech Republic and Slovakia prior to their split-up in 1993 are assigned ratings from Czechoslovakia. Serbia and Montenegro in 1996 and 2001, and Kosovo in 2008 are assigned ratings from Yugoslavia for the respective years.

5 In rare cases when the value of GDP *per capita* was not available for the given country-year, the value from the adjacent year is used. Data for Taiwan are not available in the World Bank, so instead values from the International Monetary Fund's EconStats service are used: http://www.econstats.com/weo/CTWN.htm

Model 6 includes all three interaction terms, and the final Model 7 adds the methodological controls. In short, the models are built as follows:

Model 1: Base model;

Model 2: Model 1 + trust in parliament squared;

Model 3: Model 1 + education * democracy;

Model 4: Model 1 + income * democracy;

Model 5: Model 4 + trust in parliament * democracy + trust in parliament squared * democracy;

Model 6: Model 1 + education * democracy + income * democracy + trust in parliament squared + trust in parliament * democracy + trust in parliament squared * democracy;

Model 7: Model 6 + harmonization and methodological control variables.

In all analyses data are weighted with individual case weights provided in the source data sets and harmonized by SDR (SDHT, 2017, pp. 15–17). They are combined with weights proportional to the populations of sub-national regions where split samples were merged into national samples. In the analyses, trust in parliament is group-mean centered around the mean of the country-year, to estimate the effects of the relative level of trust within the country-year. I also include the country-year mean that captures the variation between country-years (Enders & Tofighi, 2007). All continuous variables are standardized by subtracting the mean and dividing by two standard deviations to facilitate comparisons of the magnitude of the coefficients within the same model (Gelman, 2008). While the values of the coefficients cannot be compared across models because of differences in the scale factor in non-linear probability models, their directions and significance levels remain informative (Breen, Karlson, & Holm, 2018).

To estimate the models I used the `glmer` command in the `lme4` package in R (Bates, et al., 2015), the `ggeffects` package (Lüdecke, 2018) to create the plots, and the `stargazer` package (Hlavac, 2018) for the tables. Multiple other R packages were used in the analysis: `rio` (Chan, Chan, Leeper, & Becker, 2018) to import and export data sets, `tidyverse` (Wickham, 2017) to clean and transform the data, `janitor` (Firke, 2019) to clean up variable names, `fastDummies` to recode categorical variables into sets of dummies (Kaplan, 2019), `democracyData` (Marquez, 2018) and `WDI` (Arel-Bundock, 2019) to download democracy and economic indicators, and `countrycode` (Arel-Bundock, Enevoldsen, & Yetman, 2018) to switch between country names and codes.

Table 1 Descriptive statistics of all variables included in the analysis in their original metrics.

Variable name	Mean / Proportion*	Std. dev.	Min	Max
Individual-level variables (n = 356,874)				
Participation in demonstrations	0.193		0	1
Trust in parliament	4.508	2.282	0.71	9.29
Trust in parliament (group mean centered)	0.001	2.097	-6.829	7.146
Education, years	10.587	4.363	0	18
Age, years	42.457	16.456	14	96
Female	0.512		0	1
Household income	38.722	27.165	0	100
Country-year-level variables (n = 319)				
Freedom House, reversed	9.395	2.902	0	12
GDP per capita, 000	20.627	15.061	1.088	94.900
GDP per capita, ln	9.611	0.888	6.992	11.461
Trust in parliament, sample mean	4.506	0.879	2.144	8.179
Year			1989	2009
Methodological variables (n = 319)				
Non-response on demonstrations	0.054	0.053	0.000	0.350
Question on demonstrations extended	0.160		0	1
Education filled with schooling years	0.213		0	1
Trust in parliament scale length				
4 points	0.784		0	1
5 points	0.103		0	1
7 points	0.113		0	1
Sample type				
No information	0.110		0	1
Insufficient information	0.232		0	1
Quota	0.313		0	1
Random route	0.154		0	1
Multistage address	0.078		0	1
Multistage individual	0.078		0	1
Single-stage	0.034		0	1
Survey project				
Americas Barometer	0.113		0	1
Asia Europe Survey	0.047		0	1
European Values Study	0.317		0	1
International Social Survey Programme	0.103		0	1
World Values Survey	0.420		0	1

* Proportions in the case of binary variables.

Results

Estimates of the conditional three-level models explaining individual participation in demonstrations are presented in Table 2. Model 1 is the baseline model with individual- and country-year-level covariates and controls, and random intercepts for all covariates. According to the model estimates, individual education and household income on average have a positive effect on participating in demonstrations, which is in line with the resource approach to explaining political participation. The standardized effect of education is about five times stronger than that of income, pointing to the role of non-economic resources in shaping participation decisions. The association between participation in demonstrations and the country's quality of democracy is also positive, in line with the expected role of political openness for political participation. The average linear effect of trust in parliament is weakly negative and not statistically significantly different from zero at the customary 0.05 level.

Coefficients for the individual-level control variables also largely conform to prior findings: participation in demonstrations is higher among men and the association with age forms an inverse-U, where the predicted probability of participating increases with age, peaks around 50 years, and declines to its minimum levels in old age. After controlling for the quality of democracy, economic development (GDP *per capita*) is negatively associated with the probability of demonstrating, while the effect of mean trust in parliament is positive suggesting that countries where individuals on average have more trust in the parliament see higher levels of participation in demonstrations.

Model 2 includes the quadratic term of trust in parliament. The coefficient is positive and statistically significant at the conventional level. The predicted association between trust in parliament and participation in demonstrations is hence U-shaped, where individuals with the lowest and highest levels of trust in parliament have the highest probability of participating in demonstrations, while individuals with medium levels – the lowest probability. This is the opposite pattern to the inverted-U that Cichocka et al. (2017) have found with the World Values Survey with a different operationalization of participation that took into account more activities.

Models 3, 4, and 5 add cross-level interactions of education, income, and trust in parliament, respectively, with the level of democracy. The significance of the interaction term in non-linear probability models is not a proper test of the interaction effect in terms of predicted probabilities (Mize, 2019), so the interactions are explored graphically below.

Model 6 includes all cross-level interactions – between individual education, income, and trust in parliament, and the country's level of democracy. The patterns

of associations remain stable with regard to their directions and magnitudes compared to Models 3, 4, and 5 with single interactions.

The final Model 7 adds methodological control variables of two types. The first are harmonization controls, which deal with variation in the design of original survey items: (a) an indicator for surveys where the original question about demonstrations also asked about another form of participation apart from demonstrations ("Question on demonstrations extended"), (b) information about the length of the original response scale in the "trust in parliament" items, and (c) a flag indicating whether the education variable substitutes schooling years for education levels. The second type includes other methodological controls: (a) the share of item non-response in the item about participation in demonstrations, and (b) the sample type employed in the given survey. While the coefficients for some of these controls are substantial, they only minimally change the effects of the individual-level covariates or the cross-level interactions. At the same time coefficients of macro variables – the level of democracy, GDP *per capita*, and mean trust in parliament – are affected much more, even if for the first two variables the directions and significance levels of the coefficients remain unchanged. The effect of mean trust in parliament becomes not statistically significant after adding control variables related to the length of the original response scales, which changes the substantive interpretation of the results. These changes in coefficients for macro-level predictors are not surprising given that harmonization controls and the sample type are measured on the level of the national survey corresponding to the country-year. As a result, including harmonization and quality controls will not likely change coefficients for individual-level predictors, especially if they are group-mean centered, but might affect coefficients for macro-level predictors in ways that may be difficult to interpret in substantive terms.

Table 2 Three-level logistic regression of individual-level participation in demonstrations.

Participation in demonstrations	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Education	0.846***	0.847***	0.927***	0.842***	0.845***	0.911***	0.914***
	(0.012)	(0.012)	(0.032)	(0.012)	(0.012)	(0.031)	(0.031)
Education * Democracy			0.421***			0.429***	0.431***
			(0.064)			(0.063)	(0.063)
Income	0.147***	0.147***	0.135***	0.170***	0.148***	0.164***	0.164***
	(0.009)	(0.009)	(0.010)	(0.020)	(0.010)	(0.018)	(0.018)
Income * Democracy				0.065		-0.016	-0.016
				(0.042)		(0.037)	(0.037)
Trust in parliament	-0.014	-0.016*	-0.022**	-0.016*	-0.035*	-0.041**	-0.041**
	(0.009)	(0.009)	(0.009)	(0.009)	(0.020)	(0.020)	(0.020)
Trust in parliament, squared		0.077***			0.069***	0.077***	0.076***
		(0.015)			(0.022)	(0.022)	(0.022)
Trust in parliament * Democracy					0.064	0.062	0.061
					(0.042)	(0.041)	(0.041)
Trust in parliament, squared * Democracy					-0.107**	-0.085*	-0.084*
					(0.045)	(0.045)	(0.045)
Democracy	0.626***	0.626***	0.605***	0.641***	0.659***	0.645***	0.518***
	(0.120)	(0.119)	(0.123)	(0.119)	(0.120)	(0.123)	(0.118)
Individual-level control variables							
Age	0.198***	0.197***	0.198***	0.206***	0.199***	0.204***	0.204***
	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)	(0.011)
Age, squared	-0.455***	-0.456***	-0.433***	-0.456***	-0.456***	-0.445***	-0.444***
	(0.018)	(0.018)	(0.019)	(0.019)	(0.018)	(0.019)	(0.019)
Female	-0.351***	-0.350***	-0.353***	-0.352***	-0.351***	-0.353***	-0.353***
	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)

Participation in demonstrations	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
GDP per capita, ln	-0.308**	-0.304**	-0.333**	-0.320**	-0.309**	-0.340**	-0.262*
	(0.133)	(0.131)	(0.136)	(0.133)	(0.133)	(0.137)	(0.139)
Trust in parliament, mean	0.151*	0.149*	0.142*	0.158*	0.160*	0.149*	0.037
	(0.082)	(0.082)	(0.085)	(0.082)	(0.082)	(0.085)	(0.083)
Harmonization control variables							
Education filled with schooling years							-0.035
							(0.114)
Trust in parliament scale length (ref. 4 points)							
5 points							0.427***
							(0.092)
7 points							0.466**
							(0.228)
Question on demonstrations extended							0.179
							(0.129)
Quality control variables							
Non-response on demonstrations							0.009
							(0.070)
Sample type (ref. No information)							
Insufficient information							0.041
							(0.109)
Quota							-0.026
							(0.096)
Random route							-0.047
							(0.119)
Multi-stage address							-0.257*
							(0.138)

Participation in demonstrations	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Multi-stage individual							-0.119 (0.135)
Single-stage							0.110 (0.186)
Year	-0.006 (0.055)	-0.007 (0.055)	-0.003 (0.057)	-0.002 (0.055)	-0.016 (0.055)	-0.014 (0.057)	-0.133* (0.076)
Constant	-1.421*** (0.068)	-1.440*** (0.067)	-1.461*** (0.069)	-1.429*** (0.068)	-1.448*** (0.068)	-1.494*** (0.070)	-1.588*** (0.112)
Variance components							
Survey intercept	0.188	0.188	0.201	0.188	0.185	0.196	0.152
Education			0.239			0.222	0.223
Income				0.088		0.060	0.060
Trust in parliament					0.091	0.085	0.085
Trust in parliament, squared					0.052	0.052	0.052
Country intercept	0.357	0.356	0.374	0.359	0.369	0.385	0.413
Fit statistics							
Log Likelihood	-154,773	-154,761	-154,152	-154,506	-154,450	-153,722	-153,697
Akaike Inf. Crit.	309,572	309,549	308,333	309,042	308,936	307,487	307,460
Bayesian Inf. Crit.	309,712	309,700	308,495	309,204	309,130	307,725	307,816

Coefficients and standard errors in parentheses. * $p<0.05$, ** $p<0.01$, *** $p<0.001$.
N individuals = 356,874, N surveys = 319, N countries = 100.
Data source: Survey Data Recycling v.1, Harmonized Income Database v.1, Freedom House, World Bank, International Monetary Fund.

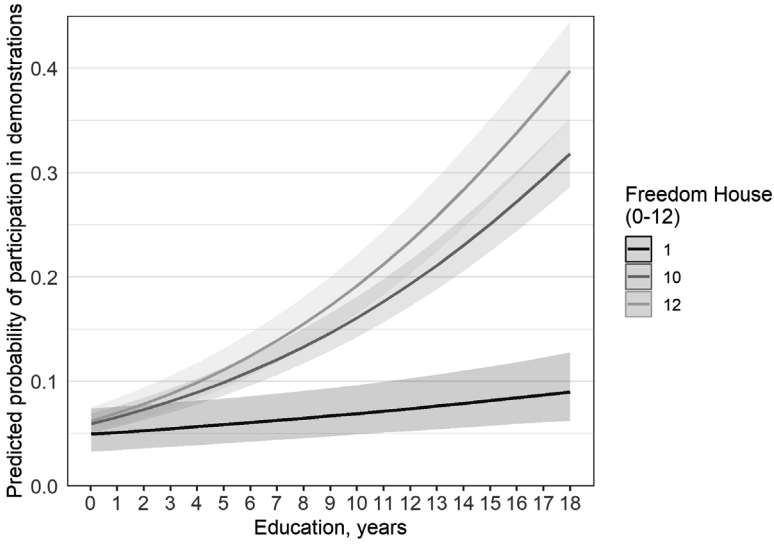

Figure 1 Predicted probability of participation in demonstrations by education and democracy (based on Model 7).

Predicted probabilities of participation in demonstrations illustrating the effects of individual education, income, and trust in parliament and their interactions with the level of democracy, with other covariates held at their means or at base levels for factors, are presented in Figures 1, 2, and 3. Figure 1 shows how the positive effects of education increase with increasing levels of democracy, in line with Hypothesis 1a. In the least democratic countries (Freedom House score equal to 1 on the scale from 0 to 12), the difference between the predicted probability of participation in demonstrations for those with no education and those with secondary education (12 years of schooling) is less than 3 percentage points, while in the most democratic countries (Freedom House score of 12) the difference is around 13 percentage points. Moving from secondary education (12 years) to tertiary education (16 years) corresponds to a change in predicted probability of demonstrating by 10 percentage points in democratic countries and by one percentage point in the least democratic countries.

Figure 2 presents the association between participation in demonstrations and household income at different levels of democracy, and shows that the effect of income on participating in demonstrations is positive at all levels of democracy, and is stronger the higher the more democratic the country. Moving from the lowest income to the highest income in non-democratic countries increases the probabil-

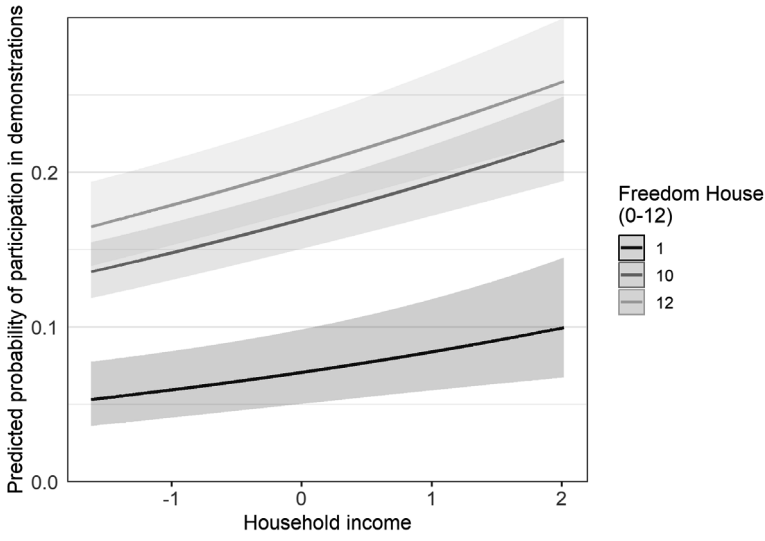

Figure 2 Predicted probability of participation in demonstrations by levels of income and democracy (based on Model 7).

ity of participation by less than 5 percentage points, while in the most democratic countries the corresponding change is by around 8 percentage points. These results need to be taken with a grain of salt given how imperfect the harmonized measure of household income is. It is possible that the observed interaction effect is due to differences in the measurement of income between surveys, or in the distribution of income between less and more democratic countries. Even if real, the difference in the magnitude of the effect of income by level of democracy is far smaller than of the effects of education, and the support for Hypothesis 1b is weak at best.

The predicted levels of participation in demonstrations depending on trust in parliament and by levels of democracy are presented in Figure 3, showing the U-shaped association between the probability of demonstrating in non-democratic countries. In these countries, the highest predicted probability of participating in demonstrations is for individuals with the lowest levels of trust in parliament at 0.13. Individuals with a medium-high level of trust in parliament have the lowest predicted probability of demonstrating of 0.065. The predicted probability increases for individuals with the highest level of trust in parliament to almost 0.1. In democratic countries the association is much flatter, and the difference between the lowest and the highest predicted probability of demonstrating is less than 2

percentage points. These results contradict the expectations stated in Hypotheses 2 and 3[6].

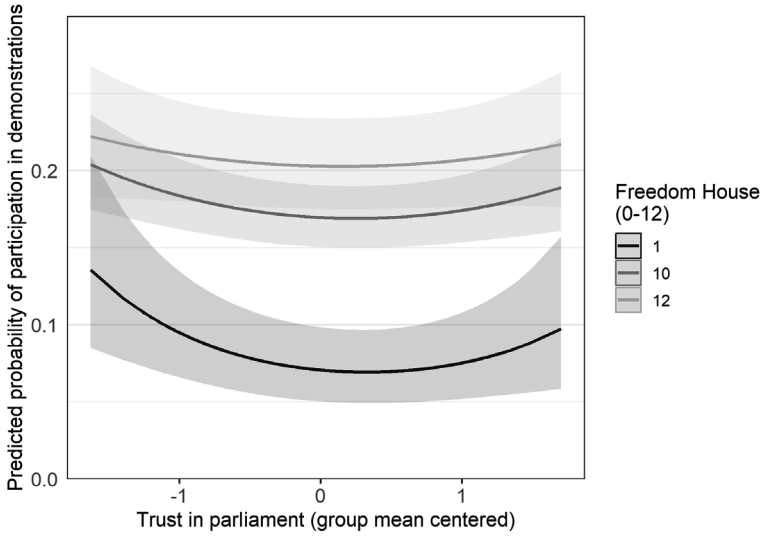

Figure 3 Predicted probability of participation in demonstrations by levels of political trust and democracy (based on Model 7).

Conclusion

In this paper I analyzed individual and contextual determinants of participation in demonstrations with data from 100 countries between 1989 and 2009, using ex-post harmonized data from five international survey projects. Results provide mixed support for previous findings and point to new insights. First, the analysis reveals systematic variation in the effects of education on participation in demonstrations: the effect of education on participation in demonstrations is positive and far stronger in democracies than in non-democracies. This might be because, while educated individuals are better at recognizing opportunities for meaningful participation and exploiting them, in non-democratic countries the awareness of limited chances for success might keep them from taking to the streets. Additionally, educated individuals who engage in protests in non-democratic countries face comparatively higher risks of state repression than in democracies. At the same time, while the association between income and participation in demonstrations is also positive, the magnitude of the effect and its variation across levels of democ-

racy are much weaker. These results confirm prior findings about the central role of education for political participation.

Further, I found that political trust is related to participation in demonstrations in a complex way: it is U-shaped, but the pattern is the strongest in the least democratic countries, and very weak in institutionalized democracies. If in non-democracies both the least and the most trusting citizens demonstrate the most, are they participating in the same demonstrations? Perhaps the demonstrations attended by individuals who are distrustful of the political regime indeed constitute protest, while in the case of individuals with high political trust in a non-democratic country, demonstrations could rather be in support of than against the state (cf. Hellmeier & Weidmann, 2019). Standard survey questions about participation in demonstrations do not distinguish between demonstrations for and demonstrations against the political system, and variation between countries might be exacerbated by linguistic differences in the meaning and connotations of the word "demonstration" or an alternative term used in the survey question. In general, verifying the validity of the assumption that participation in demonstrations, as measured in surveys, is a form of protest, could explain some of the mixed findings in the empirical literature on this topic.

The second goal of the paper is to provide an illustration of how survey data harmonized ex-post can be used in a substantive analysis. The approach to ex-post harmonization proposed in the SDR project consists in unifying the coding of original (source) variables that are identified as measuring the same concept by either mapping the original values onto a common coding scheme or by rescaling the responses to a common range, in addition to constructing auxiliary variables to record selected properties of the source variables. In this paper, I showed how the harmonized data created in the SDR approach can be applied to a concrete research problem.

Data from ex-post harmonization, such as performed in the SDR project, are not without limitations. First, while the SDR data set increases country coverage through harmonization of survey data from different cross-national surveys, the inequality in country coverage persists, and the time series for less developed countries remain short and sparse, especially after selecting a subset of the data set with the necessary harmonized variables. Second, the harmonization of variables requires that survey projects include the same or very similar questions. As a consequence, analyses are limited by the number of available harmonized variables enabling the estimation of fairly modest models. Such models can identify only broad patterns of associations for further examination with richer data sets.

Third, the process of harmonization as employed in the SDR project entails information loss and may introduce bias when response categories are collapsed, or when original responses measured with ordinal rating scales are treated as continuous and rescaled. Overall, ex-post harmonization introduces harmonization error

with unknown properties. The SDR framework aims to mitigate this by constructing control variables that are supposed to capture the aspects of question design that are lost in the process of standardization as well as the methodological and quality variation between the different surveys, but the extent to which this is successful is yet to be adequately examined. As this paper shows, analyses focusing on individual-level predictors or cross-level interactions yield stable results whether or not methodological and quality controls are applied. At the same time caution is advised when analyzing the effects of macro-level variables, as they can be correlated with the methodological and quality controls in spurious ways, which would have an effect on model coefficients, and could result in interpreting data artifacts in substantive terms.

The more general question is how to balance the costs and benefits of harmonizing survey data that were not *a priori* intended for joint analysis. On the one hand, research in cross-cultural survey methodology has led to the development of standards and guidelines that greatly improve the comparability of cross-national survey data and has demonstrated how disregarding these standards during the survey process may hurt the comparability of the resulting data (Survey Research Center, 2016). This research is focused on improving future data collection efforts, and implicitly questions the value of cross-national data sets constructed from surveys that were collected without careful ex-ante considerations of comparability at all stages of the survey process. On the other hand, surveys carried out over the last several decades in many countries worldwide are valuable as historical evidence, and researchers may be tempted to harmonize all of them together regardless of their known or suspected limitations.

In the middle ground between the extreme positions of dismissing any ex-post harmonization and combining all surveys regardless of their quality, there seem to be two main questions. The first pertains to the minimum standards for including a survey data set in a comparative analysis, with the discussion likely organized around issues related to the quality of the sample and of the measurement. The second question deals with methods of modeling survey data stemming from ex-post harmonization, and limitations to the types of statistical analyses that can be performed with such data. Efforts aimed at formulating recommendations in response to both questions would benefit from a comprehensive framework to evaluate survey quality. The quality assessment approach in the SDR project constructed quality indicators in three dimensions: quality of data, quality of documentation, and correspondence between the data and the documentation (Slomczynski & Tomescu-Dubrow, 2018). Others have attempted to assess the quality of survey samples on the basis of internal and external criteria of representativeness (Jabkowski & Cichocki, 2019; Kohler, 2007; Kołczyńska, Cichocki, & Jabkowski, 2019). While promising, these attempts face limitations related to the data and doc-

umentation, and further work is also needed in the area of measurement equivalence with survey data harmonized ex-post.

Finally, while debating the limitations of ex-post survey harmonization, it is worth remembering that many of the same challenges apply – although arguably to a lesser extent – to data within a single cross-national survey project, which goes largely unaddressed in empirical studies. Cross-national survey projects often collect data following different protocols in different countries, and these protocols change from edition to edition. Other aspects of survey quality, including documentation standards and survey outcome rates, also vary – within the same project – across countries and change over time (Jabkowski, 2018; Kołczyńska & Slomczynski, 2018; Oleksiyenko, Wysmułek, & Vangeli, 2018). Further, variables available in single cross-national survey data sets also face limitations with regard to their comparability and interpretability (Donnelly & Pop-Eleches, 2018), and survey projects themselves often ex-post harmonize the coding of socio-demographic variables, a process prone to errors.

The discussion about the consequences of combining survey data collected following different standards and procedures, and about minimum thresholds for data quality, is thus not limited to ex-post harmonized data from different projects, but also applies to analyses of data from single cross-national survey projects. Ultimately, it is up to the researcher to decide which surveys are of sufficiently high quality to be included in the analysis. Since most researchers are secondary data users, the availability and high information content of survey documentation is of utmost importance in this process.

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Appendices

Appendix A.
List of countries, project and editions included in the final analysis.

Project Edition	WVS 2	EVS 2	WVS 3	EVS 3	ASES	WVS 4	AMB 2004	ISSP 2004	AMB 2006	WVS 5	AMB 2008	EVS 4
Country												
Albania			1998			2002						2008
Algeria						2002						
Argentina	1991		1995			1999						
Armenia			1997									2008
Australia			1995							2005		
Austria		1990		1999				2004				2008
Azerbaijan			1997									2008
Bangladesh			1996			2002						
Belarus	1990		1996	2000								2008
Belgium		1990		1999								2009
Belize											2008	
Bolivia							2004		2006			
Bosnia-Herzegovina			1998			2001						2008
Brazil	1991									2006	2008	
Bulgaria		1991	1997	1999				2005		2006		2008
Burkina Faso										2007		
Canada		1990				2000		2004	2006		2007	
Chile	1990		1996			2000		2005	2006			
Colombia			1997				2004		2006	2005	2008	
Costa Rica							2004		2006		2008	

Project Edition	WVS 2	EVS 2	WVS 3	EVS 3	ASES	WVS 4	AMB 2004	ISSP 2004	AMB 2006	WVS 5	AMB 2008	EVS 4
Croatia				1999								2008
Cyprus								2004		2006		2008
Czechia	1990	1991	1998	1999				2004				2008
Denmark		1990		1999				2005				2008
Dominican Republic			1996						2006			
Ecuador									2006			
Egypt						2000						
El Salvador			1999				2004		2006			
Estonia			1996	1999								2008
Finland		1990	1996	2000				2004		2005		2009
France		1990		1999	2000			2004		2006		2008
Georgia			1996							2009		2008
Germany		1990	1997	1999	2000			2004		2006		2008
Ghana										2007		
Greece				1999	2000							2008
Guatemala							2004		2006	2005	2008	
Guyana									2006			
Haiti									2006			
Honduras							2004		2006			
Hungary		1991		1999				2004				2008
Iceland		1990		1999								2009
India	1990		1995			2001				2006		
Indonesia					2000	2001				2006		
Ireland		1990		1999	2000			2003				2008
Israel								2005				
Italy		1990		1999	2000					2005		2009
Jamaica									2006			

Project Edition	WVS 2	EVS 2	WVS 3	EVS 3	ASES	WVS 4	AMB 2004	ISSP 2004	AMB 2006	WVS 5	AMB 2008	EVS 4
Japan	1990		1995		2000			2004		2005		
Jordan						2001						
Kosovo												2008
Kyrgyzstan						2003						
Latvia			1996	1999				2004				2008
Lithuania			1997	1999								2008
Luxembourg				1999								2008
Macedonia			1998			2001						2008
Malaysia					2000					2006		
Mali										2007		
Malta		1991		1999								2008
Mexico	1990					2000	2004		2006	2005	2008	
Moldova			1996			2002				2006		2008
Montenegro			1996			2001						2008
Morocco						2001				2007		
Netherlands		1990		1999				2005		2006		2008
New Zealand			1998					2004				
Nicaragua							2004		2006			
Nigeria	1990		1995			2000						
Norway		1990	1996					2004		2007		2008
Pakistan						2001						
Panama							2004		2006			
Peru			1996			2001			2006		2008	
Philippines					2000	2001		2004				
Poland	1989	1990	1997	1999				2005				2008
Portugal		1990		1999	2000			2004				2008
Puerto Rico			1995			2001						

Project Edition	WVS 2	EVS 2	WVS 3	EVS 3	ASES	WVS 4	AMB 2004	ISSP 2004	AMB 2006	WVS 5	AMB 2008	EVS 4
Romania			1998	1999						2005		2008
Russia	1990		1995	1999				2005		2006		2008
Rwanda										2007		
Serbia			1996			2001				2006		2008
Singapore					2000							
Slovakia	1990	1991	1998	1999				2005				2008
Slovenia		1992		1999				2003		2005		2008
South Africa	1990		1996			2001		2004		2006		
South Korea	1990		1996		2000	2001		2004				
Spain		1990	1995	1999		2000		2004		2007		2008
Sweden		1990	1996	1999	2000			2004		2006		2009
Switzerland			1996					2005		2007		2008
Taiwan			1994		2000			2004		2006		
Tanzania						2001						
Thailand					2000					2007		
Trinidad & Tobago										2006		
Turkey	1990		1996	2001						2007		2009
Uganda						2001						
Ukraine			1996	1999						2006		2008
United Kingdom		1990		1999								2009
United States		1990	1995			1999		2004		2006		
Uruguay			1996					2004	2007	2006		
Venezuela			1996			2000		2004	2007			
Vietnam						2001				2006		
Zambia										2007		
Zimbabwe						2001						