Social Trust and its Impact on Survey Response Rates

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Abstract

Increasing nonresponse in household surveys in recent years has been a matter of concern, especially regarding the quality of information produced from large scale surveys with gradually decreasing response rates. In this research we explore if there is any empirical relationship between social trust, both interpersonal and institutional, and the survey response rates over time. We use social trust items measured in General Social Survey (GSS) to answer our research question. Analyzing data from 13 federally-administered national household surveys over two decades spanning 2000 to 2022 using state-space models, we found mixed results indicating that trust in both government and economic institutions yielded strong associations between response rates and trust. However, we found limited evidence suggesting that institutional trust bears an association with response rates to surveys related to health. Overall our research tries to find the root causes of declining survey response and motivates the discussion around social trust being a potential driver of influencing an individual's propensity to respond to surveys.

Key Words: Social trust, survey nonresponse, trust in institutions, General Social Survey

1. Introduction

1.1. Declining Response Rates in Household Surveys

Nonresponse in household surveys has been a significant area of focus for many years, as the reliability of drawing conclusions from probability samples hinges on the ability to collect data from all selected units in the sample. The concern about survey nonresponse is not new. Early research in this area examines methods to increase response rates (Hansen and Hurwitz, 1946) and estimate nonresponse bias (Ferber, 1948). Singer (Singer, 2006) refers to multiple sources on the consensus view that nonresponse rates in U.S. household surveys have increased over time. Despite increasingly costly efforts to make contact with designated households and persuade respondents to participate, response rates not only continue to decline but also do so at an increasing rate (Curtin et al., 2005). Some more recent works on examining survey nonresponse also reiterate the growing concern surrounding declining survey response rates (Brick and Williams, 2013; Czajka and Beyler, 2016; Meyer et al., 2015). Figure 1 show how the trend of increasing nonresponse is both sharp and steady over time in some large scale federally administered household surveys.

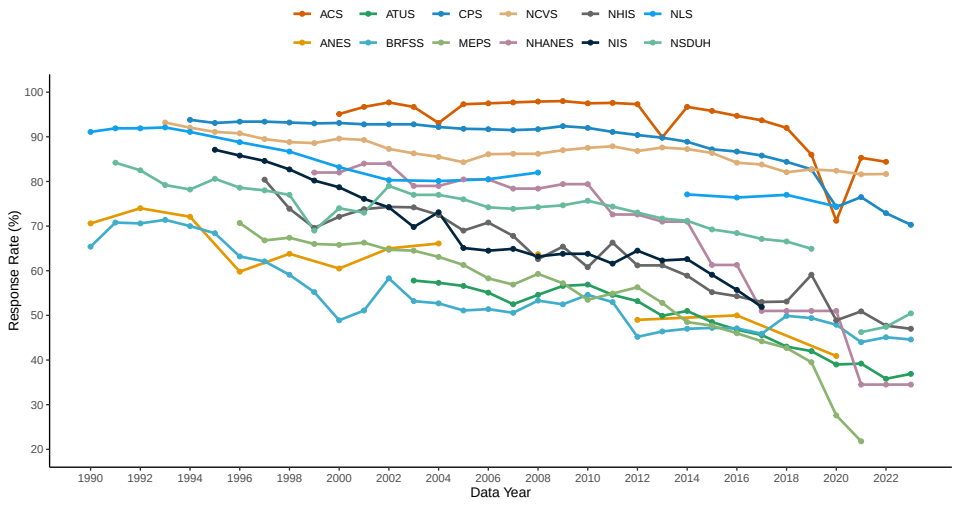

Figure 1: Decline in Response Rates over Time

1.2. Reasons for Declining Response Rates

1.2.1. The Effect of Survey Characteristics

A conventional way of classifying survey nonresponse is to categorize them into

three broad classes: (1) non-contact, (2) refusal, and (3) other factors such as language barriers, health issues, or extended absences from home (Brick and Williams, 2013; Groves and Couper, 1998). Factors impacting survey response rates are associated with changes that survey organizations undertake while fielding particular surveys. For example, changes in survey design can affect survey response rates. Introducing computer-assisted interviewing into the Current Population Survey (CPS) in January 1994, along with more reliance on the telephone interviews noticeably affected response rates. As Czajka and Beyler (Czajka and Beyler, 2016) summarizes, the annual response rates for the basic Current Population Survey (CPS) consistently ranged between 95% and 96% during the three decades prior to 1994 with no discernible trend signalling a decline. Following a major redesign in 1994, the CPS response rate dropped below 94%, beginning a modest but persistent decline in subsequent years. This downward trajectory may have plausibly begun earlier, around 1992 or 1993, but the decline was likely obscured by significant survey design changes implemented during that period. In research by Holbrook et al. (Holbrook et al., 2007), the authors explored the causes and consequences of declining response rates in the context of RDD telephone surveys. They found that surveys with longer field periods, shorter interviews, more call attempts, incentive offers, and less invasive, easier to implement respondent selection techniques yielded higher response rates. More recently, Reyes, 2020 explored the effects of several survey design characteristics on nonresponse rates, results from the existing literature. Despite extensive research, the relationship between declining response rates and survey effort remains ambiguous. On one hand, previous research documents successful methods to counter the trend of increasing nonresponse in specific surveys — either overcoming barriers to and increasing contact (Callegaro et al., 2010; Kristal et al., 1993; Triplett, 2002; Weeks et al., 1987) or targeting reluctant groups to highlight features of the survey and encourage participation (Dillman et al., 1976; Goldstein and Jennings, 2002; Groves et al., 1992; Singer et al., 1999). On the other hand, Peytchev (Peytchev et al., 2009) found that the number of call attempts for completed interviews in the Survey of Consumer Attitudes (SCA) doubled between 1976 and 1996, yet non-contact rates more than tripled over the same period.

1.2.2. The Effect of Survey Climate

Although survey characteristics fail to provide conclusive evidence on the underlying causes of declining response rates (Tourangeau and Plewes, 2013), there are many other socio-political, cultural, economical, technological, and environmental factors, outside the control of the survey researchers contributing to the increasing nonresponse rates over the years (Brick and Williams, 2013; Czajka and Beyler, 2016). Below is a list of such factors as compiled by Czajka and Beyler (2016):

- Increasing number of two-worker households
- Longer average commuting time
- Increasing prevalence of caller ID on landline telephones
- Explosive growth of cellular telephones and cell phone-only households
- Growth in the number of federal surveys
- Expansion of political polling and political calls to influence voting behavior
- Growth in telephone solicitations, contributing to people's reluctance to answer the phone
- Increasing fear or distrust of unknown callers, influenced in part by concerns about identity theft

These factors, collectively known as "survey climate", are the subject of previous research as reasons for survey nonresponse. Groves and Couper, 1998 explored the relationship between societal indicators and survey nonresponse, including population density, crime rates and household composition. They found that these indicators impacted both rates of noncontact and refusal. Evolution in technology over time has also increased the difficulty in reaching potential respondents. The earliest works assessing impact of technological advancements on telephone surveys do not find evidence of answering machines and caller IDs posing substantial barriers to telephone survey contacts and completions (Oldendick and Link, 1994). However, as technological advancements proliferated and integrated into daily life, subsequent research revealed rising rates of noncontact attributed to these technologies (Callegaro et al., 2010; Link and Oldendick, 1999; Steeh et al., 2001). Later studies on cell phones indicate that the growing prevalence of cell-only households may have significant implications for survey coverage and nonresponse rates (Brick et al., 2006). Additional research by Singer and Presser (2008) (Singer and Presser, 2007) demonstrated the effect of privacy and confidentiality concerns on nonresponse in surveys. One might thus conclude that the gradual decline of society's trust in survey organizations, government, or academia leads to depressed response rates. In the past two decades, a growing number of gated residential communities and increasing percentages of Americans living in them may be interpreted as an indicator of declining social trust (Brick and Williams, 2013).

2. Theoretical Perspectives on Nonresponse

Survey methodologists propose several theories as to what motivates survey participation. These ideas are generally captured by three main theories — social capital theory, leverage-saliency theory, and social exchange theory (Tourangeau and

Plewes, 2013). Social capital theory offers a valuable lens through which one can understand the social and psychological dynamics that foster trust, cooperation, and ultimately a willingness to participate in surveys. Robert Putnam brought attention to this theory in his work (Putnam, 1995), describing social capital as the trust people develop through meaningful interactions. This social capital, in turn, encourages cooperation. Cooperation is evident in the form of community networks, civic engagement, shared local identity, reciprocity, and a broader sense of trust within the community. One way to measure social capital is by examining the prevalence of community organizations. However, in recent years, declining membership within such associations is linked to growing distrust in public institutions. This shift could influence not only interpersonal relationships but also broader patterns of civic participation, including responses to surveys.

Although previous research examines individual level attributes, such as education (Heyneman, 2000) and socioeconomic status (Letki, 2006), that might be correlated with a person's social capital, understanding how social capital affects the likelihood to respond to surveys, social capital should be considered as a collective (Brick and Williams, 2013). Moreover, Brick and Williams (2013) (Brick and Williams, 2013) notes that declining social capital could be partly due to generational change. Despite social capital theory offering a plausible justification for growing nonresponse, accurately measuring the several dimensions of social capital often makes analyses difficult.

Understanding the need to investigate social capital as a cause for explaining survey nonresponse (Brick and Williams, 2013), our current research focuses on one crucial dimension of the social capital — social trust, measured at interpersonal level as well as trust in institutions, and investigates its collective impact on the nonresponse rates from 13 domestic U.S. surveys. Looking at the historical trends of response rates provides an empirical understanding of how generational change in social trust might impact survey response rates broadly.

3. Data and Methods

Our objective is to examine the relationship between various survey response rates across different domains and measures of interpersonal and institutional trust. We construct a panel dataset of survey response rates for a variety of U.S. domestic surveys. We therefore collect time series of response rates from 13 surveys with published and accessible response rates.[1] Table 2 presents a list of our collected surveys.

[1]Additional details on each data source is available in the Appendix and the data are available from the authors by request.

To measure social trust, we rely on measures of interpersonal and institutional trust from the General Social Survey (GSS). While GSS measures the interpersonal trust using one item, it inquires about respondents' confidence in institutions in thirteen items. Table 1 shows the wording and available responses for each type of trust questions.

Table 1: GSS Items by Type of Trust

Type of Trust Measured	**Questionnaire Wording**	**Scale**
Interpersonal Trust	Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?	Can trust, Can't be too careful, Depends
Institutional Trust	I am going to name some institutions in this country. As far as the people running these institutions are concerned, would you say you have a great deal of confidence, only some confidence, or hardly any confidence at all in them?	Great Deal, Only some, Hardly any

We measure the trust in different institutions by the percentages of respondents who indicated having a 'great deal of trust' in a given institution in a given year. For the interpersonal trust, we consider the percentages of the respondents who chose the response option 'Can trust' for the corresponding item in a given year. When using the GSS data, we follow recent guidance from NORC and use the new post-stratification weights provided in the survey for our analyses. These weights further adjust the final weights to match demographic targets from the decennial census and March Supplement to the Current Population Survey (CPS).

We link the trust measures to the panel data set we built incorporating the response

rates by year relying on the fact that all these surveys are administered to a nationally representative sample of the same target population - the non-institutionalized adult population (aged 18 years or older[2]) of the United States.

3. Empirical Approach

Our objective is to examine the co-movement between survey response rates and measures of interpersonal and institutional trust. We consider a set of response rate time series indexed as survey $i = 1, \ldots, N$ in year $t = 1, \ldots, T$. For this purpose, we consider $N = 13$. Considering the baseline year being 2000, we look at 22 years of response rates in 13 surveys (2). The GSS trust questions being biennially administered encompass 11 years of social trust measures. We account for the unevenly spaced time series issue by applying Kalman filter in the state space models which we discuss shortly.

Given the multiple time series structure of our dataset, we model each measure of trust as a common factor that affects each response rate heterogeneously. The model for the response rate to survey i, RR_i, takes the form

$$\begin{aligned} \text{RR}_{i,t} &= (\alpha + \alpha_i) + (\beta + \beta_i)\text{TR}_t^k + e_{i,t}, \\ \alpha_i &\sim \mathcal{N}(0, \sigma_\alpha^2), \\ \beta_i &\sim \mathcal{N}(0, \sigma_\beta^2), \\ e_{i,t} &\sim \mathcal{N}(0, \sigma^2). \end{aligned} \tag{1}$$

Our variable of interest TR_t^k represents the average trust of type k, α, β are the fixed intercept and slope parameters for the known trust measures, α_i, β_i are survey-specific random intercept and slope and $e_{i,t}$ is a random error term independent across years and surveys. Although the underlying target population of the surveys in question is the same, the surveys are subject to differential domains of measured constructs (domain describes the type of data collected, including socioeconomic, health, criminal justice, and politics) modes of administration (face-to-face, telephone, mail, web), fielding process or other design attributes that could potentially interfere with the observed response rates of these surveys. We add the survey-specific random effects to account for such variations arising from varying design features of the surveys.[3]

[2] Survey of Income and Program Participation (SIPP) is an exception because the target population is non-institutionalized adults of age 15 or more

[3] We note two key features in our response rate time series for the National Immunization Survey (NIS) and the Survey of Income and Program Participation (SIPP). For the NIS, we end the response

One concern with the proposed model surrounds our data structure. First, the GSS administers the trust questions biennially, meaning we face irregularly-spaced data for each trust time series. Second, some surveys did not publish response rates for all years in our sample, thereby creating a missing data problem. To alleviate these two concerns we reformulate (1) in a state space framework that allows the Kalman Filter to account for these two data issues in each update step.

3.1. State Space Representation

Given the aforementioned data limitations, we re-frame (1) using a state space framework that permits us to estimate our models using the Kalman Filter (Durbin and Koopman, 2012). Following the heterogeneous level and slope specification listed above, we construct the observation equation

$$\text{RR}_{i,t} = H'_{i,t} Z_{i,t} + \epsilon_{i,t}, \quad \epsilon_{i,t} \sim (0, \sigma^2), \tag{2}$$

where $H'_{i,t} = [1, 1, \text{TR}^k_{i,t}, \text{TR}^k_{i,t}]$. The state vector $Z_{i,t} = [\alpha, \alpha_i, \beta, \beta_i]'$ contains the fixed and random regression coefficients of each trust measure for survey i at time t. The transition equation for each trust measure follows a random walk

$$Z_{i,t} = T_{i,t} Z_{i,t-1} + \eta_t, \quad \eta_t \sim \mathcal{N}(0, Q_t). \tag{3}$$

We obtain parameter estimates (2) and (3) using maximum likelihood. For details see Harvey, 1990. This formulation allows us to account for the yearly gaps in our interpersonal and institutional trust time series and obtain parameter estimates for the irregular time series through the Kalman Filter. We carry out estimation using the `KFAS` package in the `R` software.

rate time series in 2017 as response rates were no longer published for the adult immunization module. For SIPP, we estimate historical average response rates by year raking the average interview completion rate by survey wave as an approximation for annual response rates.

Table 2: Collection of Surveys with Published Time Series Response Rates

Survey ID	Survey Name	Sponsor	Domain	Mode
GSS	General Social Survey	NORC	Socioeconomic	Mixed[†]
ACS	American Community Survey	USCB	Socioeconomic	Mixed[††]
ANES	American National Election Studies	Multiple Universities	Politics	Mixed
ATUS	American Time Use Survey	BLS	Socioeconomic	Diary
BRFSS	Behavioral Risk Factor Surveillance System	CDC	Health	Telephone
CPS	Current Population Survey	BLS	Socioeconomic	CAPI and CATI
MEPS	Medical Expenditure Panel Survey	AHRQ	Health	CAPI and CATI
NCVS	National Crime Victimization Survey	BJS	Criminal Justice	CAPI and CATI
NHANES	National Health and Nutrition Examination Survey	NCHS	Health	FTF
NHIS	National Health Interview Survey	NCIRD	Health	CAPI
NIS	National Immunization Survey	CDC	Health	Telephone
NLS	National Longitudinal Survey	BLS	Socioeconomic	Mixed
NSDUH	National Survey on Drug Use and Health	SAMHSA	Health	FTF/CASI
SIPP	Survey of Income and Program Participation	USCB	Socioeconomic	CAPI

- USCB = U.S. Census Bureau
- BLS = U.S. Bureau of Labor Statistics
- BJS = Bureau of Justice Statistics
- CDC = Centers for Disease Control and Prevention
- AHRQ = Agency for Healthcare Research and Quality
- NCHS = National Center for Health Statistics
- NCIRD = National Center for Immunization and Respiratory Diseases
- SAMHSA = Substance Abuse and Mental Health Services Administration
- [†] FTF, Telephone, Internet
- [††] FTF, Mail, Telephone, Internet

4. Results

4.1. General Trends in Institutional Trust

Generally, reported trust in various institutions in the United States are falling according to survey data from the GSS. Figure 2 shows each measure of institutional trust collected by the GSS, grouped by broad type of institution since the first year of the GSS in 1972. In most cases, we observe downward trends in institutional trust, particularly among the media and press, interpersonal trust, and trust in organized religion. Comparatively, trust in economic institutions, such as banks and business, tend to be more volatile over time. Trust in government institutions, such as the three branches of the U.S. government and the military, show relatively low trust in the executive and legislative branches while trust in the judicial branch and the military tend to be higher. Finally, trust in educational and scientific institutions tend to be relatively stable over time with science and medicine showing around the same levels of trust over time. In our subsequent analyses, we will empirically test the extent to which these measures of institutional trust are associated with response rates to federal surveys, focusing both on the strength of the relationship across all surveys and the heterogeneity in association strength across individual surveys.

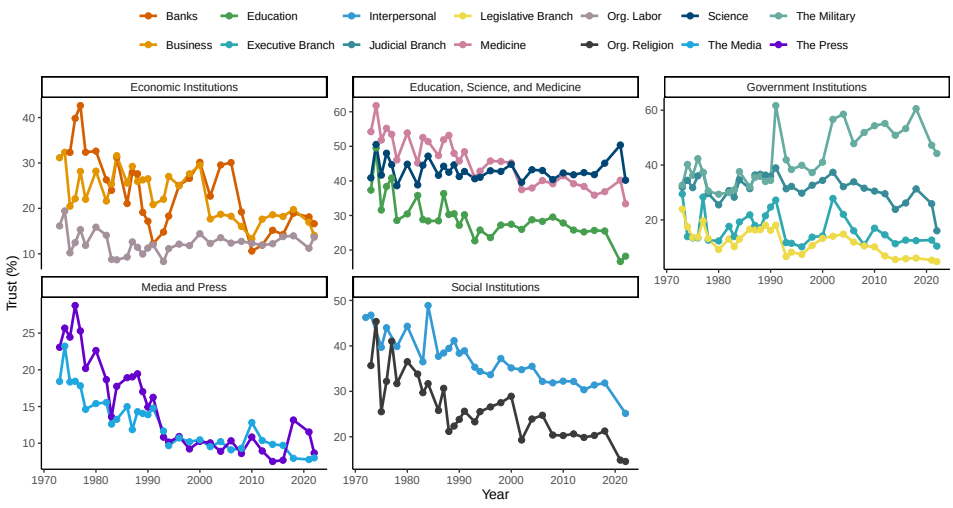

Figure 2: Trust by Category and Type of Institution

4.2. Empirical Tests

Next, we examine the co-movement between survey response rates and each measure of institutional trust over time using the variable intercept and slope model

in (2). In each table we show estimates for the common intercept $\hat{\alpha}$ and slope $\hat{\beta}$, along with the survey-specific counterparts. We are most interested in the overall relationship between survey response rates and each trust measure β as well as the individual sensitivity of the relationship for each survey β_i, that is how much stronger or weaker the relationship is for each survey.

Looking first at Table 3 we show the relationship between response rates and trust in social institutions as measured by interpersonal trust and trust in organized religion. In each case, we find a strong, positive relationship between response rates and trust, suggesting that increasing trust among individuals is associated with higher response rates over time. Among individual surveys, we find that higher levels of social institutional trust are strongly related to response rates in two large socioeconomic surveys, the ACS and CPS, in addition to the NCVS. In the cases of the ACS and CPS, respondents may be more likely to volunteer economic information, such as employment status or income, when general trust in others is higher. Similarly, a significant relationship on the NCVS may indicate that respondents are more comfortable sharing more sensitive information, i.e., crime victimization, when individuals are more trusting of each other.

In relation to trust in government institutions, including the three branches of the U.S. government and the U.S. military, we find similarly positive associations between survey response rates and each measure of trust. Results in Table 4 show positive and statistically significant associations between trust in each institution and response rates broadly. This result is somewhat unsurprising, as respondents would be most likely to respond to federally-administered surveys when trust in government institutions is high. The strength of each relationship broken down by survey is variable, though. For many socioeconomic surveys, like the ACS, CPS, and SIPP, the relationship between response rates and trust in government institutions is much stronger. Notably, we do not find any surveys for which a negative slope adjustment indicates a zero or inverse relationship between response rates and trust. Broadly speaking, we find that more trust in government institutions is associated with higher response rates to federal surveys.

We find similar positive associations for trust in various economic institutions measured in the GSS, including banks and financial institutions, business, and organized labor such as unions. We find strong associations between response rates and trust, indicated by positive and statistically significant common slope coefficients for each measure of trust (Table 5). Among individual surveys, we find some variation in how response rates correlate with trust. For example, socioeconomic surveys like the ACS and CPS tend to have stronger associations while health surveys like NHANES, NHIS, and NSDUH have weaker ones.

Table 3: Response Rates and Trust in Social Institutions

	Interpersonal		Organized Religion	
	Intercepts			
	Estimate	SE	Estimate	SE
Common	0.065	1.000	1.141	0.992
ACS	0.059	5.124	0.413	5.113
ANES	-0.01	5.127	0.097	5.125
ATUS	-0.012	5.124	0.053	5.113
BRFSS	0.005	5.124	0.202	5.113
CPS	0.037	5.124	0.334	5.113
MEPS	-0.019	5.127	0.002	5.115
NCVS	0.061	5.124	0.399	5.113
NHANES	-0.021	5.124	0.118	5.113
NHIS	0.006	5.124	0.211	5.113
NIS	-0.005	5.127	0.11	5.125
NLS	0.015	5.127	0.161	5.124
NSDUH	-0.006	5.124	0.166	5.113
SIPP	0.005	5.124	0.103	5.113
	Slopes			
	Estimate	SE	Estimate	SE
Common	1.961***	0.276	2.421***	0.277
ACS	1.391***	0.344	3.265***	0.452
ANES	-0.37	3.434	-0.017	3.437
ATUS	-0.539	0.344	-0.045	0.452
BRFSS	-0.17	0.344	0.582	0.452
CPS	0.934***	0.344	2.482***	0.452
MEPS	-0.621	2.880	-1.031	1.546
NCVS	1.282***	0.344	3.078***	0.452
NHANES	-0.591*	0.344	-0.139	0.452
NHIS	-0.067	0.344	0.761*	0.452
NIS	-0.188	3.434	0.264	3.437
NLS	0.456	2.880	1.139	2.884
NSDUH	-0.077	0.344	0.744*	0.452
SIPP	-0.113	0.344	0.686	0.452

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Results for trust in the media and the press, shown in Table 6, tended to be more variable on a survey-by-survey basis. While we generally find that trust in both the media and the press is positively associated with response rates, the strength of said associations varies substantially by survey. For instance, response rates for socioeconomic surveys like the ACS and CPS tend to have stronger associations with broader trust in the media and press. However, most other surveys measuring health outcomes and time use showed weaker relationships between their response rates and trust in each media institution.

Finally, Table 7 shows the associations between response rates and trust in education and the sciences. While we find that there is a generally positive association between response rates and trust in these institutions, we find that the relationships tended to be somewhat weaker on a survey-by-survey basis. Interestingly, we find limited evidence that response rates in health surveys had significant associations with trust in science or medicine. Conceptually, this may result from relatively consistent trends in general trust for scientific and medicine related institutions, shown in Figure 2. In these cases, it is less clear whether trust in education and the sciences relates broadly to survey response rates.

5. Discussion

In this research we examined the relationship between response rates to U.S. federally-administered surveys and various measures of institutional trust in the U.S. Combining time series data on response rates across a variety of U.S. surveys with institutional trust measured by the General Social Survey (GSS), we found mixed results on the associations between response rates and types of institutional trust. Broadly, we found that trust in both government and economic institutions yielded strong associations between response rates and trust. In particular, socioeconomic surveys like the American Community Survey (ACS) and Current Population Survey (CPS) showed the strongest relation with trust in government and economic institutions. Comparatively, we found limited evidence suggesting that institutional trust bears an association with response rates to surveys related to health. Taken together, our results suggest that there is still work to be done to understand the root causes underlying declining survey response rates in the U.S. federal surveys. Given our analysis of aggregated time series data, further research would benefit from leveraging more granular data on individual nonresponses to understand the role of trust in individuals' propensity to respond to surveys.

Authors' Contribution

Ujjayini Das
Conceptualization, literature review and primary writing and editing.
Andrew C. Forrester
Data manipulation and analysis.

Conflict of Interest
None declared.

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Table 4: Response Rates and Trust in Government Institutions

	Executive Branch		Legislative Branch		Judicial Branch		The Military	
	Intercepts							
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Common	4.759***	0.967	1.797*	0.985	0.255	0.998	0.183	0.999
ACS	1.639	5.092	3.011	4.998	0.727	5.102	0.039	5.127
ANES	0.425	5.118	0.59	5.084	0.002	5.126	-0.006	5.128
ATUS	0.351	5.093	0.832	4.998	0.242	5.102	-0.008	5.127
BRFSS	0.653	5.092	1.27	4.998	0.369	5.102	-0.003	5.127
CPS	1.415	5.092	2.356	4.998	0.59	5.102	0.03	5.127
MEPS	0.487	5.109	-0.004	5.033	-0.028	5.124	-0.012	5.127
NCVS	1.535	5.092	3.022	4.998	0.717	5.102	0.038	5.127
NHANES	0.891	5.092	0.787	4.998	0.274	5.102	0.006	5.127
NHIS	0.805	5.092	1.385	4.998	0.356	5.102	0.01	5.127
NIS	0.807	5.114	1.244	5.078	0.032	5.126	0.007	5.128
NLS	0.738	5.115	1.505	5.076	0.046	5.126	0.015	5.128
NSDUH	0.965	5.092	1.285	4.998	0.393	5.102	0.006	5.127
SIPP	0.269	5.093	1.336	4.998	0.474	5.102	-0.001	5.127
	Slopes							
	Estimate	SE	Estimate	SE	Estimate	SE	Estimate	SE
Common	4.352***	0.282	5.026***	0.284	1.995***	0.276	1.637***	0.276
ACS	3.122***	0.568	11.514***	1.099	3.206***	0.426	0.266	0.299
ANES	-0.799	3.446	3.095	3.496	-0.093	3.435	-0.703	3.432
ATUS	-1.41**	0.569	1.878*	1.099	0.207	0.426	-0.832***	0.299
BRFSS	-0.55	0.568	3.704***	1.099	0.778*	0.426	-0.621**	0.299
CPS	2.042***	0.568	9.27***	1.099	2.498***	0.426	0.007	0.299
MEPS	-3.041*	1.559	-1.233	1.773	-1.161	1.521	-1.179	1.512
NCVS	2.87***	0.568	10.941***	1.099	3.036***	0.426	0.205	0.299
NHANES	-1.588***	0.568	1.606	1.099	0.123	0.426	-0.861***	0.299
NHIS	-0.314	0.568	4.235***	1.099	0.941**	0.426	-0.563*	0.299
NIS	-0.375	3.446	3.979	3.496	0.124	3.435	-0.596	3.432
NLS	1.399	2.898	7.113**	2.964	0.455	2.880	-0.369	2.878
NSDUH	-0.356	0.568	4.185***	1.099	0.922**	0.426	-0.569*	0.299
SIPP	-0.379	0.569	3.958***	1.099	0.86**	0.426	-0.589**	0.299

Note: * p < 0.1, ** p < 0.05, *** p < 0.01.

Table 5: Response Rates and Trust in Economic Institutions

	Banks		Business		Organized Labor	
	Intercepts					
	Estimate	SE	Estimate	SE	Estimate	SE
Common	1.745*	0.988	1.841*	0.988	0.974	0.993
ACS	1.061	5.112	0.677	5.109	0.538	5.105
ANES	0.174	5.120	0.155	5.124	-0.037	5.121
ATUS	0.49	5.112	0.156	5.110	0.045	5.105
BRFSS	0.542	5.112	0.39	5.109	0.101	5.105
CPS	0.957	5.112	0.563	5.109	0.443	5.105
MEPS	0.421	5.114	0.098	5.118	-0.223	5.107
NCVS	0.964	5.112	0.636	5.109	0.496	5.105
NHANES	0.72	5.112	0.351	5.109	0.005	5.105
NHIS	0.573	5.112	0.335	5.109	0.223	5.105
NIS	0.59	5.117	0.247	5.123	0.014	5.120
NLS	0.309	5.121	0.228	5.123	0.125	5.119
NSDUH	0.747	5.112	0.414	5.109	0.071	5.105
SIPP	1.053	5.112	0.485	5.110	-0.078	5.105
	Slopes					
	Estimate	SE	Estimate	SE	Estimate	SE
Common	2.268***	0.277	2.393***	0.277	4.779***	0.283
ACS	2.642***	0.417	3.427***	0.462	1.29***	0.469
ANES	1.107	3.443	0.243	3.438	-1.218	3.443
ATUS	-0.248	0.417	0.01	0.462	-2.232***	0.469
BRFSS	0.308	0.417	0.654	0.462	-1.556***	0.469
CPS	1.956***	0.417	2.618***	0.462	0.456	0.469
MEPS	-1.184	1.534	-1.22	1.537	-2.901*	1.573
NCVS	2.483***	0.417	3.236***	0.462	1.093**	0.469
NHANES	-0.34	0.417	-0.097	0.462	-2.325***	0.469
NHIS	0.463	0.417	0.843*	0.462	-1.373***	0.469
NIS	1.478	3.443	0.551	3.438	-0.807	3.443
NLS	1.695	2.886	1.403	2.885	0.662	2.894
NSDUH	0.436	0.417	0.818*	0.462	-1.383***	0.469
SIPP	0.363	0.417	0.747	0.462	-1.44***	0.469

Note: * p < 0.1, ** p < 0.05, *** p < 0.01.

Table 6: Response Rates and Trust in The Media and The Press

	The Media		The Press	
	Estimate	SE	Estimate	SE
	Intercepts			
Common	2.339**	0.982	1.5	0.989
ACS	2.815	5.048	1.009	5.082
ANES	0.045	5.104	-0.066	5.113
ATUS	0.834	5.048	0.01	5.083
BRFSS	1.057	5.048	0.258	5.082
CPS	2.358	5.048	0.783	5.082
MEPS	0.455	5.086	-0.132	5.084
NCVS	2.596	5.048	0.891	5.082
NHANES	1.299	5.048	0.006	5.082
NHIS	1.22	5.048	0.336	5.082
NIS	0.432	5.101	0.133	5.111
NLS	1.043	5.097	0.555	5.097
NSDUH	1.589	5.048	0.291	5.082
SIPP	1.278	5.048	-0.32	5.083
	Slopes			
	Estimate	SE	Estimate	SE
Common	6.545***	0.291	6.5***	0.290
ACS	2.585***	0.653	3.733***	0.703
ANES	-0.354	3.469	-1.5	3.455
ATUS	-2.784***	0.653	-2.213***	0.703
BRFSS	-1.741***	0.653	-1.086	0.703
CPS	1.314**	0.653	2.326***	0.703
MEPS	-4.894***	1.569	-3.868**	1.638
NCVS	2.295***	0.653	3.405***	0.703
NHANES	-2.989***	0.653	-2.378***	0.703
NHIS	-1.458**	0.653	-0.767	0.703
NIS	0.345	3.469	-0.93	3.455
NLS	-0.946	2.896	2.929	2.928
NSDUH	-1.534**	0.653	-0.799	0.703
SIPP	-1.606**	0.653	-0.842	0.703

Note: * p < 0.1, ** p < 0.05, *** p < 0.01.

Table 7: Response Rates and Trust in Higher Education, Science, and Medicine

	Education		Science		Medicine	
	Intercepts					
	Estimate	SE	Estimate	SE	Estimate	SE
Common	0.164	0.999	0.078	0.999	0.109	0.999
ACS	0.235	5.117	0.047	5.126	0.061	5.125
ANES	-0.018	5.126	-0.004	5.128	0.004	5.127
ATUS	0.053	5.117	-0.006	5.126	-0.005	5.125
BRFSS	0.07	5.117	0.013	5.126	0.022	5.125
CPS	0.193	5.117	0.032	5.126	0.043	5.125
MEPS	-0.072	5.117	-0.015	5.127	-0.014	5.127
NCVS	0.238	5.117	0.042	5.126	0.056	5.125
NHANES	-0.004	5.117	0.005	5.126	0.007	5.125
NHIS	0.112	5.117	0.008	5.126	0.015	5.125
NIS	-0.006	5.126	-0.003	5.128	0.004	5.127
NLS	0.024	5.126	0.008	5.127	0.019	5.127
NSDUH	0.032	5.117	0.019	5.126	0.027	5.125
SIPP	0.035	5.117	0.017	5.126	0.023	5.125
	Slopes					
	Estimate	SE	Estimate	SE	Estimate	SE
Common	2.509***	0.277	1.55***	0.275	1.549***	0.275
ACS	2.103***	0.397	0.547*	0.304	0.975***	0.316
ANES	-0.567	3.435	-0.356	3.433	-0.158	3.433
ATUS	-0.555	0.397	-0.661**	0.304	-0.479	0.316
BRFSS	-0.046	0.397	-0.43	0.304	-0.202	0.316
CPS	1.474***	0.397	0.261	0.304	0.631**	0.316
MEPS	-1.207	1.538	-1.119	1.512	-1.009	1.514
NCVS	1.953***	0.397	0.479	0.304	0.893***	0.316
NHANES	-0.624	0.397	-0.694**	0.304	-0.519	0.316
NHIS	0.095	0.397	-0.365	0.304	-0.123	0.316
NIS	-0.345	3.435	-0.219	3.433	0.001	3.433
NLS	0.501	2.882	0.155	2.878	0.536	2.879
NSDUH	0.084	0.397	-0.372	0.304	-0.132	0.316
SIPP	0.034	0.397	-0.395	0.304	-0.159	0.316

Note: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.