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Ujjayini Das & Andrew C. Forrester

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What does it take to respond to a survey that randomly pops up in your email or text messages or even through a phone call? In this increasingly insular world of people being immersed in work or being conscious of sharing information with others, it is a matter of concern to survey researchers whether people are motivated enough to take surveys. Figure 1 shows how the upward trend in nonresponse is both sharp and steady over time—especially in some of the largest scale US federally administered household surveys. While it is not yet clear what drives the decline in nonresponse, rooting out possibilities is critically important for survey methodologists and official

statisticians alike. In our work, we look at social trust as a possible mechanism for nonresponse.

Interpersonal Trust in Surveys—Why Does it Matter?

So, what happens if someone asked to participate in a survey does not respond to it? To put it simply, we leave out people whose opinions might differ from those who do respond. Whereas our statistical analysis of said responses may be rigorous, we ultimately obtain a biased representation of public opinion and, thus, subpar decision-making. For example, we may claim that cigarette smoking is more prevalent in men based on a

survey where most women refused to respond. While many reasons might explain women's reluctance to respond, such as social desirability concerns, our otherwise rigorous survey would necessarily misrepresent the smoker population. Basing decisions on these results, public health professionals might decide on an intervention to address cigarette smoking that leaves women out of the planning process. With women less likely to receive treatment based on this conclusion, any intervention might create sex-based disparities in healthcare access and treatments. Hence, nonresponse to surveys can be crucial to public opinion research and evidence-based decision-making, if not addressed properly.
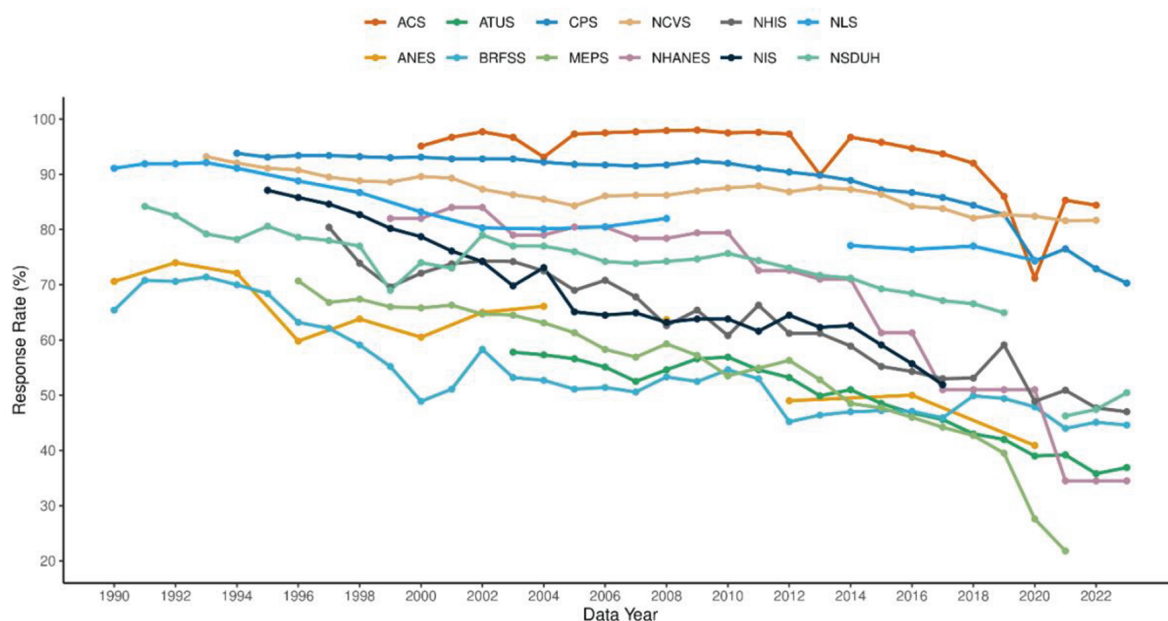

Figure 1. Decline in response rates over time. Survey titles can be found in Table 1.

Nuances of Survey Nonresponse

Studying nonresponse in surveys is not new; however, the debate surrounding increasing nonresponse is not yet settled. Literature documents two broad themes underlying declining response rates in surveys. First are survey characteristics (i.e., factors associated with changes that survey organizations undertake while fielding their surveys, such as survey mode, incentives offered, or even the survey instrument itself). Second is the survey climate (i.e., external social, environmental, political, or economic factors, outside the control of the survey researchers). In the former case, evidence shows that surveys with longer field periods, shorter interviews, more call attempts, incentive offers, and less invasive, easier to implement respondent selection techniques yield higher response rates. Comparatively, factors uncontrollable by survey researchers such as increasing prevalence of caller IDs on landline telephones and a rapid increase in cell-only households in the United States in recent years also lead to higher numbers of non-contact (one form of survey nonresponse) in random digit dialing surveys.

Previous work investigating reasons for survey nonresponse still lacks conclusive findings. Survey methodologists offer several theories as to what motivates survey participation. The three main theories are social capital theory, leverage-saliency theory, and social exchange theory. For our investigative work on social trust, we will focus on the social capital theory only. So, let's start with a high-level definition of social capital before describing how our work is associated with it.

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 *Bowling Alone: The Collapse and Retrieval of American Community*, describing social capital as the trust people develop through meaningful interactions, whether social, economic, or political. Built-up 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. As individuals have more positive interactions with one another, they develop more social capital—that is to say—trust in one another. One way to measure said social capital is to examine the prevalence of community organizations. However, in recent years, declining membership in such associations has been linked to growing distrust in public institutions. This shift could influence not only interpersonal relationships but also broader patterns of civic participation—namely, responding to surveys.

Although previous research examines individual level attributes, such as education and socioeconomic status, that might relate to a person's social capital, it is key to examine social capital from the perspective of a collective to understand how social capital affects the likelihood of responding to surveys in broader society. Moreover, previous studies note that declining social capital could partly relate to generational change. Despite social capital theory offering a plausible justification for growing nonresponse, accurately measuring several dimensions of social capital often makes empirical analyses difficult.

Understanding the need to investigate social capital as a cause of survey nonresponse, our current research focuses on one crucial dimension of the social capital: social trust, measured at the interpersonal level as well as trust in institutions. We investigate its collective impact on the nonresponse rates from thirteen domestic US 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.

Data

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 data set of survey response rates for a variety of US domestic surveys. We collect time series of response rates from thirteen surveys with published and accessible response rates. Table 1 presents the list of surveys used in our study.

To measure social trust, we rely on measures of interpersonal and institutional trust from the General Social Survey (GSS). While the GSS measures interpersonal trust using one item, it enquires about respondents' confidence in institutions in thirteen items. Table 2 shows the wording and available responses for each type of trust questions.

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[1] The post-stratification weights use the data sets interchangeably for each historical year, primarily relying on CPS data to calibrate weights on demographic variables such as age, sex, race, and marital status. Decennial data from the 1980 and 1990 censuses provide additional targets for nativity until covered by the CPS in 1994. For more detail, see Appendix C of Wells, Seeskin, and Ihde (2024).

Table 1—List of Surveys for the Analysis

Survey ID	Survey Name	Sponsor	Domain	Mode
ACS	American Community Survey	USCB	Socioeconomic	FTF[1], mail, telephone, internet
ANES	American National Election Studies	Multiple Universities	Politics	FTF, telephone
ATUS	American Time Use Survey	BLS	Socioeconomic	Diary
BRFSS	Behavioral Risk Factor Surveillance System	CDC	Health	Telephone
CPS	Current Population Survey	BLS	Socioeconomic	CAPI[2], CATI[4]
MEPS	Medical Expenditure Panel Survey	AHRQ	Health	CAPI, CATI
NCVS	National Crime Victimization Survey	BJS	Criminal Justice	CAPI, CATI
NHANES	National Health and Nutrition Examination Survey	NCHS	Health	F2F
NHIS	National Health Interview Survey	NCIRD	Health	CAPI
NIS	National Immunization Survey	CDC	Health	Telephone
NLS	National Longitudinal Survey	BLS	Socioeconomic	F2F, telephone, internet
NSDUH	National Survey of Drug Use and Health	SAMSHA	Health	FTF, CASI[3]
SIPP	Survey of Income and Program Participation	USCB	Socioeconomic	CAPI

[1]FTF – Face-to-face
[2]CAPI – Computer Assisted Personal Interview
[3]CASI – Computer Assisted Self Interview
[4]CATI – Computer Assisted Telephone Interview

Table 2—Details on Trust Measures

Type of Trust Measure	Question 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 each year. For 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 (National Opinion Research Center) and use the new post-stratification weights provided in the survey for our analysis. 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) of the United States.

Our Approach

We primarily rely on time series models to find any relationship between the response rates of surveys covering certain different domains and the reported trust in different institutions. For each survey i at time t, we model the response rates $RR_{i,t}$ using a variable intercept and slopes model as follows:

$$RR_{i,t} = (\alpha + \alpha_i) + (\beta + \beta_i)TR_t^k + \epsilon_{i,t}$$

$$\alpha_i \sim N(0, \sigma_\alpha^2)$$

$$\beta_i \sim N(0, \sigma_\beta^2) \#$$

$$\epsilon_{i,t} \sim N(0, \sigma^2).$$

Our predictor of interest TR_t^k is the average trust of type k (trust in government/supreme court/science, etc.); αi and βi are survey-specific random intercepts and

slopes. 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.

The equations look okay, don't they? Well, we ran into two key challenges while implementing the model on our combined data set. 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 the years in our sample, thereby creating a missing data problem. So, we reformulate the model to a state space framework to employ the Kalman Filter as an estimation strategy that accounts for these two data issues in each Kalman update step.

State space models (SSM) are best suited to describe a dynamic phenomenon where the underlying system has a time-varying relationship, and we do not observe the true underlying state of the system, but rather we observe a noisy version of it. For our work, this seems to be the most appropriate framework as we aim to model the dynamic relationship between social trust and response rates in surveys, while trust is measured with plausible measurement error. Using SSM enabled us to use the Kalman Filter as a tool to manage the missing data points in both of our time series by updating the observations at each state with knowledge from the prior state.

Our Findings

Given multiple time series for our indicators of social trust, we first overlaid the series over time. We noticed some intriguing patterns about the interplay between various trust measures and the response rates. Generally, reported trust in various institutions in the United States is falling according to survey data from the GSS. Figure 2 shows each measure of institutional trust collected by the GSS, grouped by broad types 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 and social institutions (interpersonal and organized religion). Comparatively, trust in economic institutions, such as banks and business, tends to be more volatile over time. Trust in government institutions, such as the three branches of the US government and the military, shows relatively low trust in the executive and legislative branches while trust in the judicial branch and the military tends to be higher. Finally, trust in educational and scientific institutions tends 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 evaluate 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 each survey in our sample.

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 and the state space specification. In each table, we show estimates for the common intercept $\hat\alpha$ and slope $\hat\beta$, along with the survey-specific
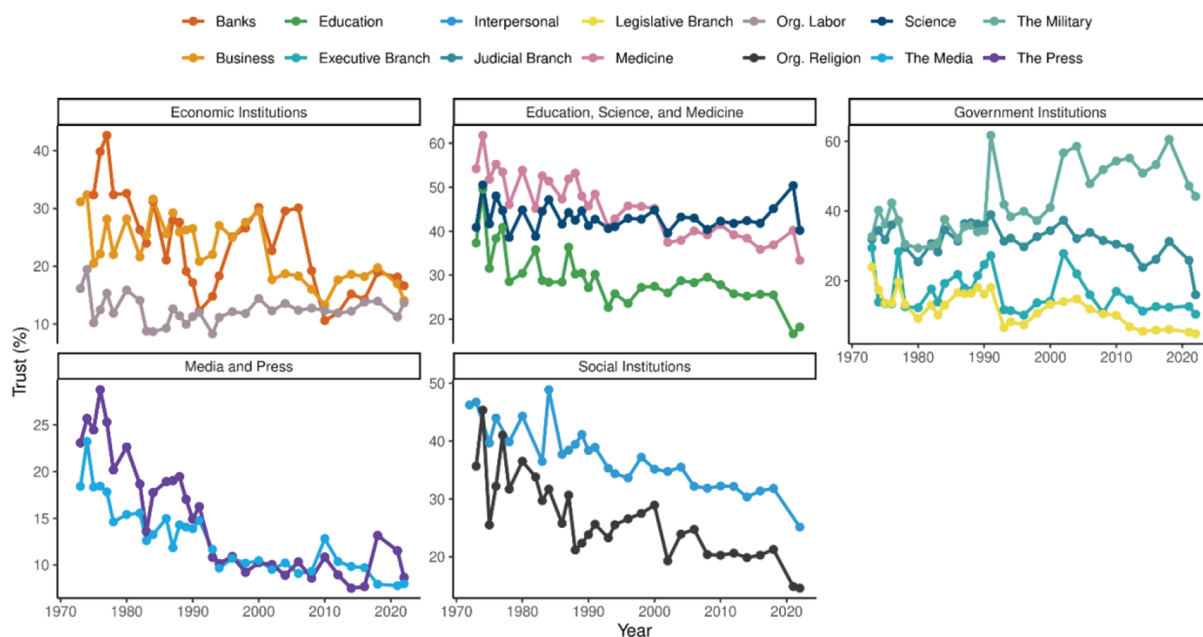
Figure 2. Trust by category and type of institution from the first year of the GSS.

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 American Community Survey (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 US government and the US 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, although the strength of each relationship broken down by survey varies. 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. Results are in 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. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

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	5.12	0.155	5.124	-0.037	5.121
ATUS	0.49	5.112	0.156	5.11	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	5.12
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	5.11	-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	
	Intercepts			
	Estimate	*SE*	*Estimate*	*SE*
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. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$.

Results for trust in the media and the press, shown in Table 6, tend 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.

Final Thoughts

In this article, we examined the relationship between response rates to US federally administered surveys and various measures of institutional trust in the United States. Combining multiple time series data on response rates across a variety of US surveys with institutional trust measured by the 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 ACS and 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 US 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. Our time series analysis can only provide a glimpse into a complex issue facing researchers and survey methodologists across academia, government, and industry. As we dive deeper into how social trust influences how individuals in the United States respond to surveys, we invite researchers to study this topic further. In the current world of declining response rates, understanding the role of social trust in surveys will be critical in both how we analyze surveys statistically and how we conduct them going forward. C

Further Reading

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Replication materials, such as R scripts and data, are available on GitHub at *https://github.com/UjjayiniDas/JSM-2024-Analysis*.

About the Authors

Ujjayini Das is a PhD candidate at the University of Maryland Joint Program in Survey Methodology. She earned a bachelor's and master's degree in statistics from the University of Calcutta, India. She held different research assistant positions at higher education institutions like the Indian Statistical Institute and the University of Connecticut before joining her PhD program. Her primary research interests include statistical methods for health disparity estimation in complex survey settings, estimation of interviewer effects in complex survey settings, estimation of interviewer effects in complex surveys, statistical inference using non-probability samples, and survey-to-survey imputation. She won the 2024 American Statistics Association Data Expo Challenge at the Joint Statistical Meetings for the current work with her coauthor Andrew C. Forrester.

Andrew C. Forrester is an economist in the US Bureau of Labor Statistics Division of Local Area Unemployment Statistics and a PhD student at the University of Maryland Joint Program in Survey Methodology. He has published research in a variety of publications, including *The World Bank Economic Review*, the *Journal of Population Research*, and the *Journal of Economic Behavior and Organization*, among others, in addition to contributed chapters published by the Oxford University Press and World Scientific. His research interests include economic and survey statistics, applied time series and seasonal adjustment, and formal demography.