Appendix- It's NOT the Economy When People Are Dying: Accountability for Household Economic and Health Outcomes During the Pandemic

Information on the July AP/NORC Poll-Methodology and Question Wording

NORC maintains a large panel of potential respondents that were recruited randomly my mail, email, telephone, and by face-to-face contact[1] and respondents were selected randomly within that sample. 1057 individuals completed the survey, with 1004 of the interviews done online and 53 over the phone, with interviews in both English and Spanish. The weighted household panel response rate was 23.6 percent and the completion rate was 13.8 percent. Poststratification weights are used in the analysis to adjust for any survey nonresponse as well as any noncoverage or under and oversampling resulting from the study specific sample design. Poststratification variables included age, gender, census division, race/ethnicity, and education, based on the 2020 Current Population Survey.

Question wording for demographic controls in the AP-NORC survey

Partisanship: Respondents were asked a series of questions. First, "Do you consider yourself a Democrat, a Republican, an Independent or none of these?" Then if they said "Republican" or "Democrat" they were then asked "Do you consider yourself a strong or moderate Republican/Democrat?" while if they said "independent" or "none of these" they were asked "Do you lean more toward the Democrats or the Republicans?", with that question also having the possible answer "Don't lean." From these 4 questions I generate a 7-point partisanship scale (0) Strong Democrat, (1) Moderate Democrat, (2) Leans Democrat, (3) Does not lean, (4) Leans Republican, (5) Moderate Republican, and (6) Strong Republican.

Gender: Gender and age are coded by the pollster from a screen question "Please tell us the age and gender of other persons living in your household, including both children and adults." Gender is coded 0=Male, 1=Female.

Age: Gender and age are coded by the pollster from a screen question "Please tell us the age and gender of other persons living in your household, including both children and adults." Age is coded as a series of dummies for ages 30-39, 40-59, 60-64, and 65+ (with 18-29 as reference category).

Education: "What is the highest level of school you have completed? No formal education, 02. 1st, 2nd, 3rd, or 4th grade, 5th or 6th grade, 7th or 8th grade, 9th grade, 10th grade, 11th grade, 12th grade NO DIPLOMA, HIGH SCHOOL GRADUATE – high school DIPLOMA or the equivalent (GED), Some college, no degree, Associate degree, Bachelor's degree, Master's degree, Professional or Doctorate degree"

[1] See https://amerispeak.norc.org/Documents/Research/AmeriSpeak%20Technical%20Overview%202019%2002%2018.pdf for a description of how the sample was constructed and maintained.

Income: "The next question is about the total income of YOUR HOUSEHOLD for 2019. Please include your own income PLUS the income of all members living in your household (including cohabiting partners and armed forces members living at home). Please count income BEFORE TAXES and from all sources (such as wages, salaries, tips, net income from a business, interest, dividends, child support, alimony, and Social Security, public assistance, pensions, or retirement benefits)." Recorded categories are: Under $10,000, $10,000 to under $20,000, $20,000 to under $30,000, $30,000 to under $40,000, $40,000 to under $50,000, $50,000 to under $75,000, $75,000 to under $100,000, $100,000 to under $150,000, $150,000 or more.

Ethnicity: Coded from two questions. First, "We ask questions about race and ethnicity now so that we will not have to ask you these questions on this topic after each survey. This is about Hispanic ethnicity. Are you of Spanish, Hispanic, or Latino descent?"-respondents could say "no I am not" or "yes" and then select a region of origin (Mexican, Mexican-American, or Chicano; Puerto Rican; Cuban; Central American; South-American; Caribbean; Other Spanish/Hispanic/Latino) . Then "Please indicate what you consider your racial background to be. We greatly appreciate your help. The categories we use may not fully describe you, but they do match those used by the Census Bureau. It helps us to know how similar the group of participants is to the U.S. population. White, Black Or African American, American Indian or Alaska Native (Type in Name of Enrolled or Principal Tribe), Asian Indian, Chinese, Filipino, Japanese, Korean, Vietnamese, Other Asian (Type In Race), Native Hawaiian, Guamanian Or Chamorro, Samoan, Other Pacific Islander (Type in Race), Some Other Race (Type In Race). From this respondents are coded as Hispanics, Non-Hispanic Whites, Non-Hispanic African American, and Other Races.

Series Included in the Time Series Creation

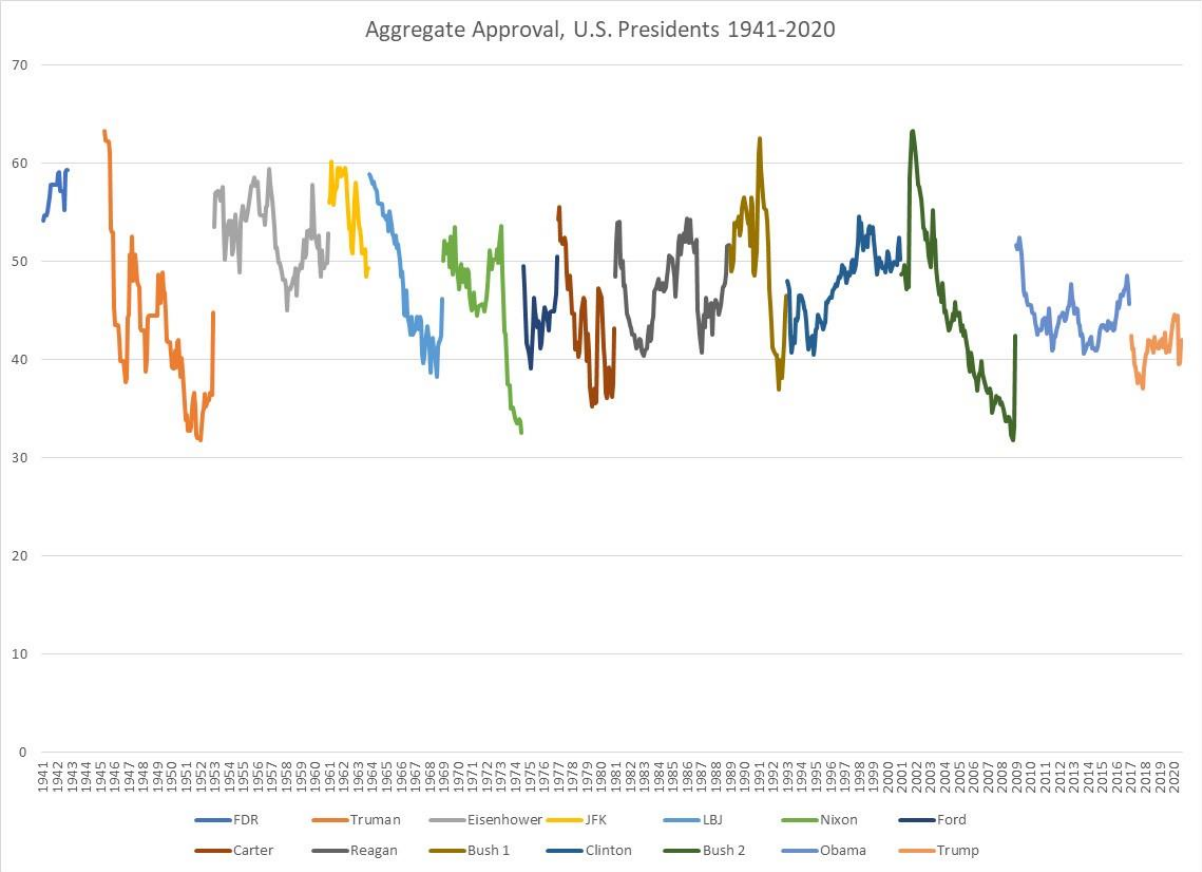
As discussed in the text, I compiled data from 90 pollsters to build a long-time series of presidential approval in the United States from which we can extract the series of President Trump's approval ratings. The specific pollsters along with the number of observations from each is listed below.

Pollster	N Surveys	Pollster	N Surveys
Abacus Data	1	Marist Poll	56
ABC News	122	Marquette Law School	1
ABC News & Washington Post	291	McLaughlin & Associates	34
Associated Press	58	Monmouth University	36
American Research Group-Adult Sample	36	Morning Consult	3
American Research Group-Registered Voter Sample	26	NBC News & Wall Street Journal	281
Lord Ashcroft Polls	2	American National Election Study	2
Atlas Intel	2	Newsweek	103
Basswood Research	1	National Journal	14
Benenson Strategy Group/GS Strategy Group	1	National Public Radio	19
Bloomberg News	30	ODFOX	36
CBS & New York Times	534	Opinium	5
Change Research	15	Optimus-Adult Sample	24
Civiqs	6	Optimus-Likely Voter Sample	24

Climate Nexus	4	Mark Penn	23
CNBC/Hart Research/Public Opinion Strategies	12	Pew Research Center	152
CNN & ORC International	162	Public Policy Polling	41
CNN & Time Magazine	31	Public Religion Research Institute	2
The Cook Political Report	14	Princeton Survey Research Associates	124
Comparative Study of Elective Systems	3	Princeton Survey Research Associates & Newsweek	31
Diageo	35	Quinnipiac University	128
Echelon Insights	9	Rasmussen Reports/Pulse Opinion Research	922
Fox News	294	RealClear Opinion Research	1
USA Today/CNN/Gallup Poll	211	Redfield & Wilton Strategies	9
Gallup	4,232	Research Co.	6
Gallup World Poll	18	RMG Research	13
GBAO	4	Reconnect Research/Roanoke College	1
GBUSA	6	Selzer & Co.	12
Georgetown University/Battleground	2	Siena College/The New York Times Upshot	1
GQR Research	5	Saint Leo University	11
Gravis Marketing	2	Suffolk University	16
Greenberg	16	SurveyMonkey	172
Global Strategy Group	2	SurveyUSA	1
Global Strategy Group/GBAO (Navigator Research)	75	TargetSmart	2
George Washington University/Battleground	2	TARR	54
Harris Poll	166	Time Magazine	34
HarrisX-The Hill	438	Democracy Fund + UCLA Nationscape	2
Hart Research Associates	8	USA Today	18
Hofstra University	2	Washington Post	10
Investor's Business Daily & TIPP Online	40	Whitman Insight Strategies	1
iCitizen	41	Winston Group	42
IPSOS	260	WIRTH	26
IVBCSM	30	YANKP	109
Kaiser	41	YCS	48
Los Angeles Times	106	Zogby	123

The Time Series

As noted in the text, the Wcalc algorithm is used to combine the series to generate a time series of presidential approval that is comparable across administrations despite different pollsters existing at different periods of time and that brings in data from a multitude of sources to extract the latent level of government approval in the country. While we focus only on President Trump is this period, we reproduce the entire series (separating out each administration) for the interest of the reader and to validate the specific series we analyze in the text. As the data in the Figure show, opinion dynamics differ in the Trump administration from previous ones, with a notably smaller honeymoon bump and greater stability of rankings across the term than other leaders experienced.



Testing for Integration and Equation Balance

In Table 2, we model the connection between unemployment and presidential approval using a general error correction model (GECM). De Boef and Keele (2008) argue for application of a general form of the ECM model in a wide range of settings, pointing out that the GECM can be re-expressed as a general autoregressive distributed lag (ADL) model (see also the follow up discussion of GECM/ADL equivalency in Enns *et al.* 2016). More recently, scholars have debated whether the GECM is appropriate for unbalanced equations. Models are *balanced* when the collection of variables on the right-hand side (the regressors) are *collectively* of the same order of integration as the variable on the left-hand side (the regressand) (Pickup and Kellstedt 2020, 4). Models are unbalanced when "the regressand is not of the same order of integration as the regressors, or *any combination of the regressors*" (Banerjee *et al.* 1993, 164, emphasis added). The crucial point relates to "collectively" and to "any combination of the regressors," meaning that the linear combination of the regressors and regressand should produce a stationary series in order for the GECM to provide a solution to the spurious regression problem. Monte Carlo simulations performed by Enns and Wlezien (2017) support this general conclusion and, in doing so, address the cautionary notes about equation balance in time series found in contributions to a recent *Political Analysis* symposium (Grant and Lebo 2016; Keele et al. 2016; but see Freeman 2016).

Pickup and Kellstedt (2020) lay out a set of procedures for assessing balance. The first step is to assess the order of integration of the variable on the left-hand side. As shown by the augmented Dickey-Fuller (ADF) tests referenced in the text, approval may not be stationary. However, the

series in first differences, rejects the null hypothesis of panel unit roots (ADF = -7.117, $p < 0.001$). Thus, Δ*Approval* is I(0). The second step is to determining the order of integration of variables on the right-hand side. As referenced in the text, the ADF for *Unemployment* reveals a unit root but its first difference is stationary (ADF=-6.185, $p<0.001$), which again confirms that it is I(0). This suggests that a linear combination of the regressors is I(0), thus indicating balance with the regressand and the independent variables.

Finally, in a third step we check equation balance by testing the residuals from our models for unit roots. Results of these tests, reported below for the three models in Table 2, reveal no indication of unit roots.

	ADF Statistic	p-value
model 1	-5.867	0
model 2	-5.946	0
model 3	-5.065	0

Testing a different cutoff for the interaction term in Table 2

In the text we test if the effect of the economy was different in 2020 than it was prior to 2020. However, one could imagine that the economy's salience did not shift until the first U.S. cases began to increase and shutdowns started in March. To test this, in the table below I replace the cutoff for what was included in the baseline model to February 2020 and also the year 2020 dummy used in the interaction model in Table 2 with one that takes the value of 1 if the observation occurred during or after March 2020 and 0 otherwise. The substantive results are unchanged: lagged levels of unemployment were significantly associated with presidential approval prior to March while the interaction term shows that effect after March the effect of unemployment significantly diverges from that baseline and cancels it out. Thus, the substantive conclusions in Table 2 do not change if we use a different baseline.

	2017-Feb 2020	2017-Aug 2020
$Approval_{t-1}$	-0.378*	-0.620*
	(0.134)	(0.118)
ΔUnemployment	-0.222	-0.952
	(1.300)	(1.408)
$Unemployment_{t-1}$	-2.432*	-3.826*
	(0.965)	(0.934)
March 2020 or later		-11.180*
		(3.599)
March 2020*ΔUnemployment		0.952
		(1.417)
March 2020*$Unemployment_{t-1}$		3.478*
		(0.928)
First Quarter in Office	1.378	2.579*
	(0.987)	(0.996)

Second Quarter in Office	-0.129 (0.641)	0.392 (0.680)
Constant	25.028 (8.870)	40.322* (7.837)
N	37	43
F	3.10*	5.13*
OLS Regression, Standard Errors in Parentheses. DV is ΔApproval * p<0.05 (two-tailed)		