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RESEARCH ARTICLE

The Policy Feedback Effects of State Assistance: Did Small Business Bailouts Increase Support for Public Aid Programs?

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Abstract

We examine whether exposure to government assistance can generate positive policy feedback effects among constituencies not traditionally supportive of the welfare state. Focusing on the U.S. Paycheck Protection Program (PPP), a small business bailout enacted during the COVID-19 pandemic, we study how making government assistance salient affects attitudes toward social assistance programs among a typically Republican-leaning and relatively affluent group. Leveraging a bespoke survey of verified program recipients and an embedded experimental manipulation, we find that reminding PPP recipients of program participation increases support for government spending on healthcare, nutritional assistance, and unemployment benefits by an average of 6.9 percentage points—equivalent to roughly 16 percent of the partisan divide on these issues. The findings provide novel causal evidence that making the receipt of government assistance salient increases support for anti-poverty programs among well-off people, even when those programs do not directly benefit them.

Keywords: redistribution; policy feedback; government aid; survey experiment; small business owners

Introduction

A prominent explanation for variation in public support for government assistance programs centers on path dependence and the feedback effects of government programs (Korpi and Palme, 1998; Pierson, 2001). Once put in place, goes the argument, policies influence public support through two channels: they shape the resources people possess as well as their interpretative schema, including who is deserving of assistance (Béland et al., 2022).

In line with the resource-based account, research shows that higher-income individuals tend to be less supportive of public spending on assistance programs to

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the needy than lower-income people. This is consistent with the fact that better-off individuals are less likely to benefit from or rely on such programs in the future. Explanations related to the second channel hold that when policies are instituted, they also affect people's interpretive and informational environment. Through the implementation of the policy, people are exposed to pertinent information—about how the government operates, the efficiency or impact of the programs (or lack thereof), and empathetic understanding of social risk—that subsequently feeds their assessment of the policy and of related matters.

Evaluating the feedback effects of a policy is difficult because exposure to it is typically endogenous: those who utilize the program are often a self-selected group that differs from others, making it hard to tease out the attitudinal effects of the policy from other factors related to the characteristics of the group exposed to the policy. Given this problem, this study leverages a unique setting in which people who typically do not rely on direct government assistance were in need of substantial help due to exogenous factors (i.e., a global pandemic). Specifically, we examine the effect of the Paycheck Protection Program (hereafter PPP)—one highly salient policy—on a constituency of small business owners in the aftermath of a major economic shock (the COVID-19 pandemic). Hence, our study focuses on the second channel described above: whether and how government assistance affects the interpretive schema of well-off individuals. We use an experimental design to mimic a heightening of the salience of government assistance to a population not traditionally used to government support and assess the downstream effects of this experience on policy preferences.[1]

Substantively, small business owners are an important, yet understudied, population in American politics. In the U.S., there are over 33 million small businesses, defined as independent businesses that have fewer than 500 employees. These small businesses employ almost half (46%) of all American workers and are the source of about two-thirds of the growth in employment over the past quarter century.[2] Moreover, they tend to be better off economically than the average American, making them an excellent case study for examining the effects of social assistance on a group that is typically not dependent on the welfare state (Malhotra et al., 2025).

Leveraging a bespoke sampling frame of PPP recipients, we conduct a survey in which we embed an experimental manipulation where half of respondents were randomly assigned to receive a salience prime. They were reminded of their participation in the PPP program and that the government had bailed out small business owners whose livelihoods were in jeopardy during the pandemic, when many forms of economic activity ground to a halt. Unlike other forms of financial assistance that come in the form of subsidies or tax breaks, the PPP provided direct

[1]There are several potential mechanisms underlying interpretive schema, including perceptions of the efficacy of programs, the competence of government, and norms of fairness and reciprocity. Although our empirical design is not intended to disentangle these mechanisms, they all point to a positive treatment effect of salience.

[2]See U.S. Chamber of Commerce report: https://www.uschamber.com/small-business/state-of-small-business-now.

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transfers of money as forgivable loans to small business owners that helped them make payroll and keep their businesses afloat during a stressful time. On the margin, this manipulation made the program salient to PPP recipients for whom it may not have been top of mind. As such, from respondents who were affected by the treatment, we can learn about the way the program as a whole changed attitudes by exposing people to a visible case of them benefiting from social spending on a government assistance program.

This study adds to prior efforts to document the feedback effects of government assistance. Gilens (1999), for example, shows that means-tested welfare in the U.S. depresses political support among both recipients and non-recipients by reinforcing racialized deservingness beliefs. Demonstrating positive feedback effects, Campbell (2012) exploits individual-level survey data and program eligibility rules to show that Social Security and Medicare beneficiaries are highly supportive of both programs and are accordingly more likely to vote and contact public officials than are demographically similar non-beneficiaries. Mettler (2011) finds that recipients of visible programs (e.g., Social Security) are substantially more likely to express pro-government attitudes than recipients of "submerged" tax expenditures, even at similar income levels. Our study adds to this work by showing that similar patterns hold also in the context of economically better-off individuals who, for exogenous reasons, happen to need government assistance. Further, whereas extant research has shown policy feedback effects on support for politicians who implemented the program, participation, trust, and beliefs of deservingness, we uniquely show that government support policies can have spillover effects on attitudes toward anti-poverty programs that do not directly benefit well-off recipients.

Specifically, we find that making PPP benefits salient caused small business owners to increase their support for various government programs designed to assist those in need: nutritional assistance, healthcare, and income assistance for the unemployed. Overall, we find that the experimental prime increased support for antipoverty programs by about 6.9 percentage points, which represents about 16% of the partisan divide in support.

Taken together, this paper provides novel evidence of the policy feedback process and advances the literature in several ways. First, the unique features of our case—a group not typically reliant on social assistance programs needing help for exogenous reasons—make it particularly useful for evaluating the feedback effects of public aid. Second, our sampling strategy and survey design allow us to focus on an important population for which we have proof from administrative records that they actually received government support. Finally, our experimental evidence on the influence of program salience is causal in nature, supplementing observational research on the topic that correlates people's awareness of and experience with government programs and their attitudes toward the welfare state.

Empirical design

Bespoke survey

As there is no national repository of small business owners, we constructed our survey sampling frame based on the list of individuals who applied for the Paycheck

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Protection Program (PPP) as of September 30, 2023.[3] According to the US Small Business Administration (SBA), PPP was part of a COVID-19 relief program that aimed to help qualifying business entities keep their workforce employed through uncollateralized, low-interest, and forgivable loans. PPP loans were available to any US-based small business, sole proprietor, independent contractor, self-employed person, 501(c)(3) nonprofit organization, 501(c)(19) veterans organization, or tribal business that was in operation on February 15, 2020, and satisfied at least one of the following conditions: (1) had 500 or fewer employees; (2) met the industry size standards set by the SBA (i.e., had a tangible net worth not exceeding $15 million on March 27, 2020, and an average net income not exceeding $5 million for the two full fiscal years prior).

By the time of its conclusion in 2021, PPP provided $793 billion in loans to close to 1 million organizations. We use PPP as the foundation of our survey sample for two reasons. First, instead of relying on respondents' self-reporting of benefit receipt, using a government-verified list of small business owners helps us more accurately target the population of interest. Second, unlike many other government grants for small business entities, PPP is not set up to target any specific subsample of businesses. In order to avoid double counting the same entity applying for multiple rounds of loans, we rely on the first-draw loan list, which contains in total 557,859 entities who applied for PPP.

In order to make sure our sample is balanced and representative of the distribution of PPP loans, we took the following steps: (1) a random sample of entities is selected from the foundational PPP pool; (2) business owners of these entities as well as their contact information are identified through various sources, including utilizing the PPP application records, Internet searches, and LinkedIn data; (3) among the matched list, a stratified recruitment sample that is balanced on entity characteristics is invited to take the survey through a link. Each of these business owners received at least one text and one email.

Respondents were first screened and disqualified from the survey if they self-identified as non-small business owners or said that they never owned a small business in the past. We also excluded responses based on various data quality checks (see Online Appendix A for additional details). To reach our target sample size while still keeping the final sample balanced, we launched the survey in four waves, repeating the steps as detailed above. Respondents were provided an incentive of $20 for participating. Overall, our matched business owner sample containing personal contact information consists of 262,347 individuals. Of these, 221,142 individuals were invited to our survey. The final sample size is 701, which makes the final qualified response rate to be 0.32%.[4] Although this seems low, it is comparable to survey efforts using probability samples that attempt to reach individuals using digital methods. For example, the SMS portion of the Cornell

[3]This experiment was part of a larger research project in which we also asked a series of questions about SBOs' political attitudes and business experiences. The descriptive profile of SBOs is reported in Malhotra et al. (2025).

[4]There is minimal within-survey attrition. Among the 701 respondents, 1 person did not reach the portion of the survey with the experiment, leaving the main outcomes used for this paper unanswered; 3 additional people did not answer all the questions related to the main outcomes.

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Midterm Election Survey has a final response rate of 0.8%. Recent phone surveys conducted by the *New York Times* have response rates of 0.4%. Table 1 presents characteristics of the sample as compared to the sampling frame. As shown in the table, despite the low response rate, the sample is fairly representative of the PPP recipients who were invited to take the survey as well as the larger PPP dataset.

Nonetheless, to address potential issues with non-response, we apply post-stratification weights to the data. Because we employ methods of probability sampling, we can reweight the data to make it representative based on the plethora of sampling frame characteristics to which we have access. The final sample is weighted based on mostly business entity characteristics along with some business owner characteristics[5] to match the PPP distribution list. The specific list of variables that are used to construct the weights is reported in Online Appendix A. The survey process, including the construction of the sampling frame, was administered by Verasight.

Table OA2 shows descriptive statistics of our sample of PPP recipients. We compare this group against a national sample of the U.S. adult population conducted by Prolific.[6] Overall, we observe that the small business owner population is older, less white, and wealthier than the U.S. population at large.

Experimental manipulation

For a randomly selected half of our sample, we ask respondents the following question: "During the COVID-19 crisis, the US Government's PPP provided government-backed loans to businesses to help them keep their workforce employed. Which of the following best describes your engagement with the Paycheck Protection Program?" The response options were "I have been a recipient of the program's loans," "I have applied for the program but did not receive a loan," "I have heard about the program but did not apply," and "I have not heard about the program."

Importantly, the purpose of this question is not to elicit individual program participation information—we know from administrative data that all respondents have applied and received loans from PPP—but to remind respondents of a government program from which they have gotten financial support. The "Prime" variable is an indicator for whether this question is asked before the measurement of the outcome variables.[7] Randomization was successful; balance tables are presented in Online Appendix C.

[5]Recall that PPP data is at the business-entity level and focuses more on the business entity rather than the individual owner.

[6]More details on the baseline Prolific sample can be found in the Online Appendix B.

[7]Despite the fact that all people in the sampling frame were known to have received PPP funding, only 61% of respondents acknowledged receiving it. Why is this the case? Some business owners may not be directly involved with the application for, or management of, PPP loan funds. Other business owners may recall receiving PPP loans but be reluctant to disclose that on a survey. There have been a number of high-profile prosecutions of PPP loan fraud. Even if respondents themselves did not commit fraud, they may be wary about disclosing their participation in the program. Table OA1 presents descriptive characteristics of respondents who acknowledged receiving PPP funding vs. those who did not. Although we cannot draw strong inferences from these comparisons, it seems that less-sophisticated businesses (i.e., non-corporations,

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Table 1. Descriptive statistics of paycheck protection program (PPP) recipients

	PPP (full) *N = 557,859*	PPP (invited) *N = 221,142*	Sample (unweighted) *N = 701*	Sample (weighted) *N = 701*
Loan status				
Charged off (%)	5.3	7.2	3.9	5.2
Exemption 4	2.8	3.8	2.0	2.9
Paid in full	91.9	89.0	94.2	91.9
Rural or urban				
R	22.2	24.0	25.7	22.2
U	77.8	76.0	74.3	77.8
Business hub zone?				
N	70.8	67.8	74.9	70.8
Y	29.2	32.2	25.1	29.2
LMI indicator				
N	71.7	69.5	73.9	70.9
Y	28.3	30.5	26.1	29.1
Business type				
Corporation	18.6	10.5	9.4	18.6
Limited liability company (LLC)	20.0	8.7	8.7	19.5
Sole proprietorship	32.2	48.9	52.2	32.2
Other	29.2	32.0	29.7	29.7
Business age				
Existing or more than 2 years old	85.7	90.7	89.3	85.7
New business or 2 years or less	8.1	4.6	6.0	8.0
Startup, loan funds will open business	0.0	0.0	0.3	0.2
Unanswered	6.1	4.6	4.4	6.2
Loan term				
0–24	50.9	33.1	34.2	50.9
25–48	4.6	6.8	3.3	4.3
49–60	44.5	60.1	62.3	44.4
Over 60	0.0	0.0	0.1	0.4
Initial approval amount				
$0–10K	28.1	31.8	44.5	33.6
$10,001–25K	41.9	50.0	40.5	36.3
$25,001–100K	18.7	10.4	9.8	18.9
$100K+	11.3	7.8	5.1	11.2

(*Continued*)

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Table 1. (*Continued*)

	PPP (full) *N = 557,859*	PPP (invited) *N = 221,142*	Sample (unweighted) *N = 701*	Sample (weighted) *N = 701*
Current approval amount				
$0–10K	28.1	31.8	44.8	34.1
$10,001–25K	41.9	50.1	40.5	36.4
$25,001–100K	18.7	10.4	9.4	18.0
$100K+	11.3	7.7	5.3	11.5
Forgiveness amount				
$0–10K	25.5	28.6	41.5	30.1
$10,001–25K	36.5	42.0	37.7	33.7
$25,001–100K	18.3	10.2	8.8	16.9
$100K+	11.0	7.7	5.3	11.5
Missing	8.6	11.5	6.7	7.8

Notes: PPP data as of September 30, 2023. Data was obtained through FOIA request.

Although the experimental manipulation presented in this paper was part of a larger study on this sample, all respondents received the PPP experiment in the same position in the survey.[8]

Outcome measures

We employ three measures to assess support for government redistributive policies.[9] While asking these questions, we remind the respondents that higher government spending would come from higher taxes, consistent with best practices to remind respondents of tradeoffs inherent in public policies (Margalit and Raviv, 2024). For ease of interpretation, we recode all survey measures to lie between 0 and 1.

those in low- and middle-income areas, those in distressed federal business zones, and those with longer loan terms) were less likely to acknowledge receiving PPP.

[8]There was one additional experimental manipulation that was not directly relevant to the context of this paper, intended as a robustness check to assess whether asking about business experiences primed responses to political attitudes. Half of respondents were asked about their small business owner experience before questions about their political attitudes, and the other half were asked about their small business owner experience after those questions. The PPP experiment, however, had a fixed position, which was after all the aforementioned blocks. Any effect of the position of the experiment within the larger survey would be the same for treatment and control groups and not produce any bias. We also tested for treatment spillover effects using the method designed by Transue et al. (2009) and found none (i.e., the PPP treatment effect was not conditioned by assignment in the prior manipulation, see Online Appendix Table OA7).

[9]Our interest is in the impact of personal exposure to government assistance programs on welfare attitudes more generally, not just about help for SBOs. We therefore ask participants for their attitudes on a range of welfare programs that cover different domains—healthcare, nutritional assistance, and unemployment assistance. This allows us to assess how broad and systematic the attitudinal effects of the treatment are.

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Healthcare. We ask whether the respondent would like to see more or less government spending on healthcare for the poor: "Would you like to see more or less government spending on health care for the poor? Remember that increasing such spending might require higher taxes to pay for it." The response options were "spend much less," "spend less," "keep at current level," "spend more," and "spend much more."

Nutritional Assistance. We ask whether the respondent would like to see more or less government spending on nutritional assistance (such as food stamps) for the poor: "Would you like to see more or less government spending on nutritional assistance for the poor (food stamps)? Remember that increasing such spending might require higher taxes to pay for it." The response options are the same as *Healthcare*.

Unemployment Assistance. We ask whether the respondent would like to see more or less government spending on income assistance for workers who lose their jobs: "Would you like to see more or less government spending to provide income assistance for workers who lose their jobs? Remember that increasing such spending might require higher taxes to pay for it." The response options are the same as *Healthcare*.

Index. We build a combined scale based on the three aforementioned measures via a simple average.

Results

As shown in Figure 1, the experimental prime increased support for all three antipoverty programs. For the table version of this figure, see Online Appendix C Table OA5. The figure presents estimates from simple OLS regression models regressing the outcome variables against a dummy variable representing the experimental prime.[10] The strongest effect was for healthcare for the poor—making PPP salient increased recipients' support by 9.4 percentage points ($p = .001$). This effect size is substantively large, representing about 22% of the association between partisanship and the outcome variable. The prime increased support for nutritional assistance by 7.5 percentage points ($p = .009$) and unemployment assistance by 4.0 percentage points ($p = .120$). Averaging across the three outcome variables, the treatment shifted support for antipoverty programs by 6.9 percentage points overall ($p = .006$). In other words, the treatment shifted respondents from being slightly against the programs to somewhat in favor (the constant terms representing the control group in Table OA5 are below 0.5). Although we can only speculate as to why the unemployment outcome exhibited the weakest treatment effects, one possibility is that the PPP was intended to reduce the need for unemployment benefits by keeping workers on payroll. Alternatively, programs such as Medicaid and SNAP are means-tested and targeted toward the poor, whereas unemployment insurance is paid into by all workers and therefore might be perceived differently by respondents.

[10]As a robustness check, we also estimated an ordered logit model predicting the three policy outcomes, which is reported in Online Appendix C. Marginal effects are plotted in Figure OA1. The regression results are reported in Table OA6. These robustness checks return results that are similar to the main OLS results.

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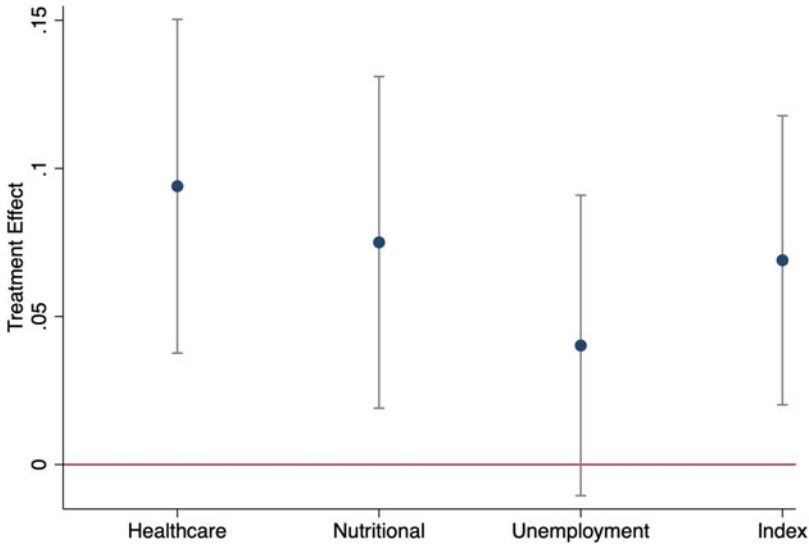


Figure 1. SBOs exhibit stronger support for antipoverty programs when primed about PPP. *Notes:* 95% confidence intervals. Outcome is a 5-point scale on [0,1].

Conclusion

The role and size of the state have become a central topic of public discussion following President Trump's decision to form a new Department of Government Efficiency (DOGE). Led by Elon Musk, this department had set its sights on radically transforming the operation of government by shrinking the public sector, eliminating prominent functions, and cutting an array of public programs. An open question is what impact these changes will have on citizens' views of the state as some of its key operations come to the fore.

This paper offers insight on this question by investigating a case where a government assistance program is made salient to its beneficiaries. Leveraging a unique sample of small business owners, we take advantage of a historic bailout program that made the government's role in mitigating social risk salient to a typically higher income and disproportionately right-leaning constituency (Malhotra et al., 2025). Our experimental approach allows us to study this research question causally. Our findings reveal support for the idea that welfare policies have feedback effects that extend beyond the policy itself. When the government implements a social assistance program, it influences the way beneficiaries evaluate government intervention on a broader set of causes and needs. Making salient government assistance does appear to be effective in building support for the welfare state.

Supplementary material. The supplementary material for this article can be found at https://doi.org/10.1017/XPS.2026.10031.

Data availability. The data, code, and any additional materials required to replicate all analyses in this article are available at the Journal of Experimental Political Science Dataverse within the Harvard Dataverse Network, at: https://doi.org/10.7910/DVN/WUQ8B5 (Malhotra and Shi 2026).

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Competing interests. The authors report no conflicts of interest.

Ethics statement. This research was approved by the Stanford University Institutional Review Board (IRB Protocol 71035). The authors affirm that the research adheres to APSA's Principles and Guidance for Human Subjects Research. Participants were shown an information screen with study information prior to beginning the survey.

References

Béland, Daniel, Andrea Louise Campbell, and R. Kent Weaver. 2022. *Policy Feedback: How Policies Shape Politics*. New York: Cambridge University Press.

Campbell, Andrea Louise. 2012. *How Policies Make Citizens: Senior Political Activism and the American Welfare State*. Princeton, NJ: Princeton University Press.

Gilens, Martin. 1999. *Why Americans Hate Welfare: Race, Media, and the Politics of Antipoverty Policy*. Chicago, IL: University of Chicago Press.

Korpi, Walter, and Joakim Palme. 1998. "The Paradox of Redistribution and Strategies of Equality: Welfare State Institutions, Inequality, and Poverty in the Western Countries." *American Sociological Review 63*(5): 661–87.

Malhotra, Neil, and Saikun Shi. 2026. "Replication Data for: The Policy Feedback Effects of State Assistance: Did Small Business Bailouts Increase Support for Public Aid Programs?" *Harvard Dataverse V3*. https://doi.org/10.7910/DVN/WUQ8B5.

Malhotra, Neil, Yotam Margalit, and Saikun Shi. 2025. "The Politics of Small Business Owners." *British Journal of Political Science 55*: e94.

Margalit, Yotam, and Shir Raviv. 2024. "Does Support for Redistribution Mean What We Think It Means?" *Political Science Research and Methods 12*(4): 870–8.

Mettler, Suzanne. 2011. *The Submerged State: How Invisible Government Policies Undermine American Democracy*. Chicago, IL: University of Chicago Press.

Pierson, Paul. ed. 2001. *The New Politics of the Welfare State*. Oxford, UK: Oxford University Press.

Transue, John E, Daniel J. Lee, and John H. Aldrich. 2009. "Treatment Spillover Effects Across Survey Experiments." *Political Analysis 17*(2): 143–61.

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