A Revealed Preference Approach to the Elicitation of Political Attitudes: Experimental Evidence on Anti-Americanism in Pakistan*

Leonardo Bursztyn†
Michael Callen‡
Bruno Ferman§
Ali Hasanain¶
Noam Yuchtman‖

April 10, 2014

Abstract

We develop an indirect, revealed preference method of eliciting political attitudes that overcomes many concerns associated with subjective responses to direct survey questions. We implement this method in an experiment in Pakistan that aims to understand the expression of anti-American attitudes. Following a standard personality survey, we offer subjects a bonus payment for the survey's completion. Around one quarter of subjects are willing to forgo a 100 Rupee payment (roughly equal to one-fifth of a day's wage) in order to avoid anonymously checking a box indicating gratitude towards the United States government for providing funds. Unbeknownst to subjects, we use their rejection of payment as an indicator of their expression of anti-American ideology; this measure, which we validate in the paper, mitigates concerns about experimenter demand effects or social stigma distorting subjects' responses. Indeed, we find that the social context in which ideology is expressed matters: when individuals believe their choice to accept or reject the 100 Rupee payment will be observable by other subjects, they reject the payment significantly *less* often than in the private setting. The willingness to forgo payment is responsive to the payment size as well: significantly fewer subjects are willing to give up a 500 Rupee payment than a 100 Rupee payment. These findings provide new evidence on the determinants of the expression of anti-American views in a geopolitically pivotal region of the world.

*We would like to thank Chris Blattman, Sylvain Chassang, Ernesto Dal Bó, Stefano DellaVigna, Lena Edlund, Ray Fisman, Paola Giuliano, Matthew Kahn, Dean Karlan, Asim Khwaja, David Levine, Aprajit Mahajan, Edward Miguel, Petra Persson, Daniel Posner, Jacob Shapiro, Nico Voigtländer, Romain Wacziarg, Reed Walker, and seminar participants at CEGA (Berkeley), CGU, NYU, Princeton, RAND, Sao Paulo School of Economics, and USP for helpful comments and suggestions. Saad Gulzar provided excellent research assistance. We also thank the Center for Global Management at UCLA Anderson for financial support.

†UCLA Anderson and NBER, bursztyn@ucla.edu.
‡UCLA Political Science, mjcallen@ucla.edu.
§Sao Paulo School of Economics, FGV, bruno.ferman@fgv.br.
¶Lahore University of Management Sciences, hasanain@lums.edu.pk.
‖UC Berkeley Haas and NBER, yuchtman@haas.berkeley.edu.

1 Introduction

Economists have devoted increased attention in recent years to investigating individuals' beliefs and attitudes, from preferences for redistribution, to trust, moral values, religious beliefs, and political ideology.[1] Often, empirical studies of individuals' attitudes are forced to rely on subjective, stated preference measures in response to direct questions. Such measures have well-known problems, however: especially when questions are sensitive, or responses are stigmatized, respondents may answer in ways that are socially acceptable, rather than answer truthfully.[2] Even when questions are not sensitive, responses may be affected by the fact that respondents know that their attitudes are being studied; they may also be affected by a desire to answer in a way that seems to be desired by the experimenter.[3] Finally, one may be concerned that responses to direct survey questions do not reveal a preference, because there is no incentive to respond in the way that one actually feels. In this paper, we develop an *indirect* method for eliciting political attitudes, based on *revealed* preference. We call this method an *offer experiment*. Not only are subjects in our study faced with a financial cost to express their political attitudes, but they also are unaware of the fact that their attitudes are being elicited when they act to reveal their preferences. We use this method to study anti-American attitudes in Pakistan, focusing on the responsiveness of political expression to price and to social visibility.

To implement our methodology, we conducted an experiment in Pakistan in July, 2013, with 1,152 participants.[4] During each experimental session, groups of Pakistani men, aged between

[1] Theoretical work on beliefs, attitudes, and identity includes Alesina and Angeletos (2005), Akerlof and Kranton (2000), Bénabou and Tirole (2006), Piketty (1995); empirical work includes Alesina and Fuchs-Schündeln (2007),Giuliano and Spilimbergo (Forthcoming), and Luttmer (2001) on preferences for redistribution, Guiso et al. (2009), Nunn and Wantchekon (2011) on trust, and Alesina and Ferrara (2002), Di Tella et al. (2007) on beliefs related to the workings of capitalist society. Recent work on ideological expression among economists includes Ponticelli and Voth (2011), who study the impact of governments' austerity policies on political unrest and Campante and Chor (2012), who present evidence that human capital and economic conditions interact to shape political behavior.

[2] Recent work eliciting potentially stigmatized attitudes includes Diaz-Cayeros et al. (2011), Coffman et al. (2013), Blair et al. (2013a), and Blair et al. (2013b). We compare our method of preference elicitation to other methods, including methods used to reduce concerns about revealing stigmatized attitudes, in section 4.3, below.

[3] Zizzo (2010) reviews the problem of experimenter demand effects as they relate to economic experiments. Crowne and Marlowe (1964) discuss the implications for survey research and Mayo (1933) provides the classical example of subjects changing their behavior merely because they are being observed (Hawthorne effects) based on experiments in the Western Electric factory at Hawthorne, Illinois. A recent reevaluation of the Hawthorne study is presented in Levitt and List (2011).

[4] All survey personnel in the field were Pakistani, and no mention was made of the involvement of American faculty in designing and analyzing survey responses.

18 and 35, were brought into a room where they were asked to complete a standard, "Big Five" personality survey. The intervention of interest occurred *after* subjects had completed the survey, unbeknownst to them. In return for completing the survey, study participants could elect to receive a "bonus" payment (above a show-up fee they had received upon arrival). Receiving the bonus payment required checking a box in a form that indicated (from the subject's perspective): "I gratefully thank the [funding agency] for its generosity and I accept the bonus payment offer." Rejecting the payment required checking a box in the same form that indicated (again, from the subject's perspective): "I choose not to accept the bonus payment offer." The experiment randomly varied three separate components of the form, at the individual level, in a $2 \times 2 \times 2$ design:

The identity of the funding agency: The funding agency was either the U.S. government or the Lahore University of Management Sciences (LUMS), a leading Pakistani university.[5]

The amount of money offered: Subjects were either offered a bonus payment of 100 Pakistani Rupees (Rs.) or of 500 Rs.; both payments represented a sizable fraction of a day's wage.[6]

The expectation of privacy: Respondents were led to believe that their decisions of whether to accept the payment would be either "public" or "private" with respect to to the other subjects in the room. In the public condition, subjects were told: "If you choose to accept the bonus payment, in order to receive this additional payment, you will be asked to turn the letter in to the survey coordinator in the front of the room, so other participants will see you turn in the letter." In the private condition, subjects were told, "If you choose to accept the bonus payment, in order to receive this additional payment, **your decision will be completely private**; you will simply replace the letter in envelope 2 and submit it with your other survey materials at the end of the study, so no other participants will know your choice."[7]

Subjects' willingness to reject payment in order to avoid expressing gratitude to the U.S. gov-

[5]Funds for bonus payments in fact came from the (public, so government-funded) University of California or from LUMS.

[6]Irfan (2008) finds that in 2003–2004, the average monthly wage among Pakistani men was 4,278 Rs., or around 200 Rs. per day. Today, the daily wage for a manual worker is roughly 400–500 Rs.

[7]In fact, all subjects would turn in their materials in exactly the same way: all subjects turned in their envelopes in the front of the room, and were seen doing so by other participants (as emphasized in the public condition). But, no subject's decision regarding the bonus payment was ever observed by any other participant, because all survey materials were submitted inside subjects' envelopes. The goal of the intervention was to manipulate subjects' expectations, without telling them anything that was factually incorrect in order to minimize the use of deception in the study.

ernment is our measure of expressions of anti-American attitudes that are held strongly enough that subjects are willing to forgo payments of a particular size. To place this decision within a simple economic framework, we consider political expression to be a function of three different components. First, political expression can be explicitly aimed at changing the world—individuals derive utility from changing (expected) outcomes for themselves, for their children, or for others whom they care about.[8] Second, because many political acts occur publicly, social influence may shape individuals' choices of political expression—this may be due to a desire to conform (Bernheim, 1994), to a desire to send a signal to a particular group, or because of the utility derived from social activity.[9] Third, individuals may engage in costly political actions for reasons of *ideology*—they would express their views, even at some cost, even in the absence of social influence, and even in the absence of any potential impact on the world around them.[10]

In our experiment, the first, "consequential" determinant of political expression is shut down, since accepting or rejecting the money offer is not likely to have any real-world impact. We use experimental variation in an individual's private financial cost associated with rejecting the U.S. government money offer, and the social visibility of that rejection decision, to estimate, in monetary terms, the importance of the second and the third determinants of political expression in our setting: social influence and an individual's (anti-American) ideology. Of course, subjects may wish to reject payment for reasons other than anti-Americanism, for example, because they do not want to feel indebted to another party. We thus compare subjects' rates of rejecting money from the U.S. government to rates of rejecting money from LUMS in order to "difference out" a propensity to reject bonus payments from a relatively neutral funder.[11]

It is important to highlight several virtues of our method of eliciting subjects' ideology. First, we elicit individuals' ideological views in a setting in which subjects are *unaware* of the elicitation.

[8] This is the case in rational voting models (Downs, 1957, Ledyard, 1984, Palfrey and Rosenthal, 1983, and Palfrey and Rosenthal, 1985), and warm glow models (Andreoni, 1990).

[9] This is true even of the (often) private act of voting (DellaVigna et al., 2013, Gerber et al., 2008, Gerber et al., 2013).

[10] See for instance, the literatures on expressive voting (Riker and Ordeshook, 1968, Tullock, 1971, Brennan and Buchanan, 1984, Brennan and Lomasky, 1993, Scheussler, 2000, Feddersen and Sandroni, 2006, Feddersen et al., 2009, and Kamenica and Brad, Forthcoming), and more generally on the economics of identity (Akerlof and Kranton, 2000).

[11] We discuss other possible confounding factors leading to the rejection of the bonus payment in Section 4.2, below.

Not only was no subject aware of the purpose of the study, but also, the action through which individuals' preferences were revealed appeared, from the subjects' perspective, simply to be part of the process of receiving payment for completing the survey. Because the choice of whether to accept the bonus payment does not appear to be of scientific interest to the researcher, we are able to observe subjects' (relatively) natural behavior, reducing concerns about experimenter demand effects or Hawthorne effects (though these concerns are not completely eliminated, as subjects' choices are still "ideological" and are still made in an artificial setting). Second, we create a setting in which a meaningful financial cost, the magnitude of which is experimentally varied across individuals, is imposed on an individual's *private* political expression. This provides a revealed preference measure of subjects' ideology in the absence of consequential or social reasons for expressing one's ideology. The experimental variation in the financial cost of expressing an anti-American attitude also allows us to *price* individuals' willingness to express their views. Third, by experimentally varying expectations of anonymity, we can manipulate the anticipated social costs of expressing one's ideology, allowing us to study how social context affects political expression.

We find that when individuals express their ideology *privately* a significant minority—around one quarter of subjects—are willing to forgo 100 Rs. to avoid taking an action that would undermine their ideology: checking a box and thus thanking the U.S. government for its generosity.[12] We also find that social context significantly affects individuals' *public* expression of their ideology: when subjects believe that their decision to accept the payment will be observed by the other study participants, significantly *fewer* individuals reject the bonus payment—the rejection rate falls by nearly 10 percentage points.[13] Next, we find that individuals' willingness to check the box thanking the U.S. government is responsive to the size of the payment. While 25% of subjects are willing to forgo a 100 Rs. payment rather than check the box indicating gratitude toward the U.S., only around 10% of subjects are willing to forgo a 500 Rs. payment (this difference is highly statistically

[12] In a sense, individuals' expression of their ideology functions much like an element of their identity (Akerlof and Kranton, 2000); individuals are willing to pay a private financial cost rather than undertaking action that undermines their ideology (identity).

[13] In our analysis below, we present results comparing rejection rates for the U.S. government vs. LUMS as the funding agency. The results are very similar to the raw rejection rates presented here. By differencing out LUMS rejection rates across conditions we account for rejection for reasons other than anti-Americanism and for other sources of private/public differences in rejection rates.

significant). Exploiting the experimental variation in prices, we are able to estimate that the cost of publicly rejecting payment is equivalent to nearly 260 Rs.

Survey evidence (discussed in further detail below) supports our interpretation of rejection of payment from the U.S. government as an expression of anti-American ideology. We find, first, that individuals who rejected the bonus payment from the U.S. government report significantly more negative views of the U.S. government, and of aid provided by the U.S. government, in response to anonymous direct survey questions that followed our main intervention. Importantly, individuals who rejected the U.S. payment offer are *no more likely* to report negative views of Japan's government or of aid from Japan, a relatively neutral foreign country. Survey evidence, too, is consistent with our findings of "moderating" effects of public expression: individuals who reject the bonus payment from the U.S. government view the other experimental subjects—correctly—as less "extremist" than themselves.[14] Furthermore, the moderating effects of public expression do not appear to result from our construction of artificial social contexts: moderation effects are strongest among subjects who report knowing most of the other participants in their session, suggesting that the effects of public expression arise from *naturally occurring* social ties.

Below, we compare our approach to other methods of eliciting sensitive or stigmatized attitudes and behaviors. A large literature in sociology, statistics, and political science describes experimental survey techniques used to address biases that can arise when respondents prefer not to confide their true views to the interviewer.[15] Our methodology offers two advantages over these other approaches. First, experimental survey techniques require a large sample in order to estimate a quantity of interest (say the share of illegal drug users) *for a population.* They cannot provide reliable information for a specific individual. This severely limits their usefulness in measuring the impacts of experimental interventions on individual attitudes. Second, while these other

[14]While this moderating effect of the majority may be specific to our study, the finding that private ideological preferences and public expression can differ has implications for understanding ideology, and its expression in different social contexts. Our findings also suggest that even subjects with relatively "extreme" views can moderate the expression of their attitudes due to social pressure.

[15]Warner (1965) introduced the "randomized response technique", Raghavarao and Federer (1979) formalized the "list experiment" (also called the "unmatched count" and the "item count technique"), and Sniderman and Piazza (1993) provide, to our knowledge, the first example of an endorsement experiment. Recent papers in political science include Bullock et al. (2011a); Fair et al. (2012); Blair et al. (2013a). We discuss experimental survey techniques in further detail in Section 4.3, below.

methods should reduce social desirability bias, they still require respondents to volunteer information that may be socially stigmatized, and respondents have no incentive to truthfully reveal their attitudes—beyond a desire to honestly respond to the surveyor—even if given sufficient "cover" for the expression of stigmatized attitudes.

In addition to our contributions to academic literatures on political expression and on preference elicitation methodology, our findings have important practical implications. They contribute to a growing body of empirical evidence on, and economic analysis of, social, political, and economic outcomes in Central Asia, an area of geopolitical importance.[16] Our results indicate that there is a significant minority of literate young men who are willing to pay a sizable financial cost solely to express their ideological views. Furthermore, they suggest that individuals' political expression in private may significantly differ from—and be much more extreme than—views expressed publicly. This suggests that bringing extremist groups into the light of day, rather than forcing members to interact in the shadows, could affect political rhetoric, and perhaps policy positions as well.[17]

We next describe the design and implementation of our experiment in Section 2. We then present our results in Section 3, and discuss them in Section 4. We offer concluding thoughts in Section 5.

2 Experimental Design and Implementation

Our experiment was implemented in two stages: first, a set of pilot studies that served as a "proof of concept" that our design could be implemented safely and successfully; then, the main study.

2.1 Piloting

We developed our protocol in a series of pilots. First, in November 2012, we ran a small pilot and focus group discussion with 20 undergraduate students at the Lahore University of Management Sciences (LUMS). Next, before running the full experiment, we ran a larger pilot study in the field

[16] Beath et al. (2012) study the impact of U.S. government assistance on Afghans' views on security and on the Afghan government, NGO's and foreign military forces. See Gentzkow and Shapiro (2004) for an overview of anti-Americanism in the Muslim world.

[17] Of course, one must keep in mind the caveat that the external validity of our findings may be limited; we discuss this in detail below.

with 143 subjects. The exercise comprised 6 separate sessions, with approximately 24 subjects per session. 71 subjects participated on June 24th, 2013, in Islamabad and 72 subjects participated on June 25th, 2013, in Peshawar. Anticipating the necessity of having Pakistanis conduct the main experiment, we used the larger pilot to train our lab coordinators, allowing us to avoid the direct involvement of any foreigners in the implementation of the main experiment.[18]

Data from the pilot allowed us to refine our experimental design and to establish that we could carry out the activity safely with minimal risk to enumerators or participants. We committed in advance to using data from the pilot studies only for these purposes, and do not include them in our main analysis.[19]

2.2 Timeline and Site Selection

We implemented our experiment simultaneously in three cities, Peshawar, Islamabad, and Dera Ghazi Khan, between July 7th and July 16th, 2013. We selected these dates so that half of our sessions would be completed prior to Ramadan and half would be completed during Ramadan, which began on July 11, 2013. It is important to emphasize that all of the research staff who participated in the implementation of the main study were Pakistanis from the cities where we conducted the experiment.

An important objective of our project is to measure the degree of anti-Americanism among populations directly affected by the war on terror—this is where anti-American views are likely to be of greatest importance. To access these populations, we ran our experiment in areas either directly affected by the United States-led invasion of Afghanistan (Peshawar) or in cities that have substantial numbers of refugees from conflict-affected areas (Islamabad and Dera Ghazi Khan).[20]

Peshawar and Islamabad have large Pashtun populations and Dera Ghazi Khan has a large Balochi population, which make them especially interesting locations for the study of anti-American attitudes. Pashtuns are an ethnic majority in Southern and Eastern Afghanistan and in Northern in

[18] Our concern was that elicitation anti-American attitudes by a team including Americans would compromise the validity of our findings.

[19] Results, available from the authors upon request, were qualitatively similar.

[20] Peshawar lies between Kabul, Afghanistan, and Islamabad on the Khyber pass and is the capital of Khyber Pakthunhwa Province (formerly Northwestern Frontier Province). Dera Ghazi Khan and Islamabad both lie close to the provincial border of Khyber Pakthunhwa and have large migrant populations.

Western Pakistan. Both the Afghan and the Pakistani Taliban draw their support primarily from Pashtuns in this region and the vast majority of the fighting related to the U.S.-led invasion of Afghanistan has happened in predominately Pashtun areas. At the time of the study, Balochistan was home to a very active secessionist movement, and the capital, Quetta, is home to the Quetta Shura which is the primary faction of the Afghan Taliban. In scouting locations for our initial pilot, we determined that direct implementation of the experiment either in rural Khyber Pakhtunhwa or in the Federally Administered Tribal Areas (FATA) involved too much risk to respondents and to enumerators, so we opted to work in large urban areas with large migrant populations, which are generally safer.

2.3 Subject Recruitment and Screening

We contracted with local survey firms to recruit men aged between 18 and 35 from neighborhoods with large migrant populations in Islamabad and Peshawar. In both cities, we asked the recruiters to target migrants from the Federally Administered Tribal Areas (FATA), Khyber Pakthunhwa (KP), and Balochistan.[21] In Dera Ghazi Khan, we first selected a *tehsil* randomly, then selected a union council randomly, and then used a simple right-hand sampling rule to contact potential participants. We ran 22 sessions in Peshawar, 10 sessions in Islamabad, and 16 sessions in Dera Ghazi Khan (Appendix Figure A.1 presents a map of the laboratory locations).

Upon contacting a potential subject, recruiters asked him to read aloud a short script in order to verify literacy, and an additional literacy test of comparable difficulty was administered when a subject reached the study site. Potential subjects who failed either test where not allowed to participate. Subject literacy was crucial for our experimental design, as the entire study required subjects to comprehend printed text. Both literacy test scripts are reproduced in the Appendix.[22]

[21] While we did not record the birth place of subjects to preserve anonymity, in these cities our recruiters drew subjects from neighborhoods primarily populated by migrants from the Swat and Malakand agencies (agencies are administrative units in FATA). Both of these agencies, located in FATA, have seen substantial levels of insurgent conflict in recent years.

[22] Appendix Figure A.2 provides Urdu translations of the two literacy screening tasks.

2.4 Enrollment

After subjects arrived at the study site, they were directed to a waiting room, provided with an informed consent form to read, and asked to wait until they were called to participate. We relied on *verbal* informed consent to assure subjects that personally-identifiable information on their participation and choices was not being collected. The study coordinator called subjects to enroll one at a time; subjects then received a chit with a randomly assigned subject number, between 1 and 24, from a research assistant.[23] After receiving their number, subjects then went to the enrollment desk outside of the laboratory (Appendix Figure A.3 provides a picture of the enrollment desk). At the desk, subjects read the second literacy script aloud, and received a payment envelope with their subject number printed on it.[24] After completing the enrollment procedure, a research assistant led subjects into the laboratory and seated them at the individual lab station corresponding to their subject number.

Lab stations consisted of a chair with a clipboard; laboratory materials were placed on the chairs, which were positioned approximately four feet apart to prevent subjects from observing each other's choices (Appendix Figure A.5 provides a picture of the experiment site in Islamabad and Appendix Figure A.6 provides a picture of the experiment site in Peshawar). We randomly assigned survey versions to lab station numbers using a simple computer program (Appendix Figure A.4 provides the mapping between survey versions and lab stations). All sessions involved exactly 24 subjects, resulting in a total of 1,152 Pakistani men participating in the main study. After a session, research assistants ensured that subjects exited the building; they were bussed off site immediately and were not allowed to interact with other subjects waiting to participate in the study.

[23] Individual stations were ordered sequentially by subject number inside the lab. Subject numbers were provided in random order to reduce the chance that subjects would be acquainted with the person sitting next to them—a concern if acquainted subjects entered the study site together, and station assignments were made in a non-random order. In practice, a research assistant handed each subject a chit, numbered from 1 to 24, from a shuffled deck. The number on the chit became a subject's participant identification number.

[24] Only one potential subject passed the first reading comprehension test but failed the second; this subject was replaced from the pool of recruits.

2.5 Experiment

At the beginning of a session, the lab director read a set of instructions aloud. After explaining the laboratory protocol, the instructor took the subjects through three specific example questions. Each subject had a printed version of these three questions.[25] After completing the instructions, the lab director fielded questions. The director then indicated that no questions would be answered during the experiment, allowing subjects one final opportunity to ask questions before the experiment commenced.[26] It is important to emphasize that no details were provided by the lab director regarding the payment process; research assistants were told to reveal no more than that payment for completing the study would occur at the end of the session. To increase subjects' confidence that they would be paid, subjects were provided their show-up fee of 300 Rupees when they began the first activity in the study.

The experiment involved four separate activities, each of which required completing a form contained in a separate envelope, numbered in order. These materials are reproduced completely in Appendix A1. Upon the completion of an activity, subjects were instructed to close their envelope and place it below their chair before proceeding. Furthermore, they were told not to return to previously completed activities, and that subjects who did not comply would be asked to leave. The primary purpose of strictly disallowing participants from returning to previous activities was to ensure that they could not change their responses in the revealed preference activity (activity 2) after completing the stated preference activity (activity 4).

When all subjects were had completed the four activities, the lab director and research assistant collected all laboratory materials except for subjects' chits and payment envelopes, which subjects had received upon enrollment. The envelopes (on which were written subjects' participant identification numbers) were taken into a separate room with the laboratory materials for the calculation of payments for each subject. Payments were placed in envelopes, which were then exchanged for the chits handed out to subjects at the beginning of the session.

[25] The purpose of the three example questions was to familiarize the subjects with the kinds of multiple choice questions that they would have to answer during the survey.

[26] We disallowed questions because we did not want subjects' inquiries to contaminate the research design.

Activity 1

The experiment began as a standard personality survey which was contained in envelope 1 along with subjects' "show up" payment. In addition to a few demographic questions, participants completed a Big 5 personality assessment. The version of the Big 5 assessment used by our team was adapted to use in Pakistan and validated by psychologists at Quaid-i-Azam University.

Activity 2

After completing the survey, subjects opened the second envelope. This envelope contained a note offering an *additional* payment (above that for showing up) in return for checking a box on a letter to the funding agency. Checking the box indicated receipt of the payment and gratitude to the agency for providing funding. This activity measures whether respondents are differentially willing to forgo a payment, depending on the funder (U.S. government or the Lahore University of Management Sciences), the amount of the payment (100 Rupees or 500 Rupees), and respondents' perception of whether the payment would be public or private. Specifically, envelope 2 contained a piece of paper with the following information printed on it (italics indicate text that varied depending on the experimental condition, with slashes dividing the conditions):

"Thank you for completing the survey. In return for completing the survey, we can offer you a bonus payment. Funding for the bonus payment comes from {*Lahore University of Management Sciences / the U.S. government*}. We can pay you {*100 Rupees / 500 Rupees*} for completing the survey, but in order to receive the bonus payment you are required to acknowledge receipt of the funds provided by {*Lahore University of Management Sciences / the U.S. government*} and thank the funder. If you choose not to accept the payment, you will forgo the bonus payment of {*100 Rupees / 500 Rupees*}, but not the payment of 300 Rs. for your participation."

After this passage, in half of the forms, the language emphasized that subjects' choices would be private, while in the other half, the language implied that subjects' choices to accept the bonus payment would be observed by other subjects, as follows:

"If you choose to accept the bonus payment, in order to receive this additional payment, {*you will be asked to turn the letter in to the survey coordinator in the front of the room, so other participants will see you turn in the letter / **your decision will be completely private**; you will simply replace the letter in envelope 2 and submit it with your other survey materials at the end of the study, so no other participants will know your choice*}. Once you have made your decision on the next page, please place the letter into envelope 2, whether or not you chose to accept the bonus payment."

In addition to the sheet of paper with instructions, envelope 2 contained the bonus payment acceptance/rejection letter, with the following options (the funding agency in the letter matched the agency mentioned in the instructional form):

☐ I gratefully thank {*Lahore University of Management Sciences / the U.S. government*} for its generosity and I accept the bonus payment offer.

☐ I choose not to accept the bonus payment offer.

It is worth noting that in practice, no subject's choice of whether to accept the bonus payment was actually public.[27] All participants turned their acceptance/rejection letter in to the survey coordinator at the front of the room, having replaced their letter into envelope 2, and submitting it with the other survey materials (note that we did not actually provide false information about what would be required of participants, as the language in both "public" and "private" conditions was literally true). The language in the "public" treatment arm was designed to suggest (without lying to subjects) that the decision to accept the bonus payment would not be private, but subjects in the "public" condition may have expected their decision to be private because they knew that the letter would be enclosed in an envelope. Because we can only imperfectly manipulate expectations of privacy, we view this exercise as providing a lower bound estimate on the effect of making the decision to accept the bonus payment public.

[27] We opted not to have any decisions made in public to ensure the safety of participants.

Activity 3

In activity 3, participants filled out a self response survey that began by asking subjects to guess how many of the other participants where willing to accept the bonus payment. This question was incentivized: subjects were informed that the three individuals who guessed closest to the actual number would receive an additional 300 Rupees. Next, the survey collected information on the number of other participants the respondent knew.

We then ran a "list experiment," a method used to measure attitudes toward sensitive topics, for example, policy positions on sensitive issues. List experiments provide individual respondents with some degree of plausible deniability ("cover") for their expression of an unpopular, embarrassing, or stigmatized view, and thus increase the likelihood that such expression will occur (though truthful expression is not incentivized).

The list experiment works as follows: first, respondents are (randomly) assigned into a control group and one or more treatment groups. Subjects in all conditions are asked to indicate the *number* of policy positions they support from a list of positions on several issues. Support for any particular policy position is never indicated, only the total number of positions articulated on the list that a subject supports. In the control condition, the list includes a set of contentious, but *not* stigmatized, policy positions. In the treatment condition, the list includes the contentious policy positions from the control list, but also adds the policy position of interest, which *is* stigmatized. The degree of support for the stigmatized position *at the population level* is determined by comparing the average number of issues supported in the treatment and control conditions.

In our study, we randomly assigned our subjects to a control group or to one of two treatment groups, with each group containing 384 subjects. In the control condition, we asked respondents:

The following are four policies some government officials express support for. Please report HOW MANY of the four <u>you</u> support. You do not need to indicate which ones you support, just how many.

- Providing the poor with free electricity generators

- Establishing an independent state in Kashmir that is not part of India and not part of Pakistan
- Ensuring that civilians (President or Prime Minister) control the military
- Reducing the number of people eligible for the Benazir Income Support Program, but increasing payments to those eligible.[28]

In the treatment conditions, subjects were asked a question that is identical other than the inclusion of an additional stigmatized item. In the first treatment condition, we added the policy position:

- refusing humanitarian aid from the U.S. government.

In the second treatment group, we added the position:

- supporting the activities of Pakistan Tehreek-e-Insaf (PTI).[29]

Activity 4

Envelope 4 contained another survey, which asked subjects direct questions to elicit their stated preference support for: (i) aid provided by the Japanese government to Pakistan; (ii) the Japanese government overall; (iii) aid provided by the United States; and (iv) the United States government overall. We also asked a question regarding willingness to take risk using a simple Likert scale approach; we asked about subjects' political awareness; and, about their support for Japan and the U.S. *relative* to other subjects in the room.

Payments

When all subjects had completed the survey, they were asked to come, in order of their subject number, to the front of the room. They gave their payment envelope and materials packet to the session coordinator and were asked to return to their seat to await payment. After collecting all 24 packets, two research assistants went into a separate room and calculated total subject payments.

[28]The Benazir Income Support Program is a popular targeted unconditional cash transfer program.
[29]PTI is the most anti-American of the major parties in Pakistan.

The payments were sealed in an envelope, with the cash payments wrapped in a thick debriefing handout so that subjects could not tell how much each had been paid. This was important to ensure that subjects could not be identified as having taken the U.S. government funding offer based on the thickness of the payment envelope.

Subjects were then called to the front of the room, were paid by providing their chit with the subject number on it in exchange for the payment, and were sent out of the lab into a waiting bus—there were no opportunities for subjects who had completed the study to communicate with subjects who had not yet participated. As soon as all subjects were paid and had exited, the subsequent session began immediately.

3 Empirical Analysis

This section presents our core empirical results. We first present the experimental subject's decision viewed through the framework of a simple utility expression; this will help structure and clarify our empirical analysis of the experiment. Second, we study individuals' private ideological expression. Third, we explore the role of social pressure by examining differences in rejection rates between subjects in the private and public conditions. Finally, we study the sensitivity of private ideological expression to the size of the payment offer. We then use the experimental variation in the financial cost of political expression and in the perception of privacy to estimate the cost, in monetary terms, of expressing anti-American attitudes in public.

3.1 A Simple Framework

Suppose that individual i derives utility from expressing attitude j through three channels. First, expressing attitude j may provide an individual with utility for *instrumental* reasons; that is, because expression changes the world (for individual i or for others) in ways that bring individual i utility. Second, individual i might derive utility for *intrinsic* reasons, directly from the act of expressing attitude j. Finally, expression might provide utility for *social* reasons when it is observed by others; individual i may derive additional utility or disutility from the public expression

of attitude j, compared to its private expression (because public expression allows an individual to send a signal to others, because group expression may result in a different experience, etc.). These components of the utility function of individual i can be expressed as follows:

$$\begin{aligned} u_i = & \alpha \times \Pr(\textit{express } j \textit{ consequential}) \times \mathbb{1}[\textit{express } j] \\ & + \beta \times \mathbb{1}[\textit{express } j] \\ & + \gamma \times \mathbb{1}[\textit{express } j] \times \mathbb{1}[\textit{public expression}] \\ & + \varepsilon_i \end{aligned} \tag{1}$$

where $\Pr(\textit{express } j \textit{ consequential})$ is the probability that expressing j changes the world in a way that brings utility to individual i, and ε_i is an individual-specific preference parameter.

In our setting, the attitude j of interest is anti-Americanism; individual i will choose to express attitude j (by rejecting the bonus payment) if the utility derived from expressing the attitude exceeds the cost of expression, c. We provide a context in which $\Pr(\textit{express } j \textit{ consequential}) \approx 0$: ticking the box to reject the bonus payment was likely to have been viewed by subjects as having negligible real world consequences that might affect utility for *instrumental* reasons. In addition, the mere act of ticking the box imposed essentially zero cost, making c simply the forgone bonus payment.

We experimentally vary c and turn on and off the public expression indicator function, $\mathbb{1}[\textit{public expression}]$. To study intrinsic motivation for political expression, for each experimental financial cost $c \in \{100Rs., 500Rs.\}$, we estimate the fraction of individuals i such that $\beta + \varepsilon_i > c$. To determine how public expression differs from private, we estimate the fraction of individuals such that $\beta + \gamma + \varepsilon_i > c$.

3.2 Sample Characteristics and Balance Across Conditions

Table 1 presents the characteristics of our experimental sample. One can see that all of our participants were men, which was by design. In addition, participants were, on average, young and

relatively well-educated. The latter is again by design, as literacy was required to implement our study. Around one half of the subjects were engaged in some economic activity at the time of the study. Around two-thirds of subjects were Pashtun, 10 percent Punjabi, and another 10 percent Baluchi. Table 2 displays the sample sizes in each treatment cell and Table 3 compares the characteristics of subjects across experimental conditions. We find that respondent characteristics, including demographics, education levels, and Big 5 personality traits are balanced across conditions.

3.3 Measuring Private Attitudes

We begin by considering rejection rates among subjects offered the low payment option (100 Rupees) in the "private" condition. Subjects in this group will provide us with an indication of whether individuals are willing to pay a significant cost simply to privately express their ideological position: viewed through the framework outlined in Section 3.1, we have tried to eliminate any instrumentally- or socially-derived utility from rejecting payment. Table 4, row 1, column 1, presents the raw rejection rate for the U.S. government offer among subjects offered 100 Rupee bonus payments in the private condition: in this group, 25.2% of subjects chose to *reject* the offer.

Of course, it might be the case that some of these subjects would have rejected money from any funding agency, not only from the U.S. government. In order to account for this possibility, we present in Table 4, row 1, column 2, the rejection rate among subjects offered 100 Rupees from LUMS, in the private condition: in this group, only 8.4% of individuals chose to reject the payment. Individuals who rejected the LUMS offer represent an estimate of the proportion of individuals who rejected the U.S. government offer not because of anti-Americanism, but because they would reject a bonus payment even from a relatively neutral entity. We can subtract this fraction from the overall rate of rejection of the U.S. government offer to find that the proportion of subjects who reject a U.S. government offer, but would have accepted an offer from LUMS is 16.8% (see Table 4, row 1, column 3; the p-value from a test that this difference equals zero is <0.001).[30]

[30]Note that 16.8% may represent a lower bound for the fraction of people who are anti-American, as some of those who rejected the LUMS offer might be anti-American as well. Indeed, LUMS has an international orientation, and is patterned after universities in the United States. Given this, subjects may associate LUMS with the United States,

In Appendix Table A.1, we report regressions reflecting the difference in rejection rates for U.S. government and LUMS offers controlling for session fixed effects and a set of subject covariates. The estimated treatment effects and standard errors remain virtually unchanged, suggesting the implementation of the laboratory protocol across rounds and experimental sites was successful.[31]

3.4 The Role of Social Context

We next investigate a second dimension of randomization incorporated into our design: variation in subjects' perceptions of whether their choices to accept the bonus payment offer would be publicly observed by other participants at the end of the session. We present the effects of (anticipated) public expression on subjects' willingness to reject the bonus payment in the second row of Table 4. Column 1 presents the difference between the public and private conditions in rejection rates of the 100 Rs. offer from the U.S. government. The proportion of subjects who rejected the U.S. government offer in the public conditions was 8.2 percentage points *lower* than in the private condition (the p-value from a test that rejection rates in the public and private conditions are the same is 0.093).

Subjects' decisions of whether to accept the bonus payment offer might differ between the public and private conditions even in the absence of any effect of social pressure on the expression of political ideology, *per se*. For example, one may be less likely to reject the bonus payment offer in the public condition out of concern that one will appear ungrateful or foolish. One might also be less likely to reject payment in public if one worried about family members' displeasure if they discovered that a financial payment was forgone. On the other hand, one may be more likely to reject the payment offer in the public condition if one is concerned about being publicly identified as having just received a large payment. These effects of the public condition in our study would exist irrespective of the identity of the funding agency.

biasing our results toward finding no anti-Americanism when we compare U.S. government offer rejection rates to LUMS offer rejection rates. Of course, if subjects would have rejected payment from any *government*, then this would also result in higher rejection rates for the U.S. government offer than the LUMS offer. We explore whether attitudes towards foreign governments in general might drive our results, along with other alternative hypotheses, in Section 4.2, below.

[31] Implementation is of special concern in our study: as outsiders (including the co-author from Eastern Pakistan), our presence could have affected subjects' behavior, preventing us from directly monitoring the experiment.

We study these effects of the public condition on rejection rates by considering the same public versus private difference in rejection rates for subjects who received a 100 Rs. offer *from LUMS*. In Table 4, row 2, column 2, one can see that the difference between the public and private rejection rates of the 100 Rs. LUMS offer was very small—an increase in rejection of 2.7 percentage points—and not statistically significant (p=0.439). The *higher* rejection rates in public for the LUMS offer suggests that the *lower* public rejection rates we found for the U.S. offer were not a result of a general reduction in rejection rates when choices are made publicly.

In Table 4, row 2, column 3, we show the public versus private difference in rejection rates of the U.S. offer, after differencing out the rejection rates for the LUMS offer. We now estimate a 10.9 percentage point lower rejection rate for the U.S. government offer in the public condition (p=0.069). These results indicate that social context affects the expression of ideological positions. Moreover, the direction of the effect of anticipated social pressure, in the context of our study, is toward *moderation*: fewer subjects rejected the U.S. offer when they believed their choice would be made public to other participants.[32]

A central consideration when evaluating our estimated effects of social pressure is whether these effects are consistent with subjects' beliefs about the views of the other subjects around them. For example, if anti-American subjects moderated the public expression of their political views out of a desire to conform to the (perceived) majority attitude, then it should be the case that these subjects correctly perceived that they were in the minority.

To measure subjects' beliefs about other subjects' willingness to accept the bonus payment, we included additional components in the study *after* the decision of whether to accept the bonus payment offer. The third envelope in the experiment (immediately after the bonus payment offer) included an incentivized elicitation of individuals' beliefs about the number of other participants in the room (from 0 to 23) who accepted the bonus payment offer (all sessions included exactly 24 participants).[33] Among respondents who received the 100 Rs. offer from the U.S. government, in the private condition (whose responses are closest to estimates of other subjects' actual ideological

[32]In Appendix Table A.2, we present regression results estimating the effect of the public condition on rejection rates controlling for session fixed effects and a set of of subject covariates, and continue to find a statistically significant reduction in the rejection of the U.S. government offer in the public condition.

[33]An additional bonus payment was promised to the three individuals with guesses closest to the actual number.

positions), the average (median) guess was that 80% (95.6%) of other participants in the room accepted the payment offer. Thus, subjects correctly believed that the majority of others would choose *in private* to accept the money from the U.S. government. Importantly, respondents who rejected the U.S. government offer correctly viewed themselves as belonging to a minority: among respondents who rejected the 100 Rs. U.S. government offer in private, the average guess was that 62.3% (median 87%) of other respondents accepted the offer.

We also directly elicited subjects' views of the individuals around them: in the fourth and last envelope, subjects were directly asked to compare their views to those of others in the room regarding: (i) the U.S. government; and (ii) accepting U.S. aid. Among those who accepted the "100 Rs.-private-U.S. donor" payment, 17% of subjects viewed themselves as strictly more anti-U.S. government than the other respondents in the room; among those who rejected that offer, that number rose to 57.2%.[34] Moreover, only 14.3% of respondents rejecting the offer report viewing others in the room as strictly more anti-American than themselves.[35]

The results we find in our analysis of the exercises contained in envelopes 3 and 4 paint a consistent picture: rejectors of the U.S. government bonus payment offer believed that a majority of the other subjects would accept the payment, and also self-identified as belonging to an anti-American minority. Our results suggest that anti-American individuals anticipated a social cost when expressing their ideology publicly. Of course, *ex ante*, one might have hypothesized that a minority of extremists might have pressured moderate individuals to express *more* anti-American attitudes in public. While this might occur in some settings, our findings of moderating effects of public expression are certainly of interest given the theoretical ambiguity.

Finally, we consider the (non-random) variation in social context arising from respondents' familiarity with each other from previous interactions outside the study. In the third envelope, we included a question asking subjects how many people they knew in the room.[36] We find that

[34] Admittedly, one worries about this elicitation is affected by subjects' decisions regarding the bonus payment, so it is best viewed as a suggestive complement to the incentivized estimates of other subjects' behavior.

[35] When we look at views on accepting U.S. aid, the numbers are very similar: among those who accepted the offer, 18.2% view themselves as strictly more likely to refuse U.S. aid, whereas the percentage is 58.3% among those who reject the money offer (and only 16.6% of those rejecting the offer view themselves as strictly less likely to refuse U.S. aid than others in the room).

[36] Subjects were asked to pick from 5 categories: no other participant; between 1 and 6 other participants; between 7 and 12; between 13 and 18; and, between 19 and 23. This was asked just after subjects estimated the number of

58.8% of respondents reported knowing at least one other person, suggesting that although the study occurred in an artificial setting, some of the social connections in the room were natural. We find that the impact of social pressure on an individual's ideological expression varies with that individual's familiarity with others in the room: the effect of the public condition on ideological expression is larger among individuals who reported to know more participants in the session.

3.5 Sensitivity of Political Expression to Payment Size

In Section 3.3, we showed that a significant minority of individuals in our sample are willing reject an offer of 100 Rs. rather than express gratitude to the U.S. government. We view this as evidence that some respondents are willing to pay a positive financial cost to privately express their ideological position. Next, in Section 3.4, we found that this expression was shaped by the social context: a significant fraction of anti-American individuals converged in their behavior toward the moderate majority when they believed their choice would be publicly observed. We next ask: how sensitive is the expression of ideology to the financial cost of that expression?

To answer this question, we exploit the random assignment of bonus payments of 500 Rs., rather than 100 Rs., to half of the study's subjects. Table 4, row 3, column 1, reports the difference in rejection rates of the U.S. government offer when the bonus payment is 500 Rs., relative to 100 Rs., in the private condition. One sees that an increase in the offer to 500 Rs. decreased the rejection rate by 15.5 percentage points, from 25.2% to 9.7% (p=0.001). For the LUMS payment, there is only a 2.8 percentage point reduction in rejection rates comparing the (private) 100 Rs. and 500 Rs. offers (column 2). The reduction in rejection of the U.S. government offer, after subtracting rejection rates for the LUMS offer, is a significant 12.7 percentage points (p=0.0128; see Table 4, row 3, column 3).[37]

other subjects who accepted the bonus payment.

[37] In Appendix Table A.3, we present regression results for the effect of higher payments on rejection rates controlling for session fixed effects and a set of of subject covariates.

3.6 Additional Estimates

We can exploit the experimental variation in prices to estimate several additional parameters of interest. First, one might wish to estimate the financial cost equivalent to the social cost of public expression found above. To do so, we assume a functional form for the relationship between the size of the private, U.S. government bonus payment offer and the rejection rate. Then, we estimate the financial cost of rejection that would produce the rejection rate we observed above in the 100 Rs., *public* U.S. government, condition. The difference between this amount and 100Rs. is our estimate of the financial equivalent to the social cost faced by individuals offered the bonus payment from the U.S. government in the public condition.

We first assume that the relationship between rejection and the cost of rejection (i.e., the bonus payment size) is linear. In this case, we estimate that the social cost of rejecting the U.S. government offer is 211 Rs. If we instead assume that there is a logistic relationship between rejection and the size of the bonus payment, we find estimate that the social cost of rejecting the bonus payment publicly is around 180 Rs.

One might also be interested in individuals' private expression of anti-American attitudes when the cost of expression is arbitrarily low. This will allow for a more direct comparison with stated views, which come at no cost (we turn to this below). We thus predict private rejection rates of the U.S. offer at price zero, exploiting the experimental variation we observe between 100 Rs. and 500 Rs. Assuming a linear relationship between expression and cost, the private rejection rate of the U.S. offer would be 29% at price zero. Assuming a logistic functional form, the estimated rejection rate at price zero is 31%.

4 Discussion

In this section, we first present evidence that our revealed preference method of eliciting subjects' political attitudes corresponds with subjects' stated preference views. Second, we address a set of potential confounding factors and alternative interpretations of our results. Third, we compare our technique to other approaches to the measurement of stigmatized attitudes. Finally, we discuss the

external validity of our findings.

4.1 Validation Using Stated Preferences

As mentioned above, following subjects' decisions of whether to accept the bonus payment, they were asked to answer a number of direct survey questions, which included elicitations of their stated views on: (i) aid provided by the U.S. government, (ii) the U.S. government overall, (iii) aid provided by the Japanese government, and (iv) the Japanese government overall (Japan was picked as a plausibly neutral, but still rich and foreign, funding nation). For each of these questions, respondents were asked to express their views by picking a number from 1 to 5, with 1 corresponding to very negative views, and 5 to very positive views. We convert responses into a "negative views" dummy variable equal to 1 if subjects responses were either "1" or "2". Subjects were also asked to compare their views on the four aforementioned topics *relative* to the other participants in the room, also on a scale from 1 to 5; we converted these into an analogous "negative relative views" dummy variable. Responses to the direct questions on stated views about U.S. aid and the U.S. government suggest anti-American sentiment among a significant minority of the sample: 26.4% of respondents report having a negative view of U.S. aid (i.e., picked either 1 or 2 as their answer to corresponding question) and 29.8% of respondents have a negative view of the U.S. government overall.

We can use the answers to these direct survey questions to "validate" our revealed preference ideology measure, with the typical caveats regarding the interpretation of responses to direct survey questions. To do so, we examine the correlation between individuals' decisions to reject the U.S. government payment in the 100 Rs., private, condition, and their responses to the direct survey questions. We first regress the "negative views on U.S. aid" dummy variable on a dummy variable indicating whether subjects rejected the bonus payment. In Table 5, column 1, one can see that individuals who rejected the U.S. payment were 68.3 percentage points more likely to express negative views on U.S. aid in response to a direct question (the coefficient is significant at the 1% level). In Table 5, column 2, we present results from an analogous regression, but using negative views of the U.S. government as the outcome. Again, one sees economically and statistically significantly

higher rates of expressing negative views among subjects who rejected the U.S. government bonus payment.

In Table 5, columns 3 and 4, we present results analogous to columns 1 and 2, but based on questions asking subjects about their views relative to others in the room. One can see that subjects who rejected the U.S. bonus payment offer view themselves as *relatively* more anti-American. Finally, as a falsification exercise, in Table 5, columns 5–8, we repeated the regressions from columns 1–4, but study subjects' views on aid from Japan, and on Japan more generally. One can see that rejection of the U.S. payment is associated with very small, statistically insignificant differences in views on Japan.

It is important to note that we view the correlation between revealed and stated preferences as merely suggestive: in addition to standard concerns regarding stated preference responses, one might be worried that the stated preferences we examine here were affected by subjects' previous receipt of a payment offer from the U.S. government.Indeed, we find evidence that participants report being more pro-American after receiving the U.S. offer, and more so when the offer is of 500 Rs. as opposed to 100 Rs. These findings suggest that subjects might be "reciprocating", that is, stating a more positive view of the U.S. after receiving a money offer from the U.S. government.[38] More generally, this finding provides direct evidence that receiving an aid payment from the U.S. will increase the beneficiaries' stated support of the U.S. It is plausible that this change merely reflects experimenter demand effects, though it could also reflect a genuine change in opinions.

4.2 Evaluating Alternative Mechanisms

Distaste for accepting money offer. Subjects might have privately rejected the U.S. offer not because they disliked the U.S., but rather because they felt uncomfortable accepting an additional monetary payment. As discussed above, we address this possibility by differencing out the private rejection rates from the LUMS offer. This procedure likely generates a lower bound for our estimates since it assumes that no subject who rejected the LUMS offer would have rejected the U.S. offer

[38]Note that the correlation between receiving a U.S. offer and stating positive views about the U.S. would only be problematic for our validation if it interacted with whether or not the participant accepted the U.S. offer. Unfortunately, we do not have data to address this potential concern.

for being anti-American. Moreover, we also difference out the LUMS public rejection rates from the U.S. public rejection rates to deal with factors other than anti-American sentiment that might specifically affect the public decision (e.g., embarrassment to publicly accept money). As discussed above, our results are robust to subtracting LUMS rejection rates.

Does rejecting the U.S. offer imply anti-American views? One might believe that individuals who dislike the U.S. would actually prefer to take its money—this might be for consequentialist reasons (less money in U.S. government hands can reduce any perceived harm the U.S. might cause) or because it feels good to benefit at the expense of an adversary. Similarly, one might wonder if pro-U.S. individuals might want to leave more money in U.S. government hands to support perceived good that might be done. We believe this is unlikely: not only would the consequences of taking the U.S. government's money be trivial, but we also find that individuals who reject the U.S. bonus payment offer are strikingly more anti-American in their stated views.

Rejecting payment might express anti-foreign or anti-government views. The U.S. government offer differed from the LUMS offer both in the foreignness of the entity offering the payment, and in the fact that the entity was a government. One might be concerned that the difference in rejection rates between the U.S. payment and the LUMS payment conditions arose from anti-foreign or anti-government views, rather than specifically anti-American view. However, in examining the correlation between rejection of the U.S. offer and stated preferences, one sees that while individuals who rejected the offer expressed very anti-American views, their views were *not* differentially negative regarding the Japanese government. This suggests that rejection was specifically an expression of Anti-American views.

Subjects might feel "insulted" by the offer. Another possible concern with our results is that subjects may have felt insulted by the bonus payment amounts, thinking that they were too small, especially the 100 Rs. payment offer from the U.S. government. Moreover, the correlation between rejection rates of the U.S. offer and stated views on the U.S. are consistent with subjects feeling insulted, since the stated opinions were elicited after the payment intervention. However, we do not believe that subjects "feeling insulted" is likely to drive our findings. First, the show-up fee to participate in the experiment was 300 Rs.: participants were willing to take a bus and participate

in the survey for that amount. It thus seems unlikely that they found 100 Rs. unreasonably small as a payment for completing the personality survey. Second, as a benchmark for the payment offer, as discussed before, consider that even the 100 Rs. amount was at least a quarter of a day's wage, which also suggests that the bonus payment amounts were not small. In fact, we believe that it would have been unnatural to offer bonus payment amounts any larger than those we offered, given that the survey subjects completed was not particularly long or challenging.

Time cost to read instructions and check the box. One might wonder if our results might arise from subjects not being willing to make the effort to read the the instructions or to check the box indicating that they accepted the bonus payment offer. We do not believe this is likely for several reasons: first, the payment amounts were sufficiently large that one would expect subjects to find it worthwhile to make the effort. Second, rejecting the money offer also required checking a box. A small number of subjects (less than 3% of our sample) did not check any box and were not paid any bonus payment; our results are robust to dropping these observations (or assigning them to either the acceptance or rejection categories, the latter being our baseline specification). Importantly, not checking any box does not correlate with receiving a U.S. offer, suggesting that a lack of effort or understanding was not specific to the U.S. offer conditions (the p-value of the correlation is 0.6). Finally, if subjects did not read the instructions and thus rejected the bonus payment offer without any ideological component of this choice, one would expect similar rejection rates between the U.S. government and LUMS. One also would not expect rejection to be correlated with stated preferences. Our pattern of results suggests that subjects' choices to reject payment were a reflection of their attitudes.

Were subjects conscious of the elicitation of their attitudes? Our study aims to improve upon asking direct survey questions by eliciting subjects' political attitudes without their being aware of the elicitation. However, the choice that subjects made regarding accepting the bonus payment intentionally, *crucially*, had an ideological component. Thus, it is important to consider whether this ideological component led subjects to think consciously about whether the experimenter was engaged in measuring their ideological positions.

We believe that this is unlikely to be a major concern: subjects had just completed a survey

that was entirely non-ideological. Having completed the survey, subjects simply made a natural choice about payment. Making the acceptance or rejection of payment (and acknowledgement of receipt of funds) as natural and not-explicitly-ideological as possible was a priority in the design of the study. It is thus highly unlikely that subjects would think about this decision as they would a direct survey question that explicitly was ideological, and was explicitly asked for the purposes of being recorded as part of a research design. Because the payment decision appeared to be merely ancillary to the main study, subjects would have been less conscious of either public stigma or private embarrassment that might arise when providing responses to direct questions.

Were subjects' choices distorted by fear or risk aversion? Related to concerns about subjects being conscious of the measurement of their attitudes, a natural concern about our design is that subjects' choices may have been distorted by fear or risk aversion, perhaps arising simply from mentioning the U.S. government. Our motivation in developing a method for eliciting subjects' attitudes without their being aware of it was that we did not want subjects' choices to be affected by concerns about what the experimenter (or funders) wished to hear, or what the experimenter (or funder) recorded. We thus specifically designed our study to minimize subjects' concerns about the anonymity of their choices (with the exception of the "public expression" condition). For example, no signature or identifying information was ever collected from subjects; individual choices therefore could not be matched to the subjects who made them (this is true even at the payment stage).

Still, one might be concerned that subjects would choose whether to accept the bonus payment while thinking about the signal that accepting or rejecting payment would send. In particular, one might worry that rejection of the U.S. government offer was artificially low because risk averse individuals accepted payment *despite* their ideologies, conforming to perceived pressure from the experimenter. As a check of whether subjects' choices were likely to have been affected by concerns about sanctions for expressing particular attitudes, we can examine whether patterns of behavior were similar for subjects with differing levels of risk aversion. We can also examine whether mentioning the U.S. government threatened subjects and led them to change their responses in our survey questions following the decision of whether to accept the bonus payment.

In envelope 4, we measured subjects' risk preferences using a five-point Likert scale. We create

a "risk averse" dummy that is equal to one if individuals reported to be either "very unwilling" or "unwilling" to take risks (around 56% of the sample are thus categorized as risk averse). First, we note that there is no effect of receiving a U.S. offer on reported risk preferences (results available upon request). Second, individuals who are risk averse according to this definition do not show significantly different rates of rejection of the U.S. offer in our baseline condition (100 Rs. payment, private condition) or in the pooled sample; rejection rates are actually (statistically insignificantly) *higher* among the more risk averse.

It is also important to note that we find no effect of receiving a U.S. bonus payment offer (as opposed to a LUMS offer) on response rates to subsequent sensitive questions, such as stated views on the U.S. government and U.S. humanitarian aid. Response rates were always very high and virtually identical for individuals receiving the U.S. and LUMS offers.[39] Since individuals could have skipped questions at any time, it is reassuring to observe that receiving a U.S. offer had no effect on subsequent response rates. These results suggest that the choice of whether to reject the payment was not shaped by fear or risk aversion, and that mentioning the U.S. government did not significantly distort subjects' behavior.

4.3 Comparison with Other Methods of Eliciting Attitudes

As discussed above, we estimate that if there were zero financial cost of expressing one's ideology, the private rejection rates of the U.S. offer would be around 30% in our sample. We can compare this number to other estimates of the share of individuals with anti-American views in our sample, coming from direct survey questions, and from list experiments, both of which elicit attitudes at zero financial cost (with varying degrees of "cover" for stigmatized views). It is important to emphasize that in our study, these elicitations were conducted after our intervention of interest. Because simply *receiving* the U.S. government bonus payment offer may have directly affected attitudes toward the U.S. (whether or not offers were accepted), in our analysis of responses to the direct survey questions and to the list experiments we focus on individuals who received the LUMS bonus

[39] For example, the response rate for the question on stated views about the U.S. government was 98.1% (99%) after receiving a U.S. (LUMS) offer; the response rate for the question on stated views about US aid was 97.4% (98.6%) after receiving a U.S. (LUMS) offer. In both cases, the difference is not statistically significant.

payment offer (results from analyses of other samples are qualitatively similar, and available from the authors upon request).

Direct elicitation of stated views. First, we consider stated attitudes in response to direct survey questions. As described above, we can construct a "negative views" dummy variable based on responses to questions about views on U.S. aid and on the U.S. government more generally. We find that the share of participants who received the LUMS offer who report having a negative view on U.S. aid is 33.3%; the share of those reporting a negative view of the U.S. government in general is 36.3%. Both of these estimates are quite similar to estimates derived from our revealed preference methodology.

These results suggest that direct survey questions can do a good job in eliciting subjects' political attitudes. However, it is important to emphasize that this is true in the absence of prior interventions (i.e., examining individuals who received the LUMS offer). Typically, when researchers study the impact of individual-level interventions on attitudes, the interventions of interest can be directly linked to experimenter demand effects in the preference elicitation stage of the study. Indeed, in our setting we observe that individuals who received an offer from the U.S. government express more pro-American views when asked directly, especially after receiving the 500 Rs. offer. Our approach, by making individuals' preference-revealing actions occur in a state of unawareness, avoids this problem. It is also important to note that significant efforts were made in our study to ensure subjects' privacy and anonymity. This may not always be possible (for example, if surveys are conducted in person).

Elicitation of views using list experiments. Second, we can estimate the fraction of experimental subjects who are anti-American using the list experiments we conducted. Among subjects receiving the LUMS offer, we estimate that 22% of subjects would indicate support for, "refusing humanitarian aid from the U.S. government," and 55.1% would indicate support for, "supporting the activities of Pakistan Tehreek-e-Insaf (PTI)," the most anti-American of the major parties in Pakistan. Thus, using our revealed preference methodology, we estimate a share of individuals expressing anti-American attitudes at zero financial cost that lies between the estimates coming from the list experiments.

List experiments can certainly be effective in eliciting possibly stigmatized attitudes. However, list experiments suffer from some important drawbacks: most importantly, list experiments are not informative about any individual's attitudes, but only about attitudes in a group. List experiments also are not incentivized, and they still require that respondents volunteer (with noise) some sensitive information.[40]

Our method of eliciting attitudes has several advantages when compared with existing methods widely used in the social sciences, such as direct survey questions and list experiments. However, our method has some disadvantages, too. Most obviously, significant "machinery" is involved, which will not be appropriate for measuring many attitudes or political preferences of interest. Depending on funding availability and willingness to use deception, the approach may be very difficult to apply for certain political entities of interest (for example, if one wished to study attitudes toward the American Nazi Party). The privacy of actions in our study was crucial, and required individuals to be literate to complete the study; this limits our method to use on literate populations. Finally, one could not measure multiple attitudes for the same individual using this method.

4.4 External Validity

Our sample consists of literate, young men, and is therefore not representative of Pakistan's population as a whole. However, our sample includes a broad representation from across Pakistani ethnic groups, drawn from three distinct study sites, and we find the same patterns of results across all main ethnic groups represented and across all three sites (results available upon request). Therefore, although our sample is not representative, our results may broadly hold across a range of literate, young men.

Perhaps our most surprising finding is that moderation of expression can be achieved via social pressure. While public expression may not always be more moderate than private expression, it is worth emphasizing that this result seems to arise in our context from *natural* social ties: social pressure effects toward moderation are particularly *strong* in our study for the subjects who reported

[40]Many of the drawbacks of list experiments also apply to the use of randomized response techniques (see, for example (Warner, 1965)) and endorsement experiments (Blair et al., 2013a; Bullock et al., 2011b).

knowing most other participants in their session. This suggests that our moderation effects were most likely not a consequence of social networks artificially created in the lab.

We also emphasize that the attitude expressed in our setting may have different characteristics from other ideologies. It may be that public expression in some settings leads to *greater* extremism. It may also be that attitude towards the U.S. is more or less price elastic than other ideologies. However, our method of eliciting subjects' ideology is not restricted to our setting and could be used to study political attitudes and the expression of those attitudes in a broad range of other contexts.

5 Conclusion

Understanding the expression of anti-American ideology is a challenging task, not least because the measurement of a potentially sensitive attitude is fraught with difficulties. We have presented a novel methodology for eliciting individuals' ideological positions that offers advantages over both direct survey questions and survey experimental techniques used to encourage truthful revelation. Relative to direct survey questions, our method elicits subjects' ideological views without directly asking about them, and without subjects' being aware of it—this reduces concerns about untruthful response, experimenter demand, or Hawthorne effects. While other methods, for example randomized response techniques, list experiments, and endorsement experiments, can provide estimates of sensitive attitudes for a *population*, they cannot do so for an individual. This can limit their use as an outcome in experiments aimed at measuring the effects of interventions which target individuals. In contrast, our approach is incentive-compatible in the sense that respondents must forgo a payment to express their political position, making the expression of ideology in our study a *revealed preference*.

Using our method, we show that a significant minority of Pakistani men in our sample are willing to forgo a sizable payment simply to avoid checking a box that affirms gratitude toward the U.S. government for providing the funds. This behavior is private, and is unlikely to be of "real world" consequence, suggesting that rejection of payment is an expression of anti-American

ideology. Experimental variation in the financial cost of expressing anti-American attitudes allows us to estimate individuals' willingness to pay to express their views: we find that expression is, indeed, sensitive to price. In addition, experimental variation in perceptions of privacy points to an important social component to ideological expression, with public expression in our setting appearing much more moderate than private expression.

These results can assist our understanding of an important ideological current in a pivotal part of the world. Our results suggest that even individuals with extreme views might suppress those views in some social contexts, a finding that may have important policy implications. More generally, understanding where political and social values and beliefs come from, and how and why they are expressed, is of interest to a broad range of social scientists. Our findings suggest that ideological expression is partly a function of the private economic costs and benefits of that expression, as well as of the social environment in which it occurs.

References

Akerlof, George A. and Rachel E. Kranton, "Economics And Identity," *Quarterly Journal of Economics*, August 2000, *115* (3), 715–743.

Alesina, Alberto and Eliana La Ferrara, "Who trusts others?," *Journal of Public Economics*, 2002, *85*, 207–234.

_ **and George-Marios Angeletos**, "Fairness and Redistribution," *American Economic Review*, 2005, *95* (4), 960–980.

_ **and Nicola Fuchs-Schündeln**, "Goodbye Lenin (or Not?): The Effect of Communism on People's Preferences," *American Economic Review*, 2007, *97* (4), 1507–1528.

Andreoni, James, "Impure Altruism and Donations to Public Goods: A Theory of Warm-Glow," *Economic Journal*, 1990, *100*, 464–477.

Beath, Andrew, Fotini Christia, and Ruben Enikolopov, "Winning Hearts and Minds through Development: Evidence from a Field Experiment in Afghanistan," 2012. MIT Political Science Deparment Working Paper No. 2011-14.

Bénabou, Roland and Jean Tirole, "Belief in a Just World and Redistributive Politics," *Quarterly Journal of Economics*, 2006, *121* (2), 699–746.

Bernheim, B. Douglas, "A Theory of Conformity," *Journal of Political Economy*, October 1994, *102* (5), 841–877.

Blair, Graeme, C. Christine Fair, Neil Malhotra, and Jacob N. Shapiro, "Poverty and Support for Militant Politics: Evidence from Pakistan," *American Journal of Political Science*, January 2013, *57* (1), 30–48.

_ **, Jason Lyall, and Kosuke Imai**, "Explaining Support for Combatants during Wartime: A Survey Experiment in Afghanistan"," *American Political Science Review*, 2013, *107* (4), 679–705.

Brennan, Geoffrey and James Buchanan, "Voter choice: evaluating political alternatives.," *American Behavioral Scientist*, 1984, *28*, 181–201.

_ **and Loren Lomasky**, *Democracy and Decision: The Pure Theory of Electoral Preference*, New York: Cambridge University Press, 1993.

Bullock, Will, Kosuke Imai, and Jacob N. Shapiro, "Statistical Analysis of Endorsement Experiments: Measuring Support for Militant Groups in Pakistan," *Political Analysis*, 2011, *19*, 363–384.

_ **,** _ **, and** _ , "Statistical Analysis of Endorsement Experiments: Measuring Support for Militant Groups in Pakistan," *Political Analysis*, 2011, *19* (363-384).

Campante, Filipe R. and Davin Chor, "Schooling, Political Participation, and the Economy," *Review of Economics and Statistics*, November 2012, *94* (4), 841–859.

Coffman, Lucas C., Katherina B. Coofman, and Keith M. Marzilli-Ericson, "The Size of the LGBT Population and the Magnitude of Anti-Gay Sentiment are Substantially Underestimated," Technical Report, NBER Working Paper 19508 2013.

Crowne, Douglas P. and David Marlowe, *The Approval Motive: Studies in Evaluative Dependence*, New york, John Wiley and Sons, 1964.

DellaVigna, Stefano, John A. List, Ulrike Malmendier, and Gautam Rao, "Voting to Tell Others," 2013.

Di Tella, Rafael, Sebastian F. Galiani, and Ernesto S. Schargrodsky, "The Formation of Beliefs: Evidence from the Allocation of Land Titles to Squatters," *Quarterly Journal of Economics*, 2007, *122* (1), 209–241.

Diaz-Cayeros, Alberto, Beatriz Magaloni, Aila Matanock, and Vidal Romero, ""Living in Fear: Mapping the Social Embeddedness of Drug Gangs and Violence in Mexico"," 2011.

Downs, Anthony, *An Economic Theory of Democracy*, New York: Addison Wesley, 1957.

Fair, C. Christine, Neil Malhotra, and Jacob N. Shapiro, "Faith or Doctrine? Religion and Support for Political Violence in Pakistan," *Public Opinion Quarterly*, Winter 2012, *76* (4), 688–720.

Feddersen, Timothy and Alvaro Sandroni, "A Theory of Participation in Elections," *American Economic Review*, 2006, *96*, 1271–1282.

_ , Sean Gailmard, and Alvaro Sandroni, "Moral Bias in Large Elections: Theory and Experimental Evidence," *American Political Science Review*, May 2009, *103* (2), 175–192.

Gentzkow, Matthew A. and Jesse M. Shapiro, "Media, Education, and Anti-Americanism in the Muslim World," *Journal of Economic Perspectives*, Summer 2004, *18* (3), 117–133.

Gerber, Alan S., Donald P. Green, and Christopher W. Larimer, "Social Pressure and Voter Turnout: Evidence from a Large-scale Field Experiment," *American Political Science Review*, February 2008, *102* (1), 33–48.

_ , Gregory A. Huber, David Doherty, and Conor M. Dowling, "Social Judgments and Political Participation: Estimating the Consequences of Social Rewards and Sanctions for Voting," 2013.

Giuliano, Paola and Antonio Spilimbergo, "Growing Up in a Recession," *Review of Economic Studies*, Forthcoming.

Guiso, Luigi, Paola Sapienza, and Luigi Zingales, "Cultural Biases in Economic Exchange?," *Quarterly Journal of Economics*, 2009, *124* (3), 1095–1131.

Irfan, Mohammad, "Pakistan's Wage Structure," Technical Report, Pakistan Institute of Development Economics Quaid-e-Azam University Campus December 2008.

Kamenica, Emir and Louisa Egan Brad, "Voters, dictators, and peons: expressive voting and pivotality," *Public Choice*, Forthcoming.

Ledyard, John O., "The pure theory of two-candidate elections," *Public Choice*, January 1984, *44*, 7–41.

Levitt, Steven D. and John A. List, "Was There Really a Hawthorne Effect at the Hawthorne Plant? An Analysis of the Original Illumination Experiments," *American Economic Journal: Applied Economics*, January 2011, *3* (1), 224–238.

Luttmer, Erzo F. P., "Group Loyalty and the Taste for Redistribution," *Journal of Political Economy*, 2001, *109* (3), 500–528.

Mayo, Elton, *The Human Problems of an Industrial Civilization*, Harvard University Press, 1933.

Nunn, Nathan and Leonard Wantchekon, "The Slave Trade and the Origins of Mistrust in Africa," *American Economic Review*, 2011, *101* (7), 3221–52.

Palfrey, Thomas R. and Howard Rosenthal, "A Strategic Calculus of Voting," *Public Choice*, 1983, *41* (1), 7–53.

_ **and** _ , "Voter Participation and Strategic Uncertainty," *American Political Science Review*, March 1985, *79*, 67–78.

Piketty, Thomas, "Social mobility and redistributive politics," *Quarterly Journal of Economics*, 1995, *110* (3), 551–584.

Ponticelli, Jacopo and Hans-Joachim Voth, "Austerity and Anarchy: Budget Cuts and Social Unrest in Europe, 1919-2008," 2011. University of Chicago Working Paper.

Raghavarao, Damaraju and Walter T. Federer, "Block Total Response as an Alternative to the Randomized Response Method in Surveys," *Journal of the Royal Statistical Society*, 1979, *Series B (Statistical Methodology) 41* (1), 40–45.

Riker, William and Peter Ordeshook, "A Theory of the Calculus of Voting," *American Political Science Review*, 1968, *62*, 25–43.

Scheussler, Alex, *A Logic of Expressive Choice*, Princeton, NJ: Princeton University Press, 2000.

Sniderman, Paul M. and Thomas Piazza, *The Scar of Race*, Harvard University Press, 1993.

Tullock, Gordon, "The Charity of the Uncharitable," *Western Economic Journal*, 1971, *9*, 379–392.

Warner, Stanley L., "Randomized Response: A Survey Technique for Eliminating Evasive Answer Bias," *Journal of the American Statistical Association*, 1965, *60* (309), 63–69.

Zizzo, Daniel John, "Experimental Demand Effects in Economic Experiments," *Experimental Economics*, 2010, *13* (75-98).

Figures and Tables

Table 1: **Characteristics of the Experimental Sample**

Variable:	Mean (1)	Standard Deviation (2)	p10 (3)	p90 (4)	N (5)
Currently engaged in economic activity?	0.504	0.500	0	1	1,121
Age	23.7	5.0	19	32	1,072
Gender (male=1)	1	0	1	1	1,152
Single	0.692	0.462	0	1	1,093
Years of education	11.9	2.8	9	16	1,085
Ethnic groups					
Punjabi	0.101	0.301	0	1	1,063
Pashtun	0.641	0.480	0	1	1,063
Baluchi	0.091	0.288	0	0	1,063
Urdu	0.005	0.068	0	0	1,063
Seraiki	0.007	0.081	0	0	1,063
Religion					
Shia	0.053	0.224	0	0	1,057
Sunni	0.853	0.354	0	1	1,057
Muslim (unspecified)	0.076	0.265	0	0	1,057
Big 5					
Openness to experience	3.020	0.424	2.500	3.583	1,147
Conscientiousness	4.110	0.563	3.417	4.750	1,146
Extraversion	3.590	0.512	2.917	4.250	1,147
Agreeableness	3.805	0.566	3.083	4.500	1,146
Neuroticism	2.901	0.530	2.200	3.583	1,148
Visibly religious	0.239	0.426	0	1	1,152

Notes: this table presents the mean, standard error, 10th percentile, 90th percentile, and number of observations for each variable.

Table 2: **Sample Size by Treatment Cells**

Donor	Payment	Private or Public condition?		Total
		Private	Public	
LUMS	Low	144	144	288
	High	144	144	288
	Total	288	288	576
U.S. Government	Low	144	144	288
	High	144	144	288
	Total	288	288	576
Total	Low	288	288	576
	High	288	288	576
	Total	576	576	1152

Notes: this table presents the number of observations in each treatment cell.

Table 3: **Covariates Balance**

	LUMS				U.S. government				p-value
	Low payment		High payment		Low payment		High payment		
	Pri	Pub	Pri	Pub	Pri	Pub	Pri	Pub	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Currently engaged	0.468	0.489	0.518	0.489	0.500	0.529	0.521	0.518	0.97
in economic activity?	(0.042)	(0.042)	(0.043)	(0.043)	(0.042)	(0.042)	(0.042)	(0.042)	
Age	23.2	23.6	23.6	24.2	23.3	23.8	24.2	23.6	0.63
	(0.4)	(0.5)	(0.4)	(0.4)	(0.4)	(0.5)	(0.5)	(0.4)	
Gender (male=1)	1	1	1	1	1	1	1	1	-
	-	-	-	-	-	-	-	-	
Single	0.696	0.691	0.691	0.683	0.748	0.669	0.674	0.684	0.90
	(0.039)	(0.040)	(0.039)	(0.040)	(0.038)	(0.040)	(0.040)	(0.040)	
Years of education	12.1	11.9	11.8	11.7	12.1	11.5	11.7	12.0	0.55
	(0.2)	(0.3)	(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	(0.2)	
Ethnic groups									
Punjabi	0.090	0.098	0.096	0.104	0.101	0.093	0.119	0.105	1.00
	(0.025)	(0.026)	(0.025)	(0.027)	(0.027)	(0.026)	(0.028)	(0.027)	
Pashtun	0.634	0.632	0.640	0.634	0.643	0.667	0.622	0.654	1.00
	(0.042)	(0.042)	(0.041)	(0.042)	(0.042)	(0.042)	(0.042)	(0.041)	
Baluchi	0.082	0.120	0.103	0.067	0.093	0.093	0.096	0.075	0.88
	(0.024)	(0.028)	(0.026)	(0.022)	(0.026)	(0.026)	(0.025)	(0.023)	
Urdu	0.022	0.008	0.000	0.000	0.000	0.000	0.007	0.000	0.17
	(0.013)	(0.008)	(0.000)	(0.000)	(0.000)	(0.000)	(0.007)	(0.000)	
Seraiki	0.015	0.000	0.000	0.000	0.008	0.000	0.015	0.015	0.13
	(0.011)	(0.000)	(0.000)	(0.000)	(0.008)	(0.000)	(0.010)	(0.011)	
Religion									
Shia	0.037	0.045	0.083	0.060	0.040	0.076	0.045	0.038	0.66
	(0.016)	(0.018)	(0.024)	(0.021)	(0.017)	(0.023)	(0.018)	(0.017)	
Sunni	0.844	0.841	0.812	0.851	0.849	0.855	0.895	0.880	0.67
	(0.031)	(0.032)	(0.034)	(0.031)	(0.032)	(0.031)	(0.027)	(0.028)	
Muslim (unspecified)	0.096	0.091	0.090	0.075	0.095	0.061	0.038	0.060	0.37
	(0.025)	(0.025)	(0.025)	(0.023)	(0.026)	(0.021)	(0.017)	(0.021)	
Big 5									
Openness to experience	3.062	3.072	2.998	3.014	3.021	3.015	2.990	2.985	0.56
	(0.032)	(0.039)	(0.036)	(0.035)	(0.038)	(0.036)	(0.035)	(0.032)	
Conscientiousness	4.110	4.101	4.110	4.121	4.095	4.124	4.064	4.157	0.93
	(0.047)	(0.048)	(0.044)	(0.044)	(0.058)	(0.045)	(0.043)	(0.047)	
Extraversion	3.655	3.586	3.572	3.564	3.543	3.543	3.566	3.689	0.14
	(0.044)	(0.045)	(0.038)	(0.042)	(0.049)	(0.041)	(0.040)	(0.042)	
Agreeableness	3.812	3.848	3.792	3.740	3.785	3.835	3.797	3.829	0.82
	(0.047)	(0.051)	(0.047)	(0.048)	(0.046)	(0.044)	(0.048)	(0.047)	
Neuroticism	2.902	2.919	2.952	2.869	2.898	2.911	2.880	2.876	0.89
	(0.047)	(0.041)	(0.038)	(0.046)	(0.046)	(0.040)	(0.046)	(0.049)	

Notes: this table reports the mean level of each variable, with standard errors in parentheses, for each treatment cell. For each variable, column 9 reports the p-value of a joint test that the mean levels are the same for all treatment cells.

Table 4: **Rejection Rates, Social Pressure effects, and Price Effects**

	U.S. government (1)	LUMS (2)	U.S. − LUMS (3)
Baseline	0.252***	0.084***	0.168***
(private, low payment)	[0.036]	[0.023]	[0.043]
Effects of social pressure	-0.082*	0.027	-0.109*
(public, low payment) − (baseline)	[0.048]	[0.035]	[0.060]
Effect of high payment	-0.155***	-0.028	-0.127**
(private, high payment) − (baseline)	[0.044]	[0.030]	[0.053]

Notes: the first row of column 1 presents the rejection rate for subjects who received U.S. 100 Rs. U.S. government offer in the private condition. The second row of column 1 presents the difference in rejection rates for those who received 100 Rs. offer from U.S. government in the public versus the private condition. The third row of column 1 presents the difference in rejection rates for those who received 500 Rs. versus 100 Rs. offers from the U.S. government in the private condition. Column 2 replicates column 1 for subjects who received an offer from LUMS instead of from the U.S. government. Column 3 presents the differences between columns 1 and 2. Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table 5: **Revealed and Stated Preferences**

	Negative views about U.S. aid	Negative views about U.S. government	Relatively more negative views about U.S. aid	Relatively more negative views about U.S. government	Negative views about JP aid	Negative views about JP government	Relatively more negative views about JP aid	Relatively more negative views about JP government
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Rejected	0.683***	0.586***	0.405***	0.412***	-0.023	0.069	-0.058	-0.046
	(0.090)	(0.108)	(0.118)	(0.118)	(0.118)	(0.094)	(0.100)	(0.106)
N	139	141	135	135	139	140	140	141

Notes: This table reports differences in stated preference views between subjects who rejected and those who accepted the U.S. 100 Rs. private offer. In column 1, subjects were asked about their views towards aid provided by the U.S. government to Pakistan: possible responses were "very negative", "negative", "neither negative nor positive", "positive", or "very positive". We coded a "negative views about U.S. aid" dummy variable equal to 1 for subjects who answered "very negative" or "negative". Column 2 uses a question about subjects' views towards U.S. government in general. Columns 3 and 4 are based on questions asking subjects how their views of U.S. aid and the U.S. government in general compare to those of others in the room. Columns 5 to 8 replicate columns 1 to 4 using views on Japan instead of the U.S. * significant at 10%; ** significant at 5%; *** significant at 1%.

A1 Experimental Protocols

On-site literacy screening script

Clean the chicken and then wash it. Add half a cup of water. Add cloves and garlic and cook the chicken until it is slightly tender. Blend together almonds, pistachios, fig, coconut, ginger, chick peas, poppy seeds and yogurt in a blender. Put some cooking oil in a pot and warm it. Add some onion to it and allow it to become green. Then add to it crushed spices, salt, and red chili powder and cook. Then stuff the cooked spices in the chicken's stomach. Cover the outside of the chicken with this preparation as well. Cover the baking dish with cooking oil and put the chicken in the dish. Then put this dish in an oven pre-heated to 200 degrees centigrade, and let it bake for 35 to 40 minutes. Then put some cooking oil on the chicken and bake it for another 10 minutes. When the chicken starts turning red, take it out. Your delicious, sweet chicken is ready! Serve with salads.[41] (See the Urdu version of our screening tests in Appendix Figure A.2).

Experimental Instructions

Activity/Envelope 1

Standard Big 5 survey adapted to use in Pakistan.

[41]This text was taken from a free online repository of recipes in Urdu (http://www.lawaonline.com/blog/murg-mewa-dar-recipes-pakistani-cooking-urdu-recipes/ accessed July 7, 2013

Questionnaire

[SURVEY VERSIONS *A*-*X*]

Instructions for filling out the questionnaire:

1. Read every statement carefully and encircle the response you agree with.
    a. If you completely disagree with the statement, encircle (1).
    b. If you mostly disagree with the statement, encircle (2).
    c. If you are indifferent to the statement, encircle (3).
    d. If you mostly agree with the statement, encircle (4).
    e. If you completely agree with the statement, encircle (5).
2. This test has no concept of right or wrong, nor do you have to be an expert to solve it. Respond as sincerely as possible. Write your opinion as carefully and honestly as possible. Answer every question and ensure that for every response, you have encircled the right option. During the test, if you encircle the wrong option by mistake or if you change your mind after encircling a response, do not erase it. Instead, mark the wrong response with a cross and encircle your correct one.

Statements:

1. I am not depressed 1 2 3 4 5
2. I like to be amongst lots of people 1 2 3 4 5
3. I don't like to waste time day-dreaming 1 2 3 4 5
4. I try to be polite to everyone I meet 1 2 3 4 5
5. I keep all my things clean and tidy 1 2 3 4 5
6. I often feel inferior to other people 1 2 3 4 5
7. I laugh easily 1 2 3 4 5
8. When I find out the right way to do something, I stick with it 1 2 3 4 5
9. I often get into quarrels with my family members and coworkers 1 2 3 4 5
10. I pace my work such that I am able to complete everything on time 1 2 3 4 5
11. Sometimes when I am under intense psychological pressure, I feel as if I am about to fall to pieces 1 2 3 4 5
12. I don't consider myself to be a jolly person 1 2 3 4 5
13. Art and wonders of nature fascinate me 1 2 3 4 5
14. Some people think that I am selfish and egoistic 1 2 3 4 5
15. I am not a very organized person 1 2 3 4 5
16. I rarely feel lonely or sad 1 2 3 4 5
17. I really enjoy talking to people 1 2 3 4 5
18. I think that listening to controversial speakers can confuse students and lead them astray 1 2 3 4 5
19. I prefer cooperation over conflict 1 2 3 4 5
20. I try to complete all tasks entrusted to me according to my conscience 1 2 3 4 5
21. I often feel mentally stressed and anxious 1 2 3 4 5
22. I often long for thrilling situations 1 2 3 4 5
23. Poetry has very little or no influence on me 1 2 3 4 5
24. I am mistrustful and skeptical about the intentions of others 1 2 3 4 5

25. My objectives are very clear and I work to achieve them in a very organized way 1 2 3 4 5
26. Sometimes I feel completely worthless 1 2 3 4 5
27. I usually prefer to work alone 1 2 3 4 5
28. I often try new and exotic dishes 1 2 3 4 5
29. I believe that if you give them the chance, people will always exploit you 1 2 3 4 5
30. I waste a lot of time before starting to work 1 2 3 4 5
31. I rarely feel scared or depressed 1 2 3 4 5
32. I often feel full of energy 1 2 3 4 5
33. I don't pay much attention to the moods and feelings evoked my surroundings and circumstances 1 2 3 4 5
34. People who know me usually like me 1 2 3 4 5
35. I work very hard to achieve my goals 1 2 3 4 5
36. I often get frustrated by the way people treat me 1 2 3 4 5
37. I am a jolly and optimistic person 1 2 3 4 5
38. I believe that we should consult religious leaders for making decisions involving moral affairs 1 2 3 4 5
39. Some people think I am cold-hearted and selfish 1 2 3 4 5
40. When I start something, I don't rest until I finish it 1 2 3 4 5
41. Often when things start taking a turn for the worse, I give up and abandon my work 1 2 3 4 5
42. I am not a jolly and optimistic person 1 2 3 4 5
43. Sometimes while studying poetry or looking at masterpieces of art, I feel chills of thrill and excitement 1 2 3 4 5
44. I am strict and stubborn in my attitude 1 2 3 4 5
45. Sometimes I am not as trustworthy as I ought to be 1 2 3 4 5
46. I am rarely sad or depressed 1 2 3 4 5
47. Fast pace is a highlight of my life 1 2 3 4 5
48. I have little interest in pondering over the working of the universe or the human condition 1 2 3 4 5
49. I usually try to be concerned and care about others 1 2 3 4 5
50. I am useful person and always do my work 1 2 3 4 5
51. I often feel helpless and wish someone else would resolve my problems 1 2 3 4 5
52. I am a very active person 1 2 3 4 5
53. I have a lot of intellectual curiosity in me 1 2 3 4 5
54. If I don't like someone I let him/her know about it 1 2 3 4 5
55. I feel that I can never keep myself organized 1 2 3 4 5
56. Sometimes I want to hide myself due to shame 1 2 3 4 5
57. I would prefer to live on my own terms as opposed to being a leader for others 1 2 3 4 5
58. I often enjoy abstract ideas and theories 1 2 3 4 5
59. If need be, I am ready to use people to get my own work done 1 2 3 4 5
60. I try to do everything perfectly 1 2 3 4 5

Please give us answers to the following questions.

1.1 Are you currently engaged in any economic activity from which you earn income?
1. Yes
2. No

1.2 Apart from your main economic activity, are you engaged in any other economic activity?
1. Yes
2. No

1.3 Which of these best describes your secondary economic activity? (S.A.)
1. Employee receiving wages / salary
2. Daily paid / casual worker / in temporary employment
3. Agricultural crops or livestock related self employment
4. Other self employment
5. Other (describe _____)

1.4 Which of the following types of agricultural crop/livestock activities are you involved in? (mark all)
1. Rice
2. Wheat
3. Cotton
4. Other grains (corn, maize, etc.)
5. Tobacco
6. Other (specify: _____)

1.5 How often do you receive income from these agricultural crop/livestock self employment activities? (mark all)
1. At least weekly
2. At least every two weeks
3. At least monthly
4. Less frequently than monthly

Personal Information

1.6 What is your age and year of birth?
Years _____ Months _____ Year of Birth _____

1.7 Gender
1. Male
2. Female

1.8 Marital Status
1. Single/Never Married
2. Married
3. Widowed
4. Divorced
5. Separated

1.9 What ethnic group do you belong to ?

1. Punjabi
2. Pashtun
3. Tajik
4. Hazara
5. Baluchi
6. Other (Specify.....)

1.10 What religious group do you belong to?

1. Shia
2. Sunni
3. Christian
4. Hindu
5. Sikh
6. Other (Specify….....)

1.11 Which languages do you speak at home?

	1. Yes	2. No
a. Pashto	1	2
b. Persian/Dari	1	2
c. Balochi	1	2
d. Punjabi	1	2
e. Urdu	1	2

1.12 What is the highest level of education that you have completed? _____

1=Completed Grade 1,
2=Completed Grade 2,
3=Completed Grade 3,
4=Completed Grade 4,
5=Completed Grade 5,
6=Completed Grade 6,
7=Completed Grade 7,
8=Completed Grade 8,
9=Completed Grade 9,
10=Completed Grade 10 (Matric/ O Levels),
11=Completed Grade 11,
12=Completed Grade 12 (FSC/A Levels),
13=Completed some years at university,
15=Completed university degree,
16=Masters,
17=Technical Training,
18=Not gone to school

1.13 Then how many years of formal education have you had?

Years _____

Please place the completed survey back in envelope 1.

After that, you should close and seal envelope 1, and place it in the larger envelope.

After that, you may open envelope 2.

Activity/Envelope 2

Thank you for completing the survey. In return for completing the survey, we can offer you a bonus payment. Funding for the bonus payment comes from {*Survey versions A-L:* **Lahore University of Management Sciences**; *Survey versions M-X:* **the U.S. government**}. We can pay you {*Survey versions A, B, C, G, H, I, M, N, O, S, T, U:* **100 Rs**; *Survey versions D, E, F, J, K, L, P, Q, R, V, W, X:* **500**Rs} for completing the survey, but in order to receive the bonus payment you are required to acknowledge receipt of the funds provided by {*Survey versions A-L:* **Lahore University of Management Sciences**; *Survey versions M-X:* **the U.S. government**} and thank the funder. If you choose not to accept the payment, you will forgo the bonus payment of {*Survey versions A, B, C, G, H, I, M, N, O, S, T, U:* **100 Rs**; *Survey versions D, E, F, J, K, L, P, Q, R, V, W, X:* **500 Rs**}, but not the payment of 300 Rs for your participation.

The letter of acknowledgment and thanks can be found on the next page.

{*Survey versions G-L, S-X:* If you choose to accept the bonus payment, in order to receive this additional payment, you will be asked to turn the letter in to the survey coordinator in the front of the room, so other participants will see you turn in the letter. Once you have made your decision on the next page, please place the letter into envelope 2, whether or not you chose to accept the bonus payment.}

{*Survey versions A-F, M-R:* If you choose to accept the bonus payment, in order to receive this additional payment, **your decision will be completely private;** you will simply replace the letter in envelope 2 and submit it with your other survey materials at the end of the study, so no other participants will know your choice. Once you have made your decision on the next page, please place the letter into envelope 2, whether or not you chose to accept the bonus payment.}

After that, you should close and seal envelope 2, and place it in the larger envelope.

After that, you may open envelope 3.

Letter of acknowledgment and thanks

Letter of acknowledgment and thanks

☐ I gratefully thank Lahore University of Management Sciences for its generosity and I accept the bonus payment offer.

☐ I choose not to accept the bonus payment offer.

Envelope 3

1) [Survey versions A-X]
In the previous section, you were asked to check a box to indicate that you thanked the funder for their generosity. There are 24 people in this room. How many people in this group, excluding yourself, do you believe were willing to accept the additional payment by checking the box?

If your guess is one of the three closest to the true number (among participants in this group), you will receive an extra X rupees.

Please indicate your belief about how many checked the box here _____

2) [Survey versions A-X]
There are 24 participants in this session. Approximately, how many people in this room are you acquainted with?

1 – No one

2 - Between 1 and 6

3 - Between 7 and 12

4 – Between 13 and 18

5 - Between 19 and 23

6 – Everyone

Envelope 3

LIST EXPERIMENTS: [DO NOT TRANSLATE THIS LINE]

Control: [Survey versions A, D, G, J, M, P. S, V]
The following are four policies some government officials express support for. Please report HOW MANY of the four you support. You do not need to indicate which ones you support, just how many.

a. Providing the poor with free electricity generators

b. Establishing an independent state in Kashmir that is not part of India and not part of Pakistan

c. Ensuring that civilians (President or Prime Minister) control the military

d. Reducing number of people eligible for the Benazir Income Support Program, but increasing payments to those eligible

TOTAL THAT YOU SUPPORT (CIRCLE ONE) 0 1 2 3 4

Treatment 1: [Survey versions B, E, H, K, N, Q, T, W]
The following are five policies some government officials express support for. Please report HOW MANY of the five you support. You do not need to indicate which ones you support, just how many.

a. Providing the poor with free electricity generators

b. Establishing an independent state in Kashmir that is not part of India and not part of Pakistan

c. Ensuring that civilians (President or Prime Minister) control the military

d. Reducing number of people eligible for the Benazir Income Support Program, but increasing payments to those eligible

e. Refusing {humanitarian aid} from the US government

TOTAL THAT YOU SUPPORT (CIRCLE ONE) 0 1 2 3 4 5

Treatment 2: [Survey versions C, F, I, L, O, R, U, X]
The following are five policies some government officials express support for. Please report HOW MANY of the five you support. You do not need to indicate which ones you support, just how many.

a. Providing the poor with free electricity generators

b. Establishing an independent state in Kashmir that is not part of India and not part of Pakistan

c. Ensuring that civilians (President or Prime Minister) control the military

d. Reducing number of people eligible for the Benazir Income Support Program, but increasing payments to those eligible

e. Supporting the activities of {Pakistan Tehreek-e-Insaf (PTI)}

TOTAL THAT YOU SUPPORT (CIRCLE ONE) 0 1 2 3 4 5

Envelope 3

[Survey versions A-X]

Please place the completed survey back in envelope 3.

After that, you should close and seal envelope 3, and place it in the larger envelope.

After that, you may open envelope 4.

Activity/Envelope 4

SURVEY VERSIONS A-X

This is the final section. Please complete the questions below and then place this document back in the envelope.

1. How do you view aid provided by the Japanese government to Pakistan? Very negatively (1), very positively (5), or something in between?

   Circle one of the following: 1 2 3 4 5

2. How do you view the Japanese government overall? Very negatively (1), very positively (5), or something in between?

   Circle one of the following: 1 2 3 4 5

3. How do you view aid provided by the United States government to Pakistan? Very negatively (1), very positively (5), or something in between?

   Circle one of the following: 1 2 3 4 5

4. How do you view the United States government overall? Very negatively (1), very positively (5), or something in between?

   Circle one of the following: 1 2 3 4 5

5. How willing are you to take risks? Are you very <u>unwilling</u> to take risks (1)? Are you very <u>willing</u> to take risks (5)? Or, something in between?

   Circle one of the following: 1 2 3 4 5

6. Do you know the name of the chief minister of your province? Please write the name below:

7. How do you think your political views on Japan compare to other individuals in the room? More anti-Japanese (1), more pro-Japanese (5), or something between?

   Circle one of the following: 1 2 3 4 5

8. How do you think your political views on receiving aid from Japan differ relative to other individuals in the room? Less willing to accept aid (1), more willing to accept aid (5), or something in between?

   Circle one of the following: 1 2 3 4 5

9. How do you think your political views on the United States compare to other individuals in the room? More anti-American (1), more pro-American (5), or something between?

   Circle one of the following: 1 2 3 4 5

10. How do you think your political views on receiving aid differ from the United States relative to other individuals in the room? Less willing to accept aid (1), more willing to accept aid (5), or something in between?

    Circle one of the following: 1 2 3 4 5

11. Would your decision of whether to take the additional payment by checking the box have changed if the payment amount was increased by 100 rupees?

1 – Yes

2 – No

12. Would your decision of whether to take the additional payment by checking the box have changed if the payment amount was increased by 300 rupees?

1 – Yes

2 – No

13. Would your decision of whether to take the additional payment by checking the box have changed if the payment amount were offered by the government of Japan?

1 – Yes

2 – No

14. Would your decision of whether to take the additional payment by checking the box have changed if the payment amount were offered by the University of California (an American university unaffiliated with the government).

1 – Yes

2 – No

Please place this completed survey back in envelope 4, seal the envelope, and place envelope 4 in the large envelope. Then, raise your hand to indicate that you have completed the survey.

Appendix Figures and Tables

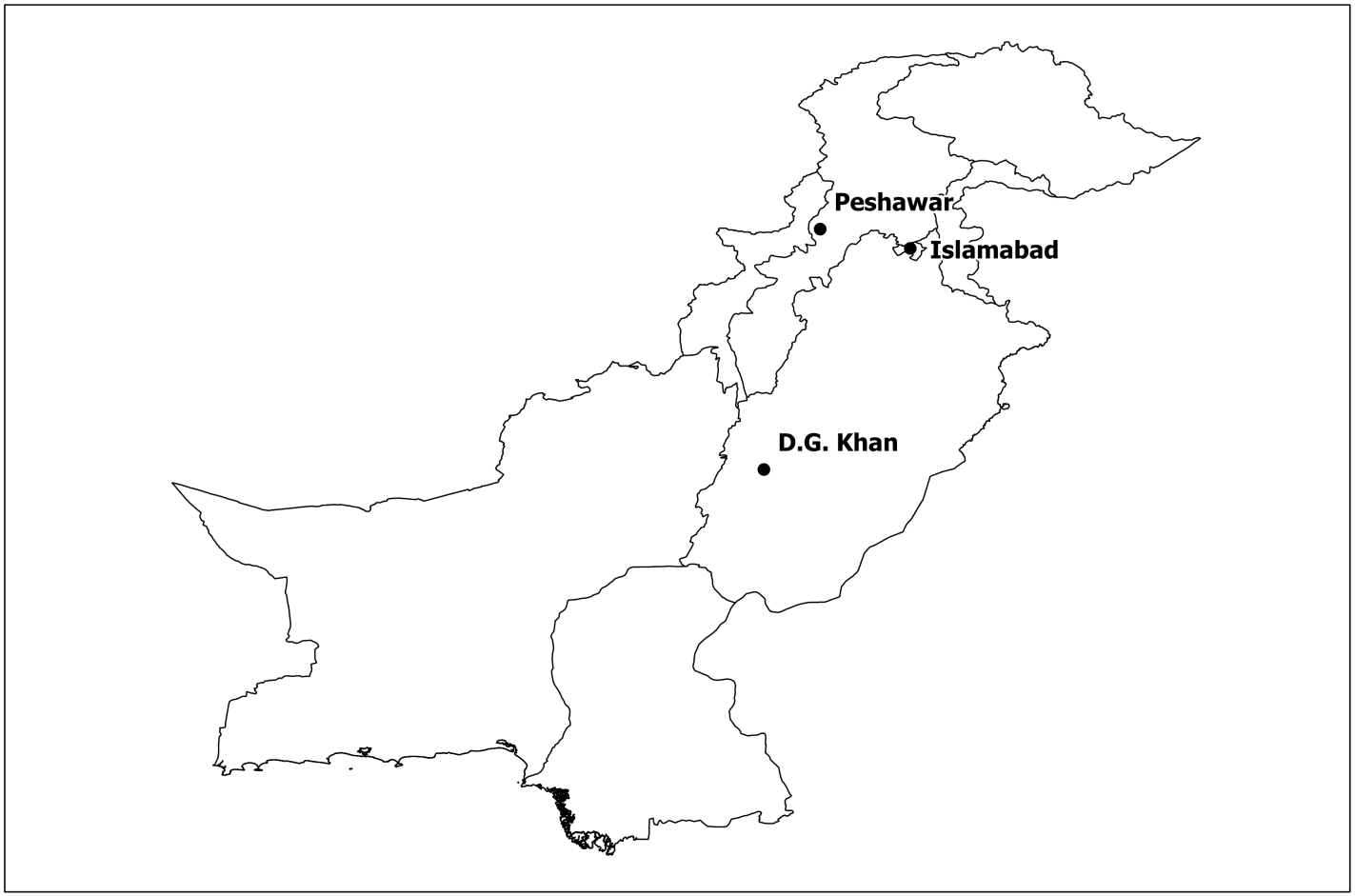
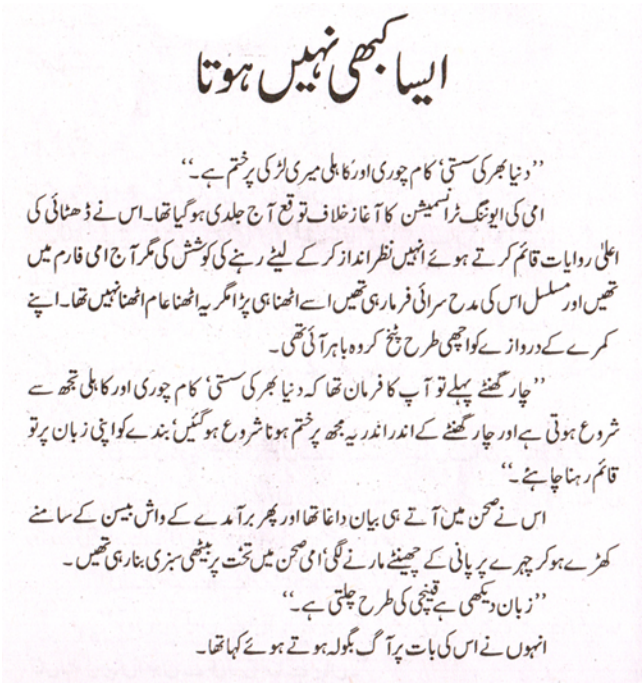


Figure A.1: Map of Laboratory Locations

Panel A: First Screening Test



ایسا کبھی نہیں ہوتا

''دنیا بھر کی سستی' کام چوری اور کاہلی میری لڑکی پر ختم ہے۔''

امی کی ایوننگ ٹرانسمیشن کا آغاز خلاف توقع آج جلدی ہو گیا تھا۔ اس نے ڈھٹائی کی اعلیٰ روایات قائم کرتے ہوئے انہیں نظر انداز کر کے لیٹے رہنے کی کوشش کی مگر آج امی فارم میں تھیں اور مسلسل اس کی مدح سرائی فرما رہی تھیں اسے اٹھنا ہی پڑا مگر یہ اٹھنا عام اٹھنا نہیں تھا۔ اپنے کمرے کے دروازے کو اچھی طرح پخ کر وہ باہر آئی تھی۔

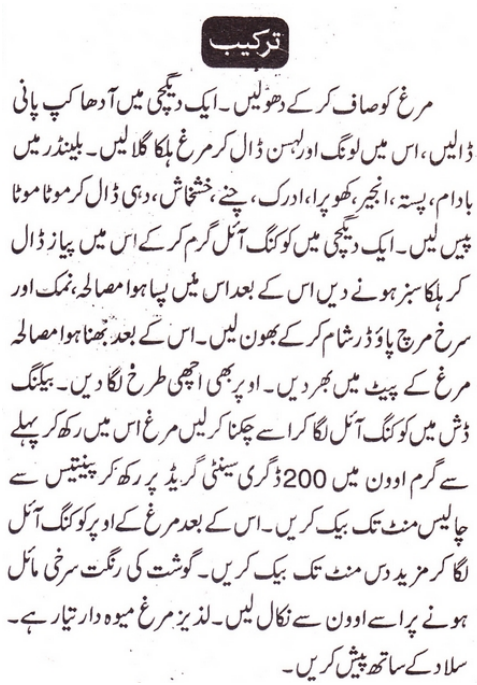
''چار گھنٹے پہلے تو آپ کا فرمان تھا کہ دنیا بھر کی سستی' کام چوری اور کاہلی تجھ سے شروع ہوتی ہے اور چار گھنٹے کے اندر اندر یہ مجھ پر ختم ہونا شروع ہو گئیں' بندے کو اپنی زبان پر تو قائم رہنا چاہئے۔''

اس نے صحن میں آتے ہی بیان داغا تھا اور پھر برآمدے کے واش بیسن کے سامنے کھڑے ہو کر چہرے پر پانی کے چھینٹے مارنے لگی' امی صحن میں تخت پر بیٹھی سبزی بنا رہی تھیں۔

''زبان دیکھی ہے قینچی کی طرح چلتی ہے۔''

انہوں نے اس کی بات پر آگ بگولہ ہوتے ہوئے کہا تھا۔

Panel B: On-site Screening Test



ترکیب

مرغ کو صاف کر کے دھو لیں۔ ایک دیگچی میں آدھا کپ پانی ڈالیں، اس میں لونگ اور لہسن ڈال کر مرغ ہلکا گلا لیں۔ بلینڈر میں بادام، پستہ، انجیر، کھوپرا، ادرک، چنے، خشخاش، دہی ڈال کر موٹا موٹا پیس لیں۔ ایک دیگچی میں کوکنگ آئل گرم کر کے اس میں پیاز ڈال کر ہلکا سبز ہونے دیں اس کے بعد اس میں پسا ہوا مصالحہ، نمک اور سرخ مرچ پاؤڈر شامل کر کے بھون لیں۔ اس کے بعد بھنا ہوا مصالحہ مرغ کے پیٹ میں بھر دیں۔ اوپر بھی اچھی طرح لگا دیں۔ بیکنگ ڈش میں کوکنگ آئل لگا کر اسے چکنا کر لیں مرغ اس میں رکھ کر پہلے سے گرم اوون میں 200 ڈگری سینٹی گریڈ پر رکھ کر پینتیس سے چالیس منٹ تک بیک کریں۔ اس کے بعد مرغ کے اوپر کوکنگ آئل لگا کر مزید دس منٹ تک بیک کریں۔ گوشت کی رنگت سرخی مائل ہونے پر اسے اوون سے نکال لیں۔ لذیز مرغ میوہ دار تیار ہے۔ سلاد کے ساتھ پیش کریں۔

Figure A.2: Urdu Versions of Screening Tests

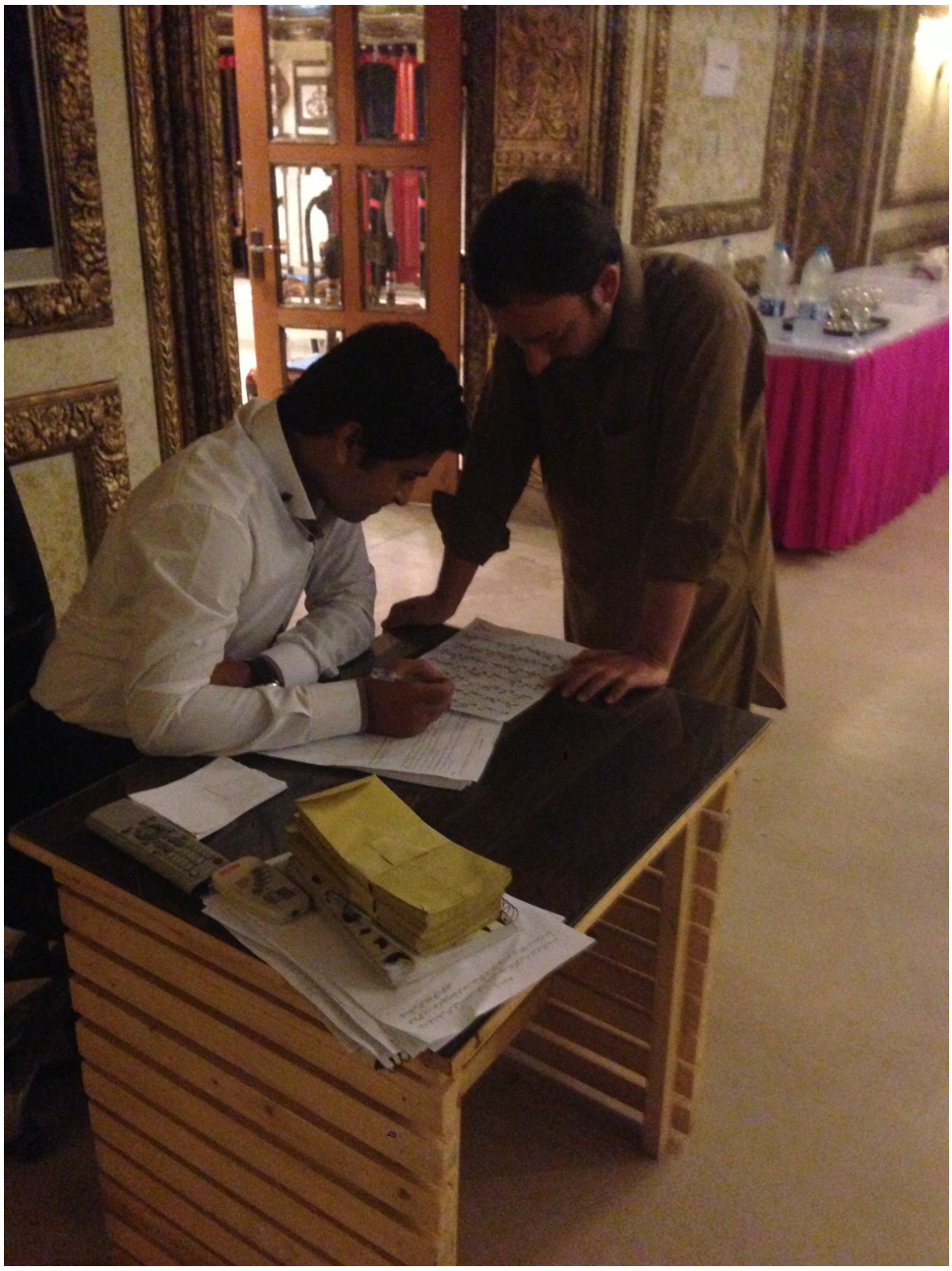


Figure A.3: Enrollment Desk Outside of the Lab in Islamabad

Laboratory Session Number	Participant Identification Number																							
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	l	k	c	v	n	o	u	s	h	w	p	b	a	i	q	m	d	f	t	e	j	g	x	r
2	w	t	q	p	x	m	j	b	s	k	n	l	v	i	d	o	e	a	h	r	g	u	c	f
3	r	w	q	n	c	t	h	i	k	a	d	g	b	o	j	x	e	l	f	v	s	p	u	m
4	k	w	g	r	c	v	u	n	x	i	p	d	t	m	b	a	l	q	s	j	e	h	o	f
5	h	c	w	s	q	d	f	r	v	m	l	u	e	a	g	x	k	t	n	i	o	j	p	b
6	v	t	n	c	q	h	o	e	p	r	j	f	w	a	l	m	s	u	b	d	i	x	g	k
7	k	g	s	i	m	c	v	h	r	p	l	x	o	b	n	j	d	w	f	u	e	q	t	a
8	w	k	d	l	h	s	f	m	g	x	b	a	o	q	p	n	c	v	e	i	u	t	r	j
9	g	x	c	u	q	l	i	j	d	b	m	p	v	t	n	f	e	k	a	s	w	h	o	r
10	m	x	w	b	c	u	l	k	t	d	e	q	p	j	h	i	n	r	o	a	f	v	g	s
11	c	b	h	f	u	w	s	t	a	n	e	o	j	l	g	m	k	v	r	d	q	i	x	p
12	l	v	j	t	i	d	r	m	c	u	b	a	x	p	e	n	o	g	q	h	s	f	k	w
13	c	p	q	a	b	v	d	n	l	x	j	g	r	e	f	k	i	h	w	o	s	t	m	u
14	q	h	a	t	i	p	k	e	c	v	n	x	m	o	r	f	g	d	b	l	s	w	u	j
15	w	j	a	q	b	g	e	t	c	d	h	o	x	m	r	i	k	u	n	p	f	v	l	s
16	r	s	q	g	w	m	o	k	x	p	d	a	c	v	b	e	t	i	j	l	f	u	n	h
17	d	h	n	x	w	c	o	l	f	i	e	r	j	v	m	g	s	a	u	k	t	q	b	p
18	x	e	b	n	l	a	s	h	o	t	d	c	v	j	f	i	q	g	r	w	u	k	m	p
19	o	b	r	s	q	i	p	t	e	w	k	c	a	g	n	d	l	j	v	m	h	f	x	u
20	n	l	h	x	q	u	s	m	i	k	b	c	w	e	f	g	v	r	p	a	t	j	o	d
21	r	w	k	q	h	x	v	d	f	n	t	i	s	l	o	e	g	m	a	c	j	b	p	u
22	h	e	w	p	s	t	m	k	f	q	l	b	a	u	r	d	n	i	g	j	o	c	v	x
23	d	v	s	i	j	g	q	n	l	e	r	k	f	p	c	w	b	m	a	t	u	o	h	x
24	c	j	i	n	g	l	a	e	t	b	v	u	k	s	x	o	d	q	f	p	h	m	w	r
25	b	i	c	k	v	a	q	s	m	u	t	h	e	g	l	n	p	j	f	x	r	w	o	d
26	l	j	k	e	s	i	o	a	r	w	x	h	n	v	b	f	c	g	u	t	m	p	d	q
27	c	m	l	o	d	n	v	t	i	w	s	x	u	g	f	j	h	r	q	p	e	b	a	k
28	b	u	i	m	g	l	t	o	k	c	x	s	j	f	r	p	n	h	d	w	e	a	v	q
29	x	b	k	p	j	u	m	v	i	t	n	a	g	d	w	c	q	l	s	o	h	r	f	e
30	t	h	c	v	n	x	o	s	r	j	e	q	d	a	p	k	f	w	m	u	g	i	b	l
31	u	c	b	v	x	f	d	t	s	l	w	o	m	g	k	r	j	a	q	n	i	p	e	h
32	d	j	r	p	i	q	k	e	n	u	o	a	t	g	w	c	v	f	s	x	m	h	b	l
33	i	g	c	f	p	d	q	e	b	a	u	n	w	j	v	o	t	s	r	m	h	x	l	k
34	u	g	e	x	l	p	t	h	m	s	o	f	v	i	r	b	k	a	n	w	j	q	d	c
35	s	k	m	x	f	e	p	c	w	d	i	n	o	b	h	g	r	u	v	l	j	t	a	q
36	p	v	m	r	j	e	k	f	x	g	t	u	i	q	b	c	a	s	o	w	h	l	n	d
37	r	i	f	o	k	p	v	q	h	s	l	g	c	a	n	d	x	t	u	m	j	w	b	e
38	w	b	j	e	d	i	l	h	t	o	c	k	x	n	a	f	q	r	v	m	u	g	s	p
39	a	w	u	c	v	q	g	p	e	o	x	m	h	t	l	k	b	d	i	f	r	n	s	j
40	o	h	v	c	p	r	n	d	m	w	k	b	u	e	f	s	q	l	x	i	a	g	j	t
41	t	c	l	b	w	v	x	k	d	i	j	p	a	s	o	e	r	f	h	q	m	n	g	u
42	a	u	n	j	f	d	t	g	s	x	r	p	e	v	i	q	l	o	c	h	b	k	w	m
43	i	u	m	q	o	r	a	g	x	d	h	p	l	s	n	t	c	v	f	w	k	e	j	b
44	m	t	a	c	f	b	d	p	n	h	i	o	r	g	k	v	l	x	j	e	u	q	s	w
45	t	c	w	d	v	f	o	j	b	n	u	x	a	p	h	l	i	q	s	g	r	e	k	m
46	e	c	f	p	i	o	q	g	a	d	t	u	h	b	l	m	x	r	k	j	n	v	w	s
47	n	a	x	j	w	s	h	c	d	k	o	p	i	m	u	b	l	g	t	q	f	e	v	r
48	t	g	l	d	b	p	e	v	i	m	k	a	n	c	s	x	w	f	r	h	j	o	q	u

Figure A.4: Survey Version to Session-Participant Number Mapping

Figure A.5: Experiment Session in Islamabad

Figure A.6: Experiment Session in Peshawar

Table A.1: **Measuring private beliefs: regression results**

	(1)	(2)	(3)
US government	0.168***	0.169***	0.176***
	[0.043]	[0.043]	[0.046]
Mean (LUMS offer)		0.084	
		[0.023]	
Session FE	No	Yes	Yes
Covariates	No	No	Yes
N	286	286	243

Notes: this table reports the coefficients of regressions of rejection on a US government donor dummy. Column 1 reports coefficients of a regression with no controls. Column 2 reports coefficients of a regression using session fixed effects. Column 3 reports coefficients of a regression including session fixed effects and a set of subject covariates. The sample in these regression include subjects who received 100 Rs. offer in the private condition. Sample size in the regression presented in column 3 is smaller due to missing values for some covariates. Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.2: **Social pressure: regression results**

	(1)	(2)	(3)
Public × US government	-0.109*	-0.107*	-0.142**
	[0.060]	[0.060]	[0.065]
Public	0.027	0.028	0.072
	[0.035]	[0.036]	[0.038]
US government	0.168***	0.169***	0.178***
	[0.043]	[0.043]	[0.045]
Mean (LUMS offer, private)		0.084	
		[0.023]	
Session FE	No	Yes	Yes
Covariates	No	No	Yes
N	571	571	488

Notes: this table reports the coefficients of regressions of rejection on the interaction of a public condition dummy and a US government donor dummy, a public condition dummy, and a US government donor dummy. Column 1 reports coefficients of a regression with no controls. Column 2 reports coefficients of a regression using session fixed effects. Column 3 reports coefficients of a regression including session fixed effects and a set of subject covariates. The sample in these regression include subjects who received 100 Rs. offer. Sample size in the regression presented in column 3 is smaller due to missing values for some covariates. Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.

Table A.3: **Price effects: regression results**

	(1)	(2)	(3)
High payment × US government	-0.127**	-0.127**	-0.121**
	[0.053]	[0.053]	[0.055]
High payment	-0.028	-0.027	-0.022
	[0.030]	[0.033]	[0.033]
US government	0.168***	0.169***	0.180***
	[0.043]	[0.042]	[0.044]
Mean (LUMS offer, low payment)		0.084	
		[0.023]	
Session FE	No	Yes	Yes
Covariates	No	No	Yes
N	572	572	499

Notes: this table reports the coefficients of regressions of rejection on the interaction of a high payment dummy and a US government donor dummy, a high payment dummy, and a US government donor dummy. Column 1 reports coefficients of a regression with no controls. Column 2 reports coefficients of a regression using session fixed effects. Column 3 reports coefficients of a regression including session fixed effects and a set of subject covariates. The sample in these regression include subjects who received an offer in the private condition. Sample size in the regression presented in column 3 is smaller due to missing values for some covariates. Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1%.