Journal of Public Economics 128 (2015) 84–95

Contents lists available at ScienceDirect

Journal of Public Economics

journal homepage: www.elsevier.com/locate/jpube

How did distributional preferences change during the Great Recession?☆

Raymond Fisman [a], Pamela Jakiela [b], Shachar Kariv [c,*]

[a] Boston University, Boston, MA, United States
[b] University of Maryland, College Park, MD, United States
[c] University of California, Berkeley, Berkeley, CA, United States

ARTICLE INFO

Article history:
Received 10 March 2014
Received in revised form 3 June 2015
Accepted 3 June 2015
Available online 9 June 2015

JEL Classification:
C79
C91
D64

Keywords:
Distributional preferences
Recession
Redistribution

ABSTRACT

To better understand how support for redistributive policies is shaped by macroeconomic shocks, we explore how distributional preferences changed during the recent "Great Recession." We conducted identical modified dictator games during both the recession and the preceding economic boom. The experiments capture subjects' selfishness (the weight on one's own payoff) and equality–efficiency tradeoffs (concerns for reducing differences in payoffs versus increasing total payoffs), which we then compare across economic conditions. Subjects exposed to recession exhibit greater selfishness and higher emphasis on efficiency relative to equality. Reproducing recessionary conditions inside the laboratory by confronting subjects with possible negative payoffs [weakly] intensifies selfishness and increases efficiency orientation, bolstering the interpretation that differing economic circumstances drive our results.

1. Introduction

The "Great Recession" was accompanied by the rise of both the Tea Party and the Occupy Wall Street movements, two groups whose members hold very different views on redistribution— suggesting that economic contraction may polarize opinions on the issue. Whether either (or both) group's successes reflect a causal relationship between macroeconomic shocks and individual support for redistribution is an open question, but one that is difficult to answer empirically. Exogenous variation in exposure to economic contraction is rare and limited in scope, and we cannot conduct large-scale controlled experiments on the US economy. Moreover, many other societal shifts may be coincident with macroeconomic changes, making it difficult to disentangle the effects of different factors which govern the willingness to make tradeoffs between both own and others' income and between equality and efficiency.

In this paper, we explore the relationship between macroeconomic conditions and attitudes toward redistribution by comparing experimentally-measured distributional preferences under the vastly different economic conditions that prevailed before and during the sharp downturn sparked by the 2008 financial crisis. Our experiments employ the generalized dictator game first utilized by Andreoni and Miller (2002), and further developed by Fisman et al. (2007), where each subject faces a large and rich menu of budget sets representing the feasible monetary payoffs to *self* (the subject) and an anonymous *other* subject. Varying the relative prices of redistributing payoffs between *self* and *other* enables us to distinguish indexical selfishness (the relative weight on the payoff for *self*) from equality–efficiency tradeoffs (the concern for increasing total payoffs versus reducing differences in payoffs), and to examine how these distributional preferences differ for subjects that participate in the experiment before and after the onset of the financial crisis.

To further test whether the recession is likely to have caused the observed changes in distributional preferences, we simulate economic contraction inside the laboratory by confronting subjects with a variant of our modified dictator game where the budget sets were such that either *self* or *oth6er*, or both, necessarily received a negative payoff relative to their initial endowment.[1] Our design thus also allows us to compare the changes in distributional preferences that occurred during the real-

☆ We thank the UC Berkeley Office of Planning and Analysis, the Financial Aid and Scholarships Office, the Career Center, and Cal Answers (Student Data Warehouse) for providing administrative and survey data on our subject pool and the UC Berkeley student body. We are particularly grateful to Daniel Markovits for many thoughtful comments. We also thank James Andreoni, Colin Camerer, Syngjoo Choi, Stefano DellaVigna, John List, Ulrike Malmendier, and Matthew Rabin for helpful discussions and comments. This paper has also benefited from suggestions by the participants of seminars at several universities and conferences.

* Corresponding author.
E-mail addresses: rfisman@bu.edu (R. Fisman), pjakiela@umd.edu (P. Jakiela), kariv@berkeley.edu (S. Kariv).

[1] This treatment generalizes the framework of List (2007) and Bardsley (2008), exposing both *self* and *other* to losses and better reflecting the conditions of scarcity that were occurring outside the laboratory. List (2007) and Bardsley (2008) show that the specification of the choice set leads to drastic changes in behavior.

http://dx.doi.org/10.1016/j.jpubeco.2015.06.001
0047-2727/

world recession to the effects of an experimental treatment that simulates recessionary conditions in the laboratory.

We consider a total of three environments, corresponding to the interaction between the experimental treatment and real-world economic conditions:

- THE GAIN BOOM (GB) environment borrows data from the two-person dictator experiment of Fisman et al. (2007), in which the decision problems are presented using a graphical interface that allows for the collection of a rich individual-level data set. The data were collected in 2004, prior to the financial crisis.
- THE GAIN RECESSION (GR) environment was identical to GB environment except for minor design modifications; however, these experiments were conducted in 2011, when the US economy remained mired in the economic downturn that set in during 2008.
- THE LOSS RECESSION (LR) environment was identical to the GR environment except that within the experiment either *self* or *other*—or both—necessarily experienced a loss relative to their endowment. These experiments were conducted in 2010 and 2011, in economic conditions similar, sometimes identical, to those of the GR environment.

There are four elements to our approach that, we argue, allow us to credibly relate macroeconomic conditions to individual behavior:

First, all experiments were conducted at the Experimental Social Science Laboratory (Xlab) at UC Berkeley. A key benefit of using the Xlab subject pool is that it is drawn primarily from a large and diverse student body, the socioeconomic composition of which is held relatively constant by the admissions office.

Second, we combine administrative and survey data on postgraduate activities to show that the economic prospects of UC Berkeley students were directly affected by the recession. We demonstrate that students faced higher student-loan debts and weakened job prospects during and after the recession than in the preceding years.

Third, we combine demographic and economic data from student admissions and financial aid with a broad range of survey responses about the experience of undergraduates at UC Berkeley. Using these data, we demonstrate that, despite the recession's impact on students' financial circumstances and job prospects, the makeup of the student body, students' overall social and academic experiences, opinions about student life, and perceptions of campus climate fluctuated very little over the period we study.

Fourth, the final piece of our analysis involves the Loss treatment that simulates recessionary conditions in the laboratory. As we describe below, we find that the impact of this experimental treatment is directionally the same as that of the real-world recession (though the effect of Loss on selfishness is not consistently significant). This bolsters the view that economic conditions, rather than other concurrent social or political changes, are likely behind the shifts in distributional preferences we observe in recession versus boom years.

Following Andreoni and Miller (2002) and Fisman et al. (2007), we estimate constant elasticity of substitution (CES) utility function over the payouts to *self* and *other*, which makes it possible to distinguish indexical selfishness from equality–efficiency tradeoffs in a particularly convenient form. The rich data generated by the design allow us to analyze behavior at the level of the individual subject.

Our main findings are as follows: subjects in the LR and GR environments, who participated in the experiment during the downturn, place greater emphasis on efficiency versus equality relative to those in the GB environment, who took part in the experiment during the preceding economic boom. Additionally, subjects in the recession environments, LR and GR, display greater levels of indexical selfishness relative to the subjects in the GB environment.

Comparing behavior between the GR and LR environments, we find that the experimental Loss treatment also increases both selfishness and efficiency-orientation (though its impact is relatively modest). Thus, overall we find that both real-world and lab-simulated recessionary conditions are associated with shifts in distributional preferences toward greater selfishness and efficiency focus. These results are robust to the inclusion of session-level demographic and socioeconomic controls.

Ex ante, one might expect that recessionary conditions could either increase or decrease the willingness to sacrifice equality to enhance efficiency. During a recession, concerns about providing a social safety net might lead to an increased desire to rein in inequality and guarantee a minimum level of income for all, even at the expense of total output. Alternatively, conditions of scarcity may make the prospect of leaving money on the table particularly unattractive, leading to an increased focus on efficiency. Our results suggest that this latter concern dominates. As Saez and Stantcheva (2013) point out, optimal taxation depends on the distributional preferences of taxpayers. Our results highlight the potentially complex interrelationship between the business cycle and the distributional preferences of voters.

To the best of our knowledge, there is only a small body of work on the impact of economic conditions on distributional preferences. Using surveys fielded between 2007 and 2011, Margalit (2013) studies how respondents' attitudes toward redistributive policies change in response to economic shocks: a drop in household income, a (subjective) decrease in employment security, and the actual loss of a job all increase support for government welfare programs. By contrast, Kuziemko (in) finds lower support for government redistribution during recessions, based on responses to the General Social Survey. By studying the willingness to make real tradeoffs between equality and efficiency in a controlled environment, our experimental design partially addresses the problems of interpretation that hamper such survey-based research.[2]

The rest of the paper is organized as follows. Section 2 describes the structure of the decision experiments and the interactions between experimental treatments and external economic conditions. Section 3 describes the subject pool and addresses a number of concerns regarding identification. Section 4 provides the empirical analysis and results, and Section 5 concludes by discussing the results and relating them to the broader literature.

2. Experimental design

We presented subjects with a sequence of modified dictator games, developed by Andreoni and Miller (2002), that vary the relative prices of allocating tokens to *self* (the subject) and *other* (an anonymous other subject, chosen at random from the group of subjects in the experiment). Throughout, we denote persons *self* and *other* by *s* and *o*, respectively, and the associated payoffs by π_s and π_o.

In a typical dictator experiment, *self* divides an endowment of tokens between *self* and *other* in any way he wishes such that $\pi_s + \pi_o = 1$ (without loss of generality, the endowment is normalized to 1). One respect in which this framework is restrictive is that the set of feasible payoff pairs is always the budget line with a slope of -1, so that the problem faced by *self* is simply dividing a fixed total income between *self* and *other*.

In the modified dictator game we study, *self* allocates the tokens across (π_s,π_o) at corresponding prices (p_s,p_o), such that $p_s\pi_s + p_o\pi_o = 1$; he can choose any allocation $(\pi_s,\pi_o) \geq 0$ that satisfies this constraint. We denote the endpoints of the budget line as $\overline{\pi}_s$ and $\overline{\pi}_o$ so we can calculate the relative price $p_s/p_o = \overline{\pi}_o/\overline{\pi}_s$. Varying the relative price of redistribution p_s/p_o allows us to examine individual responses to price

[2] Our paper is also related to the subfield of development economics that examines how individual preferences are affected by exposure to violence civil and conflict. For example, Voors et al. (2012) examine the impact of Burundis conflict on distributional, risk, and time preferences, and Callen et al. (2014) investigate the consequences of violence for economic risk preferences in Afghanistan.