Journal of Behavioral and Experimental Economics 62 (2016) 1–7

Contents lists available at ScienceDirect

Journal of Behavioral and Experimental Economics

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

Norm elicitation in within-subject designs: Testing for order effects

Giovanna D'Adda[a], Michalis Drouvelis[b], Daniele Nosenzo[c,*]

[a] Department of Management, Economics and Industrial Organization (DIG), Politecnico di Milano, Italy
[b] Department of Economics, University of Birmingham, United Kingdom
[c] School of Economics, University of Nottingham, United Kingdom

ARTICLE INFO

Article history:
Received 11 December 2015
Revised 24 February 2016
Accepted 26 February 2016
Available online 7 March 2016

JEL classification:
C91

Keywords:
Social norms
Norm elicitation
Order effects
Within-subject design
Bribery game

ABSTRACT

We investigate norms of corruption using the norm-elicitation procedure introduced by Krupka and Weber (2013). We use a within-subject design whereby the norms are elicited from the same subjects who are observed making choices in a bribery game. We test whether the order in which the norm-elicitation task and the bribery game are conducted affects elicited norms and behavior. We find little evidence of order effects in our experiment. We discuss how these results compare with those reported in the existing literature.

1. Introduction

A growing number of studies in economics appeal to the influence of social norms to explain behaviors that are difficult to reconcile with models of rational and self-interested decision making (e.g., Fehr and Fischbacher, 2004; Nikiforakis, Noussair and Wilkening, 2012; Gächter, Nosenzo and Sefton, 2013). Recently, Krupka and Weber (2013, hereafter KW) have introduced a norm-elicitation task that allows a more objective approach to the identification and measurement of norms. In this method subjects are shown a list of actions available to a decision-maker in a given situation and are asked to evaluate whether each action is "socially appropriate" or "socially inappropriate". Subjects are given material incentives to coordinate their evaluation with that of other participants in the experiment. Thus, subjects have an incentive to reveal their perception of what is collectively recognized as appropriate behavior (i.e. the social norm), rather than their own personal views of appropriateness.[1]

The KW elicitation method has been recently used to explain behavior in a variety of decision settings, including dictator games (Krupka and Weber, 2013; Krupka, Leider and Jiang, 2014; Erkut, Nosenzo and Sefton, 2015), gift-exchange games (Gächter, Nosenzo and Sefton, 2013), and oligopoly pricing games (Krupka, Leider, and Jiang, 2014).[2] These applications are based on *between-subject designs* where the norm elicitations and behavioral regularities are obtained from experiments using different subjects.[3]

However, *within-subject designs* (where norms and behavior are elicited from the same subjects) may offer a number of advantages over between-subject designs for testing the explanatory power of social norms.[4] First, within-subject designs allow to control for the effects of idiosyncrasies in the subject pools used for the measurement of norms and behavior. If the characteristics of the subjects involved in the norm-elicitation task are different from those of the subjects whose behavior is observed, the explanatory power of the elicited norms may be reduced. Moreover, within-subject designs can address questions that may not be answered with a between-subject design, such as whether subjects who behave in violation of a given norm do so because they fail to recognize the

* Corresponding author. Tel.: +441158467492.
E-mail address: Daniele.Nosenzo@nottingham.ac.uk (D. Nosenzo).

[1] This is important as social norms are collectively recognized rules of behavior. Ostrom (2000), for example, defines norms as "shared understandings about actions that are obligatory, permitted, or forbidden" (pp. 143–144). Elster (1989) emphasizes that for "norms to be social, they must be shared by other people" (p. 99).

[2] The KW method has also been used outside of a laboratory context, to explain the on-the-job behavior of financial advisers (Burks and Krupka, 2012).

[3] Exceptions to this are Nikiforakis, Oechssler and Shah (2014), who use a within-subject design to study the explanatory power of norms against exploitation and coercion, and Barr, Lane and Nosenzo (2015), who study discrimination in the context of an allocator game

[4] See Charness, Gneezy and Kuhn (2012) for a general discussion of the relative merits of between- and within-subject designs.

http://dx.doi.org/10.1016/j.socec.2016.02.003
2214-8043/

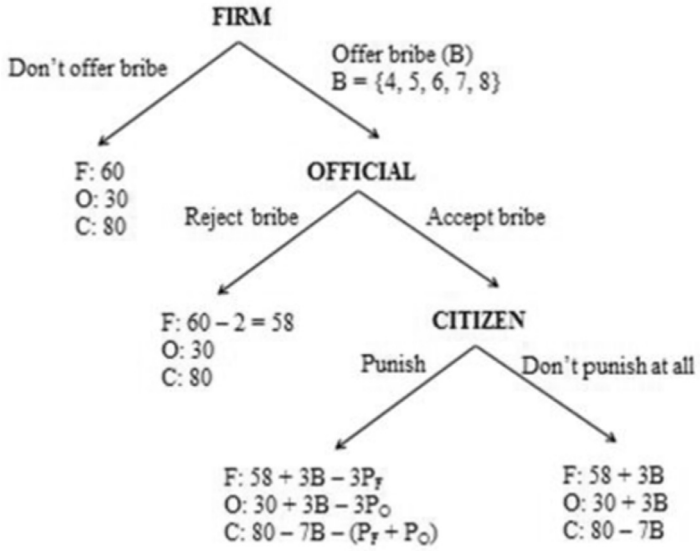

Fig. 1. The bribery game.

relevant norm, or rather because they are not sufficiently motivated to follow norms despite being able to identify them. Clearly, for this analysis, one needs to correlate normative evaluations and behavior elicited from the same subjects.

One serious obstacle to the use of within-subject designs is that the order in which the norm-elicitation and behavioral experiments are conducted may systematically affect the elicited norms and behavior. On the one hand, eliciting norms after having elicited behavior may introduce systematic biases in the measurement of norms. For instance, subjects may be prone to self-serving judgment biases whereby they manipulate their evaluation of what constitutes appropriate behavior in a given situation to reconcile it with the choices that they have previously made in that situation. In fact, several studies have found evidence of self-serving biases in (unincentivized) fairness judgments (e.g., Konow, 2005; Croson and Konow, 2009). On the other hand, eliciting norms before eliciting behavior may systematically affect subjects' choices. Theories of social norms (e.g., Cialdini, Reno and Kallgren, 1990; Bicchieri, 2000) emphasize that norm compliance requires that norms are salient and that subjects' attention is focused on the rules of appropriate behavior. Eliciting normative judgments before subjects make a choice in a given situation may focus their attention on the norms that prevail in that situation, and may thus affect behavior. In fact, Krupka and Weber (2009) find that dictator giving increases when dictators are asked to report their fairness views before making a choice.

In this paper, we describe an experiment where we test these order effects in the elicitation of norms. As an application, we focus on norms that regulate corrupt behavior, using a version of the bribery game introduced by Cameron et al. (2009).[5] We use the KW method to elicit subjects' normative views about such behaviors. In one treatment we elicit norms of corruption before asking subjects to make a choice in the bribery game, and reverse the order of tasks in another treatment.

Overall, our experiment delivers little evidence of order effects in our within-subject design. The norms elicited from subjects who had not yet played the game are not systematically different from those elicited from subjects who had previously played the game. We also find little evidence that eliciting norms affects subsequent behavior in the bribery game. We conclude the paper with a discussion of how our results compare with the related literature (Krupka and Weber, 2009; Bicchieri and Chavez, 2010; Barr, Lane and Nosenzo, 2015; Erkut, Nosenzo and Sefton, 2015) and a recommendation for researchers interested in using the KW method in within-subject experiments.

2. Experimental design

Our experiment consisted of two parts. In one part subjects played a version of the bribery game adapted from Cameron et al. (2009, hereafter CCEG). In the other part we elicited subjects' normative views of corruption using the KW task.

The bribery game used in the experiment is shown in Fig. 1. At the beginning of the game subjects are randomly matched in groups of three and randomly assigned to one of three roles: firm, public official, or citizen.[6]

The firm moves first and decides whether to initiate a corrupt act, by bribing the official. If the firm decides to offer a bribe, it has to choose a bribe amount $B = \{4, 5, 6, 7, 8\}$. Offering the bribe implies a cost of 2 to the firm, regardless of whether the bribe is accepted. If accepted, the bribe increases the firm's payoff by $3B$. The public official moves next: she observes whether the firm has offered a bribe and, if so, decides whether to accept it. Accepting the bribe is profitable for the official, whose payoff is also increased by $3B$, but implies a negative externality on society, captured by a reduction of $7B$ in the citizen's payoff.[7] Finally, the citizen observes the firm's and official's decisions and is given the opportunity to punish corrupt behavior. In particular, if the firm has offered a bribe and this has been accepted by the official, the citizen can sanction the firm and the official, by choosing whether or not to punish them, and if they choose to punish, by selecting a punishment amount $P_F = \{1, 2, 3, 4, 5, 6\}$ and $P_O = \{1, 2, 3, 4, 5, 6\}$, for the firm and official respectively. Punishment is costly for the citizen as the total amount punished

[5] See Abbink (2006) and Banuri and Eckel (2012) for reviews of laboratory experiments on corruption.

[6] All payoff amounts are in Experimental Currency Units (ECUs). At the end of the experiment ECUs payoffs were converted into GBP at the following rates: 6 ECUs = 1 GBP for the firm, 4 ECUs = 1 GBP for the official and 3 ECUs = 1 GBP for the citizen. As in CCEG, the choice of conversion rates was aimed at keeping expected earnings comparable across roles.

[7] Thus, our game is a version of the welfare-reducing game used by CCEG, where corruption is not justified by any efficiency motive.