Journal of Economic Behavior & Organization 120 (2015) 64–79

Contents lists available at ScienceDirect

Journal of Economic Behavior & Organization

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

Greasing the wheels: Pork and public goods contributions in a legislative bargaining experiment☆

Nels Christiansen*

Trinity University, Department of Economics, USA

ARTICLE INFO

Article history:
Received 18 December 2014
Received in revised form 6 October 2015
Accepted 9 October 2015
Available online 26 October 2015

JEL classification:
D72
C52
C7
C92

Keywords:
Legislative bargaining
Public goods
Pork
Inequity aversion

ABSTRACT

When a legislature bargains over funds for pork and public goods, and the funds come from a common budget, increased spending on the public good means greater payoff equality since it comes at the expense of pork. This paper explores whether inequity aversion then leads to greater public goods spending. Using both theory and a laboratory experiment we show inequity aversion generally decreases inequity within a coalition by limiting proposer power. However, this does not always mean greater public goods contributions because the types of proposals passed change in equilibrium. In addition, the experiment investigates the theoretical prediction that increasing players' relative preference for pork can increase public goods contributions. We show that while average public goods contributions remain unchanged, there is evidence at the individual level that subjects hold out for higher public goods contributions as predicted.

1. Introduction

Legislatures are often tasked with bargaining over public goods, which benefit everyone, and private goods ("pork"), which only benefit the legislator to which they are allocated. Public good provision is one of the primary roles of the legislature so that understanding what affects the division of funds between pork and public goods is an important question. To that end, this paper uses theory and an experiment to explore separately the effects of inequity aversion and relative preferences for pork among legislators on the division of a budget between pork and public goods. What is particularly interesting is that the effects of both are often counterintuitive.

There is good reason to think that inequity aversion might influence legislative bargaining. Not only might legislators themselves care about the payoffs to other legislators from a bill, but inequity averse constituents would likely produce

☆ I received valuable comments from John Kagel, Alan Wiseman, Massimo Morelli, Paul J. Healy, Jim Peck, Mark Schelker, Marina Agranov, Christoph Vanberg, the editor and referees, and seminar participants at the Western Economic Association International and Public Choice Society meetings. Financial support from the National Science Foundation Grant No. 0519205 and from the Mershon Center at The Ohio State University is gratefully acknowledged. Any opinions or findings in this paper are those of the author and do not necessarily reflect the views of the funding agencies.

* Correspondence to: Department of Economics, Trinity University, One Trinity Place, San Antonio, TX 78212, USA. Tel.: +1 210 999 8252; fax: +1 210 999 7255.

E-mail address: nels.christiansen@trinity.edu

http://dx.doi.org/10.1016/j.jebo.2015.10.004
0167-2681/

inequity averse legislators if voters turn on legislators who bring too little funding home in comparison to other districts.[1] When funds for pork and public goods come from a common budget, increased contributions to the public good will mean decreased contributions to pork and greater payoff equity among legislators. Do social preferences then limit pork spending and decrease payoff inequity?

The theoretical literature on legislative bargaining suggests that the answer is not as straightforward as it might seem. Montero (2007) incorporates inequity aversion as formalized in Fehr and Schmidt (1999) into the Baron and Ferejohn (1989) "divide the pie" bargaining game. The paper shows that inequity aversion is likely to *increase* payoff inequity between players by increasing the payoff of the proposer. Whether the theoretical increase in proposer power extends to bargaining in the presence of a public good and might allow a proposer who prefers pork more proposal power is an open question.

To explore these ideas, we use the legislative bargaining model in Volden and Wiseman (2007), which is an extension of the Baron–Ferejohn model to include a public good whose funding is constrained by pork allocations. Assuming legislators have heterogenous preferences for pork and public goods, and pork and public goods spending come from a common budget, we extend the literature in two ways. First, we incorporate Fehr–Schmidt inequity averse preferences and solve the bargaining model for a handful of parameter values. We utilize a laboratory experiment to evaluate whether behavioral patters, especially pork and public goods contributions, are consistent with the point predictions of the model. The paper shows that inequity aversion in the presence of a public good is generally predicted to decrease the power of the proposer, and the experimental results closely coincide with the predictions. This does not always mean higher contributions to the public good, however. We show in both theory and in the experiment that inequity aversion can increase pork spending because the types of proposals passed change in equilibrium.

The Volden–Wiseman model predicts that changes in the preference for pork will also matter for public good provision. That is, increasing the preference for pork can increase contributions to the public good.[2] In a recent experimental paper examining this prediction when legislators have homogenous preferences for pork and public goods, Fréchette et al. (2012) find that that public goods contributions *decrease* as the relative value for pork rises. We simplify the choice facing subjects in the experiment by holding constant the marginal return on the public good as the preference for pork rises, and we find no change in the amount given to the public good. Moreover, we do find at the individual level that subjects are holding out for higher public goods contributions as predicted. This fails to increase the average amount contributed because not all votes are needed to pass a proposal, and some subjects continue to accept the same public goods contribution as before the change in preference for pork.

The tension between funding pork and public goods appears in other models. Tergiman (2015) shows within a legislative bargaining framework that when the ruling coalition can tie a spending bill to a vote of confidence procedure, the latter strengthens a proposer's power and reduces funding for the public good. Lizerri and Persico (2001) consider national candidates making binding promises about pork and public goods spending and compare contributions under a winner-take-all system to a proportional system. Battaglini et al. (2012, 2014) explore public good provision in a dynamic environment. We focus on the Volden–Wiseman model because it is a static model with a single decision, which provides a straightforward environment to examine the effects of inequity aversion on public good provision.

The paper is also part of a growing experimental literature on legislative bargaining, which has focused on purely distributive games in which funding is allocated to goods that only benefit the recipient.[3] Jackson and Moselle (2002) extend the Baron–Ferejohn model to include a uni-dimensional policy in addition to the distributive good with legislators having heterogeneous preferences over each.[4] Christiansen et al. (2014) find support for the paper's comparative statics predictions, including the ability of pork to create coalitions of "strange bedfellows." However, it shows that coalition members opt for an "efficient equal split" of payoffs rather than the stationary subgame perfect equilibrium prediction.[5]

The paper proceeds as follows. Section 2 details the legislative bargaining model in which preferences for pork are heterogeneous. Section 3 describes the experimental design. The results of the experiment are in Section 4 with a discussion of the results and their implications in Section 5.

[1] In the U.S. the large inequities surrounding per-capita pork spending, where states such as Alaska receive far more money than most others, have recently garnered negative attention.

[2] Decreasing the relative value of the public good means higher contributions to it are necessary to secure the votes of players who would prefer to receive pork.

[3] The majority of research has studied the Baron–Ferejohn legislative bargaining model. McKelvey (1991), Diermeier and Morton (2005), and Fréchette et al. (2003, 2005a,b) experimentally examine various predictions of the model including the effects of open and closed amendment rules, changing proposal recognition probabilities, and contrasting the comparative statics results of the model to other models of the legislative bargaining process.

[4] In their model funds allocated to pork do not constrain the policy choice since policy is not in a monetary dimension. The funds for pork come from an exogenous budget, and this budget will always be completely spent in equilibrium.

[5] Christiansen and Kagel (2015) extend these results using a new treatment to look at whether bargaining outcomes differ when legislators bargain over the policy and cuts to private goods (i.e., players bargain over tax burdens instead of tax benefits). They find that even bargaining over cuts to private goods speeds the time to agreement in relation to bargaining without private goods, but cuts are less effective than when private goods are handed out.