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# Voluntary disclosure in a bargaining setting: A research note☆

Ulrike Denker[a], Steven Schwartz[b,c,*], Christopher Ward[a], Richard Young[d]

[a] Ernst and Young, New York, NY, United States
[b] School of Management, Binghamton University, United States
[c] Ernst and Young, Chicago, IL, United States
[d] Fisher College of Business, The Ohio State University, United States

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ABSTRACT

We conduct an experiment on voluntary disclosure within a simple bargaining setting wherein a proposer must choose one of two possible offers and a responder chooses whether to reject or accept that offer. In one treatment the proposer has the option to disclose whether a fairer (more equal) offer was available relative to the one chosen. Under standard economic theory, a responder will interpret no disclosure to mean the proposer's offer was the less fair alternative, and so a proposer who is making the fairer offer will disclose. In consequence, voluntary disclosure should perform as well as mandatory disclosure in motivating proposers to make fair offers. Given their rejection rates, we find responders properly infer the meaning of non-disclosure. However, despite the correct inferences made by responders, proposers submit twice as many fair offers with mandatory disclosure than with voluntary disclosure. Our results suggest that the choice of voluntary versus mandatory disclosure has consequences for resource allocation within the firm even though under standard assumptions about preferences it should not.



## 1. Introduction

In this note we present a bargaining experiment with implications for intra-firm resource allocations. Intra-firm allocations are often the result of bargaining outcomes; examples include budgeting, transfer pricing and salary adjustments. Bargaining becomes especially important when contracts are incomplete or implicit.[1] Executive compensation is a ready example; corporate Boards of Directors often have significant discretion over the allocation of the bonus pool among the firm's various executives (Murphy and Oyer, 2003).

Standard economic analyses of the bargaining process usually assume individuals only care about their own wealth. However, a robust set of observations has shown that individuals care not only for their own wealth but have preferences for distributional fairness (Fehr and Schmidt, 1999), honesty (Gneezy, 2005), and reciprocity (Fehr and Gächter, 2000). Evidence from bargaining experiments in an institutionally richer setting reveals similar results. For example, Kachelmeier and Towry (2002) found that equity concerns affected transfer prices in face-to-face negotiations. Also, Evans et al. (2001) and Zhang (2008) found that an agent's willingness to be honest was partially a function of how reporting would affect the allocation of wealth between principal and agent. Finally, Charness (2004) found that the extent to which an employee was willing to work hard when offered a generous wage was affected by whether the employer chose the wage or whether some

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* Corresponding author at: School of Management, Binghamton University, United States. Tel.: +1 6077772102.
*E-mail address:* sschwart@binghamton.edu (S. Schwartz).

[1] There are efficiency reasons to make contracts implicit rather than explicit; some researchers have argued that organizations have competitive advantages over markets and courts in keeping track of contextual details and history which are relevant in determining how to effectively settle disputes (Glover, 2012).

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outside agency (such as a bingo draw) determined the wage.

Because individuals care not only about their own wealth but also the wealth of others, there are situations where information about the allocation of wealth can play a crucial role in bargaining outcomes. Notably, consider a bargaining game where an individual (responder) knows the amount offered but not the amount retained by the person making the offer (proposer). Under standard theoretical assumptions, the size of the retained amount should be irrelevant. However, research has shown that in private information bargaining games the less informed party does worse than in the full information version (Rapoport et al., 1996). Presumably, had lesser-informed responders known how relatively small their shares were, they might have rejected some offers. Further, fear of rejection would have caused the better-informed proposers to increase their offers. Consider also the experiment by Güth et al. (2001), who find that principals give agents with different skill endowments more similar contracts when agents could observe each other's contracts than when contracts were private information. Their interpretation is principals fear differences in pay will cause costly resentment from the lower-paid agent, even if that agent is less skilled.

We extend prior research on bargaining and information structure by allowing one bargainer to make his private information known to another bargainer. That is, we study the role of *voluntary disclosure*. We assume that any disclosures made must be truthful, perhaps due to the presence of internal auditing, but that there is discretion regarding whether to make a disclosure.[2]

Under the typical assumptions about markets, (credible) voluntary disclosure should be as effective as mandatory disclosure in informing market participants. The reasoning is straightforward. If a seller does not disclose his private information, potential buyers will assume the worst possible state (Grossman, 1981; Milgrom, 1981). Therefore, in equilibrium only the worst information is withheld, and market participants' beliefs are consistent.[3]

Extending this thinking to bargaining settings, where fairness considerations often come to the foreground, voluntary disclosure should also be effective as mandatory disclosure in conveying information – lack of disclosure would be properly interpreted as an unfair offer. As a practical example of the role of voluntary disclosure in bargaining settings, consider the recent labor dispute between the National Football League and its players' union. The union requested that team owners provide audited financial statements to prove they needed financial relief. When the owners were reluctant to comply, an NFL players' union representative was quoted as saying "There's a level of distrust until they prove it – until they show us the books" (La Conforna, 2011). The idea behind the players' union position is simple: had the audited information indicated that the owners' offer was fair, it would have been disclosed.[4]

With respect to a richer institutional setting, consider the study on fairness and transfer pricing by Luft and Libby (1997). Respondents to a questionnaire indicated that if they were managing the purchasing division they would not expect the transferring division to make a large profit at their expense. For example, if an item had an outside price of $500 the purchasing division manager should be willing to pay up to $500, regardless of the transferring division's marginal cost to manufacture. However, if the transferring division had a marginal cost to manufacture of $300, the purchasing division manager might expect to only pay $450, sharing some in the cost savings from internal manufacture with the transferring division. Kachelmeier and Towry (2002) produce generally the same findings using monetary incentives. In practice, a manufacturing division surely collects marginal cost information (or should), so if a manufacturing division manager decides not to make this information available to the purchasing division, the purchasing division manager might assume that an "unfair" decision is being hidden. Our hypotheses rely on similar reasoning.

The basis for our investigation is an experiment using the mini-ultimatum game (Bolton and Zwick, 1995), which is very simple and has been employed in previous experiments to manipulate perceptions of fairness. A proposer has two choices on how to allocate a sum of money. After the proposer chooses one of the options the responder may accept or reject the offer. Prior experiments provide evidence that responders consider the fairness of an offer in terms of (1) how it allocates the surplus and (2) the alternative allocation that could have been offered (Brandts and Sola, 2001; Falk et al., 2003).

We modify this game by introducing information asymmetry regarding the potential offers available to the proposer. In each of two possible mini-ultimatum games the proposer can offer (8,2), keeping 8 for herself and giving 2 to the responder. The alternative offer, chosen by nature and observed only by the proposer, is either (5,5) or (10,0). Conditional on the proposer offering (8,2), if the proposer is able to communicate her alternative offer but chooses not to, the responder should conclude it was (5,5). The reasoning is that had the alternative been (10,0) the proposer surely would have made this known so as to demonstrate that (8,2) was the "fairer" of the two possible offers, and hence increase the chances the responder will accept the offer.

In our control treatment, MAN (Mandatory Disclosure), the responder always knows the alternative offer. That is, there is no information asymmetry. In our manipulation, VOL (Voluntary Disclosure), the proposer has the option, but not the obligation, to disclose the alternative offer,

[2] Our assumptions are similar to those in Penno (1990), who assumes managers have a wide degree of discretion in making intra-firm reports, but that reports are constrained to be truthful due to the internal audit function.

[3] Complications can arise in capital markets if the information is proprietary or if market participants are uncertain as to whether the firm has received information (Dye, 1985, 1986; Wagenhofer, 1990). See King and Wallin (1991a,b, 1995) for experimental evidence.

[4] This situation generalizes to many employer–employee salary negotiations where the employer can make claims regarding the overall profitability of company and how this impacts potential salary offers. The employee would presumably want a verification of the employer claims to judge the fairness of any salary offer.