Journal of Economic Psychology 56 (2016) 151–162

Contents lists available at ScienceDirect

Journal of Economic Psychology

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

Workers' participation in wage setting: A gift-exchange experiment

Jörg Franke [a], Ruslan Gurtoviy [b,1], Vanessa Mertins [c,*,1]

[a] TU Dortmund, Germany
[b] Deloitte Consulting, Germany
[c] University of Vechta, Germany

ARTICLE INFO

Article history:
Received 3 August 2015
Received in revised form 12 June 2016
Accepted 21 July 2016
Available online 25 July 2016

JEL classification:
C72
C91
J33
L23
M52
M55

PsycINFO classification:
3660

Keywords:
Participation
Labor market
Gift-exchange game
Personnel economics
Reciprocity

ABSTRACT

This study analyzes the consequences of workers' participation in the wage setting process on effort exertion. The experimental design is based on a modified gift-exchange game with firms specifying contract alternatives and workers deciding about the finally implemented alternative. The experimental data reveals that workers with participation rights are more sensitive to differences in wage offers: Low wage offers trigger negative reciprocity which dominates the positive incentive effects from high wage offers. On average, participation in the wage setting process leads to a decline in effort exertion.

1. Introduction

Formal and informal institutions of workers' participation and co-determination in the management of firms are widespread and, in some countries like Belgium, Germany, and the Netherlands, even mandatory for large firms. Indeed, 60% of workers in the European Union (excluding UK) are covered by collective bargaining agreements that are conducted by workers councils and/or trade unions with the respective firm or employer associations. One of the main arguments in favor

* Corresponding author.
E-mail addresses: joerg.franke@tu-dortmund.de (J. Franke), rgurtovoy@yahoo.com (R. Gurtoviy), vanessa.mertins@uni-vechta.de (V. Mertins).

[1] Part of this research has been conducted while Gurtoviy and Mertins were affiliated with the Institute for Labour Law and Industrial Relations in the European Union, University of Trier.

http://dx.doi.org/10.1016/j.joep.2016.07.002
0167-4870/

of workers' participation is that the involvement of workers in managerial decision processes finally results in increased labor performance and higher productivity.[2] Empirical studies that try to explicitly validate this hypothesis, however, produce rather mixed results; see Addison, Schnabel, and Wagner (2004) and Mueller (2011) for surveys of the respective literature involving workers councils. As most of these empirical studies are based on panel and cross-sectional data with different degrees of representativeness, they also face the typical problems of empirical work in contexts where the implementation of randomized treatments is not feasible, for instance, confounding effects from unobserved heterogeneity, or reverse causality.

Recently, the experimental approach has been applied to avoid these shortcomings and to address the consequences of increased worker participation in controlled laboratory situations; see Mellizo, Carpenter, and Matthews (2014) and Charness, Cobo-Reyes, Jiménez, Lacomba, and Lagos (2012). In both studies, subjects in the worker role were assigned substantial influence in the decision making process about the relevant work compensation. While the first study used a real effort experiment where participants vote on the respective compensation scheme among a restricted set of potential options, the second study was based on the gift-exchange game, which is the standard game in experimental labor economics; see Fehr, Kirchsteiger, and Riedl (1993), Fehr, Kirchler, Weichbold, and Gächter (1998) and Charness (2004). The crucial design feature of Charness et al. (2012) was a delegation treatment, where the decision about wages was completely delegated to the respective workers. Total authority of the worker in setting her own wage in the gift-exchange game should thereby reflect the wage decision processes in some highly successful enterprises like the Brazilian Semco SA whose organizational structures rather resemble labor co-operatives based on workers' self-management. Although both studies differ in the experimental design, the observed incentive effects from workers' participation in the managerial decision making process were very similar: Performance (in the sense of effort exertion) increased in the participation treatment, which even implied Pareto improvements in the Charness et al. (2012) framework.[3]

Our study complements this literature by granting workers a more limited degree of participatory influence in the wage setting process. The fact that, in our experiment, workers do not have total autonomy in setting their wages, should reflect in a more appropriate way the type of co-determination that is actually observed in the real world, where institutions of collective bargaining based on union or worker delegates are common (in contrast to labor-owned firms or labor cooperatives). Hence, in our version of the gift-exchange game, we allow a representative worker to choose from a menu of two alternative labor contract options that are ex-ante specified by the employer. The main objective of our study is then to analyze the robustness of the previously observed performance-enhancing effects with respect to this limited (but also more natural) institution of workers' involvement in an experimental framework.

Our experimental design relies on a modified gift-exchange game where each firm is matched simultaneously with three workers, as in Gächter and Thöni (2010), Charness and Kuhn (2007), and Kocher, Luhan, and Sutter (2012). The distinctive feature is that all workers matched to a specific firm face exactly the same contract, but participation in the wage setting process varies.[4] Within each organization, one worker is allowed to choose the work contract from a set of two pre-defined offers, a second worker is at least informed about this. The third worker remains ignorant about it, therewith serving as control.

Contrary to previous multi-player gift-exchange games, we exclude the possibility of 'horizontal' comparisons among employees: Workers are not informed about co-workers' performance and payoff. Otherwise, horizontal comparisons could affect effort provision as shown, for example in Maximiano, Sloof, and Sonnemans (2007) as well as Abeler, Altmann, Kube, and Wibral (2010) (but not in Charness and Kuhn (2007)). Furthermore, since vertical fairness concerns are also not in the focus of this study, our employers are paid only one (out of three) work relations, thus the game is a standard bilateral gift-exchange game from a game-theoretic point of view. This also implies that payoff-relevant characteristics are identical for all three workers, which in turn allows us to identify the incentive effects of participation in the contract decision process without having confounding effects from potential differences in monetary payoffs. Hence, systematic differences in behavior between the three workers can be traced back to the respective treatment differences that only vary the degree of participation and the provided information on the details of the wage setting process.

Our experimental data suggests that the incentive effects of participation in the wage setting process are rather negative: A worker who participates in the decision about the final work contract (the *participation* treatment) exerts on average significantly less effort than workers who neither participate in the wage setting process nor are informed about the details of the two alternative contract options (the *control* group). Hence, in our case workers' participation does not lead to improved firm performance.

A more detailed analysis of the experimental data reveals the underlying behavioral motives that lead to this decrease in effort exertion by participating workers. Basically, our analysis shows that the effort-wage gradient (which measures the responsiveness of workers with respect to proposed wage offers by the firm) of workers in the participation treatment is higher than for workers who do not participate in the wage setting process. In other words, the effort responses of participating workers to the respective wage offers are more pronounced (in both directions) than those of non-participating

[2] For a discussion of this and other arguments from a management perspective compare Harrison and Freeman (2004) as well as Foley and Polanyi (2006), see also Sagie and Koslowsky (2000).

[3] Pareto-improvements due to delegation could (until now) not be replicated outside the laboratory. In a natural field experiment Jeworrek and Mertins (2014) found that workers who were allowed to choose their own wage exerted significantly more effort than a control group. The related performance increase, however, was much smaller than the self-determined wage increase.

[4] A similar design has recently used by Gose and Sadrieh (2014) to analyze collective action. In one of their treatments workers who are matched to identical firms also face identical work contracts; however, they are then allowed to vote on vetoing the proposed contract before implementation. Effects of participation through voting have also been studied by Mertins and Albert (2015), who analyze subjects' behavior in a three-person power-to-take experiment.