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What is a fair wage? Reference points, entitlements and gift exchange☆

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ABSTRACT

We look at the effect of endogenous and exogenous wage setting institutions on wage offers and effort in the classic gift exchange experiments (Fehr et al., 1993). An exogenously imposed minimum wage at the competitive outcome lowers average wage offers. Workers do not negatively reciprocate and continue to offer high effort. In the endogenous wage setting institution, where workers first make wage proposals, wage offers increase marginally and average effort decreases relative to the baseline when wage proposals are not matched. Relative to the baseline, efficiency decreases in the minimum wage treatment while it marginally increases in the endogenous treatment. We find evidence that the institutional structure has important implications towards wage offers, effort and efficiency.

1. Introduction

In this paper we study stylized versions of two types of wage setting institutions. In the first one, the endogenous wage proposal institution, employers are presented an average wage proposal[1] on the part of the workers. We find that such wage proposals crowd out worker reciprocity if (proposed) wage offers are not met, workers reciprocate negatively decreasing effort levels. In the second institution, we study the effect of an exogenously imposed minimum wage at the competitive market wage. We find support for the crowding out of fairness with average wage offers declining across all periods. Even though wage offers decline, effort levels do not. We show that reciprocity in the gift exchange institution can be impacted differentially depending upon the nature of the intervention.

From the experimental literature we know that changes in institutional rules, can alter reference points, or entitlements, for the economic agents and alter behavior in subsequent periods (see for example the literature on price and quantity controls[2]). One such area that has been of recent interest for experimental economists is the labor market institution. The classic gift exchange experiments (Fehr et al., 1993) have been followed by recent research where several authors have looked at how exogenous and endogenous interventions in the gift-exchange experiments alter effort or wages levels. For example, wages may be set randomly (Charness, 2004) or above the competitive level by the experimenter (Charness, 2004; Brandts and Charness, 2004; Falk et al., 2006; and Owens and Kagel, 2010). A scenario where wages are endogenously set is studied by Charness et al. (2012) where the wage decision is delegated to employees.

Charness (2004) looks at exogenously imposed versus employer determined wages where the wage is either determined randomly or set by the experimenter. He finds that under exogenous determination effort levels are significantly higher at lower wage levels. He attributes lower effort to employer determined wages where employees provide close to minimum effort. In another paper Brandts and Charness (2004) study the effect of competitive imbalance (both, an excess of supply (workers) and an excess of demand

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[1] The average wage proposal is the average of all individual wage proposals.

[2] See for example, Isaac and Plott (1981), Coursey and Smith (1983), Kujal (1994) among others.

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(employers)). They introduce a binding minimum wage and still find evidence of gift exchange. An imposed minimum wage lowers effort provision at all wages and decreases the likelihood that a high wage is paid. Finally, Owens and Kagel (2010) find that average wages are significantly higher with the minimum wage than without, as are average overall effort levels. Interestingly, employees provide greater effort in the neighborhood of the minimum wage relative to comparable wages prior to the imposition of the minimum wage. Finally, any decrease in effort levels, relative to pre-minimum wages, is restricted to wages in the neighborhood of the minimum wage.

Falk et al. (2006) study the effect of imposing a competitive minimum wage on worker preferences and how it affects perceptions of entitlements. They elicit reservation wages from workers using the strategy method. Any wage offer above (below) the reservation wage is automatically accepted (rejected). The temporary introduction of a minimum wage leads to a rise in subjects' reservation wages (and in turn what is perceived as a fair wage) which persists even after the minimum wage has been removed. They argue that public policies can affect behavior not only through directly changing it but by also shaping perceptions of entitlements and thus, reservation values (p. 1351). As in their paper we also show that institutional arrangements can also shape wage expectations (entitlements) and hence effort.

Charness et al. (2012), meanwhile, study the effect of delegating the wage decision to employees on employee performance. Delegating the wage decision implies that wages are endogenously determined in their structure. They find that delegation significantly increases employee effort with performance increasing for the same wage levels. Finally, earnings of both employers and employees increase under this setup.

Endogenous wage setting institutions may either have wages set by the employees (Charness et al., 2012) or employers may entertain offers from unions or employees regarding wages. Such proposals are common in the workplace, for example, workers can ask for a wage increase, have a perception of a fair wage and communicate it to their employers, or make a wage proposal through a union. This may result in some form of wage entitlements that if not met may subsequently impact gift exchange.

There are no generally well defined and clear cut wage setting institutions and most are very complex due to their rules and procedures. Wage proposals from a single worker, or a collective of workers, are common in the workplace. In the latter case the workers may have stronger feelings towards a wage entitlement. Our implementation is weaker than direct wage proposals, or centralized wage bargaining. Clearly the elicitations are not binding for the employers, however, they create certain expectations for the workers (or entitlements) with regard to their future expected wage. In the first institution we study the effect on gift exchange of wage proposals made by workers. This may create entitlements to a certain wage level and if not met it may affect gift exchange.[3]

The second institution we study is where the minimum wage is set at the competitive level. Our predecessors have studied minimum wage above the competitive level (see Charness, 2004; Brandts and Charness, 2004; Owens and Kagel, 2010; and Falk et al., 2006). One can argue that it is not interesting to study a minimum wage at the competitive level. [4] However, we argue that such an exercise is useful. If a minimal intervention can impact gift exchange then more invasive policies will most likely have a stronger effect on labor market outcomes. We expect that the wage announcement creates a wage entitlement for the employers that can then impact effort.

We first replicate the findings in Fehr et al. (1993). [5] We find that in the endogenous wage proposal institution average wage offers increase, however, effort levels decrease. Our main contribution is the endogenous wage proposal institution. We find that endogenous wage proposals crowd out worker reciprocity when wage proposals are not met by the employers. If proposed wage offers are not met, workers reciprocate negatively decreasing effort levels. To our knowledge this is the first paper that presents such a result. Meanwhile, in the case of exogenously imposed minimum wage we find support for the crowding out of private fairness with average wage offers declining across all periods. Interestingly a higher proportion of the wage offers are made around the minimum wage. Even though wage offers decline, effort levels do not. This result goes against other experiments with minimum wages (Charness, 2004; Brandts and Charness, 2004; and Owens and Kagel, 2010). However, none of these papers studies a minimum wage at the competitive level.

It might be that the gains are indeed evaluated relative to a reference point or worker expectations. [6] If people have reference-dependent fairness preferences, policy measures may affect these points subsequently impacting how workers evaluate their employment situation. [7] Introduction of a minimum wage, or a wage proposal, may change the reference point according to which employers, or employee, judge an offer as fair or unfair. This may affect the wages offered by the employers and, ultimately, the employees' decisions about the effort levels.

2. Experimental design

Our design follows Fehr et al. (1993). The game has two stages. The first stage is a one-sided oral auction in which employers and workers exchange one unit of labor time. Employers propose a wage[8] and the monitor conveys the offers to the other room using Google chat. If the worker accepts the offer, the contract is concluded and this is communicated (via Google chat) to the other room. If not accepted, the employer can change the bid in an additional round with another higher one than the previous unaccepted bid. The first stage lasts three minutes. If the contract is not concluded, they earn zero profits in this period. In the second stage, workers determine the value of the good by choosing an effort level anonymously (their choice is revealed to their employer only to eliminate group pressure effects) and without any constraint (there are no sanctions associated with the effort chosen). Note that the identities of workers, or employers, is not revealed at any stage and participants had no knowledge about the person they were paired with.

We ran three treatments, the Baseline (BASE), the Endogenous wage proposal (ENDO) and the Exogenous minimum wage (EXO) treatments. We ran four sessions for the BASE and EXO treatments (Fehr et al., 1993) and five for the ENDO treatment. The different treatments are described below. Each session had twelve periods. In all sessions there were more workers than employers. The excess supply of workers is to give the competitive theory its best shot. Labor market terms were not used in the experiment: employers were called buyers, workers were called sellers, wage was called price and effort level was called quality level. Each participant knew how profits are computed and had sufficient time for reading the instructions and clarify doubts.

[3] This is weaker than Charness et al. (2012) where the wage decision is fully delegated to workers as workers are not directly involved in the decision making process.

[4] Recall that in price and quantity control experiments, non-binding controls impacted market efficiency and prices.

[5] Notice, we strictly follow the Fehr et al. (1993) protocol.

[6] As in Falk et al. (2006).

[7] Falk et al. (2006) make a similar point with regard to worker entitlements.

[8] It has to be multiple of five in order not to put a commission fee. It enables workers to earn a small amount of money at marginal trades.