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Do high stakes and competition undermine fair behaviour? Evidence from Russia☆

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ABSTRACT

This paper reports the results of a series of competitive labour market experiments in which subjects have the possibility to reciprocate favours. In the high stake condition subjects earned between two and three times their monthly income during the experiment. In the normal stake condition the stake level was reduced by a factor of ten. We observe that both in the high and the normal stake condition fairness concerns are strong enough to outweigh competitive forces and give rise to non-competitive wages. There is also no evidence that effort behaviour becomes generally more selfish at higher stake levels. Therefore, our results suggest that fairness concerns may play an important role even at relatively high stake levels.

1. Introduction

During the last decades economists and psychologists have gathered much evidence suggesting that concerns for fairness and reciprocity cannot be ignored in social interactions. This evidence and applications of recently developed theories of social preferences indicate that fairness concerns may help solving problems that have puzzled economists for a long time like, e.g. the persistence of non-competitive wage premia (Agell and Lundborg, 1995; Agell and Bennmarker, 2007; Bewley, 1999; Campbell and Kamlani, 1997), the possibility of involuntary unemployment (Fehr et al., 1993; MacLeod and Malcomson, 1998), the incompleteness of contracts (Fehr et al., 2007), the allocation of property rights (Ellingsen and Johannesson, 2004, 2005; Sonnemans et al., 2001), the conditions for successful collective action (Ostrom, 2000) and the design of contracts (Fehr and Falk, 2002; Englmaier and Wambach, 2010).

Since a considerable part of the evidence for the relevance of fairness concerns comes from questionnaire studies and from laboratory experiments sceptics sometimes dismissed this evidence by claiming that in real life the stakes involved are much higher than in laboratory experiments. Intuitively, it seems compelling to assume that fairness concerns become less relevant when the stakes are high. In addition, it has been frequently pointed out that in competitive environments deviations from

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rationality and self-interest are likely to be less important.[1] Thus, perhaps the interaction between competitive markets and high stakes will render fairness concerns unimportant. Since we believe that these arguments should be taken seriously we conducted a series of competitive labour market experiments in which subjects have the possibility to reciprocate favours.

To study the impact of variations in stake size we implemented a high stake condition, in which the subjects earned on average between two and three times their monthly incomes, and a normal stake condition, in which the subjects' income opportunities were reduced by a factor of ten. To be able to finance these experiments we have conducted them in Moscow (Russia). Both in the high and the normal stake condition subjects participated in a so-called gift exchange experiment. In this experiment wage formation took place in a competitive experimental market and after a labour contract was concluded workers chose the effort level. Fairness concerns can, in principle, play a role in this environment because experimental workers can reciprocate to high wage offers with high effort levels. The experiment is designed such that selfish workers will never make reciprocal effort choices. Yet, if there are sufficiently many fair workers exhibiting reciprocal effort behaviour, paying high, non-competitive, wages may be profitable for the experimental employers.

In contrast to common intuitions and beliefs the ten-fold increase in stake size has little impact on behaviour. We observe no differences in wages at the different stake levels. Both in the high and the normal stake condition experimental employers pay a substantial non-competitive premium. Wages typically are three times higher than the wage that is predicted by the competitive model (based on the assumption of selfish subjects). Moreover, the increase in stake size also has little impact on workers' effort behaviour. On average, workers in both stake conditions exhibit reciprocal effort choices that made it profitable for the employers to pay non-competitive wages. There are small treatment differences in effort levels but the sign of these differences varies with the wage level. At relatively low wages effort is slightly higher in the high stake condition whereas at relatively high wages the reverse holds true. At intermediate wage levels the effort is the same across conditions. We believe that these findings are of interest for labour economists and people who are interested in the potential sources of involuntary unemployment and non-competitive wage premia because the gift exchange experiment captures the spirit of the fairness version of efficiency wage theory (Akerlof, 1982; Akerlof and Yellen, 1990).

To examine potential peculiarities of our Russian subject pool we also conducted two further control experiments in the normal stake condition. In one control treatment we fixed the workers' effort exogenously so that firms had no reason to worry about effort. In this condition the experimental employers did not shy away from paying very unfair wages that are close to the competitive level.[2] Thus, whereas variations in stake size have no impact on wage formation institutional differences across markets, that is, whether effort is enforced exogenously, lead to radically different wage outcomes. In a second control experiment we observed the behaviour of Austrian subjects in the gift exchange condition. It turns out that wages as well as effort does not differ across the Russian and the Austrian subject pool. This suggests that there is nothing special about our Russian subjects, which strengthens our confidence in the potential generalisability of our high stake results across subject pools.

There are some other papers that examined how a rise in stake size affects the role of fairness concerns in the ultimatum game.[3] It is well known that the subgame perfect equilibrium in this game involves a strong earnings inequality if both players are selfish and rational. There exists by now a large body of experimental evidence, which contradicts this extreme prediction (e.g. Güth and Tietz, 1990; Roth, 1995; Camerer and Thaler, 1995). Typically, most proposers in the ultimatum game offer between 40 and 50 percent of the available money to the other party and responders reject low offers with high probability. Hoffmann, McCabe and Smith (HMS, 1996) reported the results of ultimatum games with relatively high stakes. HMS varied the stakes from $10 to $100. Their subjects were students at the University of Arizona. HMS show that the increase in stakes does not affect the proposers' offers. They provide informal evidence that responder rejection rates decreased with stake size. Yet, this claim is difficult to evaluate because they did not provide a statistical analysis of responders' rejection behaviour that controlled for the offers being received by the responders. Cameron (1999) examined the impact of very high stakes. In her experiments subjects could earn three months' income in a one-shot high stake ultimatum game. In the normal stake condition the amount to be divided up between the bargainers is twenty times lower. She reports that the proposers' behaviour is not affected by this large variation in stake size whereas the responders' rejection rates are a bit lower in the high stake condition. Slonim and Roth (1998) observe a similar result although with a different twist. They repeat the ultimatum game ten times with different opponents. They observe that stake size variations do not affect the proposers' behaviour. During the early rounds of the game they also do not find a stake size effect for the responders. However, towards the end of

[1] "Claims about the irrelevance of models of rational choice and the consequent irrelevance of economics are not uncommon topics of conversation. ... If one looks at experimental markets for evidence, the pessimism is not justified. Market models based on rational choice principles do a pretty good job of capturing the essence of very complicated phenomena¨ (Plott, 1986, p. 141). Smith (1991, p. 881) writes that markets "reinforce, even induce individual rationality". Such claims are based on the remarkable tendency of competitive experimental markets (with no or little reciprocation opportunities) to converge to the competitive prediction that is derived from assumptions of full rationality and self-interest.

[2] It is sometimes argued that "fair" behaviour is driven by the fact that experimenters can observe subjects' actions, i.e. that subjects do not want to appear greedy to the experimenter. However, experimental employers had little problems with appearing greedy in the condition with exogenous effort because they paid very low (unfair) wages. Thus, if subjects are concerned about appearing greedy, this concern seems to be easily overruled by other concerns.

[3] The ultimatum game is a bilateral bargaining game in which two players have to agree how to split a certain amount of money according to the following rules. The proposer makes one proposal of how to split the money. The responder can accept or reject this proposal. If she rejects both players get zero payoff. If she accepts the proposal is implemented.

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