3. Respect and Relational Contracts

Tor Eriksson (Aarhus School of Business and Social Sciences and CCP, Aarhus University)

Marie Claire Villeval GATE-CNRS, University of Lyon

Abstract: Assuming that people care not only about what others do but also on what others think, we study respect in a labor market context where the length of the employment relationship is endogenous. In our three-stage gift-exchange experiment, the employer can express respect by giving the employee costly symbolic rewards after observing his level of effort. We study whether symbolic rewards are used by the employers mainly to praise employees or as a coordination device to build relational contracts. We find that a high proportion of long-term relationships have been initiated by the assignment of symbolic rewards. However, in the presence of either excess demand or excess supply of labor, the assignment of symbolic rewards decreases in the length of the relationship. This supports the notion that in these conditions employers use symbolic rewards increases the employees' likelihood of accepting to continue the relationship with the same employer. But when the market is not balanced, it also leads them to adjust their effort downwards as if interpreting symbolic rewards as signaling a lower risk of getting unemployed. Overall, the ability to assign symbolic rewards is unable to increase profits or the duration of the employment relationships.

Keywords: Respect, Symbolic rewards, Coordination, Signaling, Labor market, Experiment

JEL Codes: C91, J32, J64, M52

Contact : Tor Eriksson, Department of Economics, Aarhus University: Frichshuset, Hermodsvej 22, 8230 Åbyhøj, Denmark. E-mail: tor@asb.dk. Marie Claire Villeval, University of Lyon, F-69007, CNRS - GATE, 93, Chemin de Mouilles, F-69130, Ecully, France. E-mail: villeval@gate.cnrs.fr.

Acknowledgements: The authors are grateful to participants at a CCP Workshop on Personnel Economics, the 1st joint SEBA-GATE workshop at BNU (Beijing), the EALE-SOLE Conference (London) and the Econometric Society World Congress (Shanghai) for comments on earlier versions. We thank S. Ferriol for skillful programming and J. Rosaz and L. Butera for research assistance in the laboratory. Financial support from the EMIR program of the French National Agency for Research (ANR BLAN07-3_185547) is gratefully acknowledged.

1. INTRODUCTION

It has become increasingly clear that people are motivated by both monetary and nonmonetary incentives but their interrelationship has become the subject of economic analysis only recently (see Rebitzer and Taylor, 2011; Charness and Kuhn, 2011; Gneezy and Rustichini, 2000). While there is much research on fairness and reciprocity (see e.g., Charness, 2004; Fehr *et al.*, 1993, 1997, 2007; Fehr and Schmidt, 1999), economic work on non-monetary rewards used by the principals to express trust or recognition is scarce.¹ Therefore, we have a very imprecise economic knowledge on how employers value their employees, how they express it, and how this affects employees in return.

A few papers, e.g., Ariely *et al.* (2009), Ball *et al.* (2001), Charness *et al.* (2010), and Kosfeld and Neckermann (2011), examine status and awards as reward schemes. Note that awards differ from respect as we define it here in that awards are typically visible to all employees and are in fact used to create competition among them. Instead, respect can be expressed in such a way that it is only visible to the employee who receives it, as is the case in our study.

The potential importance of the expression of recognition may derive from the fact that people are not only motivated by what others do to them (other-regarding preferences), but also by what others think about them (self-regarding motives); see Ellingsen and Johannesson (2007a and b).² Agents derive utility from thinking of themselves as good,

¹ Exceptions are Falk and Kosfeld (2006) who study the principal's choice of autonomy provided to employees and Dickinson and Villeval (2008) who analyze the choice of monitoring intensity. While both examine *ex ante* actions (*before* effort is provided), we are chiefly interested here in the expression of respect by the principal to the agent *after* effort is provided.

² Ellingsen and Johannesson (2007b) show for example that anticipated verbal feedback from recipients affects the decisions of dividers in a splitting game although the relationship is anonymous and one-shot. Similarly,

skilled, and valuable (Benabou and Tirole, 2002, 2006), and consequently have a desire for praise and social esteem; Ellingsen and Johannesson (2007a). This could contribute to explain why people enjoy working in firms where managers provide recognition (Lazear and Shaw, 2007).³⁴

From the employers' point of view, respect can be used to praise employees' past effort. But they can also use it as a coordination device to signal their willingness to build a relational contract with a particular employee.⁵ If this is the case, then we should observe less expression of respect once a relational contract has been set up; in contrast, if praising employees is only motivated by the recognition of his effort, it should be expressed continuously over time. In addition, if respect is used as a coordination device, we should expect that its use depends on the potential value of the relationship in terms of expected profits to be earned by the employer. Therefore, unbalances on the labor market due either to excess supply or to excess demand of labor should influence its usage. This paper addresses three sets of questions. First, do employers express respect and if so, is it complementary or substitute to wages? Second, is respect mainly used to praise employees for past effort or as a coordination device to continue the employment relationship? Third,

Xiao and Houser (2007) find that the willingness to avoid negative emotions expression through written messages from the receivers promotes fair exchange in a one-shot dictator game. Even more, Dana *et al.* (2006) show that many more subjects prefer exiting rather than playing a dictator game when the recipients are informed about the choice faced by the dictator than when uninformed on this option. For a more general discussion of how employers may show their appreciation of their employees' efforts, see Camerer and Malmendier (2007).

³ As emphasized by Kandel and Lazear (1992) and subsequent papers on peer pressure (Carpenter and Seki, 2010), employees also value the regard of their co-workers. But this dimension is out of the scope of this study.

⁴ Social psychologists like Rhoades and Eisenberger (2002) have shown the importance of organizational support on employees; Webster *et al.* (2003) and Gaines *et al.* (2005) show the value of praise after a successful performance. Having unsupportive bosses also contributes to predict quits (Cottini *et al.*, 2009).

⁵ Dur (2009) studies theoretically the substitutability between the expression of managers' care for the employees through the wage level and socio-emotional resources.

do employees value respect and, for given rents, does respect increase the length of the relationship with the same employer and further effort?

Testing the role of respect would be very difficult by means of survey or registry data. We have therefore designed a laboratory experiment based on a gift-exchange game. The structure of the baseline treatment is inspired by Brown, Falk and Fehr (2004). The first stage is a trading phase in which employers submit public or private wage offers on the market. In the second stage, the employees who have accepted an offer decide on their level of effort. In the respect treatment, we add a third stage in which the employer can assign symbolic rewards to her employee to show her satisfaction. Indeed, following Ellingsen and Johannesson (2008), we model respect by providing the principal with the possibility of using symbolic rewards. These rewards do not affect the employee's payoff but they are costly to the employer. Indeed, this cost shows that the employer is a worthy audience, which can increase the value of respect in the eyes of the employee, as emphasized by Ellingsen and Johannesson (2007a). Since the game is repeated and players are assigned a permanent identification number, we can observe the building of long-term relationships and the influence of respect on this process. If they care about respect, the employees can reward it through the duration of the relation and the choice of effort level in the subsequent period if both employers and the employees agree to continue the relationship.

We compare three market conditions: one in which there are the same number of employers and employees on the market, one in which there are 8 firms and 12 employees ("excess supply"), and one in which there are 12 firms and 8 employees ("excess demand"). This manipulation allows us to measure whether the use of symbolic rewards is affected by the market conditions. If employers use less symbolic rewards in the excess demand condition and more in the excess supply condition, conditional on the same level of effort, this would suggest that the effort to signal the willingness to continue the relationship depends on the potential profit of continuing the relationship. In this case, it would also show that respect is not purely driven by the willingness to praise employees.

Our results show that when the market is balanced 23.31% of employers use costly nonmonetary rewards. A high proportion of long-term relationships have been initiated by the assignment of symbolic rewards, and in most conditions assigning symbolic rewards to an employee increases the likelihood of offering him to continue the relationship. However, when there is either excess demand or excess supply of labor on the market the assignment of symbolic rewards is negatively associated with the length of the relationship. This supports the notion that in these conditions employers mostly use respect as a coordination device to initiate relational contracts. Controlling for rents and for the level of effort, we also find that the expression of respect is significantly lower in the excess demand condition, i.e. when the expected profits of continuing the relationship are lower. Indeed, the proportion of firms using symbolic rewards is 20.83% in this condition while it reaches 28.80% when there is excess supply.

On the employees' side, controlling for the rent level, receiving symbolic rewards increases the likelihood of accepting to remain with the same employer. This is true for all market conditions. But when the market is in excess demand, it also leads the employees to adjust their effort downwards as if they are interpreting symbolic rewards as signaling a lower risk of getting unemployed. When the market is balanced, receiving thumbs motivates the employees to increase their effort even further, suggesting that a more balanced relationship might favor the dynamics of respectful relationships. Overall, however, the opportunity to assign symbolic rewards does not enable the firms to increase their profits or the duration of the employment relationships compared to the baseline treatment. Indeed, in the respect treatment employers offer lower rents to their employees than in the baseline treatment. This suggests that employers try to substitute non-monetary to monetary rewards and this exerts a depressing effect on wages in general and on overall earnings.

The remainder of this paper unfolds as follows. Section 2 sets out the design and procedures of the experiment and gives the theoretical predictions. The presentation of our findings is in Section 3. The Section 4 discusses our results and concludes.

2. THE EXPERIMENT

2.1. Experimental design

Our experiment is based on a 2x3 design, that is, it consists of two treatments, the baseline treatment and the respect treatment, each being played under three different market conditions: a balanced labor market, excess supply or excess demand in the labor market.

Our baseline treatment consists of a two-stage gift-exchange game that is played during twelve trading periods. It is close to the design used by Brown, Falk and Fehr (2004) in their incomplete contract condition with a possibility to build long-term relationships. In our balanced labor market condition, in the first stage of each trading period ten firms and ten employees can contract on the labor market during three minutes.⁶ The duration of this

⁶ A major difference with the design of Brown, Falk and Fehr (2004) (henceforth: BFF) is that instructions are contextualized. We use notions such as employer, employee, wage, quality of work. This choice is justified by

trading phase can be shortened if the maximum number of contracts were concluded before the three minutes have elapsed. An identification number is assigned to each firm and each agent that is kept constant until the end of the game. This allows traders to build long-term relationships. Only firms can submit contracts on the labor market. A contract offer consists of a wage, w, and a non-binding desired level of effort, \hat{e} , with $w \in (0,1,...,100)$ and $\hat{e} \in (1,2,...,10)$. A contract offer can be either public or private. Public offers are made visible to all employees and firms. Private offers are addressed to a specific employee and cannot be observed by other firms or employees.⁷ Irrespective of whether the offer is public or private, the identification numbers of the firms that submit offers are always made visible. A firm can submit as many public and private offers as it desires but it cannot contract with more than one employee and employees can accept at most one contract. The identification numbers of the employees who have not yet accepted an offer are always visible to the firms. As soon as an employee accepts an offer, his identification number disappears from the pool of available employees. All the offers submitted by the employing firm disappear from the market and can therefore not be accepted anymore. The employees can observe all public offers submitted on the market and the private offers that are addressed specifically to them.

As soon as an employee has accepted the offer of a firm, in the second stage he chooses his actual level of effort e with $e \in (1, 2, ..., 10)$. It is common information that e can differ from the firm's desired level of effort. The effort cost function is convex and the cost schedule for the employees (the same as in BFF, 2004) is displayed in Table 1.

the nature of our treatment manipulation (see details below). Other differences with our design include the use of separate instructions for employers and employees in BFF, 15 trading periods instead of 12, ten workers and seven firms instead of ten workers and ten firms in our balanced market condition.

⁷ On the design of games with public vs. private contracts with an identification of the traders, see also Kirchsteiger *et al.* (2001).

Table 1. The cost of effort

Effort	1	2	3	4	5	6	7	8	9	10
Cost	0	1	2	4	6	8	10	12	15	18

At the end of this stage, only the employing firm is informed on the actual effort level of its employee. Trading partners are informed on both the firm's and the employee's payoffs. The payoff of the firm is determined as follows:

$$\pi^{\rm F} = 10e - w$$
 if a contract has been accepted, and 0 otherwise (1)

The payoff of the employee is defined as follows:

$$\pi^{E} = w - c(e)$$
 if a contract has been accepted, and 5 otherwise (2)

The amount of 5 can be interpreted as an unemployment benefit.

At the end of a period, all contracts are terminated. At the beginning of the next trading phase, like in BFF (2004), no employee has a job and no firm has an employee. Therefore, to continue a relationship a firm has to make a private offer to the same employee as in the previous period and the employee has to choose this offer among the available offers.

The respect treatment is similar to the baseline treatment, except that a third stage is added after the firm observes its employee's actual effort level. In this stage, the firm can send between 0 and 5 symbolic rewards to its employee to "express its approval". The symbolic rewards consist of raised thumbs that usually represent satisfaction, approval or praise of somebody's action.⁸ Receiving thumbs does not modify the employee's payoff function that

⁸ In gladiatorial combats in the ancient Rome, a thumb up was considered a signal of approval for a gladiator's life to be spared, although the interpretation is now contested. In medieval times, it has been used to seal transactions. This gesture is today considered as a sign of approval of good behavior in most cultures in Europe, North America or China. Morris, Collett, Marsh and O'Shaughnessy (1979) mention the following answers: « All right, A.O.K., bang on, champion (France), everything's fine, everything's fixed, excellent, fixe

remains the same as in (2). In contrast, each thumb assigned costs one point to the firm. Indeed, paying respect is more than simply expressing praise: whereas the later may not cost anything (and therefore may be hypocritical), the former requires some effort on the part of the person who pays respect. The payoff of the firm in the respect treatment becomes:

$$\pi^{F}_{R} = 10e - w - s$$
, if a contract has been accepted, and 0 otherwise (3)
with *s* denoting the cost of symbolic rewards assigned to the employee.

Employees know both that the assignment of thumbs reduces the firm's payoff and the cost of the thumbs. In contrast, the number of thumbs bought by a firm is not common information in the market. In all treatments, there is a history box displayed on the subjects' screens, showing for each period, whether a contract has been concluded, the identification number of the co-contractor, whether it is private or public, the wage, the demanded level of effort, the actual level of effort, and the number of thumbs given to the employee.

The use of symbolic rewards may express a sincere praise of the employee's effort, but it may also be used strategically as a coordination device to prolong a profitable relationship. To capture this dimension, we vary the proportion of firms and employees on the market. In the excess demand condition, 12 firms compete to hire 8 employees. In the excess supply condition, 12 employees compete to contract with 8 firms. Each treatment has been played under the three conditions. If symbolic rewards are used to signal a willingness to continue the employment relationship, they should be less frequent when the expected profits from continuing the relationship are lower (i.e. in the excess demand condition).

⁽Portugal), good luck, great stuff, I agree, I made it, it's a winner, kalo (Greece), O.K., ready to go, really good, Spitze (Austria), spot on, success, tops, va bene (Italy), very good, victory you've done well. »

2.2. Procedures

The experiment has been run at the *Groupe d'Analyse et de Théorie Economique* (GATE-CNRS), Lyon, France. 180 undergraduate students from the local engineering and business schools participated in this experiment, after receiving an invitation by the ORSEE software (Greiner, 2004). For each condition, two sessions were conducted in the respect treatment and one in the baseline treatment. Thus, nine sessions in total have been run. No subject participated in more than one session.

The experiment was computerized using the REGATE software (Zeiliger, 2000). Upon arrival, the subjects drew a computer tag from a bag and were randomly assigned to a computer terminal. After the instructions were read aloud by the experimentalist, the subjects answered an understanding questionnaire (see Appendix). All questions were answered in private and oral communication between the subjects was not allowed. Then the subjects played three practice periods with only the trading phase of the game in order to become familiar on how to trade on the market, but without revealing their intentions regarding the choice of effort or the use of symbolic rewards. During these periods, the subjects received a provisional identification number. The practice periods were not paid.

A session lasted on average approximately 90 minutes including the payment of subjects. On average the subjects earned $\in 14.85$, including a show-up fee of $\in 5$.

2.3. Predictions

The equilibrium of the finitely repeated game in the baseline treatment is straightforward. In the second stage of the game, since contracts are incomplete any employee should choose the minimum level of effort that minimizes his cost, i.e. $e^{*}=1$. Therefore, any firm should offer the minimum feasible wage level, $w^*=5$. Indeed, since the unemployment benefit amounts to 5, an employee should accept any contract offering at least w=5. Firms should be indifferent between posting public or private offers since they should not care about the duration of the contract. These predictions hold for each period and therefore, there is no reason to expect long-term relationships to emerge.

These predictions are not modified in the respect treatment. Indeed, symbolic rewards should not increase effort since they do not affect employees' earnings. Consequently, firms should never buy symbolic rewards. The share of private contracts, the average duration of contractual relationships, the average wage and effort level should be similar across treatments. When there is excess supply, the predictions are the same as when the market is balanced. When there is excess demand, the competition between firms may motivate firms to offer a higher wage than in the other conditions for increasing their chance to employ a worker. However, in such a situation, the employees still choose the minimum level of effort, $e^*=1$, and therefore the firms cannot offer a wage higher than w=10 because otherwise they would make a loss. As a result, $w^*=10$ is the equilibrium wage in this condition. This indicates that the surplus is captured by the employees, whereas in the other conditions, firms remain indifferent between making private or public offers. Nor is there any reason for more long-term relationships to arise in this condition.

However, we know from the literature on gift-exchange games that the average behavior usually deviates from the standard prediction. Based on the inequity aversion model of Fehr and Schmidt (1999), BFF (2004) show that in the game corresponding to our baseline

11

treatment, if there are sufficiently many fair subjects, there is an equilibrium where all the employees choose a higher than minimum level of effort in all periods except the last one and where only the truly fair subjects choose a non-minimum effort in the last period. Since fair workers reciprocate to the offer of positive rents, the firms offer profitable rents up to the last period and therefore, the prospect of receiving a rent even in the last period disciplines the selfish workers who mimic the truly fair subjects up to the penultimate period. This mechanism is facilitated by the possibility of making private offers. In the presence of a sufficiently high proportion of socially oriented subjects, we should observe $e > e^*$, $w > w^*$, a positive share of private offers and an average duration of employment relationships significantly higher than 1. These predictions hold for both treatments and all conditions.

These behavioral predictions assume that people care about what others do. Interested in what happens when people also care about what others think, we assume that people dislike looking selfish and take pride in being thought of as a valuable person. Following Ellingsen and Johannesson (2007), our intuition is that the search for esteem leads to the choice of non-minimum effort levels by a fraction of the employees when principals can express their praise and if their intentions are perceived as being good. Unlike in reciprocity-based models, these employees may exert a non-minimum effort (1) *even* when they receive a low wage. Long-term relationships are more likely if employees receive praise for their effort.

If firms believe that a sufficient share of employees have a concern for social esteem, they may send them costly symbolic rewards when the latter choose non-minimum effort levels. Our intuition is that conditional on the same rent offered, the average level of effort, the share of private contract offers and the average duration of the employment relationship should be higher in the respect treatment than in the baseline. However, selfish firms can also use costly symbolic rewards strategically as a partial substitute for generous wages, up to the penultimate period, if i) the cost of thumbs is more than compensated for by the additional surplus created by the employee's effort and if ii) thumbs increase the willingness of a reciprocal employee to stay in the same firm.⁹

The various market conditions help in identifying the motivation of offering symbolic rewards. If we observe that, conditional on the same effort level, firms express more respect when there is excess supply of labor and less respect when there is excess demand than in the balanced market condition, this indicates that employers adjust their expression of respect to the expected profits from continuing the relationship. In contrast, if symbols are only used to express sincere respect, they should not adjust to the market condition.

3. RESULTS

Our analysis of the results focuses on the use of symbolic rewards by firms and its consequences on employees' effort and ability to build long-term relationships. Before analyzing the determinants of firms' and employees' behavior and before studying the profitability of the expression of respect we first present some summary statistics.

3.1. The use of symbolic rewards

The summary statistics displayed in Table A in Appendix show that the percentage of private offers, wages, and rents offered by the employers, the effort exerted by the

⁹ One additional unit of effort increases the firm's payoff by 10 points while each thumb costs 1 point. Thus, if there is more than 10% chance that the employee they want to maintain cares about symbols (i.e. accepts an offer from the same firm and increases his effort by at least one unit), they should optimally offer thumbs.

employees, and the average duration of relationships are higher than expected from standard predictions in all conditions and treatments. Overall, we find that 23.31% of the firms give symbolic rewards to their employee when they have the opportunity to do it and when the market is balanced. When they choose to express their approval they give on average 1.98 thumbs. These values vary with the state of competition on the market, the private nature of contracts, and the employees' level of effort.

As for the structure of the labor market, the use of symbolic rewards is lowest (highest) when there is excess demand (supply). Indeed, 20.83% of firms use them in the excess demand condition and 28.80% in the excess supply condition. The average number of thumbs given is higher when there is competition than when the market is balanced, with 2.40 thumbs assigned in the excess demand condition and 2.38 in the excess supply condition.¹⁰ We also find that in the last period, the percentage of firms still offering thumbs is 7.84%. This behavior cannot be motivated by strategic considerations.

Regarding the nature of contracts, firms should be indifferent between private and public offers. 59.19 % of all accepted offers are private in the balanced market condition. The corresponding percentages are 52.33 in the excess demand condition and 67.25 in the excess supply condition. This ordering of the conditions suggests that firms are more indifferent when they do not expect much profit from a relationship. The use of symbolic rewards is more frequent in private contracts than when the contract results from a public offer, but the difference is significant only when the market is balanced. Indeed, in the balanced market condition, 34.33% of private contracts are associated with the provision of thumbs while it is

 $^{^{10}}$ A series of paired Mann-Whitney tests assuming one independent observation for each individual indicate that none of the differences between conditions are significant (*p*>0.10, two-tailed).

the case in only 8.82% of public contract offers (Wilcoxon test, with the individual as a unit of observation, p = 0.013). The corresponding percentages are 28.18% and 10.98% in the excess demand condition (p = 0.328) and 34.78% and 19.74% in the excess supply condition (p = 0.409).

Contrary to the standard predictions, employees choose a non-minimum level of effort on average and firms are more likely to give symbolic rewards to their employees when their level of effort is higher. Figure 1 displays the percentages of firms that give symbolic rewards for each level of effort in each condition, while figure 2 shows the average number of thumbs given by effort level and condition.

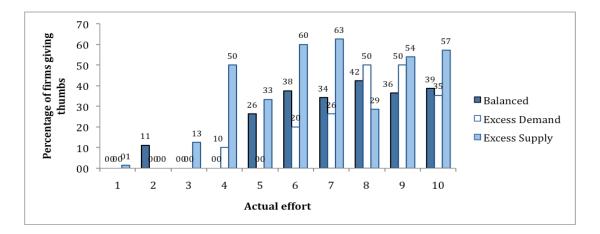


Fig.1. Percentage of firms giving symbolic rewards, by level of effort and by condition

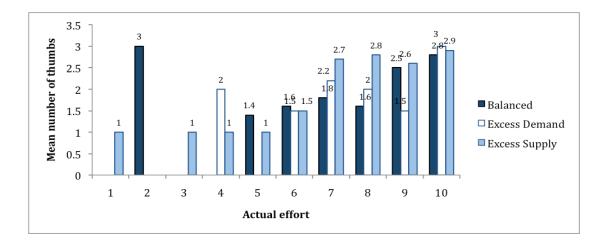


Fig.2. Mean number of symbolic rewards, by level of effort and by condition

Figures 1 and 2 show that in each condition, the higher the actual level of effort, the higher is the percentage of firms giving symbolic rewards and the number of thumbs assigned.

One behavioral prediction is that the provision of symbolic rewards should facilitate the creation of relational contracts and should therefore be associated with a longer average contract length. Figure 3 displays the relative frequency of employer-employee relationships initiated by symbolic rewards during the first period of interaction for three total duration categories and in each market condition.

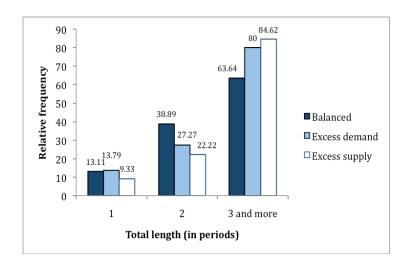


Fig.3. Proportion of relationships initiated by symbolic rewards, by total duration (number of periods) and market condition

Clearly, there is a positive association between the initial assignment of symbolic rewards and the construction of longer-term employment relationships under all market conditions. In the balanced condition, only 13.01% of the relationships that end after the first period of interaction gave rise to the provision of symbolic rewards. In contrast, in 63.64% of the relationships that lasted for at least three periods the firms sent symbolic rewards during the first period of interaction. This is even higher in the excess demand condition (80%) and the excess supply condition (84.62%), indicating that those firms that succeed in building relational contracts (i.e. longer-term contracts with the same employee) are likely to be the same as those that give non-monetary rewards to their employees.

This does not imply, however, that symbolic rewards are given throughout the duration of the relationship. Indeed, in the balanced condition, the percentage of firms giving symbolic rewards increases from 19.87% when the current contract length is 1 period, to 20.69% when it is 2 and 54.55% when it is 3, and the share decreases to 28.89% for longer current lengths. This is also observed in the excess demand condition (the corresponding percentages are 19.70, 33.33, 30, and 12.5, respectively) and the excess supply condition (20.75, 38.71, 61.54 and 31.71, respectively). These patterns suggest that the firms use symbolic rewards not only to praise their employees for past effort but also as a costly signaling device on their willingness to build long-term relationships.

3.2. The determinants of firms' decisions to express respect

Moving next beyond the bivariate relationships we considered above, we perform some regression analyses of the decisions made by the firm and employee subjects, respectively. We first analyze the determinants of the firms' decision to give symbolic rewards to their employees. We estimate a Probit model with robust standard errors and clustering at the individual level to control for the lack of independence between data. The dependent variable is the decision to assign symbolic rewards. We also estimate four Tobit models with robust standard errors and clustering at the individual level in which the dependent variable is the number of thumbs given. Tobit models are used to account for the fact that many observations are left censored and clustering is used because the same individuals make repeated decisions. The independent variables include a dummy variable for private contracts, the rent, the actual effort exerted by the employee, the current length of the employment relationship, and the gender of the employer. Moreover, a time trend is included to account for the evolution of behavior over time. The results of these regressions are displayed in Table 2. The first two columns contain the estimates on pooled data for all market conditions of the respect treatment, including dummy variables for the balanced market and the excess supply conditions. The first column corresponds to the Probit model and the second to the Tobit model. The three following columns report the Tobit estimates for each market condition separately.

Dependent variables	Decision to assign thumbs	Ν	Number of thur	nbs assigned	
Conditions	All conditions (1)	All conditions (2)	Balanced market (3)	Excess demand (4)	Excess supply (5)
Actual effort	0.078***	0.847***	0.781***	0.991***	0.853***
	(0.013)	(0.124)	(0.176)	(0.168)	(0.153)
Rent	-0.003	-0.033*	-0.081	-0.007	-0.035
	(0.002)	(0.019)	(0.056)	(0.029)	(0.026)
Private contract	0.024	0.183	1.108	0.411	-0.654
	(0.047)	(0.434)	(0.718)	(0.665)	(0.238)
Length of the	-0.051***	-0.480**	-0.055	-0.882***	-0.588***
relationship	(0.017)	(0.230)	(0.308)	(0.338)	(0.221)
Balanced market	-0.068	-0.704	-	-	-
	0.060	(0.682)			
Excess demand of labor	-0.102*	-1.024*	-	-	-
	(0.053)	(0.534)			
Period	0.002	-0.019	-0.049	0.063	0.028
	(0.006)	(0.054)	(0.142)	(0.131)	(0.126)
Male employer	-0.103*	-1.074	-0.567	-0.848	-1.588*
	(0.062)	(0.712)	(1.095)	(0.819)	(0.888)
Constant	-	-3.214***	-3.889	-6.657***	-1.381
		(1.176)	(2.401)	(1.760)	(1.214)
Ν	619	619	236	192	191
Left-censored obs.	-	469	181	152	136
Log Likelihood	-245.974	-463.242	-188.145	-135.498	-159.365
Pseudo-R ²	0.282	0.121	0.128	0.203	0.249
Prob >F	-	0.000	0.000	0.000	0.000
Wald Chi ²	605.93	-	-	-	-
Prob>Chi ²	0.000	-	-	-	-

Table 2. Determinants of the employers' decisions

Note: Model 1 is based on a Probit model with robust standard errors (in parentheses) and clustering at the individual level. The values reported are the marginal effects. Models 2 to 4 are Tobit models with robust standard errors and clustering at the individual level. *, **, and *** indicate statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

As indicated in the first column of Table 2, the likelihood that a firm assigns thumbs to an employee increases by 7.8% for each additional unit of effort exerted by this employee. It decreases by 5.1% when the length of the relationship increases by one period and by 10.2% when there is excess demand compared with the excess supply condition (significant at the 5.2% level). The second column of Table 2 confirms that, controlling for the level of the rent, the effort provided and the duration of the employment relationship, the number of

thumbs assigned is consistently increasing in the employee's level of effort and it is marginally lower in the presence of excess demand of labor. This makes sense as the profits that can be earned in this condition are lower than in the other conditions.

There are two other notable differences between the market conditions. First, when the market is balanced, we find that each additional unit of rent offered by the firm decreases the likelihood that a firm assigns thumbs by 1.06% (significant at the 3.2% level; regression not reported in Table 2 but available upon request). In contrast, there is no significant substitution effect between rent and thumbs in the other conditions.¹¹ In the excess demand treatment, this may be due to the fact that firms face a higher risk of not being able to hire any worker. In the excess supply condition, firms can offer lower rents on average due to the competition and therefore they have less pressure to substitute monetary and nonmonetary rewards. Second, while it exerts no influence when the market is balanced, the length of the employment relationship decreases the number of thumbs assigned to the employees in the presence of unbalances. It suggests that once a relational contract has been established during such conditions, firms do not want to sacrifice money any longer either because their profits are lower (excess demand condition) or because they have a stronger bargaining power (excess supply condition) than when the market is balanced. A possible interpretation is that firms use symbolic rewards to signal their willingness to establish relational contracts mainly when the market is unbalanced.

To investigate further the role of respect as a coordination device, we now study whether paying respect is associated with the employers' willingness to keep the same employee in

¹¹ The regressions deliver the same conclusions when wage is used instead of the rent variable.

the next period. We estimate two Probit models with robust standard errors and clustering at the individual level in which the dependent variable is the probability for an employer to make a private offer to the same employee as in the previous period. The independent variables include the private nature of the t-1 contract, the effort provided by the employee and its difference with the desired level of effort in t-1. When appropriate, we include the t-1 number of thumbs. We control for period, market condition and gender. The first model considers the baseline and the second one the respect treatment. Table 3 displays the results.

Table 3 Determinants of the employer's probability to make a private offer to same employee as in the previous period

Treatment	Baseline (1)	Respect (2)
Effort in <i>t</i> -1	0.095*** (0.019)	0.103*** (0.016)
Difference between actual and	0.019 (0.018)	-0.001 (0.019)
desired effort in <i>t</i> -1		
Private contract in <i>t</i> -1	0.306*** (0.087)	0.151** (0.076)
Nb thumbs given in <i>t</i> -1	-	0.063** (0.029)
Balanced market	-0.054 (0.088)	-0.168** (0.076)
Excess demand of labor	-0.340** (0.144)	-0.096 (0.082)
Period	-0.006 (0.010)	0.027** (0.011)
Male employer	0.008 (0.119)	-0.125* (0.064)
Ν	268	568
Log likelihood	-132.101	-225.722
Wald Chi ²	232.82	1261.81
p> Chi ²	0.000	0.000
Pseudo R^2	0.289	0.423

Note: The two regressions are based on Probit models with robust standard errors (in parentheses) and clustering at the individual level. The table reports the marginal effects. *, **, and *** indicate statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Each additional unit of effort increases the likelihood that a firm makes an offer to the same employee by 9.48 % in the baseline treatment and by 10.34 % in the respect treatment. Controlling for effort and market conditions, symbolic rewards are associated with a higher probability of making a private offer to the same employee in the next period. Each thumb assigned increases the probability of an offer made to the same employee by 6.3% (significant at the 5% level). In separate regressions, the corresponding marginal effect is

24.41% in the balanced market condition and 19.34% in the excess supply condition (significant at the 10% level); this effect is not statistically significant in the excess demand condition. Thus, paying respect also signals a willingness to build relational contracts. We observe that the offer of a contract to the same employee in two consecutive periods is significantly less likely in the excess demand condition when it is not possible to express respect (model 1), and in the balanced market condition when firms can express respect.

3.3. Do employees value respect?

To understand whether the receipt of symbolic rewards influences the employee's willingness to continue the employment relationship and to exert additional effort, we estimate a two-step selection model to correct for potential selection bias. The selection (Probit) equation estimates the probability that an employee is working in the same firm as in the previous period after receiving a private offer from this firm (column (1)). The independent variables include condition dummies (with the excess supply condition as the reference category), the rent and the length of the relationship in *t*-1, the number of thumbs received in t-1, this variable being also interacted with each market conditions (except the reference), a time trend, and the employee's gender. The second equation analyzes the determinants of the difference in the effort levels between the current period and the previous one if the employee has accepted a private offer from the same firm. We estimate two OLS models. In column (2), we incorporate the Inverse of the Mills ratio extracted from the selection equation and we omit the length variable to identify the model. In column (3), we also include the variation of the rent between the current and the previous periods. In all the regressions, standard errors are robust and clustered at the individual level.

Independent variables	Probability of	Variation of effort between <i>t</i> and <i>t</i> -1				
	working in the same	conditional on accepting an offer from				
	firm as in t-1 after a	the san	ne firm			
	private offer (1)	(2)	(3)			
Balanced market	-0.012 (0.048)	0.010 (0.250)	0.045 (0.257)			
Excess demand	-0.221*** (0.078)	0.613 (0.365)	0.312 (0.326)			
Rent in <i>t</i> -1	0.001 (0.001)	-0.030 ***(0.009)	0.007 (0.008)			
Variation of rent between <i>t</i> and <i>t</i> -1	-	-	0.159*** (0.032)			
Nb thumbs received in <i>t</i> -1	0.057** (0.025)	-0.165* (0.083)	-0.218* (0.101)			
Nb thumbs received in <i>t</i> -1 in						
Balanced market	-0.030 (0.040)	0.358** (0.150)	0.335** (0.139)			
Nb thumbs received in <i>t</i> -1 in Excess						
demand	-0.001 (0.020)	0.139* (0.076)	0.169 (0.114)			
Length of the relationship in t-1	0.064 * * * (0.009)	-	-			
Period	0.001 (0.006)	-0.189*** (0.057)	-0.136***(0.041)			
Male employee	-0.020 (0.026)	0.236 (0.286)	0.299 (0.246)			
Inverse of Mills ratio	-	-0.452 (0.330)	-0.377 (0.261)			
Constant	-	2.017*** (0.599)	0.010 (0.531)			
N	252	203	203			
Log Likelihood	-82.040	-	-			
Wald Chi ² // F	203.45	5.64	8.97			
Prob >Chi ² // >F	0.000	0.004	0.001			
Pseudo $R^2 // R^2$	0.347	0.114	0.312			

Table 4. Determinants of the employee's behavior

Note: Column (1) reports the marginal effects resulting from the estimation of the Probit model. Columns (2) and (3) report the OLS regressions with a correction for a possible selection bias. All standard errors (in parentheses) are robust and clustered at the individual level. *, **, and *** indicate statistical significance at the 0.10, 0.05, and 0.01 level, respectively.

Controlling for the other determinants, each thumb received in the previous period increases by 5.70 % the likelihood that the employee chooses to work in the same firm in the subsequent period after receiving a private offer from this firm (column 1). Each thumb has a similar impact regardless of the labor market condition. However, when there is excess demand of labor on the market, employees are less likely to be willing to prolong the relationship since it is easier to switch firms.

In contrast, conditional on working in the same firm, the influence of receiving thumbs in the previous period on the evolution of effort between t and t-1 varies across conditions. Indeed, in the excess supply condition, each thumb received *reduces* significantly the effort exerted in the current period compared to that in the previous period (- 16.46 % in model (2) and - 21.78 % in model (3)). Although lower in model (2), the impact is also negative in the excess demand condition. On the contrary, when the market is balanced each thumb received in *t*-1 increases effort by 19.29 % and 11.73 %, respectively.¹²

The findings from the regressions reported in Table 4 imply that employees value the receipt of symbolic rewards when choosing their employer. But the fact that they reduce their effort after receiving symbolic rewards when the market is not balanced suggests that they interpret receiving thumbs as a signal that they face a lower risk of becoming unemployed. It is only when the market is balanced that the symbolic rewards influence the employees' willingness to increase their effort further, indicating that a more equal bargaining power between the parties helps in building a positive dynamics of respectful relationships.

3.3. Is paying respect profitable?

Turning next to look at the profitability of providing symbolic rewards, we may first note that the results of the experiment imply that there is substitution between ex post symbolic rewards and ex ante monetary rewards. As shown by the non-parametric statistics in Table A in Appendix, the average wages and rents are significantly lower in the respect treatment than in the baseline (except when there is excess supply). So, even if some firms express respect, this cannot compensate for the overall less generous contracts than in the baseline treatment. Furthermore, although symbolic rewards facilitate initiating relational contracts,

¹² The various impacts of the symbolic rewards by market condition is robust to several specification changes (i.e., omitting the rent instead of the length to identify the model, including both rent and length, or estimating in the first stage the probability to work in the same firm as previously regardless of whether the firm has made a private offer to the employee in the current period).

the average total duration of the employment relationships is not significantly improved in the respect treatment in any market condition (see Table A in appendix).

In the balanced market condition, the average profit is 13.82 units in the baseline treatment and 15.26 in the respect treatment. In the latter, if we only consider firms having an employee, the average profit amounts to 29.69 for firms using symbolic rewards and 11.22 for the others. In the excess demand condition, the corresponding values are respectively 0.15 and 1.64, 21.4 and -2.51. In the excess supply condition, the respective values are 21.16 and 14.10, 35.35 and 5.62. Regardless of the market condition, we fail to find a significant impact of paying respect on profits as there is no significant difference in the profit levels between the respect and the baseline treatments, controlling or not for the rent, the period, the private nature of the contract, and the length of the relationship (regressions not reported but available upon request; see also Table A in appendix). When we consider only the continuing relationships in the respect treatment, the conclusions are changed. Indeed, giving symbolic rewards in the balanced market condition is followed by an increase in profits (by 4.11 units) in the next period as a consequence of an increase in the employees' level of effort (as shown by Table 4).¹³ But symbolic rewards exert no significant impact on profits in the excess demand condition and there is even a negative effect on subsequent profits (of the order of 8.23 units) in the excess supply condition as employees adjust their effort downward (see Table 4). The lack of differences in profits between the baseline and respect treatments is likely explained by the substitution of wages and symbolic rewards.

¹³ This result is from a regression in which the dependent variable is the difference between the profit realized in *t* and the profit realized in *t*-1 and in which the independent variables are the evolution of the rent, the distribution of symbolic rewards in *t*-1, and the period.

4. DISCUSSION AND CONCLUSION

Our repeated three-stage gift exchange game delivers some notable findings regarding the use of costly symbolic rewards as a means of either praising employees for realized effort or for signaling a willingness to continue the employment relationship. We find that a sizable fraction of our firm-subjects make use of the opportunity to give costly symbolic rewards to their employees although the employment relationship is terminated at the end of each period. Respect is expressed as a response to the employee's higher effort. In this sense, it is backward-looking. But it is also, consistent with the theoretical analysis in Dur (2009), forward-looking as the firms giving symbolic rewards are more likely to make a private offer to the same employee in the next period aiming at hiring him again. When the labor market is not balanced, we also find that symbolic rewards become less used once it is clear that the relational contract is established. This suggests that in these conditions, symbolic rewards are mainly used as a signaling and coordination device to initiate relational contracts. Indeed, if they were used only to express praise, they should not vary with the length of the relationship. When the market is balanced, there is no significant relationship between the assignment of symbolic rewards and the length of the relationship, which suggests that praise might play a greater role in this condition. On the other hand, with imbalances in the labor market and controlling for rents and levels of effort, we find that more respect is expressed when there is excess supply than when there is excess demand. When there is excess demand, prolonging the employment relationship is more valuable as the expected earnings remain considerably higher compared with the excess demand condition.

Controlling for the rent offered in the previous period, employees are more willing to accept a job offer from the same employer when the employer paid respect to him in previous

26

periods. This is observed in all conditions. In contrast, when the employment relationship is continued the impact of symbolic rewards on further effort depends on the competition for employees in the market. Indeed, while employees are also more willing to increase their effort further when the market is balanced, they tend to decrease it when there is excess supply on the market. An interpretation is that when there is excess supply, employees understand that the employers use symbolic rewards to prolong a more valuable relationship, which should decrease their risk of unemployment.

A puzzling finding of our study is that when firms have the opportunity to express respect to their employees, the sum of employers' and employees' payoffs is not improved. Overall, when firms have the opportunity to use symbolic rewards, the mean rent offered to the employees is significantly lower and the length of the employment relationships is not increased. This suggests that for some employers at least, monetary incentives and non-monetary rewards are used as substitutes and not as complements.

Our experiment shows that in a labor market context it may be difficult for the employees to interpret the intentions of the employers that give symbolic rewards, especially when the two parties have a strongly asymmetric bargaining power. Possible extensions include the study of the extent to which employers use praise and respect when the continuity of the relationship is guaranteed. Moreover, while the current experiment has been framed in terms of a labor market context, the analysis and its results may potentially apply also to other contractual relationships, such as between service providers and customers and suppliers and producers.

27

References

- Ariely, D., A. Bracha, and S. Meier (2009), «Doing Good or Doing Well? Image Motivation and Monetary Incentives in Behaving Prosocially», *American Economic Review* 99(1), 544-555
- Ball, S., C.E. Eckel, P.J. Grossman, and W. Zame (2001), «Status in Markets», *Quarterly Journal of Economics* 116(1), 161-188
- Benabou, R. and J. Tirole (2002), «Self-Confidence and Personal Motivation», *Quarterly Journal of Economics* 117(3), 871-915.
- Benabou, R. and J. Tirole (2006), «Incentives and Prosocial Behavior», *American Economic Review* 96(5), 1652-1678.
- Bolton, G., E. Katok, and A. Ockenfels (2004), «How Effective are Electronic Reputation Mechanisms? An Experimental Investigation», *Management Science* 50(11), 1587-1602.
- Brown, M., A. Falk, and E. Fehr (2004), «Relational Contracts and the Nature of Market Interactions», *Econometrica* 72(3), 747-780.
- Camerer, C. and U. Malmendier (2007), « Behavioral Economics and Organizations », in P. Diamond and H. Vartiainen (eds.), Behavioral Economics and Its Applications. Princeton University Press, 235-281
- Carpenter, J. and E. Seki (2010), «Do Social Preferences Increase Productivity? Field Experimental Evidence from Fishermen in Toyoma Bay», forthcoming in *Economic Inquiry*.
- Charness, G. (2004), «Attribution and Reciprocity in an Experimental Labor Market», *Journal of Labor Economics* 22(3), 665-688.
- Charness, G., and P. Kuhn (2011). «Lab Labor: What Can Labor Economists Learn from the Lab?», forthcoming in D. Card and O. Ashenfelter (eds.), Handbook of Labor Economics, Volume 4.
- Charness, G., Masclet, D., and Villeval, M.C. (2010). «Competitive Preferences and Status as an Incentive: Experimental Evidence», IZA Discussion Paper 5034, Bonn.
- Cottini, E., T. Kato, and N. Westergaard-Nielsen (2009). «Adverse Workplace Conditions, High-Involvement Work Practices and Labor Turnover: Evidence from Danish Linked Employer-Employee Data», IZA Discussion Paper 4587, Bonn.
- Dana, J., D.M. Cain, and R.M. Dawes (2006). «What You Don't Know Won't Hurt Me: Costly but Quiet Exit in Dictator Games», *Organizational Behavior and Human Decision Processes* 100(2), 193-201.
- Dickinson, D. and MC Villeval (2008), «Does Monitoring Decrease Work Effort? The Complementarity between Agency and Crowding-out Theories», *Games and Economic Behavior* 63, 56-76.

- Dur, R. (2009). «Gift-Exchange in the Workplace : Money or Attention? », Journal of the European Economic Association 7(2-3), 550-560
- Ellingsen, T., and M. Johannesson (2007a), «Paying Respect», *Journal of Economic Perspectives* 21(4), 135-149.
- Ellingsen, T., and M. Johannesson (2007b), «Verbal Feedback Induces Prosocial Behavior» Mimeo.
- Ellingsen, T., and M. Johannesson (2008), «Pride and Prejudice : The Human Side of Incentive Theory », *American Economic Review* 98, 990-1008
- Falk, A., and M. Kosfeld (2006), «The Hidden Costs of Control», *American Economic Review* 96(5), 1611-1630.
- Fehr, E. and A. Falk (2002), «Psychological Foundations of Incentives», *European Economic Review* 46, 687-724.
- Fehr, E., S. Gächter, and G. Kirchsteiger (1997), «Reciprocity as Contract Enforcement Device», *Econometrica* 65, 833-860
- Fehr, E., G. Kirchsteiger, and A. Riedl (1993), «Does Fairness Prevent Market Clearing? An Experimental Investigation», *Quarterly Journal of Economics* 108 (2), 437–59.
- Fehr, E., A. Klein, and K. Schmidt (2007), «Fairness and Contract Design», *Econometrica* 75(1), 121-154.
- Fehr, E., and K. Schmidt (1999). «A Theory of Fairness, Competition and Co-operation", *Quarterly Journal of Economics* 114, 817-868.
- Gaines, L.M., J. Duvall, J.M. Webster, and R.H. Smith (2005). «Feeling Good after Praise for a Successful Performance : The Importance of Social Comparison Information», *Self and Identity* 4, 373-389.
- Gneezy, U. and A. Rustichini (2000), «Pay Enough or Don't Pay at All», *Quarterly Journal* of Economics 115(3), 791-810.
- Greiner B. (2004), «An Online Recruitment System for Economic Experiments, » in: Kurt Kremer, Volker Macho (Eds), *Forschung und Wissenschaftliches Rechnen 2003*. GWDG Bericht 63; Göttingen: Ges. für Wiss. Datenverarbeitung, 79-93.
- Kandel, E. And E.P. Lazear (1992). «Peer Pressure and Partnerships», Journal of Political Economy 100(4), 801-817
- Kirchsteiger, G., M. Niederle, and J. Potters (2001). «Public versus Private Exchanges», CENter Discussion paper n°2001-101.
- Kosfeld, M. and S. Neckermann (2011), «Getting More Work for Nothing? Symbolic Awards and Worker Performance», *American Economic Journal : Microeconomics*, forthcoming.
- Lazear, E.P. and K.L. Shaw (2007). «Personnel Economics: The Economist's View of Human Resources», *Journal of Economic Perspectives* 21(4), 91-114.

- Morris, D., P. Collett, P. Marsh, and M. O'Shaughness (1979). *Gestures: Their Origin and Meanings*. London: Cape.
- Rebitzer, J. and L. Taylor (2011), «Extrinsic Rewards and Intrinsic Motives: Standard and Behavioral Approaches to Agency and Labor Markets», forthcoming in D. Card and O. Ashenfelter (Eds.), *Handbook of Labor Economics, Volume 4*.
- Rhoades, L. and R. Eisenberger (2002). «Perceived Organizational Support: A Review», Journal of Applied Psychology 87, 698-714.
- Webster, J.M., J. Duvall, L.M. Gaines, and R.H. Smith (2003). «The Roles of Praise and Social Comparison Information in the Experience of Pride», *Journal of Social Psychology* 143, 209-232.
- Xiao, E. and D. Houser (2007), «Emotions Expression and Fairness in Economic Exchange», ICES Working Paper, Washington D.C.
- Zeiliger R. A Presentation of Regate, Internet Based Software or Experimental Economics. http://www.gate.cnrs.fr/~zeiliger/regate/RegateIntro.ppt., GATE; 2000.

Appendix A.

Market condition	Balanc	ed market	Excess	Excess demand		ss supply
Treatment	Baseline	Respect	Baseline	Respect	Baseline	Respect
% private	64.29	56.78 ^{ns}	41.38	57.29 ^{ns}	81.25	60.21*
contracts	(48.13)	(49.64)	(49.54)	(49.59)	(39.24)	(49.08)
Wage	47.61	38.34**	75.38	53.91**	39.68	34.04 ^{ns}
	(13.18)	(14.91)	(7.21)	(17.24)	(20.45)	(20.05)
Desired	8.49	8.02 ^{ns}	9.47	8.52**	7.17	7.37 ^{ns}
effort	(1.96)	(2.23)	(1.26)	(2.14)	(2.92)	(2.73)
Rent	33.49	25.37***	58.79	39.65***	28.36	22.37 ^{ns}
	(10.70)	(11.74)	(6.60)	(15.16)	(15.34)	(16.16)
Actual effort	6.24	5.43 ^{ns}	7.56	5.69***	6.08	4.89 ^{ns}
	(3.68)	(3.16)	(3.05)	(3.66)	(3.55)	(3.63)
Profit all	13.82	15.26 ^{ns}	0.15	1.64 ^{ns}	21.16	14.10^{ns}
situations	(29.43)	(21.16)	(23.30)	(23.51)	(19.42)	(26.82)
Profit	14.80	15.52 ^{ns}	0.25	2.47 ^{ns}	21.16	14.18 ^{ns}
	(30.23)	(21.24)	(30.05)	(28.79)	(19.42)	(26.87)
Employee's	37.85	30.67***	63.10	45.35***	30.36	27.07 ^{ns}
payoffs	(9.96)	(10.61)	(8.42)	(14.09)	(14.34)	(16.24)
Sum of	51.67	46.19 ^{ns}	63.35	47.82***	51.52	41.25 ^{ns}
payoffs	(29.32)	(25.01)	(24.41)	(28.95)	(28.25)	(28.65)
% contracts	-	23.31	-	20.83	-	28.80
with thumbs		(42.37)		(40.72)		(45.40)
Nb thumbs	-	0.46	-	0.50	-	0.69
		(0.99)		(1.17)		(1.32)
Nb thumbs	-	1.98	-	2.40	-	2.38
if thumbs>0		(1.11)		(1.43)		(1.41)
Average	1.84	1.56 ^{ns}	1.30	1.40 ^{ns}	1.98	1.80 ^{ns}
total length	(2.25)	(1.71)	(0.72)	(1.48)	(2.52)	(1.92)
Nb obs.	120	240	144	288	96	192
Nb contracts	112	236	87	192	96	191
% contracts	93.52	98.33	60.42	66.67	100	99.48

Table A. Summary statistics

Note: Standard deviations are in parentheses. Only accepted contracts are considered (except in "profit all situations"). This table also indicates for each variable and each market condition the degree of significance of comparisons between the baseline treatment and the respect treatment, with *, **, and *** indicating statistical significance at the 0.10, 0.05, and 0.01 level, respectively, and with ^{ns} for non-significance. These indicators are based on Mann-Whitney tests, with each individual as a unit of observation.

Appendix B. Instructions for the balanced respect treatment (other instructions are available upon request)

We thank you for participating in this experiment. At the beginning of this session, you will receive an initial endowment of 5 Euros. During the course of this experiment, you can earn a further amount of money by accumulating points. The amount of points that you gain during the experiment depends on your decisions and the decisions of other participants. All the points that your will earn during the 12 periods of this experiment will be summed and exchanged into Euros at the end of the experiment according to the exchange rate of :

100 points = 4 Euros

At the end of the experiment, you will receive the amount that you earned during this experiment in addition to your initial endowment. Your earnings will be paid in cash in a separate room.

There are two roles in this experiment: there are employers and employees. The role of each participant is randomly allocated at the beginning of the experiment and each will keep the same role during the whole experiment. **The number of employers is the same as the number of employees.**

All participants have received an identification number which they will keep for the entire experiment. You will find your number on your screen.

Overview of each period

In each period, every employer can recruit one employee. The procedures are as follows.

1. Each period starts with a trading phase which lasts 3 minutes. During this phase, employers can submit contract offers which can be accepted by employees. When submitting an offer, the employer has to specify three things:

- which wage he offers

- which quality of work he desires
- and whether he wants to submit public offers to all employees or private offers to specific employees only.

Offers can be accepted by employees at any time during the trading phase.

2. Following the trading phase, each employee who has concluded a trade chooses the actual quality of his work.

3. After being informed on the quality of work chosen by his employee, the employer can decide to express his approval to his employee by means of signs of approval.

4. Lastly, each participant's earnings in the current period are determined.

Description of each stage

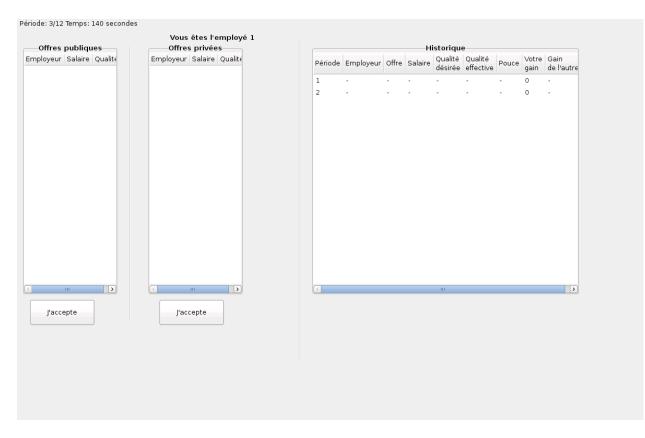
1. The trading phase on the market

Each period starts with a trading phase that lasts a maximum of 3 minutes. During this stage, each employer can conclude a contract with an employee. In order to do so, he can submit as many offers as he wishes.

Each employer can see the following screen:

Période: 3/12 Temps: 163 seco	ondes											
	Vous êtes	l'employeur 1										
Les offres publiques		es						Historiq	ue			
Employeur Salaire Quali	Salaire Qualité Emp	ployé		Période	Employé	Offre	Salaire	Qualité désirée	Qualité effective	Pouce	Votre gain	Gain de l'autre
				1	-	-	-	-	-	-	0	-
				2	-	-	-	-	-	-	0	-
(<u> </u>	C III	Les employés actuellement [1]	t sur le marché:									
 offre publique 		Quel salaire proposez-vous ?	0									
 offre privée Quel est le numéro de l'employé à qui vous faites une offre privée ? 	1	Quelle qualité demandez-vous? ∉yualider	7									

Each employee can see the following screen:



In the top left corner of the screen, you can see the number of the current period and the time remaining in this trading phase before the market closes.

How to submit an offer?

To submit an offer, the employer must indicate three elements on the left of the screen:

a) First, the employer specifies whether he wants to submit a private or a public offer.

- Public offers

The public offers are communicated to all participants in the market. All employees see all public offers on their screens. A public offer can be accepted by any employee. An employer can also see all the public offers submitted by all employers.

To submit a public offer, the employer has to click on the « public offer » field.

- Private offers

A private offer is submitted by an employer to one employee only. Only this employee is informed about the offer and only this employee can accept the offer. No other employer or employee will be informed about that offer.

To submit a private offer, the employer must click on the « private offer » field. After that he specifies the identification number of the employee he wants to submit an offer to. Each employee keeps his identification number throughout the whole experiment.

- b) Once the employer has specified to whom he wants to submit an offer, he determines which wage he offers. This wage can take any value between 0 and 100.
- c) Finally, the employer determines the quality of work he desires. The quality of work can take any value between 1 and 10.

After the offer is completely specified, the employer clicks on the « validate » button. As long as the button is not clicked, the offer can be modified. After the employer has validated his offer, the offer is displayed in bold in the list of offers available on the market.

Each employer can submit **as many public and private offers as he wishes** during each period as long as there are employees available in the market. In the middle of the employer's screens the identification numbers of the remaining employees are kept visible.

All the <u>public offers</u> in the current trading phase are displayed on the left side of the employer's and employee's screens. It is possible to see which employer has submitted an offer, which wage he has offered, which quality of work he desires. All the employers have also an identification number that they keep throughout the whole experiment.

The <u>private offers</u> are displayed in the middle of the screen. It is possible to see on the employer's screen which private offers he has submitted to specific employees, with their identification numbers, which wage he has offered, and which quality of work he desires. One can see on the employee's screen which private offers he has been personally submitted in the current period, specifying the employers' identification numbers, the wage offered and the desired quality of work.

How accept an offer?

On the left of their screen, the employees can see the remaining public offers and the private offers they have received personally. To accept an offer, the employee must click on the row in which the offer is displayed to highlight it, and then click on the button « I accept » to validate his choice. Each offer can be accepted any time during the trading phase, after the first 20 seconds following the market opening.

In any given period, each employer and each employee can conclude at most one contract. Therefore, as soon as one of his offers has been accepted, all the other offers submitted by this employer are automatically cancelled. This employer is no longer allowed to submit other offers. The employer is informed on his offer that has been accepted and on the identification number of the employee who has accepted this offer.

After 3 minutes have elapsed, the trading phase is over even if all the employers and all the employees have not concluded a contract. If all the employees have concluded a contract before 3 minutes, the trading phase is shortened.

2. Determination of work quality

Following the trading phase, the employees who have concluded a contract choose which quality of work they supply to their respective employer. The quality chosen by the employee can differ from the quality desired by the employer.

The quality of work has to be between 1 and 10. Each quality level is associated to a cost. The higher the quality, the higher the cost to the employee, and the higher the employer's earnings (before deduction of wage), as indicated in the following Table:

Quality of work	1	2	3	4	5	6	7	8	9	10
Cost for the employee	0	1	2	4	6	8	10	12	15	18
Gain of the employer before deduction of wage	10	20	30	40	50	60	70	80	90	100

The employer is informed on the quality of work actually supplied by his employee. No other employer or employee will be informed about that decision.

3. Distribution of approval signs

After being informed on the quality of work actually supplied by their employee, the employers have the

possibility to express their approval to their employee by addressing him approval signs. These approval signs are represented by raised thumbs, as indicated in the following screenshot:

Période: 3/12		
v	/ous êtes l'employeur 1	
	a possibilité, si vous le souhaitez, des pouces à votre employé 1.	
Chaque pou	uce envoyé vous coûtera 1 point.	
Cliquez	l'une des options suivantes:	
0 0 0 0	aucun pouce	
Coî	ùt des pouces: 0	√⊒⊻alider

The employer can send between 0 and 5 thumbs to his employee. The employee is informed on the number of thumbs sent by his employer.

Receiving thumbs does not affect the employee's payoff. They only aim at expressing the employer's approval.

Each thumb addressed to an employee costs 1 point to the employer. The employer must enter a value between 0 and 5 and validate his decision.

4. Calculation of payoffs

- The employer's payoff in a given period:

• If the employer has not concluded a trade, the employer receives a payoff of 0 point.

• If the employer has concluded a trade, his payoff depends on the wage he has offered, the quality supplied by the employee and the number of approval signs sent to the employee. The employer's payoff is therefore determined as follows:

Employer's payoff = (10 * quality of work) - wage - cost of thumbs

- The employee's payoff in a given period:

• If the employee has not concluded a trade, the employee receives a payoff of 5 points.

• If the employee has concluded a trade, his payoff is equal to the wage he has received minus the cost of the quality of work supplied. The employee's payoff is therefore determined as follows:

Employee's payoff = wage - cost of the quality of work supplied

Note that it may happen that employers and employees can suffer losses in a given period. If any, the losses will be deducted from your initial endowment of 5 Euros or from the gains realized in the other periods.

Every one is informed of his own payoff and of the partner's payoff at the end of the current period.

5. End of the period

A summary table appears on your screen and the screen of the participant you have concluded a contract with, with the following information:

- the identification number of the employer or the employee
- the accepted wage
- the quality of work desired by the employer
- the quality of work supplied by the employee
- the number of thumbs sent by the employer to his employee
- your earnings for the current period
- the earnings of your partner for the current period, if any.

A new period starts automatically.

6. Supplementary indicative question

At the beginning of each period, each employee can see an indicative question on this screen. He must indicate if he is indifferent between all the employers or if he would prefer to receive a private offer from a specific employer. In this case, he has to indicate the identification number of this employer.

The answer to this question is purely **indicative** and it is communicated to none of the other participants, neither the employees, nor the employees. It has no influence on the offers received or on the payoffs.

To become familiar with the rules of this experiment, we invite you to read these instructions again and to answer the questions that will be displayed on your screen.

Next, you will perform **3 trials of the trading phase** only (i.e., without choosing the quality of work to supply nor the approval signs). During these trials no money can be earned. For these trials you will be assigned a provisional identification number.

Following the 3 trials, the 12 periods that compose this experiment will start. The definitive identification numbers will be assigned for the rest of the experiment.

Please note that communication between participants is strictly prohibited during the experiment. Communication will lead to the exclusion from the experiment. In case you have any question, do not hesitate to raise your hand and we will answer your question in private.
