Non-Financial Motivation in the Workplace

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Abstract:

This chapter reviews the literature on how non-monetary motivations affect effort and performance in the labor market. Various theories of social preferences are explained, including distributional, competitive, and reciprocal models. Evidence from laboratory experiments shows that each of these models may explain worker behavior to some extent depending on the workplace situation involved. Perceptions of fairness and intent play a large role in worker effort decisions. This chapter also considers the roles of respect, symbolic rewards, and identity in influencing workplace behavior. Taken as a whole, the behavioral effects of non-financial motivators depend heavily on the intricacies of the workplace and the types of workers and tasks involved.

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1. Introduction

This chapter discuss non-financial motivations that have been found to affect worker responses in experimental labor environments. We first present various theories of social-preference motivations, including distributional, competitive, and reciprocal models. We then discuss laboratory experimental evidence that credibly isolates these social motivators and explain when each motivator may play a role in the workplace. Finally, we consider the role of other important motivators in the workplace: respect, symbolic rewards, and identity.

2. Models of Social Preferences

Many economic environments feature a high degree of small-scale interpersonal interaction—this is where social preferences are most powerful. Individual workers function in a rich social environment in the workplace, with concomitant norms, organizational procedures, and interactions with co-workers. Issues of fairness, reciprocity, and identity may play major roles. Since the workplace is not a static environment, one's actions may reflect instrumental considerations. But laboratory experiments can isolate any non-instrumental influences.

Social preferences have received considerable attention in economics and the broader social-science literature in recent years. A still-growing literature has demonstrated their prevalence, their social and economic implications, and the conditions under which they manifest. People deliberately sacrifice to help or to hurt other people, to establish equity or equality, or to increase the economic surplus available for the group. This has important consequences for both theory and practical applications in the workplace, between the worker and co-workers, and between workers and their employers.

2.1. Distributional models

Models of social preferences generally fall into one of several categories. Consequential models presume that people care solely about the distribution of payoffs. The first approach is simple altruism, whereby one puts an unvarying weight on the payoffs of another. This weight may lead to different actions, depending on the price-effectiveness of sacrifice. Other models involve reducing differences in material payoffs, helping the poorer individuals, or increasing the total payoff for the group.

The primary consequential social-preference models are Bolton (1991), Fehr and Schmidt (1999), and Bolton and Ockenfels (2000). In Bolton (1991), people care about their own money, but don't like to have less than others. In the latter two models, receiving more than others may also bother an individual. People trade off money to reduce differences in material payoffs. The Fehr and Schmidt (1999) model has functional form:

$$U_i(x) = x_i - \alpha_i \frac{1}{n-1} \sum_{j \neq i} \max[x_j - x_i, 0] - \beta_i \frac{1}{n-1} \sum_{j \neq i} \max[x_i - x_j, 0],$$

where $\beta_i \leq \alpha_i$ and $0 \leq \beta_i < 1$. Being behind is more annoying than being ahead. Bolton and Ockenfels (2000) posit that one's disutility from unequal payoffs is identical whether one is ahead or behind.

The distributional projection of Charness and Rabin (2002) reflects both Rawlsian and utilitarian preferences: one likes to increase the lowest payoff in the reference group as well as increase the total payoff of the group. Specifically,

$$V_i(\pi_i, \pi_2, \ldots, \pi_N) \equiv (1-\lambda) \cdot \pi_i + \lambda \cdot [\delta \cdot \min[\pi_i, \pi_2, \ldots, \pi_N] + (1-\delta) \cdot (\pi_i + \pi_2 + \cdots + \pi_N)],$$

where $\lambda \in [0,1]$ measures how much player *i* cares about social welfare versus own self-interest and $\delta \in [0,1]$ shows the trade-off between the Rawlsian and utilitarian components. The social-efficiency concern is the hallmark of the model. As an example, experimental subjects were asked to choose between payoffs of (750,375,*x*) or (400,400,*x*) for (Person 1, Person 2, Self); 54% chose the option with higher total payoffs. However, social efficiency is not everything: When the choice was between payoffs of (1200,0,*x*) or (400,400,*x*), only 18% chose the option with the even higher total payoffs (*x* was 500, disclosed only at the end). These results suggest preferences for both efficiency and increasing the lowest payoff.

2.2. Competitive preferences

There is also a darker side to distributional social preferences. While most individuals favor equalizing financial payoffs or social-efficiency considerations, others prefer coming out ahead or perhaps simply enjoy decreasing the payoffs of others. Offerman et al. (1996) present some of the first evidence of competitive preferences. About 15% of subjects are willing to sacrifice some of their money to decrease another's payoff. In Charness, Masclet, and Villeval (2014), participants could perform a number-letter coding task or just read magazines, receiving a fixed payment regardless of their output. People were assigned to anonymous groups of three, learning after each period whether one was the first, second, or third most productive.

Participants could pay with their own money to either purchase additional output or to sabotage the output of others. Many people did so, particularly when it seemed likely to advance in one's rank in the group. Abbink and Sadrieh (2009) and Abbink and Hermann (2011) provide further evidence on the joy of destruction.

2.3. Intentions and reciprocity

People may also care about others' intentions and motives. Whereas predicted choices of purely distributional models depend only on the payoff distribution, more sophisticated non-consequential models incorporate beliefs. Models of intentional reciprocity consider the desire to reciprocate the perceived intentional actions of others. Nevertheless, including reciprocity considerations comes with the cost of some loss of tractability.

Incorporating (intentional) reciprocity into preferences is a challenging problem. In Rabin (1993), one wishes to increase or decrease another's payoffs based on her beliefs about whether the other person is treating her fairly. Specifically,

$$U_i(a_i, b_j, c_i) \equiv \pi_i(a_i, b_j) + \tilde{f_j}(b_j, c_i) \cdot [1 + f_i(a_i, b_j)],$$

where a_i represents *i*'s strategy, b_i represents *j*'s belief about what *i* is choosing, and c_i represents *i*'s belief about what *j* believes *i*'s strategy is. The essential implication is that people will sacrifice money to help (hurt) those who they believe are being kind (unkind) to them. The kindness function $\tilde{f_j}(b_j, c_i)$ reflects beliefs about how kind is one's counterpart (defined by the location within the range of possible Pareto-efficient payoffs).

Dufwenberg and Kirchsteiger (2004) extend this model to sequential games. Falk and Fischbacher (2006) combine intentional reciprocity with Fehr and Schmidt (1999) inequity aversion in sequential games. Cox et al. (2007) develop a non-equilibrium model that combines a form of distributional preferences with reciprocity considerations; one's emotional state affects one's degree of willingness to trade off own money for helping or hurting others, and this emotional state reflects relative payoffs and the kindness or unkindness of others.

Charness and Rabin (2002) include negative reciprocity in two ways: First, they may withdraw concern for someone's payoff and refuse to sacrifice. "Misbehavior," determined endogenously by the group's views, diminishes the weight one places on that person's payoff. Consider a strategy profile $s \equiv \{s_1, s_2, s_3, \dots, s_n\}$ and a *demerit* profile $d \equiv \{d_1, d_2, d_3, \dots, d_n\}$, where $d_k \in [0,1]$ for all k. The demerit profile measures how much k deserves; the higher that

d_k is, the less others think that k deserves. Preferences are defined as a function of both one's underlying "social-welfare" preferences and how one feels about others:

$$U_i(s,d) \equiv (1-\lambda)\cdot\pi_i + \lambda\cdot[\delta\cdot\min\,[\pi_i, \min_{m\neq i}\{\pi_m + bd_m\}] +$$
$$(1-\delta)\cdot(\pi_i + \textstyle\sum_{m\neq i}\max\,[1-kd_m, 0]\,\pi_m) - f\sum_{m\neq i}\,d_m\cdot\pi_m)]$$

where *b*, *d*, and *f* are non-negative parameters of the model. Here the greater is d_j for $j \neq i$, the less weight that *i* places on *j*'s material payoff. Hence, the more that *i* feels that *j* is unkind, the less that *i* wants to help her. One may also sacrifice money to hurt another: When *f* is positive, *i* may sacrifice to hurt *j* when *j* is being unkind.

Another motivator is *guilt aversion*, whereby one feels guilty to the extent that one disappoints someone's expectations (*simple guilt*) or believes that someone will blame her (*guilt-from-blame*). Higher-order beliefs are key for both intentional reciprocity and guilt aversion. In Charness and Dufwenberg (2006), cheap talk (non-binding free-form communication) greatly affects behavior, although these social-preference models are silent on this. A principal first chooses whether to form a relationship with the agent, risking a zero payoff if the agent does not provide costly effort but gaining if effort is provided. Without free-form communication, the likelihood of the optimal social outcome is 20%; this rises to 50% with communication (with cheap-talk promises, the rate is 67%). Promises affect the beliefs of the players involved.

The belief-dependence of social preferences opens new avenues for thinking more broadly about the design of communication pathways in organizations and society. Guilt aversion may be relevant for understanding strategic interaction more generally, perhaps shedding light on the role of language and social norms in these contexts.

3. Evidence on Social Preferences

3.1. Predictions

The social-preference models often make different predictions. We present examples relevant to the workplace, discussing how well these models explain the experimental data.

While consequential models state that choices depend solely on the resulting outcomes of the choices, Brandts and Solà (2001), Charness and Rabin (2002, 2005), and Falk et al. (2003) find that the rate at which people reject a low offer depends on the path leading to the choice.

These models also make different predictions even without any considerations of reciprocity. In Charness and Rabin (2002), a dictator chooses whether another person receives $4 or $7.50; the dictator always receives $4. The Fehr and Schmidt (1999) model predicts $4 will be chosen. But the Charness and Rabin (2002) model predicts choosing $7.50, and 69% do. In Charness and Grosskopf (2001), one receives a fixed sum of 600 and assigns an amount between 300 and 1200 to the other person. Seventy-four percent chose 1200, 10% chose 600, and 9% chose less than 600 (the most interesting choice was 599). Thus, the distributional element of Charness and Rabin (2002) alone outperforms the difference-aversion models. This has been confirmed in papers such as Engelmann and Strobel (2004).

Examples of costly punishment are abundant. Rejections in the ultimatum game and punishment in the public-goods game (Fehr and Gächter 2000, 2002) offer classic examples of negative reciprocity. In Charness (2004), effort choices in response to a deliberate choice of a low wage are significantly lower than when this same wage is assigned randomly. In any case, the consequentialist models do not explain the experimental data as well as models considering the path leading to the choice, since reciprocity is a common feature of labor-market relationships.

Field experiments widely confirm laboratory findings of social preferences. Camerer (2015) surveys a variety of studies that test lab-field generalizability. Although some lab experiments employ features that undermine generalizability, he argues that these features are seldom essential. Overall, he finds little evidence that typical lab features undermine generalizability.

3.2. Laboratory evidence on worker responses to wage inequality

We have seen that workers' effort decisions depend on the perceived fairness of their wages. Bewley (2002) and Card et al. (2012) find that the comparison of one's wage to those of others is often key. Gächter and Thöni (2010) show that social comparisons matter in the domain of disadvantageous wage inequality. Clark et al. (2010) analyzes how one's wage history, wage rank, and reference wage affect effort provision. These results suggest a nuanced interaction between firm-worker fairness, wage inequality, and worker status (given by the wage rank).

Charness and Kuhn (2007) study whether co-workers' wages influence a worker's effort in the case of unequal productivities. Every firm employed a low-productivity and a high-

productivity worker; these generated unequal returns for the firm given the same effort. The different productivity schedules were not divulged, an important feature of real-world labor markets. In one treatment, workers knew only own wages; in the second, each worker learned the other wage chosen. No consistent pattern emerged regarding the effect of co-workers' wages. Not knowing productivity differences may hinder social comparison, since wage inequality is not necessarily perceived to be unfair. Still, firms tend to compress observable wages.

Abeler et al. (2010) suggests that high-performing workers could feel unfairly treated without higher wages. Each principal is matched with two agents, who exert effort in stage one. Principals observe effort and pay wages in stage two. In the equal-wage treatment, principals must pay the same wage to both agents; these wages could differ in the individual-wage treatment. Everyone learns the efforts, wages, and resulting payoffs. Workers paid equally provided significantly lower effort in subsequent periods than those receiving individual wages, with effort levels in the individual treatment almost twice as high. When workers are paid individual wages, hard-working individuals continually exert high effort, and low performers change their behavior and increase their effort levels. But agents feel equal wages for unequal performance are unfair and so reduce their performance.

These experiments indicate that unequal wages might influence performance negatively with equally productive workers. Still, in some occupations, where individuals differ only slightly in productivity due to technological reasons for example, it might be optimal for employers to pay a flat wage. In the case of unequally productive workers, wages that account for these differences seem necessary to avoid dissatisfied workers.

4. Respect, Symbolic Rewards, and Identity

4.1. Respect and symbolic rewards

Ellingsen and Johannesson (2007) discuss the importance of feeling respected in the workplace. This can take on many forms—examples include trust, awards, recognition, or other symbolic rewards. Masclet, Noussair, and Villeval (2003) employ sanctioning points in a voluntary contribution game instead of monetary sanctions. In fact, both monetary and non-monetary punishments were equally effective in the earlier periods, but monetary punishments

had a much greater effect on contributions than did non-monetary punishments as time passed; people apparently became less sensitive to the non-monetary negativity.

Eriksson and Villeval (2012) consider the role of respect in a laboratory labor market with repeated interaction. In this study, an employer may send a worker approval in the form of one to five "thumbs up," a purely symbolic gesture that is costly to the employer. These symbolic rewards are primarily used to establish long-term labor relationships, since they are used much less frequently in established relationships. Furthermore, employers use these rewards more when the labor relationship is especially valuable (excess supply, rather than excess demand). Respect increases stated-effort provision even when the labor market is balanced.

Bradler and Neckermann (2019) use combinations of monetary and non-monetary rewards. In four separate treatments, subjects receive only a thank-you card, only money, a thank-you card and money, or a thank-you card and money with a personal touch. An increase in real-effort exertion is observed in either card-only or money-only treatments. But when a subject receives both a thank-you card and money, productivity is no different from the no-gift control. Yet when a thank-you card is combined with money personally folded into a unique shape, the productivity-enhancing effect is even stronger than in the card-only and money-only treatments. These results suggest that either monetary or non-monetary gifts can be effective at increasing productivity. There may be some crowding-out when these are combined, but the effect of each motivator is restored when there is a personal touch.

4.2. Identity

The issue of identity has loomed large in recent years. One definition of *social identity* involves one's sense of self. One insight from social-identity theory is that the groups to which people belong mean something to them. One derives self-esteem from group membership and adopts behaviors that are consistent with the norms and stereotypes associated with that group identity (Shih et al., 1999). Individuals also compare their own group against other groups. Group identity is used to explain such phenomena as ethnic and racial conflicts (Sen, 2007), discrimination, political campaigns, and the formation of human capital (Coleman, 1961). Charness, Rigotti, and Rustichini (2007) and Chen and Li (2009) were the first in economics to show strong effects on behavior from group membership, in both games and individual decision-making tasks.

While social identity has been used as a negative tool to inflame political passions, it may very well be possible to harness social identity as a positive force. Ai, Chen, Mei, and Phillips (2016) conduct a large-scale field experiment to see if group membership can increase participation and pro-social lending for an online crowdlending community. A simple email manipulation encourages members to join a lending team. Messages increase the likelihood that a lender joins a team, and the impact on lending is large relative to median lender lifetime loans. In Charness and Holder (2019), people are endowed with money they can give to a charity. In one treatment, anonymous three-person groups are formed, and the experimenter matches the total contribution of those groups whose contribution was above the median; in another treatment with no groups, the experimenter matches individual above-median contributions. Contributions were 45% higher in the group-matching treatment. Overall, these findings suggest team membership can be an effective behavioral mechanism to increase pro-social behavior, which can be applied to areas such as micro-lending, charitable giving, and organization of the gig economy.

Another interesting element is the issue of what activates a particular facet of one's identity. In this vein, Shih, Pittinsky, and Ambady (1999) study stereotype susceptibility with a group of female Asian-American undergraduates on a math test. Performance was dependent on which powerful stereotype (i.e., Asians have excellent quantitative skills and women do not) was evoked. Charness, Cobo-Reyes, and Jiménez (2014) employ two identities in a public-goods game with endogenous network formation. One dimension is the endowment received, either high or low. The second dimension is one's identity from a team-building task calibrated to yield success. Monetary identity was found to prevail, although just knowing that others were in a team-building task increased contributions. Finally, Adnan, Arin, Charness, Lacomba, and Lagos (2021) conduct an exploratory study of which social categories matter to people. Participants can choose or discard a peer according to gender, ethnicity, or religion. When selecting a partner, gender appears to have been the dominant social category across different conditions, with subjects exhibiting sharp preferences for being matched with a female partner.

Many fascinating questions remain in this area.

5. Summary

This literature review has discussed empirical evidence on non-financial motivations for worker effort. Motivations such as social preferences and one's sense of identity play a major role in determining worker effort. Social preferences in worker-firm relationships often influence effort decisions. Workers often react to perceived unfairness with reduced effort. Perceptions of fairness depend on expected wages and even on co-workers' wages. Ignoring non-financial motivations in the workplace will lead to quite sub-optimal policies; furthermore, embracing and harnessing these motivations can result in major improvements in productivity and performance.

An overriding theme across the study of these non-financial motivations is that the impact of each motivation depends heavily on context. Further research on these topics should shed light on the contexts in which these behavioral effects are most likely to occur among different types of workers, work tasks, levels of wealth, and cultural norms regarding fairness.

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