

Original Research Article

Accommodation of Non-pecuniary Factors in Work Incentive Models: Social Preference and Social Esteem Approaches[♦]

Abstract

This study examines the relevance of different approaches related to non-pecuniary factors by distinguishing positive from negative work attitudes (e.g., effort and shirking). Using survey data, we quantify the relative importance of several human resource management practices. Results show that the social esteem approach, including pride and shame, is more prevalent than the social preference approach, including reciprocity and fairness, with respect to effort. However, the latter approach is as important as the former approach with respect to shirking. These results are robust, irrespective of gender. Distinguishing the context of work incentives, either effort or shirking, is crucially important when discussing the effects of non-pecuniary factors.

*JEL Classification:*J0; J16; J5

Keywords: Effort; Equity; Work Incentives; Pride; Reciprocity; Shirking

19 I. Introduction

20 Work incentive is a chief concern of economists because companies can achieve high
21 performance in terms of productivity and profitability through improved work
22 attitudes of employees. Among the numerous studies made of work incentives, the
23 efficiency wage theory is a particularly influential approach (Akerlof, 1982;
24 Akerlof & Yellen, 1990; Shapiro & Stiglitz, 1984). The efficiency wage
25 theory comprises the so-called gift exchange model of Akerlof (1982) and the shirking
26 model of Shapiro and Stiglitz (1984).¹ Although their incentive mechanisms differ,
27 they are common in the respect that a higher wage motivates employees to work hard.
28 More recent studies recognize limitations of the pecuniary approach and increasingly
29 emphasize factors beyond material incentives.² Two approaches are often used to
30 analyze non-pecuniary factors in behavior agency theory. One is the social preference
31 approach. The other is the social esteem approach. The former has examined how
32 others affect one's behaviors. Examples include reciprocity and fairness (Fehr, Klein,

¹ More recent literature includes Fella (2000), Faria (2000), Jellal and Zenou (2000), Collard and Croix (2000), Amable and Gatti (2002), and Chang and Lai (2002).

² For example, Dugar (2010) studies nonmonetary sanctions and rewards in a laboratory experiment.

33 & Schmidt, 2007; Falk, Fehr, & Fischbacher, 2008).³ Specifically in the literature,
34 equity is discussed as an important source of reciprocal behavior (Bolton & Ockenfels,
35 2000; Fehr & Schmidt, 1999). Self-motivation, such as by pride and shame, has
36 particularly been addressed: most people care about how others regard their behavior
37 (Brennan & Pettit, 2004).

38 This study is conducted to specify more relevant approach to encompass
39 non-pecuniary factors in work incentive models by examining the relative
40 importance of several factors. For this purpose, past work incentive arguments are
41 reconstructed comprehensively by the application of findings related to human
42 behaviors in the recent literature to personnel economics. The approaches distinguish
43 positive and negative attitudes towards work. Dohmen et al. (2009) used the
44 approach, where positive and negative reciprocity reflects different personality traits,
45 in their survey research in Germany. We also introduce asymmetric reactions to
46 human resource management practices. The literature shows that people tend to
47 punish harmful behavior more strongly than they reward beneficial behavior (Fehr
48 & Gächter, 2000; Offerman, 2002). Trivial unfavorable treatment might be sufficient to

³Strategic reciprocity based on pecuniary incentives (e.g., Akerlof, 1982) is included in the social preference approach, although some define reciprocity as “an in-kind response to beneficial or harmful acts ... even if *no material gain* can be expected (Fehr & Gächter, 2000, p.160).”

49 make employees shirk, although decent favorable treatment can be necessary to
50 induce effort. Additionally, our analyses integrate asymmetric reactions with gender
51 differences in bargaining behavior. The literature shows that women are more willing
52 to accept unfair monetary offers than men are (Eckel & Grossman, 2001; Solnick,
53 2001). We wonder if a similar phenomenon applies when examining the relations
54 between work incentives and non-pecuniary human resource management practices.

55 The analyses use survey data collected from local employees of multinational
56 companies in Southeast Asia. We use covariance structural analysis in which work
57 incentives are explained by pecuniary and non-pecuniary factors such as equity, job
58 training, relationships with supervisors, company management, social evaluation,
59 and working conditions. In the literature, they are the primary factors affecting work
60 incentives. In our analyses, social evaluation is related to the social esteem
61 approach. Categories aside from job training are related to the social preference
62 approach.

63 Our analyses show the social esteem approach is more prevalent than the
64 social preference approach when discussing effort, although the latter is as important
65 as the former in terms of shirking behaviors. Factors such as social evaluation and
66 job training are revealed to encourage employees more effectively than other factors

67 do. Self-esteem, which can be held up as a result of good social evaluation of
68 companies, affects employee motivation much more strongly than do less visible
69 factors, such as equity. However, the degrees of impact on shirking do not
70 differ among factors compared to those on effort. Additionally, these results are valid,
71 irrespective of gender. We conclude that the relevance of approaches varies depending
72 on which work attitudes we are investigating.

73 We also confirm that some implications from past laboratory experiments are
74 applicable to the study of work incentives in practical working environments.
75 Employees tend to resist unfavorable treatment more strongly than they reward
76 favorable treatment. The result is consistent with the literature related to asymmetric
77 reactions to favorable and non-favorable treatment. However, the analyses do not
78 show that women are more tolerant of unfavorable non-pecuniary treatment than men
79 are. The degree of impact of protesting unfavorable treatment does not vary between
80 genders. No gender differences are observed in shirking behaviors. Additionally, the
81 analyses reveal that the degree to which some practices motivate employees differs
82 between men and women. Social evaluation accounts for male motivation more
83 importantly than for female motivation, although relationships with supervisors
84 account for female motivation more importantly than for male motivation. These

85 analyses serve as a complement to controlled laboratory experiments because
86 some have questioned whether laboratory results can provide useful practical
87 implications based on unrealistic assumptions (Charness, Frechette, & Kagal, 2004;
88 Fehr & Gächter, 2000; Pereira, N. Silva, & J. Silva, 2006).

89 This paper is organized as follows. Section 2 presents a description of data used
90 for the analyses and introduces the model. Results of the analyses are discussed in
91 Section 3. Section 4 concludes the paper.

92

93 II. Data and model

94 The analyses use survey data collected from employees working for foreign plants of
95 57 Japanese multinational companies in the manufacturing industry. They operate
96 businesses in Malaysia, China, Thailand, Singapore, and Indonesia. All employees
97 working for those plants participated in the survey. Survey questions are related
98 to demographic characteristics, work-related attitudes, and subjective evaluations of
99 human resource management at their respective companies.

100 The survey was administered during 2005-07 using a placement method with a
101 self-administered questionnaire. To safeguard privacy, particularly for inquiries
102 related to shirking, anonymity is guaranteed. The survey questionnaire explicitly

103 announced to respondents that only individual responses would be used for this
104 research and would not be revealed to supervisors or to their companies. Almost all
105 employees responded to this census survey and the response rate did not vary
106 depending on gender. This helped avoid selection bias of sampling for the
107 gender-based study.

108 The questionnaire is classified into eight categories of questions: two types of
109 work attitudes, equity, social evaluation, job training, relationships with supervisors,
110 company management, and working conditions.

111 The analyses distinguish work attitudes of two types, effort and shirking. Effort
112 and shirking represent employees' overall work attitudes. Effort comprises factors
113 such as willingness to work hard and to take on extra tasks.⁴ Shirking comprises
114 aversion to work. Previous works distinguish negative reciprocity (Camerer & Thaler,
115 1995; Roth, Prasnikar, Okuno-Fujiwara, & Zamir, 1991; Slonim & Roth, 1998) and
116 positive reciprocity (Fehr, Kirchsteiger, & Riedl, 1993; Berg, Dickhaut, & McCabe,
117 1995).⁵ Distinguishing positive and negative attitudes towards work enables us to use
118 different model specification under which different factors affect work incentives.

⁴A similar measure of work effort is used in the literature such as Clark et al. (2010).

⁵The idea to distinguish negative and positive reciprocity is related to Herzberg's two-factor theory.

119 The analyses introduce asymmetric reactions to human resource management
120 practices. Previous studies have shown that people tend to punish harmful behavior
121 more strongly than they reward beneficial behavior (Fehr & Gächter, 2000; Offerman,
122 2002). Specifically, several laboratory games reveal inequality aversion: people reject
123 unfair offers to penalize their partners even though they end up with lower pay-offs
124 themselves. Applying similar logic to the labor market, we wonder if employees
125 resist working hard under inequitable treatment, although shirking harms the
126 company's business so that they end up with a lower payment.

127 In sum, the analyses identify differences in factors that affect effort and shirking,
128 and examine the degree of asymmetric impacts of the factors on work attitudes.

129 Among recent works related to non-pecuniary work incentives, equity often
130 garners special attention because the literature discusses equity as a main source of
131 reciprocal behavior. Specifically, distributional fairness is the primary focus of the
132 economics literature under laboratory games. However, recent research in
133 industrial psychology has devoted more attention to so-called overall fairness, which
134 includes more than distributional fairness because overall fairness is regarded as a
135 proximal driver of human behavior in reality (Lind, 2001). Equity described in this
136 paper is analogous to overall fairness, which includes both pecuniary and

137 non-pecuniary factors. It is beyond the idea of distributional fairness used in
138 laboratory games and represents factors affecting whether employees feel that they
139 are fairly treated.

140 Other categories of questions are more straightforward. Social evaluation
141 represents how a society evaluates the company. Job training comprises factors
142 related to whether the current position provides opportunities for skill development.
143 Relationships with supervisors include factors such as overall feelings and
144 supervision capability. Similarly, company management represents executive
145 managers' attitudes towards employees: whether they care about employee welfare
146 and show respect to employees. Those seven categories encompass non-monetary
147 factors. However, the last category of working conditions includes factors related to
148 monetary compensation such as the level of wages, benefits, and the availability to
149 take leave.

150 The analyses can be related to behavior agency theory. Social evaluation in our
151 analyses is related to the social esteem approach. The social evaluation term captures
152 employees' feelings about how others regard their work. However, equity is related
153 to the social preference approach. Other categories such as relationships with
154 supervisors, company management, and working conditions are also related to the

155 social preference approach because those factors affect employee attitudes towards
156 work. For example, employees might appreciate better working conditions offered by
157 employers so that they work hard, as the gift exchange model of Akerlof
158 suggests. Nevertheless, it remains unclear how to classify job training. It can be
159 related to the social preference approach if employees appreciate job training
160 opportunities provided by employers. Otherwise, the social esteem approach is more
161 suitable, specifically if the category captures self-attainment in the sense that
162 employees enjoy skill development. Our analytical method includes both the social
163 esteem approach and the social preference approach, although it has a stronger flavor
164 of the latter approach than the former one.

165 Table 1 presents selected questions used for these analyses. They are prepared by
166 relating previously described literature in economics to the industrial psychology
167 literature (Mowday, Porter, & Steer, 1982; Eisenberger, Armeli, Rexwinkel, Lynch,
168 & Rhodes, 2001). For example, social evaluation is related to the concept of
169 Corporate Social Responsibility. This category includes the factor of whether the
170 company contributes to society and does not conduct socially controversial business
171 activities such as child labor abuse.

172 Table 2 summarizes the sample used for these analyses. The sample size is

173 44,562, eliminating a few observations that had missing variables. In our sample,
174 women are slightly more numerous than men. Women comprise about 60% of
175 respondents. Almost all respondents (about 80%) are permanently employed and
176 only 20% of the sample is temporarily employed. Additionally, nearly 40% of the
177 sample are observations from Thailand.

178 We use covariance structural analysis. Our model explains employees' attitudes
179 towards work by such factors as equity, social evaluation, job training, relationships
180 with supervisors, company management, and working conditions. These factors are
181 latent variables: they are not measured directly. We use observed variables presented
182 in Table 1 (survey responses) to infer the latent variables. One may want to think that,
183 for example, an equity variable is derived from three questions as if it were a
184 compound variable.⁶

⁶The structural equation is expressed as $\mathbf{t} = \mathbf{A}\mathbf{t} + \mathbf{B}\mathbf{h}$, where $\mathbf{t}$ is a vector of structural variables, $\mathbf{h}$ is a vector of exogenous variables, and $\mathbf{A}$ and $\mathbf{B}$ are matrices of parameters. Structural variables are unobserved latent variables and observed variables (i.e., all variables in Table 1). Exogenous variables are equity, social evaluation, job training, working conditions, and disturbances. The parameters are estimated using maximum likelihood methods so that the population variance-covariance matrix, which is a function of the parameters, approximates its sample variance-covariance matrix. Those who

185 Using covariance structural analysis, our analyses are designed to address factors
186 beyond the scope of traditional quantitative methods. Factors such as equity and
187 effort are non-observable. It is not easy to apply traditional quantitative methods to
188 study the current topic. Similar topics are often analyzed by application of ordered
189 probit models to survey data. Many questions are not used after variable selection
190 when using each question item as an explanatory variable. Covariance structural
191 analysis compounds the information of several questions so that we do not waste
192 collected information. Additionally, we cannot infer the degree of impacts of each
193 independent variable by comparing estimated coefficients obtained under ordered
194 probit models. One might wonder if marginal effects measure the magnitude of
195 coefficients. However, it is necessary to assume the cardinality of Likert scales.
196 The comparison is straightforward under covariance structural analysis because
197 standardized path coefficients reveal the degree of impact of each category, which
198 enables us to evaluate the relative importance of each category.

199

200 III. Results of analyses

are not familiar with covariance structural analysis may want to refer to books such as Bowen and Guo
(2011).

201 Table 3 presents the results of the analysis. The first six columns labeled “All” present
202 the results obtained using the whole sample; other columns present the results
203 obtained using sub-samples: Columns 7–12 for men, Columns 13–18 for women. For
204 each latent variable, the first row shows estimated coefficients; the second row shows
205 standard errors. Standardized coefficients follow beneath from Row 7.

206 The importance of equity was confirmed from the formulation of employees’
207 work attitudes. Column 1 presents results obtained under a benchmark model. The
208 coefficient on equity is estimated as positive, which indicates that employees make
209 extraordinary efforts when they feel equally treated. However, other non-monetary
210 factors are more effective to induce effort. The standardized path coefficient is
211 estimated as 0.14 on social evaluation and 0.27 on job training for each compared to
212 0.04 on equity. Corporate image and job training are revealed to be important in
213 practice. Activities related to corporate social responsibility help not only to promote
214 sales but also to motivate employees through an improved image of a company.
215 Employees are encouraged to work harder if they enjoy working through skill
216 acquisition.

217 The results imply that visible (or direct) gifts are more effective for inducing
218 employees' efforts than invisible (or indirect) gifts are. A different model

219 specification with the terms of working conditions confirms that implication. In
220 Column 3, the standardized path coefficient on working conditions is estimated to be
221 three times as large as that on equity. Working conditions are visible factors such as
222 level of wages, benefits, and the ability to take leaves.

223 Relations between aspects of equity and work incentives are revealed by
224 comparing results under the benchmark model with those under other specifications.
225 The standardized path coefficient is estimated as 0.02 on equity in Column 3
226 compared to 0.04 in Column 1. The degree of the impact of Column 3 is weaker than
227 that of Column 1 because equity in Column 1 includes more than distributional
228 fairness. Working conditions are a proxy for employees' satisfaction related to
229 monetary compensation. Therefore, the effect of equity aside from pecuniary factors
230 remains in Column 3. Additionally, equity judgments turned out to be influenced
231 strongly by relationships with supervisors. The salient implication is related to
232 interactional justice in organizational justice. Employees tend to feel fairly treated
233 under good relationships with supervisors. Employees are willing to be dedicated
234 under fair treatment. Therefore, the coefficient of equity is not estimated at the
235 statistically significant level once human relationships are included in Column 2.

236 Some implications obtained in the effort case apply to analyses of the shirking

237 case. Columns 4–6 present results of the analysis using shirking as a dependent
238 variable. A benchmark model in Column 4 confirms the importance of equity. The
239 coefficient on equity is estimated as negative. Employees shirk if they do not feel
240 that they are treated equally. Additionally, the degree of the impacts related to equity
241 is not as large as other non-monetary factors. The standardized path coefficient is
242 estimated as -0.20 on equity compared to -0.28 on social evaluation and -0.23 on job
243 training. However, the degrees of impacts do not vary much among the three factors
244 compared to those in Column 1, where a greater difference is observed. Additionally,
245 the degree to which employees respond to equity is much larger (in absolute value)
246 than the estimate in Column 1.

247 These results reveal that employees are more sensitive to equity when discussing
248 shirking than when discussing effort. In fact, this statement applies not only to equity
249 but also to almost all other factors in our analyses. We observe asymmetric reactions
250 towards favorable and unfavorable human resource practices. Employees are more
251 sensitive to unfavorable treatment.⁷ The results suggest the necessity of distinguishing
252 positive/negative responses (i.e., effort and shirking) when modeling the effects of

⁷The results are in line with the literature, which shows that people tend to punish harmful behavior more strongly than they reward beneficial behavior (Fehr & Gächter, 2000; Offerman, 2002).

253 human resource management practices on work incentives. Although favorable
254 treatment helps to motivate employees, the impacts of favorable treatment are not as
255 great as those of unfavorable treatment on employees' attitudes towards work.
256 Companies may want to devote more attention to precautionary practices rather than
257 promotional practices of human resource management. Trivial unfavorable treatment
258 might cost a lot in the sense that enormous favorable treatment is then necessary to
259 recover the work incentives of discouraged employees. Unfavorable treatment should
260 be avoided to the greatest extent possible.

261 The remaining implications resemble those in the effort case. Columns 5–6
262 present results of the analysis obtained under different specifications. The degree of
263 equity's impacts became smaller in Columns 5–6 than that of the benchmark model
264 in Column 4.⁸ The standardized path coefficient on supervisors is estimated as -0.20
265 and the path coefficient on working conditions is estimated as -0.23, compared to
266 -0.13 on equity (Column 5). Employees shirk if they feel that their supervisors treat
267 them poorly or if they are not satisfied with monetary compensation. Similarly, the
268 standardized path coefficient on management is estimated as -0.32 compared to -0.09

⁸Examining goodness of fit measures confirms that the benchmark model in Column 1 (or 4) fits the data better than other specifications. The GFI, 0.89, is close to 0.9, which is a rule of thumb of a good fit. Our AGFI of 0.84 is also close to 0.9, although the value is reduced slightly by adjustment according to the number of parameters.

269 on equity (Column 6). Employees are discouraged from working if company
270 management does not care for them. Again, we confirm that equity in Column 4
271 captures a broader concept of equity. Equity judgment is emotional and is often
272 affected by several pecuniary and non-pecuniary factors. For example, employees are
273 not willing to work hard if their companies do not devote closer attention to them
274 (Row 12). Although the importance of such intentions is well recognized, it was not
275 straightforward how employees formulate equity judgments in reality. Our analyses
276 identify the degree to which equity's impacts decline after accounting for other factors
277 because the effect of equity, aside from other factors, remains.

278 We further examine the robustness of results by conducting gender-specific
279 analyses (Columns 7–18). The literature presents gender differences in human
280 behavior. Our analyses investigate whether similar gender differences are observed in
281 effort solicitation based on non-pecuniary factors. Rows 15–20 provide test statistics
282 signifying whether coefficients are estimated as equivalent for both genders. We
283 interpret that the respective degrees of impacts are not equal if the test statistic is
284 greater than 1.96 (i.e. statistically significant at the 5% level).

285 The analyses show no difference in impacts of equity between men and women.
286 However, the impacts of other factors such as social evaluation, job training, and

287 relationships with supervisors are shown to differ between men and women when
288 discussing positive responses. The social evaluation of companies is more important
289 to motivate male employees than female employees, although job training is more
290 effective to motivate female employees than male employees. The role of pride
291 turned out to be more important for men than women. Our results confirm the
292 common belief that men are creatures of pride. Although the results of job training
293 might not be readily apparent, a possible interpretation is that women appreciate
294 opportunities for skill acquisition in a men-oriented society. Human resource
295 strategies might want to be customized towards each gender because the degree of
296 effectiveness varies between genders.

297 Another feature is the lack of gender differences in discussing negative
298 responses. The degree of impacts of protesting unfavorable treatment does not
299 change irrespective of gender.⁹For example, the standardized path coefficient on
300 social evaluation is estimated as -0.29 (Column 10, Row 8) for men compared to

⁹The results reveal new findings regarding gender differences: people's reactions towards

non-pecuniary factors differ from those on pecuniary factors. Although women are more willing to

accept unfair monetary offers than men are (Eckel& Grossman, 2001; Solnick, 2001), such differences

are not observed in the case of unfavorable non-pecuniary factors.

301 -0.28 (Column 16, Row 8) for women. Similarly, the standardized path coefficient on
302 job training is estimated as -0.22 (Column 10, Row 9) for men compared to -0.23
303 (Column 16, Row 9) for women. No differences exist in the respective degrees of
304 impacts because the test statistic is less than 1.96

305 In sum, factors motivating male employees differ from those motivating female
306 employees because the impacts of factors such as social evaluation, job training, and
307 relationships with supervisors are shown to differ between men and women, but
308 factors discouraging employees are common because the degree of impacts of
309 protesting unfavorable treatment does not change, irrespective of gender. Additionally,
310 neither gender is more emotional than the other in the sense that the degree of
311 impacts of protesting unfavorable treatment does not vary.

312 We close this section by relating our analyses to behavior agent theory. A salient
313 implication of our results is that the social esteem approach is more prevalent than
314 the social preference approach when discussing effort, but the latter is as important as
315 the former when discussing shirking. In the effort columns of Table 3, the
316 standardized path coefficients of social evaluation in Row 8 are larger than those of
317 equity in Row 7, and relationships with supervisors in Row 10. However, they show
318 less difference in columns of shirking, including company management in Row 12 for

319 each. These results imply that the relevance of either approach varies depending
320 on the work attitudes: effort or shirking.

321

322 V. Conclusion

323 Evidence from survey analyses and experimental economics challenges traditional
324 economics, where pecuniary factors play a primary role in raising work
325 incentives. Increasingly, attention is devoted to non-pecuniary factors in the study of
326 work incentives. One example is reciprocity and fairness in the choice of effort.
327 Self-esteem is another example.

328 This paper presents a study addressing which approach is relevant to discuss
329 non-pecuniary factors by distinguishing positive and negative work attitudes (e.g.,
330 effort and shirking). Non-pecuniary factors are often analyzed under the social
331 preference approach such as reciprocity and fairness and the social esteem approach
332 such as pride and shame. This research attempts to study work incentives
333 comprehensively using a model with three key categories: equity, which is related to
334 social preference approach; social evaluation, which is related to the social esteem
335 approach; and job training, which is unclassified. The analyses quantify the relative
336 importance of these human resource management practices.

337 Our results imply that the social esteem approach is more prevalent than the
338 social preference approach when discussing effort. Although the importance of
339 equity was confirmed, other practices such as social evaluation and job training are
340 apparently more effective to motivate employees. On the other hand, the social
341 preference approach is as important as the social esteem approach when discussing
342 shirking. The degree of impact of non-pecuniary factors on shirking shows less
343 difference among factors (see Column 4). It is not fruitful to discuss which approach
344 is superior because results exhibit the importance of both approaches. It is more
345 practical to distinguish either effort or shirking when discussing the effects of
346 non-pecuniary factors.

347 This research also examines the interaction between equity and other factors
348 categorized in the social preference approach. Our analyses reveal the complicated
349 nature of equity judgments. The degree of equity's impacts becomes smaller once we
350 account for other factors because the effect of equity aside from those factors
351 remains.

352 Furthermore, this research studies non-pecuniary work incentives by particularly
353 addressing gender differences. This study examines whether non-pecuniary factors
354 play a different role in motivating male and female workers. We observed gender

355 differences in factors inducing effort. The role of pride, which can be captured by the
356 social evaluation of companies, is more important for motivating men than
357 women. On the other hand, we observed no gender differences in terms of factors
358 discouraging employees. The degree to which human resource management practices
359 discourage employees was revealed to be similar for men and women.

360 One motivation to conduct this study was to examine whether behavioral
361 implications obtained in past laboratory experiments are actually applicable to work
362 incentives. Results show that some behavioral implications of laboratory experiments
363 are applicable to work incentives in practical working environments. Employees tend
364 to resist unfavorable treatment more strongly than they reward favorable treatment.
365 However, women are not necessarily more tolerant than men. No gender differences
366 are observed for the degree of impacts of protesting unfavorable treatment.

367 Additional efforts are underway to develop a new framework of economics
368 incorporating non-monetary factors and heterogeneous demographic characteristics,
369 including gender differences. These analyses will provide step toward further
370 development in this field.

371 **Table 1 Selected questions used for analyses¹⁰**

372

373	1.Effort	* I work ahead even though my supervisors do not demand it.
374		* I try to work more than assigned.
375	2. Shirking	* I sometimes slow down on my work.
376		* I sometimes avoid working.
377		* I have lost enthusiasm for my work.
378	3. Equity	* The company evaluates me fairly based on my performance.
379		* The evaluation standards of human resource management are fair.
380		* My work is evaluated properly.
381	4. Social evaluation	
382		** I am satisfied with the social evaluation of the company.
383		** I am satisfied with the social evaluation of my work.
384		* My company makes contributions to society.
385		* I am proud of informing others that I work for this company.
386	5. Job training	* I can learn new skills and develop my ability through my work.
387		* The management helps to develop the workers' abilities.
388		* Supervisors and/or seniors are willing to train subordinates.
389		* The company arranged effective job-training courses within a year.
390	6. Relationships with supervisors	
391		**I am satisfied with the leadership of my supervisor.
392		** I have a good relationship with my supervisor.
393	7. Working conditions	
394		**I am satisfied with the welfare system of the company/factory.
395		**I am satisfied with the number of holidays and working hours.
396		**I am satisfied with the level of my salary/wage.
397		** I am satisfied with the opportunities for promotion.
398	8. Company management	
399		* The management show respect to workers.
400		* The management appreciates workers' hard work.
401		* The management cares about workers' welfare.
402		

¹⁰* Multiple choice answers are 1. I don't think (or feel) so.; 2. I somewhat don't think (or feel) so.; 3. Cannot say; 4. I somewhat think (or feel) so.; 5: I think (or feel) so.

** Multiple choice answers are 1. Dissatisfied; 2. Somewhat dissatisfied; 3. Cannot say; 4. Somewhat satisfied; 5. Satisfied.

403 **Table 2 Summary Statistics**

404

		Male	Female			
Gender		42.4	57.6			
		Permanent	Temporary			
Permanent/Temporary		80.6	19.4			
		Yes	No			
Experiences to change jobs		53.9	46.1			
		Malaysia	Singapore	Indonesia	China	Thailand
Areas		26.3	1.8	0.9	29.0	42.0
		1	2	3	4	5
1. Effort						
	work ahead	8.9	8.3	26.9	21.6	34.3
	work more	12.8	8.9	20.7	27.0	30.5
2. Shirking						
	slow down	33.1	17.2	20.2	16.6	12.9
	avoid working	24.9	13.7	20.0	18.7	22.7
	lost enthusiasm	44.7	17.7	18.8	9.7	9.1
3. Equity						
	performance	19.0	20.5	24.0	21.2	15.3
	evaluation standards	22.3	19.9	25.8	19.4	12.5
	work evaluation	18.8	19.1	27.9	21.6	12.6
4. Social evaluation						
	company	6.0	7.8	34.9	33.2	18.0
	work	6.8	9.0	39.3	29.7	15.3
	contributions	7.2	7.8	22.3	27.1	35.6
	proud	7.4	6.9	16.4	25.1	44.3
5. Job training						
	learn	10.6	12.0	22.0	28.4	27.0
	management	9.1	10.1	22.6	27.0	31.2
	supervisors	8.3	12.4	24.1	29.7	25.5
	courses	19.7	15.2	23.2	22.4	19.5
6. Supervisors						
	leadership	12.4	14.2	22.9	30.3	20.2
	relationships	7.0	10.9	30.0	32.0	20.1
7. Working conditions						
	welfare system	18.9	17.9	20.2	27.8	15.1
	holidays/ working hours	14.8	14.1	19.1	29.2	22.9
	salary	32.6	25.7	18.0	16.2	7.5
	promotion	17.0	13.7	46.5	14.5	8.3
8. Company management						
	respect	14.9	14.1	26.2	26.0	18.7
	appreciation	15.5	16.0	25.7	24.5	18.3
	cares	15.8	15.2	25.1	25.2	18.7
Sample size	44,562					
		unit: frequency (%)				

405

406 **Table 3 Results of Analyses**

		[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	
		All						Male						Female						
		Effort	Effort	Effort	Shirking	Shirking	Shirking	Effort	Effort	Effort	Shirking	Shirking	Shirking	Effort	Effort	Effort	Shirking	Shirking	Shirking	
[1]	Equity	0.03*	0.01	0.01**	-0.10*	-0.06*	-0.04*	0.02**	0.00	0.01	-0.10*	-0.07*	-0.04*	0.03*	0.01	0.02***	-0.10*	-0.10*	-0.04*	
	Standard errors	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00	
[2]	Social evaluation	0.24*	0.20*	0.20*	-0.28*	-0.20*	-0.20*	0.30*	0.25*	0.28*	-0.29*	-0.22*	-0.21*	0.23*	0.19*	0.20*	-0.28*	-0.20*	-0.21*	
	Standard errors	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	0.02	0.02	0.02	0.01	0.01	0.01	
[3]	Job training	0.28*	0.25*	0.27*	-0.14*			0.25*	0.21*	0.24*	-0.13*			0.30*	0.28*	0.29*	-0.14*			
	Standard errors	0.01	0.01	0.01	0.01			0.01	0.01	0.01	0.01			0.01	0.01	0.01	0.01			
[4]	Supervisors		0.07*			-0.10*	-0.09*		0.06*			-0.11*	-0.09*		0.04*			-0.10*	-0.08*	
	Standard errors		0.01			0.00	0.00		0.01			0.01	0.01		0.01			0.01	0.01	
[5]	Working conditions			0.05*		-0.11*				0.02**		-0.09*				0.04*		-0.12*		
	Standard errors			0.01		0.00				0.01		0.01				0.01		0.01		
[6]	Management						-0.17*						-0.17*						-0.17*	
	Standard errors						0.01						0.01						0.01	
	Standardized coefficients																			
[7]	Equity	0.04*	0.01	0.02**	-0.20*	-0.13*	-0.09*	0.02**	0.00	0.02	-0.20*	-0.14*	-0.09*	0.04*	0.02	0.02***	-0.21*	-0.12*	-0.09*	
[8]	Social evaluation	0.14*	0.12*	0.12*	-0.28*	-0.20*	-0.21*	0.19*	0.16*	0.17*	-0.29*	-0.22*	-0.21*	0.14*	0.12*	0.12*	-0.28*	-0.20*	-0.22*	
[9]	Job training	0.27*	0.24*	0.27*	-0.23*			0.26*	0.22*	0.25*	-0.22*			0.30*	0.28*	0.30*	-0.23*			
[10]	Supervisors		0.11*			-0.20*	-0.17*		0.11*			-0.20*	-0.17*		0.08*			-0.19*	-0.17*	
[11]	Working conditions			0.06*		-0.23*				0.03**		-0.18*				0.05*		-0.26*		
[12]	Management						-0.32*						-0.31*						-0.33*	
[13]	GFI	0.89	0.85	0.83	0.89	0.83	0.84	0.89	0.83	0.85	0.89	0.83	0.83	0.89	0.85	0.83	0.89	0.83	0.83	
[14]	AGFI	0.84	0.79	0.78	0.85	0.77	0.77	0.85	0.78	0.79	0.86	0.77	0.78	0.85	0.80	0.78	0.86	0.77	0.78	
		* statistically significant at the 0.1% level; ** at the 3% level; *** at the 10% level																		
	The first six columns labeled “All” present the results obtained using the whole sample; other columns present the results obtained using sub-samples: columns 7–12 for males, columns 13–18 for females. For each latent variable, the first row shows estimated coefficients; the second row shows standard errors. Standardized coefficients follow beneath from row 7.																			
	GFI is similar to R-squared in regression analysis. Ranging between 0 and 1, GFI takes a value of one if the model fits the data perfectly. AGFI is comparable to adjusted R-squared. AGFI adjusts the number of parameters in deriving GFI because the value of GFI increases with the number of parameters.																			
	Gender differences in coefficients																			
[15]	Equity							0.73	1.04	0.27	0.17	2.22*	0.42							
[16]	Social evaluation							-2.75*	-2.21*	-3.11*	0.90	1.44	0.17							
[17]	Job training							3.04*	3.79*	2.97*	-0.38									
[18]	Supervisors							-3.19*				1.58	0.96							
[19]	Working conditions									1.15		-4.39*								
[20]	Management												-0.74							
		* statistically significant at the 5% level																		

References

- Akerlof, G. A.(1982). Labor contracts as partial gift exchange.*Quarterly Journal of Economics*, 97, 543-569.
- Akerlof, G., &Yellen, J. (1990). The fair wage-effort hypothesis and unemployment. *Quarterly Journal of Economics*, 105, 255-283.
- Amable, B. & Gatti, D. (2002). Macroeconomic effects of product market competition in a dynamic efficiency wage model.*Economics Letters*, 75, 39-46.
- Berg, J., Dickhaut, J., &McCabe, K. (1995). Trust, reciprocity and social history.*Games and Economic Behavior*,10, 122-142.
- Bolton, G., &Ockenfels,A. (2000). ERC-A theory of equity, reciprocity and competition. *American Economic Review*, 90, 166-193.
- Bowen, N.K. &Guo, S.(2011). *Structural Equation Modeling*,Oxford: Oxford University Press.
- Brennan, G., &Pettit, P. (2004).*Theeconomy of esteem*. Oxford: OxfordUniversity Press.
- Camerer, C.,&Thaler, R. (1995). Anomalies: ultimatums, dictators and manners.*Journal of Economic Perspectives*, 9, 209-219.
- Chang, J. & Lai, C. (2002).Is the Efficiency Wage Efficient? The Social Norm and Organizational Corruption, *The Scandinavian Journal of Economics*, 104, 27–47.
- Charness,G., Frechette, G. R., &Kagel, J. H. (2004). How robust is laboratory gift exchange? *Experimental Economics*, 7, 189-205.
- Clark, A. E., Masclet, D., &Villeval, M. C. (2010). Effort and comparison income: Experimental and survey evidence.*Industrial and Labor Review*, 63, 407-26.
- Collard, F. &Croix, D. (2000). Gift Exchange and the Business Cycle: The Fair Wage Strikes Back.*Review of Economic Dynamics*, 3, 166–193.
- Dohmen, T., Falk, A., Huffman, D., &Sunde, U.(2009). Homo reciprocans: Survey evidence

434 on behavioural outcomes.*Economic Journal*, 119, 592-612.

435 Dugar, S.(2010). Nonmonetary sanctions and rewards in an experimental coordination game.
 436 *Journal of Economic Behavior & Organization*,73, 377-386.

437 EckelC.C., &Grossman,P.J. (2001). Chivalry and solidarity in ultimatum games.*Economic*
 438 *Inquiry*, 39, 171-188.

439 Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch,P. D., &Rhodes, L. (2001). Reciprocation
 440 of perceived organization support.*Journal of Applied Psychology*, 86, 42-51.

441 Falk, A., Fehr, E., &Fischbacher, U. (2008). Testing Theories of Fairness--Intentions Matter,
 442 *Games and Economic Behavior*, 62(1), 287-303.

443 Faria, J.R. (2000). Supervision and effort in an intertemporal efficiency wage model: the role
 444 of the Solow condition.*Economics Letters*, 67, 93-98.

445 Fehr, E., Kirchsteiger,G., &Riedl, A. (1993). Does fairness prevent market clearing? An
 446 experimental investigation.*Quarterly Journal of Economics*, 108, 437-460.

447 Fehr, E., &Schmidt, K. M. (1999).A theory of fairness, competition, and cooperation.
 448 *Quarterly Journal of Economics*, 114, 817-868.

449 Fehr, E., &Gächeter, S. (2000). Fairness and retaliation: the economics of reciprocity.
 450 *Journal of Economic Perspectives*, 14, 159-181.

451 Fehr, E., Klein, A., &Schmidt, K. M. (2007). Fairness and contract design.*Econometrica*, 75,
 452 121-154.

453 Fella, G. (2000). Efficiency wage and efficient redundancy pay.*European Economic Review*,
 454 44, 1473-1490.

455 Jellal, M. &Zenou, Y. (2000).A dynamic efficiency wage model with learning by doing,
 456 *Economics Letters*, 66, 99–105.

457 Lind, E.A. (2001). Fairness heuristic theory: justice judgments as pivotal cognitions in
 458 organizational relations. In J. Greenberg, &R. Cropanzano, (Eds.), *Advances in*

459 *Organizational Justice*(pp.56-88). CA: StanfordUniversity Press.

460 Mowday, R.T., Porter L.W., & Steer, R.M. (1982).*Employee-organization linkage: the*

461 *psychology of commitment, absenteeism, and turnover*.New York: Academic Press.

462 Offerman, T.(2002). Hurting hurts more than helping helps.*European Economic Review*, 45,

463 1423-1437.

464 Pereira, P. T., Silva, N., &Silva, J. (2006). Positive and negative reciprocity in the labor

465 market.*Journal of Economic Behavior & Organization*, 59, 406-422.

466 Roth A., Prasnikar, V., Okuno-Fujiwara, M., &Zamir, S. (1991). Bargaining and market

467 behavior in Jerusalem, Ljubljana, Pittsburgh, and Tokyo: an experimental study.

468 *American Economic Review*, 81, 1068-1095.

469 Shapiro, C., &Stiglitz, J. E. (1984). Equilibrium unemployment as a worker discipline device.

470 *American Economic Review*, 74, 433-444.

471 Slonim, R., &Roth, A. (1998). Financial incentives and learning in ultimatum and market

472 games: an experiment in the SlovakRepublic.*Econometrica*, 66, 569-596.

473 Solnick, S. (2001). Gender differences in the ultimatum game.*Economic Inquiry*, 39,

474 189-200.