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#### RESEARCH ARTICLE

# Compensation Disparity between Locals and Expatriates in China: A Multilevel Analysis of the Influence of Norms

Kwok Leung · Xiaowan Lin · Lin Lu

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**Abstract** In developing countries, there is a large gap in the compensations of locals and expatriates, which is related to negative attitudes of locals. A multilevel study was conducted in China on the influence of low compensation parity in MNC operations. Findings show that the negative effects of low compensation parity on outcome variables, namely, evaluation of and knowledge sharing with expatriates, as well as job satisfaction and intention to quit, were fully mediated by distributive justice based on a comparison with expatriates. Personal pro-disparity norm regarding low compensation parity played a buffering role and was related to a weaker relationship between compensation parity and comparative distributive justice. Organizational pro-disparity norm showed a similar cross-level buffering effect. Trust climate was related to a weaker relationship between compensation parity and comparative distributive justice, and fully mediated the moderating effect of organizational pro-disparity norm. The findings have important theoretical and managerial implications for mitigating the negative influence of low compensation parity in multinational firms, and point to some important topics for future research on the social integration of locals and expatriates.

**Keywords** Locals  $\cdot$  Expatriates  $\cdot$  Compensation disparity  $\cdot$  Distributive justice  $\cdot$  Norms  $\cdot$  China

K. Leung (⊠)

Department of Management, City University of Hong Kong, Hong Kong, China e-mail: mkkleung@cityu.edu.hk

X. Lin

Department of Management and Marketing, University of Macau, Macau, China

L. Lu

Antai College of Economics and Management, Shanghai Jiao Tong University, Shanghai, China



#### 1 Introduction

Multinational corporations (MNCs) operate in many developing countries, and expatriates are often deployed in these operations. Expatriates are typically remunerated according to the compensation level of their home countries, whereas local employees are paid according to the local labor market, resulting in a large gap in compensation between these two groups. In these MNC operations, locals do compare with expatriates and report low distributive justice, <sup>1</sup> i.e., low perceived fairness of the compensation received as compared to the compensation of expatriates (e.g., C. C. Chen et al. 2002), which is related to negative outcomes, such as low job satisfaction (e.g., Leung et al. 1996). Indeed, this compensation gap is often a source of perceived injustice and frustration for local employees (Toh and DeNisi 2003).

To maintain cost competitiveness, it is difficult for MNCs to narrow the compensation gap significantly, and it is important to identify non-financial factors to mitigate its negative effects (C. C. Chen et al. 2002; Toh and DeNisi 2003). Managerial guidelines can then be developed to maintain the morale of local employees and promote their working relationship with expatriates. From a theoretical perspective, this line of research can unravel the dynamics underlying the negative reactions to the compensation gap between well-defined national groups, and shed light on the social integration processes within MNCs in developing countries.

The research reported in this paper attempts to develop and test a multi-level model with a focus on the mitigation of the negative influence of low compensation parity, i.e., a large compensation gap, between locals and expatriates in China. This research has two major objectives. First, we develop a theoretical model for the relationships between compensation parity, perceived justice, and locals' reactions to compensation parity. Previous studies have examined the relationship of compensation parity between locals and expatriates with perceived distributive justice (e.g., C. C. Chen et al. 2002), and of distributive justice with the reactions of local employees (e.g., Leung et al. 1996). Consistent with equity theory (Adams 1965), we develop and evaluate a mediation model in which perceived distributive justice mediates the effects of compensation parity on the reactions of locals.

The second objective is to extend previous research on mitigating the negative effects associated with low compensation parity by developing a multi-level model based on the notion of norm, defined as beliefs about the proper and appropriate behaviors and practices for a given situation (Cialdini and Trost 1998). As described in a subsequent section, prior research has examined several moderators that can buffer the negative reactions of locals to low compensation parity, but norm is

<sup>&</sup>lt;sup>1</sup> The equality norm is more salient in collectivistic societies, such as China, than in individualistic societies (Leung 1997). Our research was conducted in China, and because of the market reform in the past decades, the equity norm, which requires the ratio of input and outcome to be similar across employees, is now salient in the Chinese work context (e.g., Chen 1995; He et al. 2004). Another reason for the salience of the equity norm is that expatriates are likely to be viewed as outgroup members, and it is well-documented that Chinese tend to adopt the equity norm with outgroup members (Leung 1997). We thank an anonymous reviewer for this argument.



distinct from the moderators examined before. It is well-known that salient norms function to guide behaviors, and theories of norms (e.g., Cialdini and Trost 1998; Staw et al. 1980) suggest that they exert both main and moderating effects. Norms exist at two levels: The personal level as well as the group level (e.g., Ehrhart and Naumann 2004). Most prior research on norms focuses on one level, either personal or group norm, and is primarily concerned with their main effects (e.g., Albarracín et al. 2001; Goldstein and Cialdini 2011; Cialdini and Trost 1998). A novel feature of our research is to adopt a multi-level conceptualization of norms and explore their buffering effects at the personal as well as group levels on the negative effects of low compensation parity in MNCs. In sum, this study provides a novel perspective on mitigating the negative influence of low compensation parity and helps promote the development of multi-level models in international management research.

# 2 Literature Review and Development of Hypotheses

#### 2.1 Compensation Parity between Locals and Expatriates and Justice Perception

Equity theory (Adams 1965; Carrell and Dittrich 1978), a major theory in organizational behavior, posits that people evaluate the fairness of their rewards based on a comparison with others in similar situations. Briefly put, distributive justice is perceived if the ratios of inputs and outcomes are similar across individuals in similar situations. Equity theory also posits negative reactions to low perceived distributive justice, from negative attitudinal reactions to reduction of effort. Drawing on this theory, Lawler (1981) proposes a pay satisfaction model, in which the perceived pay of referent others is able to influence one's pay satisfaction. Applying equity theory in the MNC context in developing countries, local employees would evaluate the fairness of their compensations with regard to their input to the job, such as effort and qualifications. If they choose expatriates as the referent group for social comparison, they will perceive low distributive justice, because expatriates typically make a few times more than locals in developing countries (e.g., Choi and Chen 2007). Because of the common practice of pay secrecy, locals usually do not have precise information about the magnitude of the compensation gap. However, distributive justice judgments are theoretically based on perceptions and, as a result, our research is concerned with the subjective appraisal of compensation parity.

Based on equity theory, we predict that the lower the perceived compensation parity between locals and expatriates, the lower the perceived distributive justice of locals. Consistent with equity theory, C. C. Chen et al. (2002) found that compensation parity between locals and expatriates was positively related to locals' perceived fairness of their compensations, termed comparative distributive justice by Leung et al. (1996) because this justice perception is based on a comparison with expatriates. In line with equity theory, several studies have shown that perceived comparative distributive justice is related to positive reactions from locals, such as job satisfaction (e.g., Choi and Chen 2007; Leung et al. 2001). These



findings as a whole suggest that comparative distributive justice should mediate the effects of compensation parity between locals and expatriates on locals' reactions.

To index the reactions of local employees toward comparative distributive justice, we examined two major types of reactions. The first type involves reactions toward expatriates, which are particularly important for our research context. Probing the dynamics that shape these reactions provides theoretical insight about intercultural relations in MNCs, which are critical to their success. Two such reactions toward expatriates are included. Evaluation of expatriates, referring to the evaluation of the managerial competence of expatriates, reflects positive attitudes toward expatriates as managers, which is key to positive intercultural relationship. Knowledge sharing with expatriates, referring to the sharing of knowledge and expertise with expatriates by locals, is critical for the collaboration of locals and expatriates and the effective learning and performance for both groups. In line with this argument, Hocking et al. (2007) found that experiential learning of expatriates was related to access to the knowledge of locals. Reiche et al. (2009) argue that knowledge transfer between expatriates and locals contributes to the intellectual capital of MNCs, which is obviously critical to their success.

The second type of reaction is oriented toward the firm and includes job satisfaction and intention to quit, which are major outcome variables in justice research (Colquitt et al. 2001). Job satisfaction is important in its own right and is a reliable and important predictor of various job outcomes (Harrison et al. 2006). Intention to quit is the best predictor of employee turnover behavior (Griffeth et al. 2000), and the retention of high-performing local employees is a major challenge confronting MNC operations in China (e.g., Walsh and Zhu 2007).

Following equity theory, we predict that comparative distributive justice should be related to both types of reactions from locals. The two outcome variables concerning the firm are conceptually distinct from the two outcome variables concerning expatriates, thus allowing us to test the convergence of the results.

Hypothesis 1: Perceived compensation parity between locals and expatriates will be positively related to evaluation of and knowledge sharing with expatriates as well as job satisfaction and negatively related to the intention to quit. These relationships will be mediated by comparative distributive justice.

#### 2.2 Salient Norms and Compensation Parity between Locals and Expatriates

Pioneering the research on mitigating the negative effects of low compensation parity, C. C. Chen et al. (2002) found that if expatriates were perceived as interpersonally sensitive, such as being helpful and respectful to locals, the negative impact of low compensation parity was reduced. Leung et al. (2009) found that perceived trustworthiness of expatriates moderated the relationship between comparative distributive justice and evaluation of expatriates, supporting the argument that the negative influence of low comparative distributive justice was reduced by perceived trustworthiness of expatriates. While these two studies examined individual-level moderators, Leung et al. (2011) recently found that an inclusive climate initiated by expatriates for locals, a group-level construct, can



mitigate the negative effects of disapproval of low compensation parity on locals' reactions. The present research extends this line of work and develops a multi-level model based on salient norms, and a novel feature of this model is to evaluate whether norms can mitigate the negative effects of low compensation parity at both the personal and organizational levels.

The notion of norm has a long history in management, social psychology, and sociology. At the group level, group norms are concerned with what is regarded as proper and appropriate for a given situation, which typically develop through interaction among group members and are agreed upon informally within a group. At the individual level, personal norms are concerned with what an individual regards as proper and appropriate for a given situation (Schwartz 1973). In general, norms function to guide people's behaviors and judgments (e.g., Kerr et al. 1997; Schwartz 1973). People have a tendency to act according to salient norms, and regard practices consistent with salient norms as proper and legitimate.

In our research context, the norm central to low compensation parity between locals and expatriates is concerned with the extent to which it is regarded as proper and appropriate, termed the pro-disparity norm. Cialdini et al. (1990) have distinguished two types of norms: Descriptive norms, referring to what is seen as typical, and injunctive norms, which are concerned with morally approved behaviors. In our theoretical analysis, we are concerned with the appropriateness and legitimacy of low compensation parity, and pro-disparity norm is thus injunctive in nature. At the personal level, some locals may endorse the pro-disparity norm because they accept the practice that expatriates have to be compensated based on the labor market conditions of their home countries. At the organizational level, some firms may highlight the use of home country standards for determining the compensations of expatriates as a widespread practice in MNC operations in developing countries, resulting in a pro-disparity organizational norm.

As argued before, compensation parity is related to comparative distributive justice, which in turn is related to reactions of local employees. The next step in developing the multilevel model is to consider the moderating influence of norms. Our theorizing begins with the argument that norms legitimize behaviors consistent with them and suppress counter-normative behaviors (Cialdini and Trost 1998). There is substantial evidence to support the argument that people act according to salient norms and regard practices consistent with salient norms as proper and legitimate (Cialdini and Trost 1998; Schwartz 1973; Cropanzano and Mitchell 2005). Following this argument, a given behavior or a practice may elicit negative reactions from people, but if it is endorsed by a salient norm, people's negative reactions should be attenuated. We therefore propose that although prior research shows that low compensation parity between locals and expatriates is likely to trigger negative reactions from locals, if low compensation parity is supported by a salient norm, the negative reactions should be attenuated.

Consistent with this theorizing, several studies have demonstrated the buffering role of norms at both individual and group levels in mitigating the influence of negative antecedent variables. For instance, Staw et al. (1980) found that an extrinsic reward decreased task satisfaction and persistence, but a norm for payment removed the suppressive effects of the reward. In other words, this specific norm



can attenuate the negative reactions to an extrinsic reward. Duffy et al. (2006) provide some suggestive evidence for the moderating effect of a group norm. Social undermining (behaviors by others that damage a person's relationships, work performance, and reputation) was obviously related to negative reactions from victims, but social undermining was related to weaker negative reactions in a context of high occurrence of social undermining. Duffy et al. (2006) suggest that one way to explain this finding is that a context of high social undermining is associated with an organizational norm for social undermining, which reduces the negative reactions of the victims to their experience of social undermining. Taken as a whole, these findings support the theoretical argument that a salient norm, either personal or organizational, can reduce the negative reactions to a behavior or a practice that is supported by the norm.

In the MNC context, low compensation parity between locals and expatriates is a practice that triggers negative reactions from locals. The preceding theoretical analysis suggests that both personal and organizational pro-disparity norms should attenuate the negative influence of low compensation parity, i.e., they can weaken the relationship between compensation parity and comparative distributive justice.

Hypothesis 2: Personal pro-disparity norm will negatively moderate the relationship between perceived compensation parity and comparative distributive justice at the individual level. The relationship between perceived compensation parity and comparative distributive justice will be weaker when personal pro-disparity norm is high.

Hypothesis 3: Organizational pro-disparity norm will show a cross-level, negative moderation effect on the relationship between perceived compensation parity and comparative distributive justice. The relationship between perceived compensation parity and comparative distributive justice will be weaker when organizational pro-disparity norm is high.

# 2.3 Probing the Moderating Effect of Organizational Pro-disparity Norm

It is important to probe the processes underlying the moderating effect of organizational pro-disparity norm, because insight gleaned from such effort can help develop a more complete theoretical model. As a first attempt in this direction, we focus on organizational climate. There is a long history of research on organizational climate, which typically involves a referent, such as safety (Zohar 2000). With regard to trust, it is conceptualized at the organizational level as intragroup trust (Friedlander 1967), or trust climate (Butler 1999; Poon 2003), which refers to the shared perception that employees trust each other and are trustworthy within a group or an organization. Trust is important because it shapes the interpretation of events and issues. A negative event or behavior associated with a trustworthy target is likely to lead to more benign interpretations of the motives behind it and alleviate its negative consequences (Zand 1972). In line with this logic, Simons and Peterson (2000) theorize that intragroup trust, or trust climate, should be able to mitigate the negative reactions to task conflict. Indeed, they found that task conflict was related



less strongly to relationship conflict when intragroup trust was high, thus confirming the buffering effect of trust climate.

We extend the theorizing of Simons and Peterson (2000) to the MNC context and propose that trust climate can mitigate the negative effects of low compensation parity on the reactions of local employees. Our reasoning is captured in the following hypothesis:

Hypothesis 4: Trust climate will negatively moderate the relationship between perceived compensation parity and comparative distributive justice. The higher the trust climate, the weaker the relationship between perceived compensation parity and comparative distributive justice.

As argued before, organizational pro-disparity norm legitimizes low compensation parity between locals and expatriates and hence can attenuate its instigation of negative reactions from local employees. Legitimacy promotes trust because people tend to trust and accept arrangements and practices that have a legitimate basis (e.g., Rafaeli et al. 2008; Sitkin and George 2005). Because organizational pro-disparity norm confers legitimacy on the high salaries of expatriates, we argue that it can reduce the distrust triggered by low compensation parity. In other words, organizational pro-disparity norm should be positively related to trust climate. Given that trust climate can moderate the relationship between compensation parity

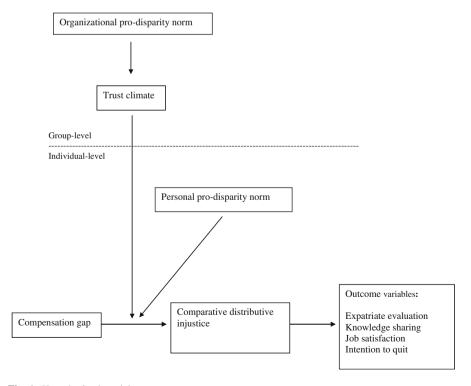


Fig. 1 Hypothesized model



and comparative distributive justice, trust climate should mediate the moderating effect of organizational pro-disparity norm:

Hypothesis 5: Trust climate will mediate the moderation effect of organizational pro-disparity norm on the relationship between perceived compensation parity and comparative distributive justice.

For a schematic presentation of our research model, see Fig. 1. In this model, perceived compensation parity is related positively to both organizational attitudes and reactions towards expatriates through comparative distributive justice, and norms at the individual and organizational levels can reduce the effects of perceived compensation parity. To evaluate this model, a survey with a multi-level design was conducted in a variety of MNC operations in the Shanghai area in China, which provides a good research context because China is arguably the most important destination of foreign direct investments (Fan et al. 2009). The theoretical implications of the findings and directions for future research are then explored.

#### 3 Methods

# 3.1 Sample and Procedures

Sixty-seven wholly owned foreign enterprises or international joint ventures were invited to participate in our study by part-time MBA students enrolled in a university in Shanghai, China on behalf of the researchers. Sixty companies accepted the invitation, resulting in a response rate of 90 %. These MBA students were instructed to identify about 12 local employees from diverse departments in their organizations who had working relationships with expatriate managers and invited them to complete a questionnaire. This group size provided a good estimate of the group-level constructs (Bryk and Raudenbush 1992), and covered various functions within an organization. Respondents were informed that their individual responses would be kept confidential and were for research use only. Participants received a small sum of money for completing the questionnaires.

The final sample contained 716 local Chinese employees from 60 companies, with 10–12 participants from each company. A total of 57.7 % were men and most were in the age of 20–39 (91.5 %). 97.2 % of the participants had a university education or above. 15.2 % were departmental or senior managers, 23.5 % at the supervisor level, and 60.5 % general employees. More than half (53.5 %) were from manufacturing, and 20.3 % from IT industries. 62 % were wholly owned foreign enterprises, and 35.2 % international joint ventures. 36.9 % of the firms were from North America (Canada/US), 33.5 % from Europe, and 15.3 % from Asia, including Hong Kong, Macau, and Taiwan. Pay levels are much higher in these Chinese societies than in mainland China (International Monetary Fund 2012), and managers from these Chinese societies are typically compensated at the expatriate level.



#### 3.2 Measures

Compensation parity was measured by two items adopted from C. C. Chen et al. (2002), with the rating scale modified so that respondents rated their salary and benefits relative to those of the expatriates in their firm on a five-point scale (1 = very low and 5 = very high). Scale scores were computed by averaging the constituent items of the scale, and this procedure was also followed for the scales described below. A higher score reflects higher compensation parity. The alpha was 0.92.

Comparative distributive justice (CDJ) was based on the single-item scale used by Leung et al. (1996) and C. C. Chen et al. (2002), which was adapted from Rice et al. (1990). Two self-constructed items were added, which were developed with reference to Rice et al. (1990) to capture the perceived fairness of the compensation received as compared with expatriates. The construction of this scale was necessary because popular distributive justice scales (e.g., Niehoff and Moorman 1993; Judge and Colquitt 2004) do not explicitly target the social comparison involved. Respondents were asked to consider the situation in their firm and respond to the items, and a sample item is 'All in all, my compensation is fair as compared to expatriates'. Responses were made on five-point scales, from 1 'strongly disagree' to 5 'strongly agree'. A higher score refers to a higher level of justice perception. The alpha of this scale was 0.80.

Expatriate evaluation consisted of eight items. Two items were adapted from Bass (1985) to assess the respondents' general satisfaction with expatriates: "In all, I am satisfied with the overseas manager" and "In all, I am satisfied that the methods of leadership used by the overseas manager are right ones for getting my group's work done". The other six items were adapted from Leung et al. (2011) to measure respondents' evaluation of the abilities and knowledge of expatriates, such as "Expatriates have excellent managerial skills". These two sets of items were found to form a single scale (Leung et al. 2011). Four items adapted from Bock et al. (2005) were used to measure knowledge sharing with expatriates. A sample item is "I share my work reports and official documents with expatriate managers." Job satisfaction was measured by four items taken from Cole (1979), and a sample item is "I am satisfied with my job." Intention to quit was measured by two items taken from the general satisfaction scale by Hackman and Oldham (1974): "I frequently think of quitting this job" and "People on this job often think of quitting". All four dependent variables were measured on five-point scales (from 1 "strongly disagree" to 5 "strongly agree"), and reliabilities were satisfactory (See Table 1).

# 3.2.1 Personal Pro-disparity Norm (Personal Norm in Short)

Norms are usually measured by context-specific items constructed to cater to the specific context of a study. We followed this practice and developed a scale for our context with reference to measures typically used to measure personal norms (e.g., Gärling et al. 2003; Hopper and Nielsen 1991). Five items were used, focusing on the perceived appropriateness and propriety of the compensation gap. A sample



Table 1 Means, standard deviations, coefficient alphas, and intercorrelations

Variables	Mean	SD	1	2	3	4	5	6	7
Individual-level measures	3								
1. Compensation parity	2.22	0.75	(0.92)						
2. Comparative DJ	2.86	0.65	0.46	(0.80)					
3. Expatriate evaluation	3.26	0.50	0.26	0.52	(0.82)				
4. Knowledge sharing	3.47	0.54	0.14	0.31	0.42	(0.73)			
5. Job satisfaction	3.31	0.63	0.24	0.48	0.53	0.47	(0.83)		
6. Intention to quit	2.71	0.73	-0.13	-0.20	-0.23	-0.23	-0.41	(0.71)	
7. Personal norm	3.00	0.55	0.17	0.39	0.30	0.16	0.21	-0.18	(0.68)
Group-level measures									
1. Organizational norm	3.09	0.26	_						
2. Trust climate	3.35	0.29	0.27	_					

Numbers in parentheses are alpha coefficients. N = 716. All correlations are significant at p < 0.01 DJ distributive justice

item is "I cannot accept that local employees receive lower salaries than expatriates at the same level (reversed)." The alpha of the scale was 0.68.

# 3.2.2 Group-level Variables

The items of the personal norm scale were adapted to measure organizational prodisparity norm (organizational norm in short). Following the referent shift model (Chan 1998), the subject "I" in the items was replaced by "Most of the local employees". These items captured the perception of the salient normative beliefs among locals about compensation parity within a firm. Trust climate was measured by a four-item scale developed by Poon (2003), and a sample item is: "There is a very high level of trust throughout my organization".

Since organizational norm and trust climate are group-level constructs, we assessed their within-group agreement, or degree of social consensus, to justify the aggregation of the items to the firm level. The inter-rater agreement ( $r_{\rm wg}$ ; James et al. 1993) was first examined, and the median  $r_{\rm wg}$  values were acceptable: 0.82 and 0.87 for organizational norm and trust climate, respectively (G. Chen et al. 2002). In addition, the intraclass correlation coefficients (ICC1) and reliability of the group mean (ICC2) were also examined. Satisfactory ICC1 values for organizational norm and trust climate were found: 0.08 and 0.20, respectively. The ICC2 values for organizational norm and trust climate were 0.51 and 0.75, respectively, suggesting that the value for trust climate was satisfactory, and that the value for organizational norm was marginal. However, this marginal value should not be a major problem because inter-rater agreement and ICC1 were acceptable, and similar values can produce meaningful results in prior research (e.g., Liao and Chuang 2004; Schneider et al. 1998). The aggregation was therefore justified, and individual scores were averaged to form group-level measures.



#### 3.2.3 Control Variables

Four individual-level variables including gender, age, education level, and rank, and two group-level variables, including company type (international joint ventures vs. wholly owned foreign enterprises) and home continent (two dummy variables representing North America, Europe, and Asia, with Asia as the referent group) were considered to control for their potential influence.

#### 3.3 Common Method Variance

Because of the nature of the variables studied, the data were based on self-report, raising the concern of common method variance problems. However, the complex pattern of predictions tested and the cross-level design should alleviate this concern. Our key hypotheses are concerned with mediation and interaction effects, which, on logical grounds, cannot be generated by common method variance. For mediation to occur, the relationship between a mediator and an outcome variable must be stronger than that between an independent variable and the outcome variable. We are not aware of any argument that common method variance can create a significant but erroneous mediation effect.

For cross-level interaction effects, the problem of common method variance is unlikely (Liao and Rupp 2005). The overlap between firm-level and individual-level variables in terms of having the same respondent generating the data is small, because individual-level variables are based on a specific respondent, whereas firm-level variables are based on averaging the responses of all the respondents from the same firm as this respondent. In fact, Lai et al. (2013) have shown that cross-level interaction effects cannot be artifacts of common method variance.

# 4 Findings

#### 4.1 General Results

Means, standard deviations and intercorrelations are presented in Table 1. Hierarchical linear modeling (HLM) (Bryk and Raudenbush 1992) with HLM 6.06 was used in hypothesis testing to account for the non-independence in the data. Following Hofmann and Gavin (1998), the predictors at level 1 were grand-mean centered so that the influence of the level-1 variables can be adequately controlled for when examining the level-2 effects. For the cross-level interaction effects, we also obtained results based on group-mean centering and found that the centering method used did not alter the pattern of the results obtained. Our proposed model involves mediating and moderating relationships, and we conducted the analysis following the framework developed by Edwards and Lambert (2007) and previous studies that tested similar relationships (e.g., Brockner and Siegel 1997; Grant and Sumanth 2009).

Because compensation parity, comparative distributive justice and personal prodisparity norm are conceptually related, we conducted a confirmatory factor



analysis to examine their distinctness. Results show that the proposed three-factor model yielded a good model fit ( $\chi^2 = 171.28$ , df = 32, CFI = 0.95, IFI = 0.95, RMSEA = 0.078). All items loaded significantly and substantially on their intended constructs. When all the items were loaded on one single latent variable, the model fit was poor:  $\chi^2 = 1,108.52$ , df = 35, CFI = 0.58, IFI = 0.58, RMSEA = 0.207. These three individual-level variables are therefore distinct.

We first estimated null models, in which no predictors were included, to examine whether there were significant between-group variances in the hypothesized individual-level mediator (i.e., comparative distributive justice) and all dependent variables. These tests revealed satisfactory results for all the individual-level variables: Comparative distributive justice,  $\tau_{00} = 0.06$ ,  $\chi^2$  (59) = 166.07, p < 0.01, ICC1 = 0.14; expatriate evaluation,  $\tau_{00} = 0.03$ ,  $\chi^2$  (59) = 151.12, p < 0.01, ICC1 = 0.12; knowledge sharing,  $\tau_{00} = 0.03$ ,  $\chi^2$  (59) = 129.72, p < 0.01, ICC1 = 0.10; job satisfaction,  $\tau_{00} = 0.05$ ,  $\chi^2$  (59) = 152.96, p < 0.01, ICC1 = 0.12; and intention to quit,  $\tau_{00} = 0.09$ ,  $\chi^2$  (59) = 189.67, p < 0.01, ICC1 = 0.16. The ICC1 values indicate the percentage of the variance in the individual-level variables that resides between groups. Chi square tests indicate that in each case, the between-group variance is significantly different from zero.

The mediating effect of comparative distributive justice on the relationships between compensation parity and the dependent variables were tested with a set of HLM models, with no organization-level predictors specified (see Table 2). With regard to the effects of control variables, it is noteworthy that the origin of the MNCs showed clear effects on intention to quit. Local employees working for MNCs from North America and Europe reported lower intention to quit than locals working for Asian MNCs. A speculation is that Western MNCs may provide better compensations and benefits than Asian MNCs in China, which may account for the lower intention to quit of their local employees. This finding, although not the focus of the present research, may point to some interesting topics for future research.

As expected, the hypothesized mediator, comparative distributive justice, was significantly related to the predictor, compensation parity ( $\beta=0.36,\,SE=0.03,\,p<0.01$ ), and to all four outcome variables (expatriate evaluation:  $\beta=0.39,\,SE=0.03,\,p<0.01$ ; knowledge sharing:  $\beta=0.24,\,SE=0.03,\,p<0.01$ ; job satisfaction:  $\beta=0.45,\,SE=0.03,\,p<0.01$ ; and intention to quit:  $\beta=-0.22,\,SE=0.04,\,p<0.01$ ). Compensation parity also significantly predicted all the outcome variables (expatriate evaluation:  $\beta=0.17,\,SE=0.03,\,p<0.01$ ; knowledge sharing:  $\beta=0.09,\,SE=0.03,\,p<0.01$ ; job satisfaction:  $\beta=0.19,\,SE=0.03,\,p<0.01$ ; and intention to quit:  $\beta=-0.14,\,SE=0.04,\,p<0.01$ ). However, when each of the four dependent variables was regressed on compensation parity and comparative distributive justice simultaneously, the effect of compensation parity on all the four dependent variables became non-significant, while the influence of comparative distributive justice remained significant. According to Baron and Kenny (1986), full mediation effects were established. A Sobel test supported the indirect effects of compensation parity on the four

<sup>&</sup>lt;sup>2</sup> We thank an anonymous reviewer for alerting us to the potential significance of this finding.



Table 2 HLM results for mediation effects of comparative distributive justice

	Dependent variables	iables											
	Comparative DJ	Expatriate	Expatriate evaluation		Knowledge sharing	sharing		Job satisfaction	ıction		Intention to quit	o quit	
Intercept	2.85	3.25	3.25	3.25	3.47	3.46	3.47	3.30	3.30	3.30	2.72	2.72	2.72
IJV vs. WOFE	-0.06	-0.12*	-0.10*	-0.10*	-0.14*	-0.12*	-0.12*	-0.10	-0.08	-0.08	0.02	0.01	0.01
Home continent- North America	0.04	0.08	90.0	90.0	0.10	0.09	0.09	0.11	60.0	60:0	-0.28*	-0.27*	-0.28*
Home continent- Europe	0.01	0.05	0.04	0.04	0.10	0.10	0.10	0.16	0.15*	0.15*	-0.26*	-0.26*	-0.26*
Rank	*90.0	0.01	-0.01	-0.01	0.10**	0.09**	0.09	0.10**	0.07*	0.07*	-0.06	-0.05	-0.05
Gender	-0.03	-0.02	-0.01	-0.01	0.02	0.03	0.03	-0.04	-0.03	-0.03	-0.02	-0.02	-0.02
Age	0.04	-0.01	-0.00	-0.00	0.08*	*80.0	0.08*	0.03	0.03	0.03	0.02	0.01	0.01
Education level	-0.03	90.0	0.07**	0.07**	0.02	0.03	0.03	-0.01	0.00	0.00	-0.07	-0.07	-0.08
Compensation parity	0.36**	0.17**		0.03	0.09**		-0.00	0.19**		0.03	-0.14**		-0.08
Comparative DJ			0.39**	0.38**		0.24**	0.24		0.45**	0.43**		-0.22**	-0.18**
Within-group variance	0.31	0.21	0.17	0.17	0.25	0.24	0.24	0.33	0.28	0.28	0.44	0.43	0.43
Between-group variance	0.03	0.02	0.01	0.01	0.02	0.02	0.02	0.04	0.02	0.02	0.08	0.08	0.08
$R_{\rm within-group}^2$	0.16	0.05	0.24	0.24	0.05	0.12	0.12	90.0	0.20	0.20	0.02	0.04	0.05
$R^2_{\rm between-group}$	0.41	0.30	0.59	0.59	0.20	0.30	0.30	0.21	0.56	0.56	0.12	0.14	0.13
:													

DJ distributive justice, IJV (coded as 1) international joint ventures, WOFE (coded as 0) wholly owned foreign enterprises p < 0.05, p < 0.01



Table 3 HLM results for main effects of personal and organizational norms and moderating effects

	Comparativ	e DJ			
	Model 1	Model 2	Model 3	Model 4	Model 5
Individual-level					
Intercept	2.86	2.86	2.86	2.86	2.87
Rank	0.04	0.04	0.06	0.07	0.06
Gender	-0.06	-0.05	-0.05	-0.01	-0.03
Age	-0.01	-0.01	-0.01	0.01	0.01
Education level	-0.04	-0.04	-0.02	-0.05	-0.04
Compensation parity (CP)	0.31**	0.32**	0.35**	0.35**	0.33**
Personal norm (PN)	0.36**	0.35**			
$CP \times PN$		-0.09*			
Group-level					
IJV vs. WOFE	-0.04	-0.06	-0.02	-0.04	
Home country: North America	-0.04	0.01	-0.05	-0.03	
Home country: Europe	-0.01	0.00	-0.02	-0.08	
Organizational norm (ON)	0.33**		0.52**		0.42**
Trust climate (TC)				0.50**	0.41**
Cross-level					
$CP \times ON$			-0.26*		-0.19
$CP \times TC$				-0.28**	-0.25*
Within-group variance	0.27	0.27	0.31	0.31	0.31
Between-group variance	0.02	0.03	0.02	0.02	0.01
$R_{within-group}^2$	0.25	0.26	0.16	0.17	0.17
$R^2_{between-group}$	0.62	0.55	0.68	0.71	0.87

DJ distributive justice, IJV international joint venture, WOFE wholly owned foreign enterprises \*p < 0.05, \*\*p < 0.01

outcome variables through comparative distributive justice (for expatriate evaluation, Sobel = 8.71, p < 0.01; for knowledge sharing, Sobel = 6.66, p < 0.01; for job satisfaction, Sobel = 8.01, p < 0.01; for intention to quit, Sobel = -3.45, p < 0.01). Consistent with Hypothesis 1, the effects of compensation parity on the outcome variables were fully mediated by comparative distributive justice.

It is informative to see if norms at both levels can influence comparative distributive justice. As Table 3 shows, after controlling the effects of compensation parity and the control variables, the effects of personal and organizational norms on comparative distributive justice were both significant (personal norm,  $\beta = 0.36$ , SE = 0.04, p < 0.01; organizational norm,  $\gamma = 0.33$ , SE = 0.11, p < 0.01).

# 4.2 Moderating Effects

Our model hypothesizes three moderators of the relationship between compensation parity and comparative distributive justice, with personal norm at the individual



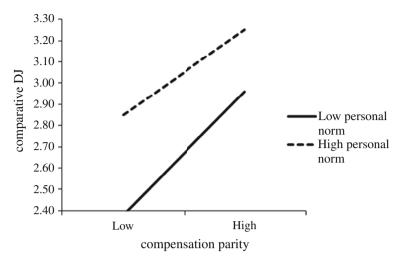


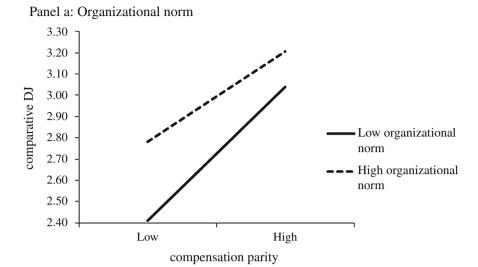
Fig. 2 The moderating effect of personal norm on the relationship between compensation parity and comparative distributive justice

level, and organizational norm and trust climate at the group level. To test the moderating effect of personal norm, an HLM model without specifying any organization-level predictors was assessed. The predictor variables (compensation parity and personal norm) were first mean-centered, and the two-way interaction term (compensation parity × personal norm) was formed by multiplying the two centered predictors. We then regressed comparative distributive justice on compensation parity, personal norm, compensation parity × personal norm, and the control variables.

Results in Table 3 (Model 2) show that the interaction effect of personal norm and compensation parity is significant ( $\beta = -0.09$ , SE = 0.05, p < 0.05). This interaction effect is at the individual level, and Fig. 2 provides a graphic representation of the effect, which is based on one standard deviation above and below the mean (Aiken and West 1991). Consistent with Hypothesis 2, the relationship between compensation parity and comparative distributive justice is weaker when personal norm is high (low personal norm:  $\beta = 0.38$ , t = 9.40, p < 0.01; high personal norm,  $\beta = 0.27$ , t = 6.63, p < 0.01).

To test the cross-level interaction effects involving organizational norm and trust climate, and the mediating effect of trust climate on the interaction effect of organizational norm and compensation parity, a set of HLM models were examined (Models 3–5 in Table 3). Consistent with Hypothesis 3, results of Model 3 show that the moderating effect of organizational norm is significant ( $\gamma=-0.26$ , SE = 0.11, p < 0.05). Panel a of Fig. 3 shows that the effect of compensation parity on comparative distributive justice is weaker when organizational norm is high (low organizational norm:  $\beta=0.41$ , t = 10.19, p < 0.01; high organizational norm:  $\beta=0.28$ , t = 6.45, p < 0.01). In support of Hypothesis 4, results of Model 4 show that the moderating effect of trust climate ( $\gamma=-0.28$ , SE = 0.11, p < 0.01) is significant. Panel b of Fig. 3 shows that the influence of compensation parity on





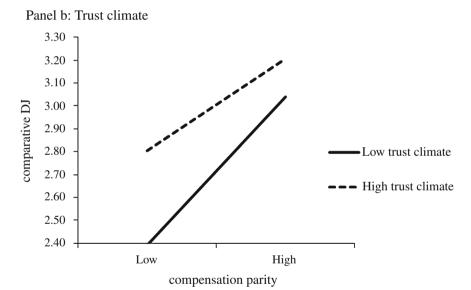


Fig. 3 The moderating effects of organizational norm and trust climate on the relationship between compensation parity and comparative distributive justice

comparative distributive justice is weaker when trust climate is high (low trust climate:  $\beta = 0.43$ , t = 10.27, p < 0.01; high trust climate:  $\beta = 0.27$ , t = 6.00, p < 0.01).

Following the commonly used procedure to test whether an interaction effect is mediated by another interaction effect (e.g., Brockner and Siegel 1997; Grant and Sumanth 2009), Model 5 includes both the main effects of organizational norm and trust climate, as well as their interaction effects with comparative parity. Results of



this model show that the moderating effect of organizational norm became non-significant,  $\gamma = -0.19$ , SE = 0.11, ns., while the moderating effect of trust climate was still significant,  $\gamma = -0.25$ , SE = 0.11, p < 0.05. Given that organizational norm and trust climate are significantly related (b = 0.30, SE = 0.14, p < 0.05), we conclude that trust climate fully mediated the moderating influence of organizational norm on the relationship between comparative parity and comparative distributive justice, thus supporting Hypothesis 5.

#### 5 Discussion

# 5.1 Theoretical Implications for the Role of Norms in MNC Operations

The results extend previous works on moderating the impact of compensation parity between locals and expatriates (e.g., C. C. Chen et al. 2002; Leung et al. 2011) by focusing on a novel construct, pro-disparity norm at the personal and organizational levels. As predicted, both personal and organizational pro-disparity norms are related to a weaker relationship between compensation parity and comparative distributive justice. These findings have at least two major theoretical implications. First, pro-disparity norm is concerned with the propriety of compensation parity, and is not directly concerned with comparative distributive justice. We theorize that the moderating effect occurs because pro-disparity norm functions to legitimize low compensation parity. A different type of norm that is directly concerned with comparative distributive justice, but not with low compensation parity, can be identified. For instance, a norm that emphasizes winner-takes-all may exist in some organizations and attenuate the salience of low distributive justice perception. Although low compensation parity leads to low perceived distributive justice, if the tendency to perceive low distributive justice is attenuated by a winner-takes-all norm, the negative reactions to low compensation parity may also be reduced.

Second, it is necessary to explore how pro-disparity norms are formed. When an MNC launches a new operation in a developing country and brings locals and expatriates to work together, a hybrid culture (Earley and Mosakowski 2000), or a third culture (Graen et al. 1997), is formed, which combines elements of the cultures of locals and expatriates. In the formative stage of this new culture, norms are relatively plastic and can be shaped more easily than well-established norms in a mono-cultural context. Given the importance of norms in mitigating the negative effects of low compensation parity, future research should explore the antecedents of pro-disparity norms in the formative stage of MNC operations and the dynamics involved.

# 5.2 Multilevel Models in International Management Research

Multilevel models are becoming common in many areas of management research (Hitt et al. 2007), but they are relatively uncommon in international management research (Li et al. 2012). Currently, multilevel models that span across many national contexts have received relatively more attention. In this type of model,



nation is typically the construct at the highest level, which exerts main effects on variables, and/or cross-level moderating effects on a relationship, at a lower level (e.g., Arregle et al. 2006). The present research illustrates another type of multilevel model for international management research. Within a single national context, individual and group-level constructs can be examined simultaneously to shed light on organizational phenomena associated with MNCs. The group-level constructs may involve industries, organizations, departments and teams, and the lower-level constructs involve variables or relationships that are of interest to international management.

# 5.3 Managerial Implications

Our multi-level research has important managerial implications. The benefits of prodisparity norms in reducing the negative effects of low compensation parity between locals and expatriates are clearly demonstrated. It is important for MNCs to encourage the development of these norms. One useful practice is to highlight that the compensation gap is commonplace in MNC operations in China, which may help local employees to endorse them. As discussed before, the best time to shape the norms of an MNC operation may be in its formative stage, when the organizational culture is still relatively moldable.

Our research also shows that trust climate can mediate the moderating effects of organizational pro-disparity norm. MNCs should try to build a strong trust climate, and the encouragement of trusting behavior and showcasing fair management practices are important ways to build a strong trust climate. Many other trust-building practices can be contemplated, such as the inclusion of locals in decision-making (Leung et al. 2011).

# 5.4 Limitations and Conclusions

Despite that meaningful results are found, this study has several limitations that should be addressed in future research. First, we focus on distributive justice, and do not examine other justice dimensions, such as procedural justice. Future studies can examine the role of procedural justice in shaping the effects of compensation parity. Second, we examined the subjective appraisal of compensation parity in the present research, which may deviate from objective compensation parity. Future research should examine the impact of actual differences between the pay of locals and expatriates. It is also interesting to explore factors that influence the subjective appraisal of compensation parity and how objective compensation parity is related to subjective appraisal. A related issue is that we did not specify the expatriates that respondents should make reference to, and future research should explore whether some specific background of expatriates, such as their rank, may affect the results. Third, we did not collect information on the national origin of the expatriate managers and the firms, which may have important effects. Future research should assess the influence of the national background of expatriates and the firms. Fourth, most of the measures used in the research are developed in the West. While these measures are reliable and produce meaningful results, future research needs to



explore any indigenous facets that may be omitted in measures originated from the West. In addition, the two norm scales are self-constructed, and although this is a common practice in this research area, their validity has to be evaluated in future research. A related issue is that the ICC2 of organizational norm is only marginal, and the results associated with this variable needs to be evaluated in future research. Fifth, the dependent variables are based on self-report. Although common method variance is unlikely to be a threat because of the multi-level design and our focus on mediation and moderation effects, it is useful to obtain data from diverse sources in future research. Sixth, a convenience sample is involved, and although it is diverse and involves respondents from different functions and industries, the results may be affected by this sampling strategy. It is useful to consider other samples in future research to ensure the generality of the findings. A related issue is that the research is based on the Chinese context, and future research needs to explore other cultural contexts. For instance, Huff and Kelley (2003) found that Asians tend to trust less than Americans, and it is interesting to see if the effect of trust climate may vary across cultural contexts. However, because our theorizing is not based on any specific organizational or cultural context, we believe that the general pattern of our findings is likely to generalize to other contexts, a speculation for future research to verify. Finally, the research is based on a cross-sectional design, and causality cannot be ascertained. For instance, based on equity theory we posit that compensation parity is an antecedent of comparative distributive justice, but the reverse may be possible. Longitudinal and experimental designs are needed in future research to evaluate the causal claims in our theorizing.

The limitations of our study are offset by several strengths. Our findings are coherent and consistent with our theoretical predictions and prior findings. The multilevel conceptualization of pro-disparity norms is supported, as personal and organizational norms show moderating effects at different levels. Trust climate can mediate the cross-level moderating effect of organizational pro-disparity norm, which opens up new research avenues for probing the dynamics of normative influence at the organizational level. Our theorizing and findings not only shed light on the processes underlying the collaboration of locals and expatriates in MNC operations, but also contribute to the development of multilevel models in international management research.

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