



## Understanding psychological contract breach due to labour costs reduction: Contingent upon employee sex and managerial control

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Integrating the perspectives of psychological contract and sex differences, this study examines how organizational decision to reduce labour costs influences employees' perceived psychological contract breach and their commitment to their organizations. Using two experiments, we found three-way interaction effects among the decision to reduce labour costs, employee sex, and the managerial control over the decision. The decision of labour costs reduction leads to stronger feelings of psychological contract breach for females when the decision is in low than in high levels of managerial control, but the same decision leads to stronger psychological contract breach for males when the decision is in high than in low levels of managerial control. Furthermore, the indirect effect of labour costs reduction on employees' organizational commitment through psychological contract breach is also contingent upon the interaction between employee sex and managerial control. Our findings expand the literature of psychological contract and shed light on timely practical issues of management's decisions regarding labour costs reduction.

### Practitioner points

- Labour costs reductions in economic downturns lead to different responses from employees, and managers are advised to plan their actions bearing in mind such differences.
- Management in crisis or difficulties calls for more delicate considerations of employees' psychological feelings towards the organization.
- Nuanced empirical evidence informs us about the different needs and responses of a diverse group of employees and how their responses contradict.

Employees often understand their relationships with the organizations as an exchange in that their organizations offer them inducements (i.e., continued employment, fair compensation, and promotion opportunities) for their contributions (i.e., extra work effort and attachment to the firm; March & Simon, 1958). The employees' beliefs

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regarding the mutual obligations between them and their organizations were formally defined as psychological contract (Rousseau, 2001). Psychological contract makes a significant contribution to understandings of employment relationship (Guest, 2004; Rousseau, 2001; Zhao, Wayne, Glibkowski, & Bravo, 2007).

When employees perceive that their organizations have failed to fulfil one or more obligations, they experience psychological contract breach (Morrison & Robinson, 1997). Extensive studies have explored the consequences of psychological contract breach, including different aspects of negative work attitudes and behaviours (e.g., Conway, Guest, & Trenberth, 2011; Ng, Feldman, & Lam, 2010). Nonetheless, the research on antecedents to psychological contract breach has shown the complexity of the forces that shape this subjective reality. Although organizational practices, such as labour costs reduction, can trigger psychological contract breach (Johnson & O'Leary-Kelly, 2003), recent research has acknowledged the importance of contingencies in changing the magnitude or direction of the relationship between cutback practices and employees' perceptions of employment relationships. For example, layoffs were found to be more justifiable by an external shock such as reduced product demand (Charness & Levine, 2000, 2002). If external shock can become an excuse, the financial crisis since 2008 could save the organizations from being blamed for cutbacks (Elliott, 2010).

Things are not that easy for management, however. In this study, we theoretically and empirically demonstrate that employee responses depend on two other factors: The individual factor of employee sex and the situational factor of managerial control over the decision. Under high or low levels of managerial control over the decision, female and male employees respond differently towards the labour costs reduction decision, and their response pattern is more complex than merely accepting the economic downturn as a scapegoat. The underlying reason is that psychological contract breach involves a sense-making process (Morrison & Robinson, 1997), in which organizational contexts and individual characteristics interact to shape how employees interpret a specific practice, and subsequently affect their attitudinal responses.

Sex defines the most fundamental groups to which individuals belong (Eagly & Karau, 2002), and it differentiates employees' expectations about the inducements from the firm. Thus, male and female employees have different understandings of the psychological contract, in terms of the focus and duration. Shaped by both biological and social forces in psychological contract, females prefer long-term employment relationships with a focus on organizational support, whereas males value instant rewards that recognize their agency in work settings.

With such differences, males and females interpret and respond to the same working situation in different ways (Jianakoplos & Bernasek, 1998; Sandberg, 2013). Particularly, whether labour costs reduction is in high or low level of managerial control is an important context for employees' perceptions of such a practice. This information conveys different signals to males and females about the extent that an organization has met their expectations regarding the employment relationship. Thus, males and females perceive breach of psychological contract at different levels facing the same labour costs reduction decision, depending on the condition of managerial control, therefore shaping their affective commitment to the organization.

Our major goal in this study is to investigate how psychological contract breach is determined by the interactions among labour costs reduction, employee sex, and managerial control, and how it subsequently influences employees' commitment to the organization. We will integrate the perspectives of psychological contract and sex difference to theorize on the three-way interaction effects. The investigation of these

contingencies will offer new insights into the literature, describing a more nuanced picture for the determinants of psychological contract breach and its influences on work outcomes.

### **Theory and hypotheses**

During times of economic downturns, some firms respond by cutting jobs or paycheques (Richmond, 2009; Tuna, 2008). Compared to exploring new markets, developing new products, or improving operational efficiency, reducing labour cost is often seen as an easy choice for executives (Ofek, 1993) and becomes a way of life for even healthy companies (Farrell, 2009). Such actions may help balance sheets look better, but can result in employees' sense of psychological contract breach at the same time, which in turn has negative impacts on their attitudes towards the organization (Bal, De Lange, Jansen, & Van Der Velde, 2008; Zhao *et al.*, 2007). Implicitly guided by the norm of reciprocity, employees expect an equitable balance between what they receive from their organizations and what they contribute to the organizations (Gouldner, 1960). Labour costs reduction violates employees' expectation of sustained employment, which is a major component of an organization's obligation as perceived by employees (Kim & Choi, 2010).

Although labour costs reduction in general elicits employees' feeling of betrayal (Bewley, 1998; Kickul, Lester, & Finkl, 2002), the effect is contingent upon the interplay between both employee sex and managerial control over labour costs reduction. Employee sex differentiates employees' psychological contracts in terms of focus and duration. Thus, males and females differentially evaluate whether labour costs reduction with a high or low level of managerial control has fulfilled or violated their expectations of the employment relationship, and subsequently respond to it in the changes of organizational commitment.

#### *Sex differences in psychological contracts*

As the perceptions of employees, psychological contracts are understood through a number of dimensions (McLean Parks, Kidder, & Gallagher, 1998; Rousseau & McLean Parks, 1993). Among these dimensions, focus and duration are the two most relevant for the sex differences in understanding employment relationships under labour costs reduction.

*Focus.* Focus of the psychological contract refers to the social-economic continuum in which desirable inducements are delivered in their employment relationships (March & Simon, 1958; McLean Parks *et al.*, 1998). Comparing the sexes, females tend to care more about inducements signalling support from the organization, whereas males focus more on rewards recognizing their agency. These different focuses are shaped by both biological and social forces.

Biologically, reproduction of one's gene is a major motive for each sex, but the sexes behave differently to maximize their opportunities of reproduction (Trivers, 1972). Males owning power or welfare have better access to mates and better chance for reproduction of their genes (Eagly & Wood, 1999). In contrast, females need

support and protections to successfully reproduce their genes (Taylor, Klein, Lewis, & Gruenewald, 2000).

Socially, the sexual division of labour shapes different roles for males and females, producing sex differences in goal pursuit (Diekmann & Eagly, 2008). Males have been the chief breadwinners in most societies. They endorse economic goals more than do their female counterparts (Roberts & Robins, 2000), as financial rewards recognize their agency in work settings (Dries, Pepermans, & De Kerpel, 2008). In comparison, females take major responsibility for taking care of children and families (Eagly & Wood, 1999). They consider agentic matters as secondary, but focus more on the maintenance of supportive bonding with others (Cinnamon & Rich, 2002). In support of this line of reasoning, research on value priorities has shown that females emphasize relational interdependence (Gabriel & Gardner, 1999), benevolence, and universalism (Schwartz & Rubel, 2005), whereas males attribute more importance to self-direction, power, and achievement through competition (Shavitt, Lalwani, Zhang, & Torelli, 2006). Furthermore, these sex differences hold across a wide range of cultural groups (Schwartz & Rubel, 2005).

As a result, female and male employees differ in the focus dimension of psychological contract, as they value different inducements from their work. A number of empirical studies in multiple countries have consistently found that males attach high importance to obtaining monetary returns, while females focus more on obtaining continuous support from their employers (e.g., Konrad, Ritchie, Lieb, & Corrigan, 2000; Rosenblatt, Talmud, & Ruvio, 1999; Weaver, 1978).

*Duration.* Duration refers to the temporal length that a psychological contract lasts (McLean Parks *et al.*, 1998). This dimension also incorporates individual differences. For example, temporary or contingent employees regard their contracts as short-term when compared to those of traditional 'core' employees and thus react less negatively to the termination of work relationships (McLean Parks *et al.*, 1998). Sex differences underline employees' expectations in regard to the duration of a psychological contract such that females understand the psychological contract in a longer duration than do males for biological and social reasons.

Biologically, females prefer longer relationships than their male counterparts. Similar to most mammalian species, pre-historic males have the largest degree of success in reproduction if they can find more mates and widely disperse their genes, not necessarily in long-term relationships (Eagly & Wood, 1999, 2013). However, mammalian females maximize their reproduction chances by establishing longer committed relationships because they spend much more time in pregnancy and taking care of their offspring before they can live independently (Wood & Eagly, 2010).

Socially, gender role expectations train females to be more patient in delayed gratification than males. When asked to wait some time before consuming desirable goods, boys are less likely than girls to honour the request, even when the delayed reward is larger (Kochanska, Murray, Jacques, Loenig, & Vandegest, 1996). Similarly, males are more likely than females to seek immediate returns from a transaction, as exemplified by males' higher rates of participation in gambling or games of chance (Hraba & Lee, 1998) and less in savings (Furnham, 1999). The different preferences for duration are also reflected in the priorities that males and females attributed to relevant values. Compared to males, females favour security more and show a proclivity for tradition that carries longer time orientation (Schwartz & Rubel, 2005).

The sexes thus differ in their expected inducements in psychological contracts such that females expect longer duration of employment relationships than do males. Research has shown that many males expect organizations to offer immediate inducements but lack patience to wait for delayed gratification (Silverman, 2003). They are also more likely to voluntarily withdraw from the job (Light & Ureta, 1990) and think of looking for a new job more frequently (Royalty, 1998). In comparison, females have a lower occupational mobility and feel more threatened by job loss (Rosenblatt *et al.*, 1999).

*Interaction effect among labour costs reduction, employee sex, and managerial control on psychological contract breach*

The above differences in psychological contracts between the two sexes can colour their interpretations of labour costs reduction with the contextual information about managerial control. Contextual factors play important roles in shaping employees' perceptions of the organizational fulfilment or breach of psychological contracts (Guest, 2004; Kickul *et al.*, 2002). A number of studies have found that when evaluating their psychological contracts with organizations, employees incorporate contextual information into consideration such as external environment (e.g., Pfeifer, 2007), procedural justice (Morrison & Robinson, 1997), and organizational politics (Rosen, Chang, Johnson, & Levy, 2009).

One important context for labour costs reduction is whether it is under managerial control or not. When an action is conducted free from outside constraints, representing the actor's true intention, or being a volitional choice, it is described as under the control of the actor (Pritchard, Havitz, & Howard, 1999). An action under own control elicits a higher level of ownership of the actor in that action (Shamir, 1988). In addition, observers attributed more responsibility to the actors or decision-makers who make a volitional choice (Bagozzi, 1993).

Employees may rely on situational cues such as firm performance to infer how much control the management (as the persona of the organization; Eisenhardt, 1989) has over the cutback, as firms or industries are differentially affected by the global financial crisis (Metz, Kulik, Brown, & Cregan, 2012). When firms perform poorly, the lack of resource restricts the management to allocate resources at their will, forcing them to seek for organizational survival first (Bradley, Aldrich, Shepherd, & Wiklund, 2011). Labour costs reduction in this situation is more likely out of managerial control. However, when firms perform well, the resources offer management more discretion to distribute the resources. Thus, the cutback is more likely to be under managerial control, representing the management's true intention or effort.

The information about managerial control of the cutback conveys different signals for males and females, as they focus on different issues regarding employment relationships with different durations, as aforementioned. Males' focuses on agency and preferences for timeliness have made them alert and sensitive to any potential duplicity if their entitlements are not properly delivered (Conway & Coyle-Shapiro, 2012). When labour costs reduction is in high level of managerial control, males regard the organization as having the ability but intentionally failing to fulfil the obligation of providing them with their share of profits, resulting in stronger connection between the decision and the perception of breach on psychological contracts. In contrast, this feeling of unfulfilment is less intense if the labour costs reduction is in low level of managerial control. Labour costs reduction becomes a remedy for worsened situations, in which males correspondingly expect a lower level of financial rewards or

employment sustainability. With reduced expectations, they are less likely to experience psychological contract breach.

In contrast, females expect long-term employment from organizations offering support. The need for shelter and protection is particularly salient in hardship with scarce resources (Eagly & Wood, 2013), such as economic downturns. Although the cutback in general is a violation of job security, high levels of managerial control over the situation imply a potentially sustaining future of the organization. Expecting longer term of relationships and supportive resources, females would perceive a larger potential of the organization to provide shelter and support in the future. With a higher level of patience on delayed gratification (Silverman, 2003), they understand psychological contracts in a longer temporal dimension and are less likely to perceive the cutback in this situation as the breach of psychological contract. However, the same practice in low level of managerial control signals the incompetence of the organization to continuously offer protection for employees, with an uncertain future. Thus, females experience a higher level of psychological contract breach in this situation.

Combining the above reasoning, we propose a three-way interaction effect between employee sex, managerial control, and labour costs reduction practices on psychological contract breach. For clarity purpose, we state the hypothesis in two separate sectors.

*Hypothesis 1a:* For males, the positive effect of labour costs reduction on psychological contract breach is stronger when managerial control is high than when it is low.

*Hypothesis 1b:* For females, the positive effect of labour costs reduction on psychological contract breach is weaker when managerial control is high than when it is low.

*Moderated indirect effect on organizational commitment through psychological contract breach*

When employees perceive their psychological contracts as being breached, their associations with the organizations are no longer rewarding or fulfilling their needs. Consequently, they tend to restrict their efforts, engage in retaliation behaviours (Morrison & Robinson, 1997), seek employment elsewhere (Turnley & Feldman, 1999), be less committed to their organizations, perform at lower levels (Lester, Turnley, Bloodgood, & Bolino, 2002), and lower their trust in the management (Robinson & Morrison, 2000).

Therefore, psychological contract breach links the three-way interaction proposed above to employees' organizational commitment. The perception of psychological contract breach offers negative input for employees to understand their relationships with their organizations (Johnson & O'Leary-Kelly, 2003). Male employees who cannot obtain desired inducements from their organizations and know that the organization has control over the decision tend to view the situation as not rewarding. Such negative interpretations of the relationship lead to lower levels of organizational commitment. Thus, the indirect effect of the cutback on males' commitment via psychological contract breach is stronger when the cutback is perceived to be in high control of management.

In comparison, cutback has a stronger indirect effect on females' organizational commitment when the decision is in low level of managerial control. When female employees believe that their organizations' survival depends on reducing labour costs,



they interpret it as a failure of the organization to protect or support them in hardship. This unmet expectation elicits their perceptions of psychological contract breach, which accordingly undermines their commitment to the organizations. Thus, in two segments, we propose a moderated indirect effect of labour costs reduction on employees' organizational commitment through psychological contract breach.

*Hypothesis 2a:* For males, the negative indirect effect of labour costs reduction on organizational commitment through psychological contract breach is stronger when managerial control is high than when it is low.

*Hypothesis 2b:* For females, the negative indirect effect of labour costs reduction on organizational commitment through psychological contract breach is weaker when managerial control is high than when it is low.

In summary, we proposed a three-way conditional process model (Hayes, 2013), as shown in Figure 1. To test this model, we conducted two experiments in which labour costs reduction and managerial control were manipulated. Experimental design allows us to clearly demonstrate the causal relationships among the focal variables, improving the internal validity of the research findings (Montes & Zweig, 2009). In addition, this approach avoids a chaotic situation involved in field studies collecting sensitive information regarding job security, which could do harm to participants' psychological welfare as well as their relationships with their organizations (APA, 1994).

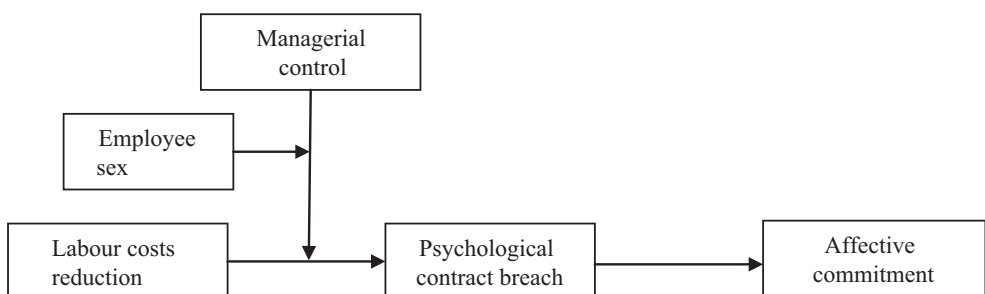
In both experiments, we manipulated labour costs reduction through different announcements from the CEO of the organization and manipulated managerial control through different conditions of firm performance. As aforementioned, employees could use organizational performance as a proxy to infer whether the cutback is in high or level of the management. Below, we report the two studies and the results.

## STUDY I

### Methods

#### *Participants, designs, and procedures*

This study involves a 2 (labour costs reduction vs. no labour costs reduction)  $\times$  2 (high vs. low managerial control)  $\times$  2 (male vs. female) between-subject factorial design. We invited 302 managers with diversified cultural background to participate in this study. We randomly assigned each participant to one of the four experimental conditions



**Figure 1.** Three-way conditional process model.

and presented him/her with a scenario in which the two factors (labour costs reduction and managerial control) were manipulated. They were asked to report how they would respond to it.

After deleting responses with incomplete information, we had 223 valid responses coming from Lebanon (26.5%), China (26.0%), Germany (12.1%), Korea (12.1%), Malaysia (7.6%), and the United States (5.8%). Among the participants, 56.5% were males. The average age of these participants was 30.7 years ( $SD = 7.5$  years), and the average organizational tenure was 7.1 years ( $SD = 7.1$  years). They were well educated in that 56.6% of them had a bachelor's degree and 31.4% had a master's degree. Statistical comparisons demonstrated that these valid responses did not differ significantly from the dropped ones in their demographic variables. The number of valid responses in each condition was listed in Table 1.

We developed the scenario based on a pilot study in which we interviewed people from varied industries on their organizations' human resource practices in the financial crisis. The scenario situated the respondents as employees within a company that was influenced by the financial crisis. To ensure the credibility of the scenario, we collected the data at the time of the economic downturn (during April and May, 2009). Although the scenario was hypothetical, the salience of the financial crisis and the worldwide fear of its implications could realistically lead participants to be deeply immersed in the situation. In the background information, participants were told that the industry was shocked by the ongoing financial crisis, and rumour said this company will initiate labour costs reduction practices as some other firms had carried out in this industry. Then, participants received an open letter from the CEO, announcing that the company would maintain firm size and compensation levels to get employees' support and contributions to survive the crisis. Following the above information, we manipulated labour costs reduction and managerial control.

#### *Manipulation on managerial control*

Participants were informed that after 3 months since the CEO's open letter, the firm disclosed its financial statements. In the condition of high managerial control, the firm performance improved, with profit indices increasing. In the condition of low managerial control, the firm performance declined, with profit indices decreasing.

#### *Manipulation on labour costs reduction*

Following the information about firm performance, participants received a second open letter from the CEO. In the condition of labour costs reduction, the CEO explained the current situation and announced that after deliberate discussion, the top management

**Table 1.** Distribution of participants (Study 1)

	High in managerial control		Low in managerial control	
	Male	Female	Male	Female
Labour costs reduction	27	30	28	24
No labour costs reduction	32	26	31	25



team decided to cut labour costs in terms of downsizing and/or decreasing overall pay levels, and the details of this plan will be disclosed later on. In the condition of no labour costs reduction, the CEO explained the current situation and announced that after deliberate discussion, the top management team decided to maintain firm size and compensation levels, and the whole company shall go through the crisis together.

After reading the scenario, participants reported to what extent they experienced psychological contract breach and how they affectively committed to the organization. They also reported their demographic variables. The effects of manipulations were checked.

### **Measures**

*Psychological contract breach* was measured by the 5-item scale developed by Robinson and Morrison (2000). An example was 'I have not received the things promised to me for my contributions (1 = strongly disagree, 7 = strongly agree)'. Cronbach's  $\alpha = .76$ .

*Affective commitment* was measured by the 6-item scale developed by Meyer, Allen, and Smith (1993). An example item was 'I would be very happy to spend the rest of my career with this organization (1 = strongly disagree, 7 = strongly agree)'. Cronbach's  $\alpha = .89$ .

In addition, we incorporated participants' age and tenure as control variables. We analysed nationality's effects on all core variables and found no significant difference in psychological contract breach,  $F(5, 217) = 1.43, p > .10$ , or in affective commitment,  $F(5, 217) = .99, p > .10$ . For the parsimony of the model, we did not include nationality as a control variable.

### **Data analytic strategies**

We conducted one-way ANOVAs as manipulation checks on labour costs reduction and firm performance. Then, we conducted confirmatory factor analysis in M-PLUS to examine the discriminant validity among the focal variables.

When testing the hypotheses, we adopted the PROCESS macro in SPSS developed by Hayes (2013) to estimate the three-way conditional process model and to calculate the simple slopes for the first-stage moderation and the conditional indirect effects. This macro uses an OLS regression-based path analytical framework for estimating direct, indirect, and conditional indirect effects. Bootstrap methods are implemented for inference about indirect and conditional indirect effects (Hayes, 2013).

## **Results**

### **Manipulation check**

We checked manipulations in two homogeneous samples. Among the respondents who participated in the study, we used one item to check the effect of manipulation on labour costs reduction: 'The top managers practice what they preach' (1 = strongly disagree, 7 = strongly agree). Participants under the condition of labour costs reduction scored significantly lower than those of no labour costs reduction (Mean = 3.90 vs. 5.15),  $F(1, 221) = 34.08, p < .01$ . One single item was used to measure the respondents' perception of the company's performance: 'The Company will be in decline for a long time' (1 = strongly disagree, 7 = strongly agree). Respondents under the condition of low

managerial control perceived higher possibility of decline than those of high managerial control (Mean = 3.95 vs. 3.41),  $F(1, 221) = 6.63, p < .01$ .

We also randomly presented one of the four scenarios to 149 managers and checked the effect of manipulations using another set of questions. These managers did not significantly differ from the participants in their demographic variables. One item was used to check the labour costs reduction manipulation: 'To what extent do you think the firm will reduce labour costs?' (1 = very unlikely, 7 = very likely). Managers in the condition of labour costs reduction scored higher than those of no labour costs reduction (Mean = 5.53 vs. 4.38),  $F(1, 147) = 21.43, p < .001$ . Two items were used to check the managerial control manipulation: 'To what extent do you think the current decision is a volitional choice of the management?' (1 = totally out of managerial control, 7 = totally a volitional choice of the management) and 'To what extent do you think the current decision is due to the general economic downturn?' (1 = very little, 7 = very large). Managers in the condition of high managerial control scored higher in the first question (Mean = 4.87 vs. 4.29),  $F(1, 147) = 3.74, p < .05$ , but lower in the second question (Mean = 2.88 vs. 4.42),  $F(1, 147) = 36.58, p < .001$ , than those in the condition of low managerial control. Putting together, the evidences indicated that the firm performance successfully manipulated participants' perceptions of managerial control.

### **Preliminary analyses**

Table 2 presents the means, standard deviations, reliability coefficients, and zero-order correlations of focal variables. We conducted confirmatory factor analysis in MPLUS to examine the discriminant validity between psychological contract breach and affective commitment. The hypothesized 2-factor model showed good fit, with  $\chi^2(43) = 102.43$ , RMSEA = .061, CFI = .95, TLI = .93. The single-factor model combining all items yielded a poorer fit than the hypothesized model,  $\chi^2(44) = 271.83$ , RMSEA = .16, both CFI and TLI below .80, with a chi-square change of 169.4 ( $\Delta df = 1, p < .001$ ). Thus, the hypothesized two-factor model best represented the factor structure of the items.

**Table 2.** Descriptive statistics and correlations<sup>a</sup> (Study 1)

Variables	Mean	SD	1	2	3	4	5	6	7
1. Labour costs reduction <sup>b</sup>	0.51	0.50							
2. Managerial control <sup>c</sup>	0.52	0.50	.04						
3. Sex <sup>d</sup>	0.57	0.50	-.09	-.06					
4. Age	30.65	7.51	.002	.02	.14*				
5. Tenure	7.09	7.07	-.02	.04	.12	.90**			
6. Psychological contract breach	3.37	1.07	.47**	.01	-.04	-.02	-.003	<b>(.76)</b>	
7. Affective commitment	4.54	1.24	-.32**	.03	-.03	.20**	.22**	-.42**	<b>(.89)</b>

Note. Reliabilities of the scales are presented in boldface within parentheses along the central diagonal.

<sup>a</sup>N = 223.

<sup>b</sup>0 = No labour costs reduction, 1 = labour costs reduction.

<sup>c</sup>0 = Low in managerial control, 1 = high in managerial control.

<sup>d</sup>0 = Female, 1 = male.

\* $p < .05$ ; \*\* $p < .01$  (both two-tailed).

### Hypotheses testing

Table 3 shows the results of the conditional process analysis. The three-way interaction was significantly related to psychological contract breach ( $B = 1.13$ ,  $SE = 0.52$ ,  $p < .05$ ). None of the control variables was significant in predicting employees' psychological contract breach. We calculated the projected values of employees' psychological contract breach under each of the eight conditions and plotted them in Figure 2. The relative positions of those dots in Figure 2, as well as the simple slopes, demonstrate consistent patterns with our hypothesis. For males, when the situation was in low managerial control, the simple slope between labour costs reduction and psychological contract breach was 0.93 ( $SE = 0.24$ ,  $p < .01$ ); when the situation was in high managerial control, the simple slope was 1.18 ( $SE = 0.24$ ,  $p < .001$ ). These results supported Hypothesis 1a. For females, when the situation was in low managerial control, the simple slope was 1.46 ( $SE = 0.29$ ,  $p < .001$ ); when the situation was in high managerial control, the simple slope was 0.58 ( $SE = 0.26$ ,  $p < .05$ ). These results supported Hypothesis 1b.

For affective commitment, we calculated the conditional indirect effect of labour costs reduction on affective commitment via psychological contract breach in the four conditions. For males, when the situation was in low managerial control, the indirect effect was  $-0.37$  ( $SE = 0.13$ ), not significantly different from zero at the level of 0.01, with the bootstrap 99% confidence interval (CI) of  $(-0.76, 0.12)$ , including the point of zero. However, when the situation was in high managerial control, the indirect effect was  $-0.47$  ( $SE = 0.15$ ), significantly different from zero with the bootstrap 99% CI of  $(-0.92, -0.16)$ . The results supported Hypothesis 2a. For females, when the situation was in low managerial control, the indirect effect was  $-0.58$  ( $SE = 0.17$ ), different from zero at the significance level of 0.01, with the bootstrap 99% CI of  $(-1.13, -0.22)$ . However, when the situation was in high managerial control, the indirect effect was  $-0.23$

**Table 3.** Results of conditional process model<sup>a</sup> (Study 1)

	Psychological contract breach	Affective commitment
Intercept	3.25*** (0.50)	5.71*** (0.62)
Age	-0.02 (0.02)	0.004 (0.02)
Tenure	0.02 (0.02)	0.04 (0.02)
Labour costs reduction (LCR) <sup>b</sup>	1.46*** (0.29)	-0.30 (0.35)
Managerial control (MC) <sup>c</sup>	0.33 (0.29)	0.05 (0.33)
Sex (S) <sup>d</sup>	0.15 (0.26)	-0.30 (0.30)
LCR × MC	-0.88* (0.39)	0.03 (0.45)
LCR × S	-0.53 (0.38)	0.22 (0.43)
MC × S	-0.37 (0.37)	0.40 (0.42)
LCR × MC × S	1.13* (0.52)	-0.89 (0.60)
Psychological contract breach		-0.39*** (0.08)
R <sup>2</sup>	.25	.27
F	7.81***	7.93***

Note. Unstandardized coefficients reported, with standard error in parentheses.

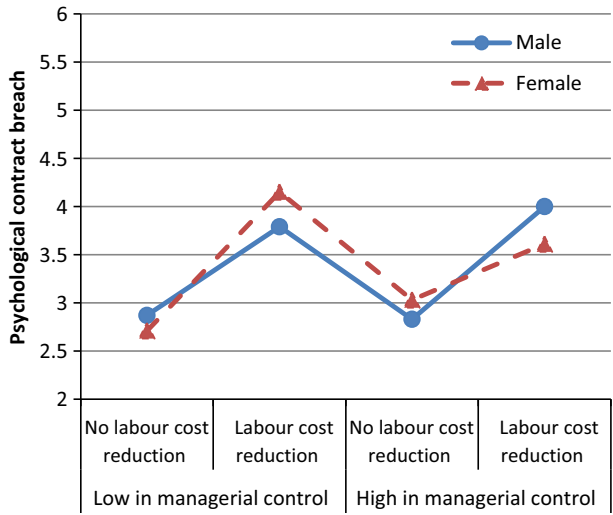
<sup>a</sup>N = 223.

<sup>b</sup>0 = No labour costs reduction, 1 = labour costs reduction.

<sup>c</sup>0 = Low in managerial control, 1 = high in managerial control.

<sup>d</sup>0 = Female, 1 = male.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed).



**Figure 2.** Three-way interaction on psychological contract breach (Study 1).

( $SE = 0.12$ ), with the bootstrap 99% CI of  $(-0.62, 0.02)$ , containing zero. The results supported Hypothesis 2b. The results of Study 1 supported the hypothesized model. Study 1 includes participants from multiple countries and has advantages in generalizability, yet may involve national differences. Although we did not find significant differences among participants from different countries in focal variables, a more rigorous approach is to conduct a second study within one nation in order to avoid any potential threat to internal validity. In addition, we manipulated managerial control in Study 1 by comparing the firm performance with its previous situation – improved or declined. In Study 2, we set all the firm performance declining, which is more realistic during the overall economic downturn, but compared it with the average level of the industry to manipulate managerial control. We also checked the effect of manipulations directly among the respondents who participated in the study.

## STUDY 2

### Methods

#### Participants, designs, and procedures

This study is also in a 2 (labour costs reduction vs. no labour costs reduction)  $\times$  2 (low vs. high in managerial control)  $\times$  2 (male vs. female) factorial design. In the Fall of 2013, we invited 232 middle managers in China to participate in this study when they were enrolled in a training programme. We randomly assigned each participant to one of the experimental conditions and presented him/her with a scenario in which the two factors (labour costs reduction and managerial control) were manipulated.

We had complete answers from all the participants. Among them, 59% were males. The average age was 29.7 years ( $SD = 3.92$  years), and the average organizational tenure was 82.2 months ( $SD = 44.37$ ). They were well educated in that 16.8% of them had a bachelor’s degree and 82.3% had a master’s degree. The distribution of participants in the eight cells was shown in Table 4.

**Table 4.** Distribution of participants (Study 2)

	High in managerial control		Low in managerial control	
	Male	Female	Male	Female
Labour costs reduction	26	26	38	33
No labour costs reduction	23	29	31	26

The scenario started with the background introduction, demonstrating the firm's net profit ratio (20%) and the average level of the industry (14%) before the financial crisis – identical to all versions. We then manipulated *managerial control* and *labour costs reduction*.

#### *Manipulation on managerial control*

We manipulated this variable by providing participants with a figure with bar charts comparing the net profit ratios between the firm and the industry average level before and during economic downturn. Using the figure, we highlighted the numbers to ensure that the participants could correctly capture the manipulated information. For the groups high in managerial control, the firm's net profit during economic downturn was 9%, lower than previous but still higher than the industry average level (4%). For the groups low in managerial control, the firm's net profit during economic downturn was -3%, much lower than the industry average level (4%).

#### *Manipulation on labour costs reduction*

We manipulated this variable by informing the participants in the open letter of the CEO about the firm's subsequent plan, as what we did in Study 1.

After reading the scenario, participants were asked to report their psychological contract breach, affective commitment, and their demographic variables. The effects of manipulations were checked.

#### **Measures and analytical strategy**

*Psychological contract breach* and *Affective commitment* were measured using the same scales as in Study 1. Cronbach's alphas were .81 and .93, respectively.

We adopted similar data analytical strategies as in Study 1. In addition, age and organizational tenure of participants were controlled.

## **Results**

### ***Manipulation check***

One item was used to measure the participants' perceptions of managerial control: 'To what extent do you think the top management is in control of the current situation?' (1 = very little, 7 = very large). Participants in the condition of low managerial control scored significantly lower than those in the condition of high managerial control (Mean = 4.97 vs. 5.46),  $F(1, 230) = 3.49, p < .05$ .

The manipulation on labour costs reduction was checked by one item ‘To what extent do you think the firm will reduce labour costs?’ (1 = very unlikely, 7 = very likely). Participants in the condition of no labour costs reduction scored lower than those in the condition of labour costs reduction (Mean = 3.58 vs. 4.79),  $F(1, 230) = 15.92, p < .01$ .

### **Preliminary analyses**

Table 5 presents the means, standard deviations, reliability coefficients, and zero-order correlations of focal variables. We conducted confirmatory factor analysis in MPLUS to examine the discriminant validity between psychological contract breach and affective commitment. The hypothesized two-factor model showed good fit, with  $\chi^2(43) = 202.59$ , RMSEA = .078, CFI = .92, TLI = .90. The single-factor model combining all items yielded a poorer fit than the hypothesized model,  $\chi^2(44) = 481.02$ , RMSEA = .19, both CFI and TLI below .80, with a chi-square change of 278.43 ( $\Delta df = 1, p < .001$ ). Thus, the hypothesized two-factor model best represented the factor structure of the items.

### **Hypotheses testing**

We followed the same procedure as in Study 1 to estimate the conditional process model and to calculate the simple slopes and the conditional indirect effects. Table 6 shows the results of the conditional process analyses.

The three-way interaction was significantly related to psychological contract breach ( $B = -0.75, SE = 0.33, p < .05$ ). We calculated the projected values of employees’ psychological contract breach under each of the eight conditions and plotted them in Figure 3. The relative positions of those dots in Figure 3, as well as the simple slopes, demonstrate consistent patterns with our hypothesis. For males, when the situation was in low managerial control, the simple slope between labour costs reduction and

**Table 5.** Descriptives and reliabilities<sup>a</sup> (Study 2)

Variables	Mean	SD	1	2	3	4	5	6	7
1. Labour costs reduction <sup>b</sup>	0.49	0.50							
2. Managerial control <sup>c</sup>	0.36	0.48	.02						
3. Sex <sup>d</sup>	0.59	0.49	-.06	-.02					
4. Age	29.7	3.91	.06	-.01	.36**				
5. Tenure	82.16	44.37	.02	-.06	.32**	.90**			
6. Psychological contract breach	2.84	.63	.25**	.19**	.02	-.06	-.10	<b>(.81)</b>	
7. Affective commitment	3.79	1.31	-.30**	-.29**	-.13	-.04	-.03	-.53**	<b>(.93)</b>

Note. Reliabilities of the scales are presented in boldface within parentheses along the central diagonal.

<sup>a</sup> $N = 232$ .

<sup>b</sup>0 = No labour costs reduction, 1 = labour costs reduction.

<sup>c</sup>0 = Low in managerial control, 1 = high in managerial control.

<sup>d</sup>0 = Female, 1 = male.

\* $p < .05$ ; \*\* $p < .01$  (both two-tailed).



**Table 6.** Results of conditional process model<sup>a</sup> (Study 2)

	Psychological contract breach	Affective commitment
Intercept	2.68*** (0.56)	5.72*** (0.99)
Age	0.01 (0.02)	0.05 (0.04)
Tenure	-0.002 (0.002)	-0.005 (0.004)
Labour costs reduction (LCR) <sup>b</sup>	0.11 (0.17)	-0.53* (0.26)
Managerial Control (MC) <sup>c</sup>	-0.03 (0.18)	-0.50 (0.30)
Sex (S) <sup>d</sup>	-0.16 (0.15)	-0.05 (0.25)
LCR × MC	0.35 (0.26)	0.06 (0.44)
LCR × S	0.40 (0.21)	-0.60 (0.35)
MC × S	0.52* (0.23)	-1.00* (0.40)
LCR × MC × S	-0.75* (0.33)	1.63** (0.57)
Psychological contract breach		-0.86*** (0.11)
R <sup>2</sup>	.14	.43
F	4.01***	16.86***

Note. Unstandardized coefficients reported, with standard error in parentheses.

<sup>a</sup>N = 223.

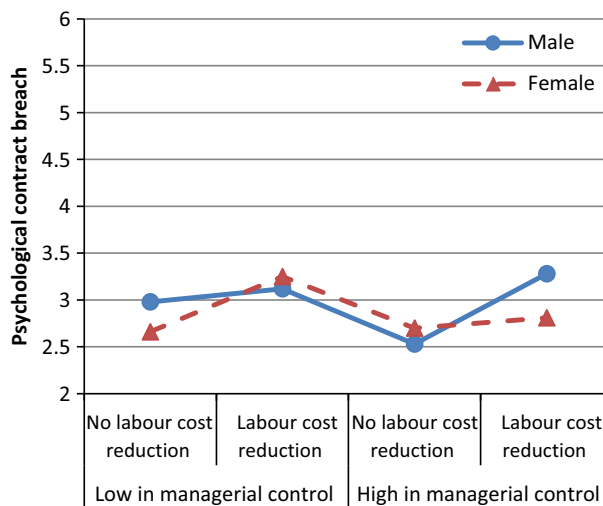
<sup>b</sup>0 = No labour costs reduction, 1 = labour costs reduction.

<sup>c</sup>0 = Low in managerial control, 1 = high in managerial control.

<sup>d</sup>0 = Female, 1 = male.

\* $p < .05$ ; \*\* $p < .01$ ; \*\*\* $p < .001$  (two-tailed).

psychological contract breach was 0.10 ( $SE = 0.17$ , *n.s.*); when the situation was in high managerial control, the simple slope was 0.51 ( $SE = 0.13$ ,  $p < .001$ ). These results supported Hypothesis 1a. For females, when the situation was in low managerial control, the simple slope was 0.46 ( $SE = 0.20$ ,  $p < .05$ ); when the situation was in high managerial control, the simple slope was 0.11 ( $SE = 0.16$ , *n.s.*). These results supported Hypothesis 1b.



**Figure 3.** Three-way interaction on psychological contract breach (Study 2).

For affective commitment, we calculated the conditional indirect effect of labour costs reduction on affective commitment via psychological contract breach in the four conditions. For males, when the situation was in low managerial control, the indirect effect was  $-0.09$  ( $SE = 0.14$ ), not significantly different from zero at the level of 0.05, with the bootstrap 95% CI of  $(-0.36, 0.17)$ . However, when the situation was in high managerial control, the indirect effect was  $-0.44$  ( $SE = 0.13$ ), significantly different from zero with the bootstrap 95% CI of  $(-0.73, -0.20)$ . The results supported Hypothesis 2a. For females, when the situation was in low managerial control, the indirect effect was  $-0.40$  ( $SE = 0.17$ ), significantly different from zero with the bootstrap 95% CI of  $(-0.74, -0.07)$ . However, when the situation was in high managerial control, the indirect effect was  $-0.10$  ( $SE = 0.12$ ), with the bootstrap 95% CI of  $(-0.35, 0.14)$ , containing zero. The results supported Hypothesis 2b.

## GENERAL DISCUSSION

Research on occupational and organizational psychology mostly occurs in the time of affluence such that employees and organizations hope for growth, promotion, salary increase, and a better future; but the reality is more complex and research needs to address psychology at workplace during scarcity and crisis (Lerner & Lerner, 1981). Many organizations cut labour costs to survive crises. However, our findings demonstrated that the decision of labour costs reduction leads to negative responses by employees towards their organizations, and the exact magnitudes of the responses depend on managerial control and the employees' sex. Our two empirical studies obtained consistent results regarding the interaction effects. Labour costs reduction more strongly impacts male employees' psychological contract breach and commitment to their organizations when the decision is in high level of managerial control. In comparison, the decision more strongly impacts female employees' psychological contract breach and commitment to their organizations when the decision is in low level of managerial control.

### *Scholarly implications*

These findings contribute to the current literature of psychological contract in a number of ways. First, we integrated the literature on sex difference and dimensions of psychological contract to theorize the three-way interaction effect among labour costs reduction, employee sex and managerial control. Psychological contract represents a kind of exchange relationship, but not all exchanges are created equal in that female and male employees perceive their organizations' obligations differently. Synthesizing the dimensions of focus and duration from the psychological contract literature, we analysed how nature (or biological) and nurture (or social) reasons lead to the sex differences in psychological contracts. The differences then impact male and female employees' responses facing the labour costs reduction decision and managerial control. An obligation of any entity to others is a societal phenomenon such that the responsibility holder as well as the targeted parties can both influence what degrees of fulfilment are appropriate. Previous studies have addressed how organizational characteristics (such as resource abundance) shape employees' expectations (e.g., Pfeifer, 2007), but we extended the analyses by incorporating the characteristics of both organizations and employees in our analysis of psychological contracts.

Second, our findings highlighted psychological contract breach as linking the three-way interaction to employees' organizational commitment. The results supported the notion that psychological contract breach represents a fundamental cognitive process underlying employees' attitudes and behaviours towards their organizations (Rousseau, 1998). Even though debates exist in the usefulness of this construct (Guest, 1998; Rousseau, 1998), the findings here supported the construct as a basic mechanism through which employees understand their relationships with their organizations (Guest & Conway, 2002).

Third, the clear pattern of the three-way interaction effect has methodological implications for conducting research with such a focus. Scholars agree that three-way interactions are interesting and informative, but at the same time difficult to duplicate in different studies and hard to justify theoretically (e.g., Hekman *et al.*, 2010). Herein, we integrated different literature to argue for the three-way interactive effects. Empirically, we manipulated the key variables in different ways in two experiments and found consistent support for our theoretical argument. These attempts further manifest the necessity of more fine-grained theoretical elaborations and research designs for three-way interactions.

### **Practical implications**

From the results reported in this study, we can offer three suggestions to managers. First, managers can more effectively manage a diverse workforce by knowing what employees expect from their employment relationships. Our research studies sex, but the implications also apply to other employee diversity factors such as ethnicity, age, and rank (Thomas, 1992). The results indicated that female employees respond differently from males to cutbacks when these decisions are under or out of managerial control. The underlying reason lies in the fact that male and female employees expect different inducements from their employers. This logic can extend to managing diversity in other aspects. For example, young employees in general seek more challenging work responsibilities, faster promotions, and increased opportunities, while senior employees are more likely to seek stability in employment, moderate responsibilities, and job security (see Bal *et al.*, 2008). In this sense, a broad stroke understanding of potential breaches of psychological contracts may not be informative or useful. Effective management requires considering which category of employees would be the most vulnerable and negatively influenced by important decisions that will impact or change the inducements offered to them (Montes & Irving, 2008).

Second, we offer insights into management in crisis or difficulties. As the financial and debt crises are still influencing the lives of billions of people (James, 2012), this study sheds light on the possible responses of employees during situations of scarcity and uncertainty. Labour costs reductions, including downsizing and wage cuts, are widely implemented when organizations attempt to re-orient their strategies (Kickul *et al.*, 2002) or respond to a stagnant economy (Elliott, 2010). Recent statistics indicate that the unemployment rates in the United States and United Kingdom both are higher than 6% (BLS, 2014; ONS, 2014), and in the European Union 10.6% (Eurostat, 2014). The impacts on employees' lives are significant and bitter. The President of India, Shri Mukherjee, who was India's Finance Minister during the crisis, stated 'The current economic crisis begins as financial crisis; it is also becoming an employment crisis and has in many countries produced a social crisis'. Labour costs reduction may make the balance sheets look better quickly, but lead to other hidden costs to organizations (De Vries & Balazs,

1997; Turnley & Feldman, 1999). Based on our study, we recommend that managers deliberate over potential impacts of managerial decisions on employee outcomes and seek input from different groups of employees in order to understand their needs and minimize the negative impact.

Third, managerial control could be a double-edged sword to organizational leaders. Leaders tend to build strong images in front of their employees in that leaders are in control for the fate of the organizations. The assumption of such activities is that stronger leaders are more likely to be accepted and followed by employees. Relevant to this assumption, leaders are highly paid for their assumed responsibilities to organizational performance (Hambrick & Mason, 1984). On the other hand, when things turn bad, the majority of leaders tend to downplay their control over the situation, such as blaming the economy or other external factors leading to the difficulties. However, our findings in the study indicate that managerial control signals different meanings for different groups of employees. Managers need to be more cautious in highlighting or downplaying their roles, especially when dealing with external shocks.

### **Limitations and future directions**

This research has some limitations and calls for future research. First, we adopted an experimental design with both merits and limitations. The two empirical studies complement with each other in terms of respondents and manipulation approaches, ensuring the high levels of internal and external validity. However, future studies can collect data at real organizations to understand the temporal effect of prolonged crises on the development of psychological contracts. It would be interesting to further examine how the change in an employee's psychological contract unfolds over time. Although this research just focuses on employees' reaction within a short time period after the crisis, we believe that a longer term perspective is warranted.

Second, we did not differentiate various practices of labour costs reduction in the forms of layoff and pay cut. These two policies can lead to different responses (Bewley, 1998), opening another avenue for potential future research. Reducing compensation may lead to employees' deviant behaviours that undermine organizational wealth and employee morale (Bewley, 1998), and layoffs lead to survivors' guilt and stress, impacting productivity in other ways (Brockner, Grover, Reed, & Dewitt, 1992). Future research can examine other practices that firms adopt to overcome crisis and their effects on more outcome variables for both employees and organizations.

A possible third limitation is the scenario-based study designs that may lead to the possible demanding effect (Shadish, Cook, & Campbell, 2002). Demanding effect could be a methodological problem in studying some topics such as purchasing behaviours, but it is not a serious problem when studying topics of fairness, trust, betrayal, and psychological contract, as indicated by previous research (e.g., Blader & Tyler, 2003; Rousseau & Aquino, 1993). Future research, if at all possible, should find real organizations that have different combinations of policies and measure employees' actual responses after the introduction of those policies.

Another direction for future research is to compare the interaction effects on different types of commitment, namely affective commitment, continuance commitment, and normative commitment (Meyer *et al.*, 1993). In the current research, we focused on affective commitment as it has important implications for employee behaviours that are critical for organizations going through the crisis. However, even employees with a low level of affective commitment may hold a high level of continuance commitment at times

of difficulty due to lack of alternatives in the job market. It is thus interesting to examine the predicting strength of the current model for continuance commitment and employees' turnover intentions.

### Conclusion

Labour costs reduction impacts employees' perceived psychological contract breach and organizational commitment, and the magnitudes of the effects depend on the interaction between the sex of the employee and the managerial control of the situation. The contingencies help managers and researchers understand psychological contract breach and design more nuanced ways to better manage employment relationships under crisis.

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