

IMPACTS OF CHANGE ON ADMINISTRATIVE STAFFS IN UNIVERSITIES

Victor P. Lau, Hang Seng Management College, Hong Kong, victorlau@hsmc.edu.hk
Chow Hau Siu Irene, Chinese University of Hong Kong, Hong Kong, irene@baf.msmail.cuhk.edu.hk
Tso Hung Scarlet, Hang Seng Management College, Hong Kong, scarlettso@hsmc.edu.hk
Wong Yin Yee, City University of Hong Kong, Hong Kong, mgjwong@cityu.edu.hk

ABSTRACT

The rapid change of the business environment has pushed the universities to cope with unprecedented challenges. The government-funded universities are no longer a "shelter" for employees. In particular, the administrative staffs that provide front-line services to the universities may be more vulnerable, because they appear not to be "academic" for the academic institutions. As such, administrative staffs may be more likely to suffer from the organizational change, and they may accordingly alter their working attitude and behavior. The purpose of this study is to examine the negative impact of change on these individuals' attitude and behavior at work.

Keywords: Organizational change, perceived organizational support, perceived supervisory support, psychological contract, job satisfaction.

INTRODUCTION

Organizational change has become a common practice nowadays. The rapid, dynamic, and continuous change of the business environments has forced organizations to cope with a higher degree of challenges [1]. In the context of globalization, local universities can no longer be confined to act local but also forced to go global to compete (or even survive) in the highly competitive global environment. It has become prevalent nowadays that the local universities adopt such entry modes as countertrades (e.g., student exchange), strategic alliances (e.g., Strategic Engineering School Alliance formed by HKUST and UPenn), and joint ventures (e.g., China Europe International Business School, aka CEIBS) among universities across the international business arenas. In response to the environmental changes and the fierce competitors all over the world, organizational changes in universities have become unavoidable [10].

Just like those elsewhere, universities in Hong Kong have been commonly considered nonprofit organizations. In reality, however, these institutions nowadays have to make 'profits' through different ways, such as fund raising, self-financed academic programs, entrepreneurial partnership, etc. In the past decade, universities funded by the University Grants Committee (UGC) of the Hong Kong Special Administrative Region have suffered from continuous fund cutting due to burgeoning budget deficit by the government. Nevertheless, they have been forced to cope with increased pressures from local and international competitors. In response to the strong demand for becoming global- and knowledge-based institutions [78], the once relatively bureaucratic, government-funded universities in Hong Kong have been urged to phase out

the traditional forms of educational governance and adopted new managerial forms and practices that have been commonly used at the private or corporate organizations [44]. These institutions have been aspiring for a leading position through market-conscious operations and customer-oriented services or striving for maximizing their 'profits' from self-financed programs. For instance, they have attempted to establish collaborative partnerships from various aspects with tertiary educational institutions all over the world, or develop business links with profit making MNCs from different industries. In other words, the government-funded (i.e., University Grants Committee or UGC-funded) universities in Hong Kong have no longer been a "shelter" for employees. Furthermore, the administrative employees that provide front-line services to universities may be more vulnerable, because these employees appear not to be as "academic" as the academic staff that may be regarded as more "necessary" for the academic purposes for academic institutions. For example, City University of Hong Kong, one of the eight UGC-funded universities, allocated about 65% of its resources to support research and teaching activities, while only some 30% was used to support administrative and supportive services in 2001, and an annual budget cut about 3% had been exercised for several consecutive years [11]. The administrative employees may be more likely to suffer from the tremendous change, and they may subtly alter their working attitude and behavior in response to the change.

Although change appears to be necessary for organizations to succeed, or survive, in the turbulent business environments, organizational change inevitably interrupts social and obligated relationship between organizations and their employees [2]. Such "side effects" do not only impinge on work attitude and behavior of employees but also weaken the performance of organizations. Research found that organizational change affected employees' work attitude and behavior, such as job satisfaction [68], job security [4], organizational loyalty [52], and organizational commitment [32]. It also affected employees' job performance [70] and productivity [12]. These impacts of organizational change on universities, in particular to the administrative employees, have unavoidably affected the employer-employee relationship and, consequently, reshaped employees' work attitude and behavior.

In the extant literature, however, the impacts of organizational change on employees' work attitudes and behaviors in nonprofit organizations in particular those in government-funded universities have not been fully investigated. Certain underdeveloped research perspectives are thus worth noting. First, from a theoretical perspective, although research has noticed that organizational change may have negative impacts on

employees' work attitude and behavior [39] [62] [65], there has been little attention to the influences of employees' perception of support from their organizations and superiors and the fulfillment of psychological contract on organizations during the process of organizational change. Second, from a cultural perspective, the majority of the organizational change research has been conducted in the western contexts [36] [50] [73], whereas research has shown that there are cultural variations on the psychological reactions and behavioral outcomes of the employees at work [35] [69]. For example, [38] found that employees' fulfillment of psychological contract was attributed to the differences between western and eastern cultures. As such, the external validity of the findings, predominantly conducted in the western context, on the effects of organizational change on work outcomes is subject to verification. Third, from a sampling perspective, the extant literature has primarily focused on managerial positions in the commercial firms [73], while the research on the administrative employees in nonprofit organizations has been minimal. However, these frontline employees are likely to be the first target of people affected by organizational change, and their work attitude and behavior, to a certain extent, affects organizational performance. To bridge the knowledge gap, this study attempts to develop and test a theoretical model linking between organizational change and work outcomes to a sample of the administrative employees of the government-funded universities in Hong Kong.

THEORETICAL MODEL

Two theories underlie how employees' work attitude and behavior may be restored in the process of organizational change, namely organizational support theory and psychological contract theory. Organizational support theory (OST) maintains a global belief of employees concerning the extent to which the organization cares about them and values their contributions to the organization. It holds that employees' perceived organizational support produces a felt obligation to care about the organization's welfare and help the organization to achieve its goals [55] [64]. Perceived organizational support captures an individual's perception concerning the degree to which an organization values their contributions and cares about their well-being [16] and the level of the organization's commitment to them [55] [77]. Perceived organizational support focuses on the organizational treatment perceived by the employees, regardless of whether the treatment is explicitly or implicitly promised [13].

Psychological contract theory is an extension from social exchange theory and the norm of reciprocity, which becomes the focal point of the researchers studying the changing nature of the employment relationship and associated attitudinal and behavioral reactions of the employees. Psychological contract is defined as an individual's belief regarding the terms and conditions of an exchange relationship between that person with another party [60]. It implicitly relates to the mutual obligations and expectations that exist between employers and employees [31] [58]. In light of the obligated exchange on socialization, employees

strategically and rationally interact for initiating, strengthening, maintaining relationships with their organizations [15]. As psychological contract is inherently perceptual, one party's understanding of the contract may not necessarily be shared by the other [57].

Drawing upon the theories of organizational support and psychological contract, the theoretical model of this study was developed. The variables perceived organizational support, perceived supervisory support, and psychological contract were hypothesized as significant mediators that would alter the directions of the relationship between organizational change and work outcomes. In particular, the breach of psychological contract due to organizational change was reversely mediated by perceived organizational support and perceived supervisory support. In turn, the effects of perceived organizational support and perceived supervisory support on various work attitude and behavior, namely job satisfaction, job security, job stress, organizational commitment, organizational loyalty, and turnover intention, are mediated by employees' psychological contract. The model is depicted in Figure 1.

Organizational Change and Perceived Organizational Support

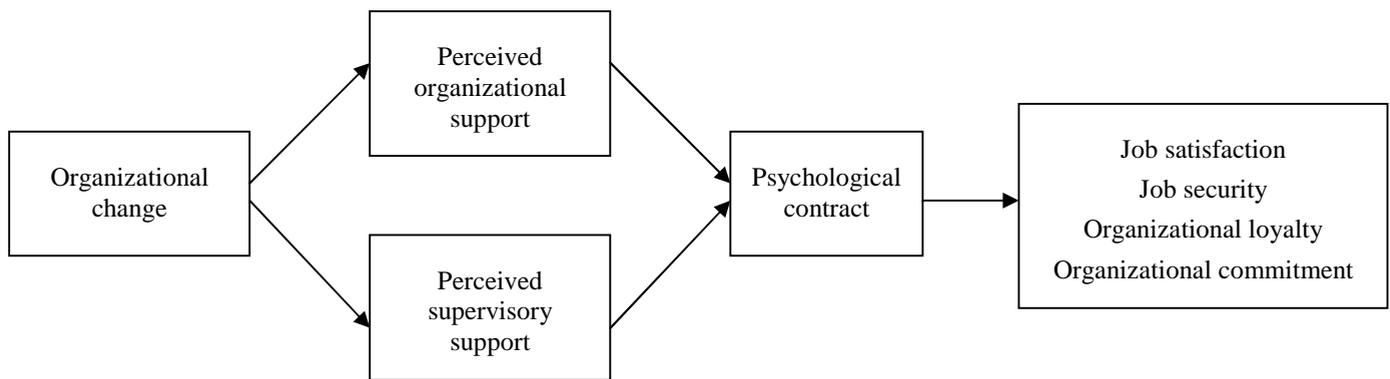
In the literature, researchers found that employees' perception of organizational support was negatively related to organizational change [2] [56]. Employees formed favorable perception to which organizations valued their contributions and cared about their well-being [15]. In contrast, organizations downplaying employees' contributions and well-being would lessen their perceived obligations to the employers. Likewise, based on the norm of reciprocity, employees would respond negatively to perceived unfavorable treatment from the employers, and consequently, the employer-employee relationship would be negatively affected. As organizational change implies that organizations are likely to protect employers' own benefits at the expenses of those of the employees, employees may perceive it as an unfavorable treatment and as a violation of the norm of reciprocity by single side of the employers. Thus, we expect:

Hypothesis 1a. Organizational change will be negatively related to perceived organizational support of employees.

Organizational Change and Perceived Supervisory Support

Based on social exchange theory and the reciprocal obligation, employees may also develop a perception of supervisory support concerning the degree to which superiors value their contributions and care about their well-being [36] [49]. In fact, supervisors have long been recognized to play an important part in developing roles and expectations of employees [23]. Previous studies demonstrated that organizational change was closely related to supervisory support perceived by the employees. As supervisors structured work environment and provided information and feedback to employees about the support of the broader organization for change, their behaviors were likely to be interpreted as

FIGURE 1. THEORETICAL FRAMEWORK OF THE STUDY



representative of the broader organizational processes [25]. Therefore, the violation of the norm of reciprocity by the organizations may also be attributed to their supervisors who have not stood up for their own benefits. Thus, we expect:

Hypothesis 1b. Organizational change will be negatively related to perceived supervisory support of employees.

Perceived Organizational Support and Psychological Contract

Both perceived organizational support and psychological contract stress the social exchange process in the establishment and maintenance of the employer-employee relationship, with an emphasis on organizations' attainment of favorable outcomes through the favorable treatment to the employees [2]. Researchers indicated that the favorable treatment made to employees resulting in the fulfillment of psychological contract might also increase employees' perceived organizational support. In contrast, the organizations that failed to provide a felt obligation to the employees would be viewed as a breach in psychological contract fulfillment, which might lead to erosion of the exchange foundation of the employer-employee relationship [57] [60]. Thus, we expect:

Hypothesis 2a. Perceived organizational support of employees will be positively related to their psychological contract.

Perceived Supervisory Support and Psychological Contract

Other than the perception of organizational support, perceived supervisory support also plays a key role on the social relationship in the organizations. The employees generate a felt obligation to positively achieve desired attitudes and performance in response to supervisory support [20]. According to psychological contract theory, employees' negative perception of supervisory support may damage the supervisor-employee relationship, following by the breach of psychological contract on the supervisor-employee relationship. Thus, we expect:

Hypothesis 2b. Perceived supervisory support of employees will be positively related to their psychological contract.

Psychological Contract and Work Outcomes

Psychological contract focuses on the discrepancy between what was promised and what have fulfilled, providing the basis on which employees reciprocate [13]. Previous research demonstrated that violations of psychological contract were associated with a variety of negative work outcomes [58] [73]. In the following, the fulfillment of psychological contract was hypothesized to be positively related to several work outcomes.

Job satisfaction was defined as an internal state that was expressed by affectively and/or cognitively evaluating one's job with some degree of favor [6]. In other words, job satisfaction was individuals' general attitude toward their job [45]. Job satisfaction consisted of multi-dimensional constructs such as satisfaction with supervision at work, work itself, pay and conditions, appraisal, promotion practices, and co-workers [29]. When employees presented a high level of job satisfaction, they may have positive attitude towards their jobs. For example, the employees who were more satisfied with their jobs were also absent less [28] and less likely to leave [9]. The widespread organizational change has resulted in employees' disillusion toward their organizations. When employees perceived that their organizations had failed to fulfill their promises or obligations, a breach of psychological contract emerged and led to a sense of unmet expectations toward the organizations. Previous research suggested that the discrepancy between promised and received outcomes was likely to lead to the feelings of inequity and, subsequently, job dissatisfaction [37] [76]. In other words, psychological contract of employees was a critical indicator to job satisfaction. Thus, we expect:

Hypothesis 3a. Fulfillment of psychological contract will be positively related to job satisfaction of employees.

Researchers theorized that one of the most prevalent consequences of organizational change was job security [46]. Over the past decade, a number of organizations that have encountered dramatic and unappeasable wave

of organizational change have increasingly found difficulty in fulfilling the traditional expectation of providing long-term employment to their employees, even if some organizations understood that this would damage their reciprocal obligations on the employees. As such, the employees who had assumed that their positions were secured had to deal with potential or actual job loss [43] [59]. When obligations associated with the psychological contract were not fulfilled, the problem of job security also reflected a negative message to the employees [16]. Empirical studies also supported that employees' fulfillment of psychological contract was positively associated to job security [1] [4]. Thus, we expect:

Hypothesis 3b. Fulfillment of psychological contract will be positively related to job security of employees.

Organizational loyalty referred to one's specific psychological commitment to the organizations [52]. Employees who were loyal to their organizations were motivated to work hard and were willing to stay with the organizations. Since organizational changes constantly increased unmet expectations to the employees [57] [73], such discrepancies on employer-employee relationship inevitably precipitated the breach of employees' psychological contract and thus the decrease in organizational loyalty. [58] found that psychological contract breach was negatively associated with employee loyalty to their organizations. Thus, we expect:

Hypothesis 3c. Fulfillment of psychological contract will be positively related to organizational loyalty of employees.

Organizational commitment was defined as the relative strength of an individual's involvement in a particular organization characterized by strong acceptance or a belief in an organization's goals and values, willingness to exert effort on behalf of the organization, and a strong desire to maintain membership of the organization [48]. Organizational commitment could thus be seen as the extent to which employees identified with their organizations and managerial goals, showed a willingness to invest effort, participated in decision making, and internalized managerial values [51]. Organizational commitment was the driving force behind an organization's performance [67]. Historically, guarantee of life-long employment by the organizations being a crucial practice of fostering strong commitment of employee to the organization was implicit in the psychological contract between organizations and employees [45]. Organizational change could influence commitment through its impacts on the psychological contract that the employee had toward the organizations [61]. Thus, we expect:

Hypothesis 3d. Fulfillment of psychological contract will be positively related to organizational commitment of employees.

Previous studies have long indicated that organizational change had significantly negative impacts on changing psychological contract of employees to their employers [26] [65]. An important contribution of the current study

was to argue that these previous studies have omitted some essential variables in describing the relationship between organizational change and psychological contract. One of these variables might be perceived organizational support. As mentioned before, according to psychological contract theory, when the employees believed that the organizations were unable to fulfill their promises or obligations, a breach of psychological contract would typically create the perception of an imbalance and inequity in the social exchange relationship, and organizational change often facilitated such an imbalance and inequity in the organizations. However, according to organizational support theory, when employees' also believed that the organizations valued their contributions and cared about their well-being [16] during the process of organizational change, the violation of psychological change would be minimal or even disappeared. Thus, we expect:

Hypothesis 4a. Perceived organizational support will be reversely mediated the negative relationship between organizational change and psychological contract of employees.

Similar to the mediating effect of perceived organizational support, the current study also proposed that perceived supervisory support had the same mediated effect on the relationship between organizational change and psychological contract. Based on the social support relationship, the source of social support in the work environment, such as a supervisor, could counter-balance and buffer the potentially negative effects of work demands for employees [14] [41]. Thus, we expect:

Hypothesis 4b. Perceived supervisory support will be reversely mediated the negative relationship between organizational change and psychological contract of employees.

Although research indicated that perceived organizational support and perceived supervisory support were positively related to a variety of work outcomes [17] [27] [63], the mediating role of psychological contract on the relationship has not been fully investigated. Based on the assumptions of the significant relationships between perceived organizational support and the fulfillment of psychological contract [47] [61], and prior research consistently suggesting that psychological contract breach negatively influenced employees' attitudes and behaviors [57] [58], psychological contract was hypothesized to be a positive mediator of perceived organizational support and perceived supervisory support on several work outcomes. Thus, we expect:

Hypothesis 5a. Psychological contract will be a positive mediator on the relationship between perceived organizational support and (i) job satisfaction, (ii) job security, (iii) organizational commitment, and (iv) organizational loyalty and a negative mediator on the relationship between perceived organizational support and (v) job stress and (vi) turnover intention.

Hypothesis 5b. Psychological contract will be a positive mediator on the relationship between perceived

supervisory support and (i) job satisfaction, (ii) job security, (iii) organizational commitment, and (iv) organizational loyalty and a negative mediator on the relationship between perceived supervisory support and (v) job stress and (vi) turnover intention.

METHODS

Subjects

The administrative employees (including administrative, executive, clerical, and technical positions, etc.) from the government-funded universities were targeted. A total of 3,516 mail questionnaires were sent to all of the full-time administrative employees (including tenured-based and contract-based employees) whose personal information could be searched from the universities' official websites. The usable returned questionnaires were 1,108, with a response rate of 31.51%, which was relatively high in Hong Kong [30] [71]. In the sample, 33% of the respondents were male and 67% were female. Approximately 40% of the respondents aged between 31 and 40. Besides, about 60% of the respondents were married.

The questionnaire items were originally in English. As the first language was Chinese in Hong Kong, it would be easier for the respondents to understand and complete the survey. Therefore, all measurement items were translated into Chinese. To ensure accuracy and correctness, the Chinese version was back translated into English [7]. Equivalence was found between two English versions. The questionnaires were sent by mail, enclosed with stamped return envelopes. The participants were assured of confidentiality.

Measures

Organizational change was measured using 6-item scale extracted from revised 11 of total 14 different types of organizational change developed by [53]. The respondents were requested to indicate whether each selected item was a characteristic reflecting their real situation. Response option was a five-point scale. Two sample items were: (1) Reductions in force – layoffs, firings, downsizings, involuntary separations, and (2) Reorganizations of personnel or operations – changes in divisional structures, reporting relationships. Cronbach's alpha of .71 was obtained for this measure.

Perceived organizational support was measured using [16] instrument. Over a decade later, [77] used a shortened 9-item version of the Survey of Perceived Organizational Support (SPOS), loaded highest in [16]'s factor analysis. This shortened version of the SPOS was used in previous research [16]. Some items denoted with (R) were reverse scored. Responses were obtained on a 5-point Likert-type scale where 1, strongly disagree and 5, strongly agree. Two sample items from the scale were: (1) The organization shows little concern for me (R), and (2) The organization takes pride in my accomplishments at work. Cronbach's alpha of .86 was obtained for this measure.

Perceived supervisory support was measured using [24]'s 9-item scale. This instrument was used to assess the extent of perceptions of supervisory support received by employees in their job. Responses were obtained using a 5-point Likert scale, where 1, strongly disagree and 5, strongly agree. Two sample items from the scale were: (1) My supervisor takes the time to learn about my career goals and aspirations, and (2) My supervisor assigns me special projects that increase my visibility in the organization. Cronbach's alpha of .92 was obtained for this measure.

Psychological contract of employees were measured using [73]'s 16-item scale. These 16 elements tapped the typical dimensions to test the employment relationship. Responses ranged from 1, 'received much more than promised'; 2, 'Received more than promised'; 3, 'Received about the same as promised'; 4, 'Received less than promised'; and 5, 'received much less than promised'. A sample item from the scale was: Job challenge and excitement. Cronbach's alpha of .88 was obtained for this measure.

Employee's job satisfaction was measured using [42]'s 3-item scale. Within which, an item denoted with (R) were reverse scored. The scale was used to test whether employee was satisfied with his or her job. Responses were obtained using a 5-point Likert-type scale anchored by 1, strongly disagree, 5, strongly agree. A sample item was: In general, I like working here. Cronbach's alpha was .83 for this measure.

Job security, an employee's associated work outcome, was measured using [34] 3-item scale. The items used to address the level of certainty an employee was about keeping his or her job. Responses were obtained on a 5-point Likert scale anchored by 1, strongly disagree and 5, strongly agree. A sample item is: I am certain I will not be laid off in the next six month. Cronbach's alpha of .77 was obtained for this measure.

Organizational loyalty was measured using [66]'s instrument. Four items were used to assess employee's loyalty to organization through a job taking in an organization. The response format was a 5-choice Likert scale with anchors (1) strongly disagree through (5) strongly agree. Two sample items were: (1) If I had to choose all over again, I would take a job with this company, and (2) I would be willing to spend the rest of my career working for this company. Cronbach's alpha for this measure was .87.

Organizational commitment was measured using [40]'s 6-item scale. Within which, two items denoted with (R) were reverse scored. The scale was adopted to address the degree of the employee's commitment to their serving organization. Responses were obtained on a 5-point Likert-scale anchored by 1, strongly disagree, and 5, strongly agree. Two sample items were: (1) I am willing to work harder than I have to in order to help this organization succeed, and (2) I would turn down another job for more pay in order to stay with this organization. Cronbach's alpha for this measure was .82.

The following control variables were used. The demographic variables included as controls were age, educational level, sex, marital status, number of children, monthly salary range (HK\$), and years of service. Age was collected in 10-year blocks by a one-item self-report measure, which consisted of five categories: (1) 20 or below, (2) 21 to 30, (3) 31 to 40, (4) 41 to 50, and (5) 51 or above. Educational level consisted of four categories: (1) primary level, (2) secondary level, (3) undergraduate degree, and (4) postgraduate degree. Gender was measured by nominal scale, which was divided into two categories: (1) male and (2) female. Marital status was measured by nominal scale, which was divided into two categories: (1) married and (2) single. Number of children was collected by a one-item self-report ratio scale. Monthly income was measured by a one-item self-report measure, which consisted of six categories: (1) less than HK\$10,000, (2) HK\$10,001 to HK\$15,000, (3) HK\$15,001 to HK\$20,000, (4) HK\$20,001 to HK\$25,000, (5) HK\$25,001 to HK\$30,000, and (6) HK\$30,001 or above. Years of service in tertiary educational institution was measured by a one-item self-report measure, which consisted of six categories: (1) less than 1 year, (2) 1 to 5 years, (3) 6 to 10 years, (4) 11 to 15 years, (5) 16 to 20 years, and (6) 20 years or above.

Data Analysis

The data were analyzed by hierarchical multiple regressions using SPSS 14.0. For all regression equations, control variables were entered first, followed by the relevant independent variables or/and mediating variables. For testing the mediating effects, the analytical method recommended by [3] was adopted, which was described in the results chapter below.

RESULTS

Descriptive Statistics

Table 1 presented the means, standard deviations, correlations, and Cronbach's alphas for all studied variables. The internal reliabilities of the instruments were generally good, with alphas ranged from .71 (organizational change) to .92 (perceived supervisory support). The results showed that the participants encountered a considerable level of organizational change ($M=3.54$), consisted of significant cutbacks in operations, reductions in size, voluntary terminations, early retirement, reorganizations of personnel, attempted takeovers or merger, and rapid growth. Compared to organizational change, the means of perceived organizational support ($M=2.85$) and perceived supervisory support ($M=3.03$) were somewhat lower, and perceived organizational support was even below average, implying that the supports perceived by the supporting staff in tertiary educational institutions in Hong Kong were low relative to the changes, and the employees' perception of organizational support appeared to be low. Furthermore, their perception of supervisory support was a little bit higher than that of organizational support, indicating that the employees perceived less support from the organization relative to their supervisors during the changes. One explanation was that the supporting staff understood that their

supervisors had also suffered from the change – they 'sunk' together!

The four work outcomes were all above average. Among them, the highest mean was job satisfaction ($M=3.53$). Since organizational change had been implemented everywhere, the problems caused by organizational change in the universities were not necessarily worse than the works outside the academic venues.

Testing for Direct Effects

Hypotheses 1a-b, 2a-b, and 3a-d were to test the direct effects of organizational change on perceived organizational support and perceived supervisory support, the direct effects of perceived organizational support and perceived supervisory support on psychological contract, and the direct effects of psychological contract on several work outcomes.

For Hypothesis 1a, as reported in Table 2, the results of Model 1 showed that organizational change was negatively related to perceived organizational support of employees ($\beta=-.23$, $p<.001$), indicating that organizational change did have negative effects on employees' perception of organizational support. Thus, Hypothesis 1a was supported. Likewise, for Hypothesis 1b, as reported in Table 2, the results of Model 2 demonstrated that organizational change was also negatively related to perceived supervisory support of employees ($\beta=-.14$, $p<.001$). Hypothesis 1b was supported.

Hypotheses 2a and 2b examined the effects of perceived organizational support and perceived supervisory support of employees on their fulfillment of psychological contract. As shown in Table 2 (Model 3), perceived organizational support was positively related to their fulfillment of psychological contract ($\beta=.69$, $p<.001$). In Table 2 (Model 4), the results also showed that perceived supervisory support was positively related to their fulfillment of psychological contract ($\beta=.63$, $p<.001$). Thus, both Hypotheses 2a and 2b were substantiated.

For Hypotheses 3a to 3d, the relationships between psychological contract and various work outcomes were investigated. As expected, in Table 3, psychological contract had significantly positive effects on job satisfaction ($\beta=.50$, $p<.001$), job security ($\beta=.35$, $p<.001$), organizational loyalty ($\beta=.56$, $p<.001$), and organizational commitment ($\beta=.51$, $p<.001$). Thus, Hypothesis 3a to 3d were all supported and at the right direction.

Testing for Mediating Effects

Hypotheses 4a-b and 5a-b were to test the mediating effects of perceived organizational support, perceived supervisory support, and psychological contract on the relationships between organizational change and various work outcomes. To test the mediating regressions, the procedure described by [3] were used. According to [3], four steps were needed to establish the mediating relationship. First, the independent variable must be

related to the dependent variable. Second, the independent variable must be related to the mediating variable. Third, with the independent variable controlled, the mediating variable must be related to the dependent variable. Fourth, to establish that the mediating variables completely or partially mediated the relationship between the independent variable and the dependent variable, the effect of independent variable on dependent variable, controlling for the mediating variable, must be eliminated or reduced.

psychological contract (dependent variable) was substantially reduced ($\beta=-.05, p<.001$), after perceived organizational support (mediating variable) was controlled. The results revealed that perceived organizational support significantly mediated the relationship between organizational change and psychological contract; it also reversed the direction from negative to positive effect. It indicated that organizational change might lead to a breach in employees' psychological contract unless the employees

TABLE 1. MEANS, STANDARD DEVIATIONS, CORRELATIONS, AND ALPHAS

Variable	M	SD	1	2	3	4	5	6	7
1 Organizational change	3.54	.56 (.71)							
2 Perceived organizational support	2.85	.64	-.23 ***	(.86)					
3 Perceived supervisory support	3.03	.70	-.16 ***	.63 ***	(.92)				
4 Psychological contract	3.11	.52	-.16 ***	.68 ***	.62 ***	(.88)			
5 Job satisfaction	3.53	.71	-.07 *	.49 ***	.46 ***	.50 ***	(.83)		
6 Job security	3.29	.76	-.24 ***	.29 ***	.27 ***	.34 ***	.21 ***	(.77)	
7 Organizational loyalty	3.21	.75	-.10 ***	.55 ***	.47 ***	.57 ***	.71 ***	.26 ***	(.87)
8 Organizational commitment	3.36	.55	-.08 **	.54 ***	.46 ***	.54 ***	.69 ***	.28 ***	.83 ***
9 Age	3.21	.87	.15 ***	-.06	-.12 ***	.06 *	.17 ***	-.06	.17 ***
10 Education level	2.75	.72	-.05	-.04	.04	-.04	-.10 ***	.04	.13 ***
11 Sex	1.67	.47	.00	.00	-.01	.01	.07 *	.09 **	.05
12 Marital status	1.39	.49	-.13 ***	.04	.04	-.06 *	-.11 ***	.04	-.14 ***
13 Number of children	.77	.90	.09	.01	-.04	.09 **	.17 ***	-.02	.18 ***
14 Monthly income range (HK\$)	3.77	1.59	.15 ***	-.03	-.03	.10 ***	.08 **	.00	.06
15 Years of service	3.28	1.32	.21 ***	-.03	-.09 **	.13 ***	.18 ***	-.03	.20 ***

Variable	8	9	10	11	12	13	14	15
1 Organizational change								
2 Perceived organizational support								
3 Perceived supervisory support								
4 Psychological contract								
5 Job satisfaction								
6 Job security								
7 Organizational loyalty								
8 Organizational commitment	(.82)							
9 Age	.20 ***	--						
10 Education level	-.12 ***	-.23 ***	--					
11 Sex	.05	-.07 **	-.18 ***	--				
12 Marital status	-.15 ***	-.49 ***	.13 ***	.04	--			
13 Number of children	.21 ***	.51 ***	-.21 ***	-.03	-.61 ***	--		
14 Monthly income range (HK\$)	.11 ***	.43 ***	.39 ***	-.17 ***	-.34 ***	.23 ***	--	
15 Years of service	.23 ***	.70 ***	-.29 ***	-.04	-.41 ***	.44 ***	.43 ***	--

N=1,108. Cronbach's alphas coefficients were in parentheses. * p<.05 ** p<.01 *** p<.001

Hypothesis 4a predicted that perceived organizational support was reversely mediated the negative relationship between organizational change and psychological contract of employees. As shown in Table 2, first, in Model 3, organizational change (independent variable) was negatively related to psychological contract (dependent variable) ($\beta=-.21, p<.001$). Second, in Model 1, organizational change (independent variable) was negatively related to perceived organizational support (mediating variable) ($\beta=-.23, p<.001$). Third, in Model 6, perceived organizational support (mediating variable) was positively related to psychological contract (dependent variable) ($\beta=.68, p<.001$), after organizational change (independent variable) was controlled. Fourth, in Model 6, the negative effect of organizational change (independent variable) on

perceived support from their organizations. Thus, Hypothesis 4a was supported.

Similarly, Hypothesis 4b predicted that perceived supervisory support was reversely mediated the negative relationship between organizational change and psychological contract of employees. First, same as Hypothesis 4a, organizational change was negatively related to psychological contract (Model 5). Second, in Model 2, organizational change was negatively related to perceived supervisory support ($\beta=-.14, p<.001$). Third, in Model 7, perceived supervisory support was positively related to psychological contract ($\beta=.61, p<.001$), after organizational change was controlled. Fourth, in Model 7, the negative effect of organizational change on psychological contract was substantially reduced ($\beta=-.12,$

TABLE 2. REGRESSION RESULTS FOR THE DIRECT AND MEDIATING EFFECTS

Measure	Standardized regression coefficient							
	Predictor variables	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Control								
Age		-.12 *	-.15 **	-.12 *	-.12 *	-.12 *	-.12 *	-.12 *
Education level		-.04	.01	-.05	-.05	-.05	-.05	-.05
Sex		-.02	-.12	.01	.01	.01	.01	.01
Marital status		.03	-.03	-.01	-.01	-.01	-.01	-.01
Number of children		.08	.03	.06	.06	.06	.06	.06
Monthly salary range (HK\$)		.02	.00	.09	.09	.09	.09	.09
Years of service		.02	-.01	.13 *	.13 *	.13 *	.13 *	.13 *
Organizational change		-.23 ***	-.14 ***			-.21 ***	-.05 *	-.12 ***
Perceived organizational support				.69 ***			.68 ***	
Perceived supervisory support					.63 ***			.61 ***
F							105.18 ***	78.88 ***
R ²							.50 ***	.43 ***
Adjusted R ²							.50 ***	.42 ***
Df							9, 935	9, 945

Model 1=perceived organizational support, Model 2=perceived supervisory, Models 3 to 7=psychological contract

* p<.05 ** p<.01 *** p<.001

TABLE 3. REGRESSION RESULTS FOR THE DIRECT EFFECTS ON WORK OUTCOMES

Measure	Standardized regression coefficient			
	Employees' work outcomes			
	1	2	3	4
Control				
Age	.02	-.07	-.03	.00
Education level	-.05	.02	-.05	-.06
Sex	.06	.11 ***	.03	.04
Marital status	.02	.03	-.04	-.02
Number of children	.11 *	.02	.10 *	.11 **
Monthly salary range (HK\$)	.04	.05	-.02	.04
Years of service	.10 *	.02	.15 ***	.14 **
Psychological contract	.50 ***	.35 ***	.56 ***	.51 ***
F	48.67 ***	18.66 ***	69.10 ***	58.90 ***
R ²	.29 ***	.14 ***	.37 ***	.33 ***
Adjusted R ²	.28 ***	.13 ***	.36 ***	.33 ***
Df	8, 962	8, 964	8, 965	8, 958

Work outcomes: 1=job satisfaction, 2=job security, 3=organizational loyalty, 4=organizational commitment

* p<.05 ** p<.01 *** p<.001

p<.001), after perceived supervisory support was controlled. Thus, Hypothesis 4b was also supported.

Hypothesis 5a predicted that psychological contract would be a positive mediator on the relationship between perceived organizational support and various work outcomes. As shown in Table 4, first, perceived organizational support was a significantly positive predictor of job satisfaction ($\beta=.52$, $p<.001$), job security ($\beta=.30$, $p<.001$), organizational loyalty ($\beta=.56$, $p<.001$), and organizational commitment ($\beta=.56$, $p<.001$). Second, perceived organizational support was a significantly positive predictor of psychological contract ($\beta=.69$, $p<.001$). Third, after perceived organizational support was controlled, psychological contract was a significantly positive predictor of job satisfaction ($\beta=.25$,

$p<.001$), job security ($\beta=.27$, $p<.001$), organizational loyalty ($\beta=.33$, $p<.001$), and organizational commitment ($\beta=.25$, $p<.001$). Fourth, the effects of perceived organizational support on several work outcomes were all decreased (see Table 4), after psychological contract was controlled. Thus, Hypothesis 5a was supported.

Hypothesis 5b predicted that psychological contract would also be a positive mediator on the relationship between perceived supervisory support and several work outcomes. As shown in Table 5, first, perceived supervisory support was a significantly positive predictor of job satisfaction ($\beta=.50$, $p<.001$), job security ($\beta=.26$, $p<.001$), organizational loyalty ($\beta=.49$, $p<.001$), and organizational commitment ($\beta=.50$, $p<.001$). Second,

TABLE 4. REGRESSION RESULTS FOR PERCEIVED ORGANIZATIONAL SUPPORT

Measure Predictor variables	Standardized regression coefficient								
	Model 1				Model 2				
	1	2	3	4	1	2	3	4	
Control									
Age	.02	-.07	-.03	.00	-.12 *	.02	-.07	-.03	.00
Education level	-.05	.02	-.05	-.06	-.05	-.05	.02	-.05	-.06
Sex	.06	.11 ***	.03	.04	.01	.06	.11 ***	.03	.04
Marital status	.02	.03	-.04	-.02	-.01	.02	.03	-.04	-.02
Number of children	.11 *	.02	.10 *	.11 **	.06	.11 *	.02	.10 *	.11 **
Monthly salary range (HK\$)	.04	.05	-.02	.04	.09	.04	.05	-.02	.04
Years of service	.10 *	.02	.15 ***	.14 **	.13 *	.10 *	.02	.15 ***	.14 **
Perceived organizational support	.52 ***	.30 ***	.56 ***	.56 ***	.69 ***	.34 ***	.11 **	.33 ***	.38 ***
Psychological contract						.25 ***	.27 ***	.33 ***	.25 ***
F						55.36 ***	17.38 ***	75.47 ***	70.72 ***
R ²						.35 ***	.14 ***	.42 ***	.41 ***
Adjusted R ²						.34 ***	.14 ***	.42 ***	.40 ***
Df						9, 933 ***	9, 935 ***	9, 936 ***	9, 930 ***

Models 1 and 3: 1=job satisfaction, 2=job security, 3=organizational loyalty, 4=organizational commitment

Model 2: Psychological contract

* $p < .05$ ** $p < .01$ *** $p < .001$

TABLE 5. REGRESSION RESULTS FOR PERCEIVED SUPERVISORY SUPPORT

Measure Predictor variables	Standardized regression coefficient								
	Model 1				Model 2				
	1	2	3	4	1	2	3	4	
Control									
Age	.02	-.07	-.03	.00	-.12 *	.02	-.07	-.03	.00
Education level	-.05	.02	-.05	-.06	-.05	-.05	.02	-.05	-.06
Sex	.06	.11 ***	.03	.04	.01	.06	.11 ***	.03	.04
Marital status	.02	.03	-.04	-.02	-.01	.02	.03	-.04	-.02
Number of children	.11 *	.02	.10 *	.11 **	.06	.11 *	.02	.10 *	.11 **
Monthly salary range (HK\$)	.04	.05	-.02	.04	.09	.04	.05	-.02	.04
Years of service	.10 *	.02	.15 ***	.14 **	.13 *	.10 *	.02	.15 ***	.14 **
Perceived organizational support	.50 ***	.26 ***	.49 ***	.50 ***	.63 ***	.31 ***	.63	.23 ***	.28 ***
Psychological contract						.30 ***	.31 ***	.41 ***	.33 ***
F						56.57 ***	16.42 ***	68.29 ***	62.00 ***
R ²						.35 ***	.14 ***	.39 ***	.37 ***
Adjusted R ²						.34 ***	.13 ***	.39 ***	.37 ***
Df						9, 943	9, 945	9, 946	9, 939

Models 1 and 3: 1=job satisfaction, 2=job security, 3=organizational loyalty, 4=organizational commitment

Model 2: Psychological contract

* $p < .05$ ** $p < .01$ *** $p < .001$

perceived supervisory support was a significantly positive predictor of psychological contract ($\beta = .63$, $p < .001$). Third, after perceived organizational support was controlled, psychological contract was a significantly positive predictor of job satisfaction ($\beta = .30$, $p < .001$), job security ($\beta = .31$, $p < .001$), organizational loyalty ($\beta = .41$, $p < .001$), and organizational commitment ($\beta = .33$, $p < .001$). Fourth, the effects of perceived supervisory support on several work outcomes were all decreased (see Table 5), after psychological contract was controlled. Thus, Hypothesis 5b was also supported.

DISCUSSION

Summary

In the extant literature, several types of organizational change have been identified, such as restructuring, downsizing, pay or benefit cuts, reorganization of personnel or operations, reduction in work forces, cutback in operations, or computerization, [1] [33] [54] [72]. With the catalyst of globalization, local and international business environments have been increasingly competitive, organizational change has become an important, if not the only, means to survive or

succeed. Local universities, just like business firms, are also required to monitor and adapt to such continuous changes. For example, to catch up the technological trends, the Department of Chemistry and Biology at the University of California (UCLA) was reported as operating virtual office hours offering faculty and students 24-hour communication, electronic posting of courses and on-line question and answer services [1]. In Hong Kong, all the government-funded universities have been engulfed in tremendous organizational change due to the budget cut affected by the Asian financial crisis since 1997 and the reform of the education system in Hong Kong since 2000. In the current study, the participants demonstrate that their universities have encountered a considerable level of organizational change (with a mean of 3.54 out of a 5-point scale).

Although organizational researchers have addressed different aspects to explain the relationship between organizational change and work outcomes, applying the concept of social exchange to underlie organizational change has appeared to be limited. Social exchange theory is usually used for understanding the exchange relationship in organizations [22]. Since organizational change involves changing the balance of exchanges and felt obligations in the organizations, the changes of employees' work attitude and behavior thus becomes reasonable. Consistent with this line of reasoning, this research draws upon perceived organizational support theory and psychological contract theory and investigates the mediating role of perceived organizational support and psychological contract on the relationship between organizational change and several work outcomes.

Built upon social exchange theory, organizational support theory holds that employees' perceived organizational support produces a felt obligation to care about the organization's welfare and help the organization to achieve its goals [55] [64]. Consistent with the theory, this research suggests that the employees must get the impression that they are supported by their organizations and superiors in order to produce a felt obligation to care about the organization's welfare and help the organization to achieve its goals when the organizational change is implemented. Otherwise, their work outcomes would be negatively influenced.

Besides perceived organizational support, the perception of support from supervisors is also proposed as an important factor mediates the negative effect of organizational change. According to leader-member exchange theory (LMX) [21], the developed relationship as being a partnership between supervisors and employees that involves support, trust, information sharing, liking, respect, and reciprocal influence. If the partnership relationship between supervisors and employees is established, the obligated reciprocation of positive responses to favorable treatment is more likely to occur [5] [22].

Theoretical and Practical Implications

Some theoretical and practical implications from the major findings of the current study are worth noting. First, the results of the current study provide some

evidence to support that organizational change negatively affects employees' psychological contract. This is an important finding as it helps explain why employees are resistant to change and decreased in satisfaction and commitment at work. As changes in organizations are probably damage the established equity between employers and employees, which result in the violation of employees' psychological contract to the organizations.

Second, the results reveal that perceived organizational support and perceived supervisory support mediate the negative impacts of organizational change on employees' psychological contract. Furthermore, the effect of perceived organizational support is stronger than that of perceived supervisory support on psychological contract. Similarly, the mediating effect of perceived organizational support is also stronger than that of perceived supervisory support on the relationship between organizational change and psychological contract. After the mediating effect of perceived organizational support is controlled, the effect of organizational change on psychological change decreases. However, after the mediating effect of perceived supervisory support is controlled, the effect of organizational change on psychological change also decreases, indicating that the mediating effect of perceived supervisory support is much weaker than that of perceived organizational support. As such, to reduce the negative impact of organizational change, the support from their supervisors at the individual level, though it does have some positive effect, is unlikely to substitute the support from their employers at the organizational level. In order to implement the change successfully, the organizations should effectively manage employees' perceptions of being supported by the organizations or employers.

Third, in view of the issues mentioned above, the potential problems from the administrative employees in the organizational change implemented in universities in Hong Kong should be concerned. The current study reveals that the administrative employees were facing considerable level of organizational change. However, their perception of organizational support was weaker than that of supervisory support. Although employees' work attitude and behavior was not likely to be an immediate problem, the relatively low level of perceived organizational support of the employees may cause harms to organizational performance in the long run.

Limitations

Several limitations of the design of the current study and the findings should be considered. First, the single type of participants, i.e., only the administrative employees from a single industry, i.e., the government-funded universities in Hong Kong, might have limited the generalizability of the findings. Second, only the administrative employees whose personal information had posted on their official websites were collected as the sample source, which might cause sampling biases. Third, the data analyses were based on self reports. It might create the problem of common method variance, which might be subject to informant biases [19]. Last, the survey was conducted by a cross-sectional method.

To confirm the findings in the current study, longitudinal studies in future are encouraged.

Conclusion

Organizational change has become a common practice nowadays. Organizations that are engaging in dramatic change increasingly alert the importance of employees who are able to cope with the change at the workplace [74] [75]. In particular, the organizations involving major strategic changes inevitably create tensions and conflicts [8] to the employees. To manage the employees' perceptions of organizational support an important means to minimize the negative impacts of organizational change on the employees' work attitude and behavior in order to allow the organizations to obtain the greatest advantages from the change.

REFERENCES

- [1] Allen, T. D., Freeman, D. M., Russell J., E. A., Reizenstein, R. C., & Rentz, J. 2001. Survivor reactions to organizational downsizing: Does time ease the pain? *Journal of Occupational and Organizational Psychology*, 74(2): 145-164.
- [2] Aselage, J., & Eisenberger, R. 2003. Perceived organizational support and psychological contract: A theoretical integration. *Journal of Organizational Behavior*, 24(5): 491-509.
- [3] Baron, R. M., & Kenny, D. A. 1986. The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- [4] Beaumont, P. B., & Harris, R. I. D. 2002. Examining white-collar downsizing as a cause of change in the psychological contract: Some UK evidence. *Employee Relations*, 24(4): 378-388.
- [5] Blau, P. M. 1964. *Exchange and power in social life*. NY: Wiley.
- [6] Brief, A. P. 1998. *Attitudes in and around organizations*. Thousand Oaks, CA: Sage.
- [7] Brislin, R. W., Lonner, W. J., & Thorndike, R. M. 1973. *Cross-cultural research methods*. New York: Wiley.
- [8] Carnall, C. A. 1995. *Managing change in organizations*. London: Prentice Hall.
- [9] Carsten, J. M., & Spector, P. E. 1987. Unemployment, job satisfaction, and employee turnover: A meta-analytic test of the Muchinsky model. *Journal of Applied Psychology*, 72(3): 374-381.
- [10] Caruana, A. Ramaseshan, B., & Ewing, M. T. 1998. Do universities that are more market oriented perform better? *The International Journal of Public Sector Bradford*, 11(1): 55-70.
- [11] City University of Hong Kong. 2001. *Management Review Progress Report*. Retrieved from http://www.cityu.edu.hk/op/Management_Review/English/Progress/index.htm.
- [12] Cooper, C. L. 1999. The changing psychological contract at work. *European Business Journal*, 11(3): 115-118.
- [13] Coyle-Shapiro, J., & Conway, N. 2005. Exchange relationships: Examining psychological contract and perceived organizational support. *Journal of Applied Psychology*, 90(4): 774-781.
- [14] Cummings, R. C. 1990. Job stress and the buffering effect of supervisory support. *Group & Organization Studies*, 15(1): 92-104.
- [15] Eisenberger, R., Cummings, J., Armeli, S., & Lynch, P. 1997. Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology*, 82(5): 812-820.
- [16] Eisenberger, R., Huntington, R., Hutchinson, S., & Sowa, D. 1986. Perceived organizational support. *Journal of Applied Psychology*, 71(3): 500-507.
- [17] Elrod, D. P. II, & Tippett, D. D. 2002. The "death valley" of change. *Journal of Organizational Change Management*, 15(3): 273-291.
- [18] Fisher, A. B. 1988. The downside of downsizing. *Fortune*, 117(11): 23, 42-52.
- [19] Fox, M. L., Dwyer, D. J., & Ganster, D. C. 1993. Effects of stressful job demands and control on physiological and attitudinal outcomes in a hospital setting. *Academy of Management Journal*, 36(2): 289-318.
- [20] Gagnon, M. A., & Michael, J. H. 2004. Outcomes of perceived supervisor support for wood production employees. *Forest Products Journal*, 54(12): 172-177.
- [21] Gerstner, C. R., & Day, D. V. 1997. Meta-analysis review of leader-member exchange theory: Correlates and construct issues. *Journal of Applied Psychology*, 82(6): 827-844.
- [22] Gouldner, A. W. 1960. The norm of reciprocity: A preliminary statement. *American Sociological Review*, 25: 161-178.
- [23] Graen, G. B., & Scandura, T. A. 1987. Toward a psychology of dyadic organizing. In L. L. Cummings & B. Staw (Eds) *Research in organizational behavior*, 9: 175-208. Greenwich, CT: JAI Press.
- [24] Greenhaus, J. H., Parasuraman, A., & Wormley, W. M. 1990. Effects of race on organizational experiences, job performance evaluations, and career outcomes. *Academy of Management Journal*. 33(1): 64-86.
- [25] Griffin, M. A., Patterson, M. G., & West, M. A. 2001. Job satisfaction and teamwork: The role of supervisor support. *Journal of Organizational Behavior*, 22(5): 537-550.
- [26] Guzzo, R. A., & Noonan, K. A. 1994. Human resource practices as communications and the psychological contract. *Human Resource Management*, 33(3): 447-462.
- [27] Guzzo, R. A., Noonan, K. A., & Elron, E. 1994. Expatriate managers and the psychological contract. *Journal of Applied Psychology*, 79(4): 617-626.
- [28] Hackett, R. D., & Guion, R. M. 1985. A reevaluation of the absenteeism-job satisfaction relationship. *Organizational Behavior and Human Decision Processes*, 35(3): 340-381.
- [29] Hackman, J., & Oldham, G. 1980, *Work redesign*. Reading, MA: Addison-Wesley.
- [30] Harzing, A. W. K. 1997. Response rates in international mail surveys: Results of a 22 country study. *International Business Review*, 6(6): 641-665.
- [31] Herriot, P., & Pemberton, C. 1997. Facilitating new deals. *Human Resource Management Journal*, 7(1): 45-56.
- [32] Herscovitch, L., & Meyer, J. P. 2002. Commitment to organizational change: Extension of a three-

component model. *Journal of Applied Psychology*, 87(3):474-487.

[33] Hirsch, P. 1987. *Pack your own parachute*. Reading, MA: Addison Wesley.

[34] King, J. E. 2000. White-collar reactions to job insecurity and the role of the psychological contract: Implications for human resource management. *Human Resource Management*, 39(1): 79-92.

[35] Kickul, J., Lester, S. W., & Beijio, E. 2004. Attitudinal and behavioral outcomes of psychological contract breach: A cross cultural comparison of the United States and Hong Kong Chinese. *International Journal of Cross Cultural Management*, 4(2): 229-252.

[36] Kirkman, B. L., & Shapiro, D. L. 2001. The impact of cultural values on job satisfaction and organizational commitment in self-managing work teams: The mediating role of employee resistance. *Academy of Management Journal*, 44(3): 557-569.

[36] Kottke, J. L., & Sharafinski, C. E. 1988. Measuring perceived supervisory and organizational support. *Educational and Psychological Measurement*, 48(4): 1075-1079.

[37] Lawler, E. E. III 1973. *Motivation in work organizations*. Monterey, CA: Brooks/Cole.

[38] Lo, S., & Aryee, S. 2003. Psychological contract breach in a Chinese context: An integrative approach. *Journal of Management Studies*, 40(4): 1005-1020.

[39] Maguire, H. 2002. Psychological contract: Are they still relevant? *Career Development International*, 7(3): 167-180.

[40] Marsden, P. V., Kalleberg, A. L., & Cook, C. R. 1993. Gender differences in organizational commitment: Influences of work positions and family roles. *Work and Occupations*, 20(3): 368-390.

[41] Maslach, C., Schaufeli, W. B., & Leiter, M. P. 2001. Job burnout. *Annual Review of Psychology*, 52: 397-422.

[42] Mcfarlin, D. B., & Rice, R. W. 1992. The role of facet importance as a moderator in job satisfaction processes. *Journal of Organizational Behavior*, 13(1): 41-54.

[43] Mclean Parks, J., & Schmedemann, D. A. 1994. When promises become contracts: Implied contracts and handbook provisions on job security. *Human Resource Management*, 33(3): 402-423.

[44] Meyer, H. D. 2002. The new managerialism in education management: Corporatization or organizational learning? *Journal of Educational Administration*, 40(6): 534-551.

[45] Meyer, J. P., Allen, N. J., & Topolnytsky, L. 1998. Commitment in a changing work of work. *Canadian Psychology*, 39(1): 82-93.

[46] Mirvis, P. H. 1985. Negotiations after the scale: The roots and ramifications of conflict in an acquisition. *Journal of Occupational Behavior*, 6(1): 65-84.

[47] Morrison, E. W., & Robinson, S. L. 1997. When employees feel betrayed: A model of how psychological contract violation develops. *Academy of Management Review*, 22(1): 226-256.

[48] Mowday, R. T., Porter, L. W., & Steers, R. M. 1982. *Employee-organization linkages: The psychology of commitment, absenteeism and turnover*. New York: Academic Press.

[49] Muhammad, A. H., & Hamdy, H. I. 2005. Burnout, supervisory support, and work outcomes: A study from

an Arabic cultural perspective. *International Journal of Commerce and Management*, 15(3/4), 230-242.

[50] Oreg, S. 2003. Resistance to Change: Developing an individual differences measure. *Journal of Applied Psychology*, 88(4): 680-693.

[51] O'Reilly, C., & Chatman, J. 1986. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization of pro-social behavior. *Journal of Applied Psychology*, 71(5): 492-9.

[52] Patchen, M. 1965. *Some questionnaire measures of employee motivation and morale: A report on their reliability and validity*. Ann Arbor, MI: Institute for Social Research.

[53] Reilly, A. H., Brett, J. M., & Stroh, L. K. 1993. The impact of corporate turbulence on managers' attitudes. *Strategic Management Journal*, 14: 167-179.

[54] Probst, T. M. 2003. Exploring employee outcomes of organizational restructuring: A Solomon four-group study. *Group and Organization Management*, 28(3): 416-439.

[55] Rhoades, L., & Eisenberger, R. 2002. Perceived organizational support: A review of the literature. *Journal of Applied Psychology*, Vol. 87(4), 698-174.

[56] Rhoades, L., Eisenberger, R., & Armeli, S. 2001. Affective commitment to the organization: the contribution of perceived organizational support. *Journal of Applied Psychology*, 86(5): 825-836.

[57] Robinson, S. L. 1996. Trust and breach of the psychological contract. *Administrative Science Quarterly*, 41(4): 574-599.

[58] Robinson, S. L., & Rousseau, D. M. 1994. Violating the psychological contract: Not the exception but the norm. *Journal of Organizational Behavior*, 15(3): 245-259.

[59] Roskies, E., Louis-Guerin, C., & Fournier, C. 1993. Coping with job insecurity: How does personality make a difference? *Journal of Organizational Behavior*, 14(7): 617-630.

[60] Rousseau, D. M. 1989. Managing the change to an automated office: Lessons from five case studies. *Office: Technology and People*, 4(1): 31-52.

[61] Rousseau, D. M. 1995. *Psychological contract in organizations: Understanding written and unwritten agreements*. Thousand Oaks, CA: Sage.

[62] Shield, R., Thorpe, R., & Nelson, A. 2002. Hospital mergers and psychological contract. *Strategic Change*, 11(7): 357-367.

[63] Shore, L. M., & Barksdale, K. 1998. Examining degree of balance and level of obligation on the employment relationship: A social exchange approach. *Journal of Organizational behavior*, 19(7): 731-744.

[64] Shore, L. M., & Shore, T. H. 1995. Perceived organizational support and organizational justice. In R. Cropanzano & M. Kacmar (Eds) *Organizational politics, justice and support: Managing the social climate in the work place*: 149-164. Westport, CT: Quorum.

[65] Sparrow, P. R., & Cooper, C. L. 1998. New organizational forms: The strategic relevance of future psychological contract scenarios. *Canadian Journal of Administrative Sciences*, 15(4): 356-371.

[66] Stroh, L. K., Brett, J. M., & Reily, A. H. 1994. A decade of change: Managers' attachment to their organizations and their jobs. *Human Resource Management*, 33(4): 531-548.

- [67] Suliman, A., & Iles, P. 2000. Is continuance commitment beneficial to organization? Commitment-performance relationship: A new look. *Journal of Managerial Psychology*, 15(5/6): 407-426.
- [68] Tett, R. P., & Meyer, J. P. 1993. Job satisfaction, organizational commitment, turnover intention, turnover: Path analyses based on meta-analytic findings. *Personnel Psychology*, 46(2): 259-293.
- [69] Thomas, D. C., Au, K., & Ravlin, E. C. 2003. Cultural variation and the psychological contract. *Journal of Organizational Behavior*, 24(5): 451-471.
- [70] Thoresen, C. J., Bliese, P. D., Bradley, J. C., & Thoresen J. D. 2004. The big five personality traits and individual job performance growth trajectories in maintenance and transitional job stages. *Journal of Applied Psychology*, 89(5): 835-853.
- [71] Tuan, C., & Ng, L. F. Y. 1997. The changing investment environment and strategies in post-1997 Hong Kong: Responses to the transfer of sovereignty. *Journal of Applied Business Research*, 13(2): 23-36.
- [72] Turnley, W. H., & Feldman, D. C. 1998. Psychological contract violations during corporate restructuring. *Human Resources Management*, 37(1): 71-83.
- [73] Turnley, W. H., & Feldman, D. C. 2000. Re-examining the effects of psychological contract violations: Unmet expectations and job dissatisfaction as mediators. *Journal of Organizational Behavior*, 21(1): 25-41.
- [74] Wanberg, C. R., & Banas, J. T. 2000. Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85(1): 132-142.
- [75] Wanberg, C. R., Bunce, L. W., & Gavin, M. B. 1999. Perceived fairness of layoffs among individuals who have been laid off: A longitudinal study. *Personnel Psychology*, 52(1): 59-84.
- [76] Wanous, J. P. 1973. Effects of a realistic job preview on job acceptance, job attitudes, and job survival. *Journal of Applied Psychology*, 58(3): 327-332.
- [77] Wayne, S. J., Shore, L. M., & Liden, R. C. 1997. Perceived organizational support and leader-member exchange: A social exchange perspective *Academy of Management Journal*, Vol. 40(1), 82-111.
- [78] Wong, E. O. W. 2003. Leadership style for school-based management in Hong Kong. The *International Journal of Educational Management*, 17(6): 243-247.