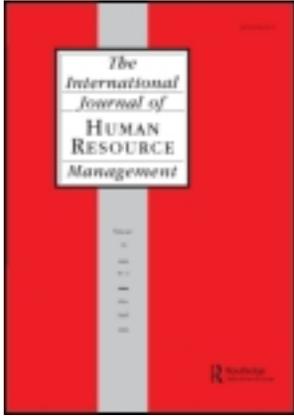


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## Human resource flexibility, organizational culture and firm performance: an investigation of multinational firms in Hong Kong

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This article explores the relationships between human resource (HR) flexibility, organizational culture, and organizational performance. Drawing on previous works, we develop a conceptual model that links the constructs together. It is hypothesized that the three sub-dimensions of HR flexibility (i.e. employee skill flexibility, employee behaviour flexibility, and HR practice flexibility) affect adaptability culture, which in turn impacts HR-related and market-related outcomes. The data were collected via a questionnaire survey of HR directors/managers in multinational corporations (MNCs) in Hong Kong. The results of structural equation modelling (SEM) reveal the positive effects of employee behaviour flexibility and HR practice flexibility on adaptability culture. Employee skill flexibility, however, exerts no such effect. Further, adaptability culture is found to affect both HR-related and market-related performance in a positive manner.

**Keywords:** adaptability culture; firm performance; Hong Kong; human resource flexibility; multinational corporations

### Introduction

The notion of flexibility has attracted a great deal of research attention in the past decade. Sanchez (1995) defines it as the ability of a firm to respond to various demands from its dynamic competitive environment. Viewed as a critical organizational capability, flexibility enables a firm to adapt to diverse and changing requirements from the external environment (Snow and Snell 1993; Wright and Boswell 2002) and to achieve and maintain competitive advantage and superior performance (Sanchez 1995; Hitt, Keats and DeMarie 1998).

Human resource (HR) flexibility is one of important aspects of organizational flexibility, and it is focused on adapting employee attributes (such as knowledge, skills and behaviours) to changing environmental conditions. Some recent works have explored its nature, components and potential contribution to firm performance (Wright and Snell 1998; Bhattacharya, Gibson and Doty 2005; Eldridge and Nisar 2006). For example, three distinct sub-dimensions of HR flexibility have been identified, namely, *employee skill flexibility*, *employee behaviour flexibility* and *HR practice flexibility* (Wright and Snell 1998). Empirically, a significant and positive relationship has been found between HR flexibility and financial performance (Bhattacharya et al. 2005).

In current literature, the relationship between HR flexibility and firm performance has been explained on the base of the resource-based view. According to this perspective, HR flexibility represents a valuable, firm-specific, and hard-to-imitate organizational capability. Hence, it can generate sustainable competitive advantage and enhance organizational effectiveness (Bhattacharya et al. 2005; Wright et al. 2001). It is worth noting that another source of

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competitive advantage for firms comes from organizational culture (Barney 1986). As pointed out by Jackson and Schuler (1995), organizational culture and HRM are not separable in an organization. The culture of an organization is in part shaped by its HRM system (Brockbank 1999; Lau and Ngo 2004). One may thus expect that the association between HR flexibility and organizational culture would subtly affect firm performance. However, to our best knowledge, no research has explored this issue.

The purpose of this study is to examine the relationships among HR flexibility, organizational culture, and firm performance. Based on previous works, we develop a conceptual model linking these constructs together. We expect the three sub-dimensions of HR flexibility (i.e. employee skill flexibility, employee behaviour flexibility, and HR practice flexibility) contribute to the development of adaptability culture. This type of organizational culture in turn leads to firm performance. Several hypotheses are formulated and tested with data collected from HR directors and managers working for multinational corporations (MNCs) in Hong Kong.

This study extends the current literature in three ways. First, while past research focused mainly on the influence of HR flexibility on financial performance (Bhattacharya et al. 2005), we consider both HR-related and market-related performance as outcome variables. In doing so, we provide a full picture of the various impacts of HR flexibility. Second, we explore the underlying mechanism that links HR flexibility with organizational performance. In particular, we suggest that adaptability culture serves as an intervening variable that explains how HR flexibility affects firm performance. Finally, our sample consists of MNCs operating in Hong Kong. Reputed for its *laissez-faire* economy, Hong Kong has been the most important city in the Asia Pacific region for MNC's strategy setting, market planning, and HRM activities (Enright, Scott and Chang 2005). The business environment in Hong Kong is characterized by a high degree of economic freedom and severe market competition. To remain competitive during the globalization era, MNCs in Hong Kong need to be highly adaptive to the rapidly changing business conditions. It is critical for them to attract and retain a high-quality and adaptive workforce (Chan and Lui 2004). Thus, maintaining a high level of flexibility in their HRM system becomes a salient issue for these firms. By studying how MNCs manage HR flexibility, the present study makes a unique contribution to the area of international HRM (Kahancova and van der Meer 2006).

### **Literature review**

Wright and Snell (1998, p. 761) defined flexibility in HRM as 'the extent to which the firm's human resources possess skills and behavioral repertoires that can give a firm options for pursuing strategic alternatives in the firm's competitive environment, as well as the extent to which the necessary HRM practices can be identified, developed, and implemented quickly to maximize the flexibility inherent in those human resources'. Viewed as an internal trait or characteristic of a firm, HR flexibility can be addressed through the following three conceptual components (Wright and Snell 1998):

1. *Employee skill flexibility* refers to the 'number of potential alternative uses to which employee skills can be applied' and 'how individuals with different skills can be redeployed quickly' (Wright and Snell 1998, pp. 764–765). In other words, if employees of a firm possess a broad variety of skills and they can perform different job duties upon request, the firm is said to have a high degree of employee skill flexibility. Adopting a resource-based view, Bhattacharya et al. (2005) contend that this type of flexibility could be a source of competitive advantage for firms, since these broad-based skills are valuable and difficult to imitate or replicate.

2. *Employee behaviour flexibility* refers to the extent to which employees possess a broad repertoire of behavioural scripts that can be adapted to situation-specific demands. If employees are able to apply these behavioural scripts appropriately under various conditions, rather than follow standard operating procedures, it helps the firm to adjust and respond to the changing situations and thereby increase its competitiveness (Wright and Snell 1998).
3. *Flexibility of HR practices* is defined by Bhattacharya et al. (2005, p. 624) as 'the extent to which the firm's HR practices can be adapted and applied across a variety of situations, or across various sites or units of the firm, and the speed with which these adaptation and application can be made'. Bhattacharya et al. (2005) further argued that firms that possess this type of flexibility not only create values such as achieving strategic consistency across different units and enhancing responsiveness to environmental changes, but also build a capability that is difficult to imitate and non-substitutable.

Barney (1991) suggested that a firm's resources or capabilities might generate sustainable competitive advantage if it possesses the following attributes: value; rarity; inimitability; and non-substitutability. HR flexibility has been considered as an organizational capability arising out of individual skills and behaviours and implemented through HR practices (Bhattacharya et al. 2005). It fulfils all the conditions set by Barney (1991), and thus, it could be a source of sustainable competitive advantage for firms. As such, HR flexibility should drive high firm performance. Bhattacharya et al. (2005) found that all the three sub-dimensions of HR flexibility were positively related to financial performance. Extending the above logic, HR flexibility should also contribute to other aspects of firm performance. To exert its effect on performance, HR flexibility needs to be supported by organizational design and culture.

Organizational culture refers to a complex set of values, beliefs, assumptions and symbols that defines the way in which a firm conducts its business (Schein 1985; Barney 1986). It is manifested in the behaviour of its members and how the firm interacts with its customers, suppliers and employees (Lepak, Takeuchi, Erhardt and Colakoglu 2006). Some scholars viewed organizational culture as control and exchange mechanisms in managing workforce (Jones 1983; Wilkins and Ouchi 1983). As a result, it can be used to guide employees toward desirable behaviours as well as to develop high performers (Sherwood 1988; O'Reilly 1989; Lau and Ngo 1996). Moreover, some researchers asserted that organizational culture can provide a source of sustained competitive advantage for firms, particularly when it is seen as a firm-level resource that is valuable, rare, and difficult to imitate (Barney 1986; Fiol 1991).

A considerable body of research has demonstrated the linkage between organizational culture and firm performance (Saffold 1988; Denison 1990; Cameron and Freeman 1991; Kotter and Heskett 1992; Wilderom, Glunk and Maslowski 2000). There are several explanations for it. First of all, it has been contended that organizational culture can enhance organizational performance by energizing and motivating employees, unifying people around shared goals, and shaping and guiding employee behaviours (Daft 2007). Second, according to the resource-based view, organizational culture is seen as a valuable, unique, and inimitable resource. It forms the basis for a firm's sustained competitive advantage and hence enhances performance (Barney 1986; Fiol 1991; Chan, Shaffer and Snape 2004). Last, organizational culture may help the organization adapt to the changing market conditions, particularly when its strategic focus is on the external environment instead of internal functioning. As such, the organization can respond promptly to customer needs and the moves of its competitors, and this improves organizational effectiveness (Daft 2007).

Based on the competing values framework, Quinn and his associates (Quinn 1988; Quinn and Spreitzer 1991) developed a typology of organizational culture. Four distinct types of

culture (i.e. group, developmental, hierarchical and rational) have been identified, each with different strategic emphases (Quinn and Spreitzer 1991). For example, developmental culture emphasizes flexibility and change as well as concerns growth, creativity and external adaptation (Quinn 1988; Lau and Ngo 1996). This type of organizational culture has been found to be positively related to firm's innovation performance (Lau and Ngo 2004). A similar typology of organizational culture was proposed by Denison and Mishra (1995), who classified organizational culture into four categories based on two dimensions: 1) the extent to which the competitive environment requires flexibility or stability; and 2) the extent to which the strategic focus and strength is internal or external. The four categories include adaptability/entrepreneurial, mission, clan, and bureaucratic culture. Among them, adaptability culture is similar to developmental culture discussed above. As described by Daft (2007, p. 368), this type of culture is 'characterized by strategic focus on the external environment through flexibility and change to meet customer needs. The culture encourages entrepreneurial values, norms, and beliefs that support the capacity of the organization to detect, interpret, and translate signals from the environment into new behaviour responses. This type of company, however, doesn't just react quickly to environmental changes – it actively creates changes'. Adaptability culture fits best if the external environment requires flexibility and responsiveness. With this type of culture, organizations are able to respond to the needs of the stakeholders (Daft 2007).

### **Hypotheses development**

Organizational culture reflects the vision of a firm. It often begins with a founder or a leader who articulates particular ideas and values as a vision, philosophy, or business strategy. When these ideas and values bring about success, they become institutionalized through the implementation of management practices (Daft 2007). In particular, HR policy and practices are often designed in such a way to elicit employees' behaviours that comply with the strategic direction and corporate values of the firm. In current literature, a close relationship has been noted between HRM system and organizational culture (Brockbank 1999; Ogbonna and Whipp 1999; Chan et al. 2004). For example, Lau and Ngo (2004) found that HR practices that emphasize extensive training, performance-based reward, and team development help to create an organizational culture that promotes innovation.

We argue that, among the various types of organizational culture, adaptability culture is most relevant to HR flexibility. This is because they share similar underlying ideas and strategic focus (i.e. responsiveness and adaptation to external environment). An internal fit can be achieved by promoting both HR flexibility and adaptability culture at the same time. Moreover, an organization may endorse some corporate values as well as implement new HR practices in order to develop a wide range of employee skills and behavioural repertoires (Wright and Snell 1998). These values and HR practices are likely to be congruent with adaptability culture and even strengthen it. It is thus hypothesized that:

*Hypothesis 1:* HR flexibility is positively related to adaptability culture.

As discussed above, HR flexibility has different sub-dimensions with different foci (i.e. individual skills, individual behaviours, and implementation of HR practices). The role played by these sub-dimensions in promoting adaptability culture, however, may not be the same. Since organizational culture is manifested in the behaviours of its members, we expect that adaptability culture should be more influenced by employee behaviour flexibility than employee skill flexibility. Employees' skills seem to have little connection with the core elements of organizational culture (i.e. shared values, beliefs, and patterns of behaviours among members of an organization). Thus, the effect of employee skill flexibility on adaptability

culture should be minimal. Besides, it has been noted that organizational culture is influenced by HR practices (Brockbank 1999; Lau and Ngo 2004). As argued by Bhattacharya et al. (2005), flexibility of HR practices can induce flexible employee behaviours. Similar to the effect of employee behaviour flexibility, flexibility of HR practices is expected to be positively linked to adaptability culture. Following the above arguments, we hypothesize that:

*Hypothesis 2:* Among the three sub-dimensions of HR flexibility, employee behaviour flexibility and HR practice flexibility have stronger relationships with adaptability culture as compared with employee skill flexibility.

A positive relationship has been consistently found between organizational culture and firm performance. Daft (2007) argued that if the external environment requires flexibility and responsiveness, a culture that encourages adaptability is able to meet the stakeholders' needs, and thus enhances organizational performance. Kotter and Heskett (1992) suggested that organizational culture that emphasizes adaptation to dynamic environmental forces is more likely to be high performing. Additionally, Lau and Ngo (2004) found that organizational culture with a development and innovation orientation had a direct effect on a firm's innovation performance. In view of the above, it is plausible that adaptability culture would contribute to firm performance.

Another possible reason why adaptability culture leads to high performance is provided by Lau and Ngo (1996). In a study of the relationships between different types of organizational culture and employee attitudes in Hong Kong, they found that developmental culture (which is similar to adaptability culture in the present study) had a positive effect on organizational commitment. They further suggested that 'a culture that emphasizes flexibility and external adaptation matches the core values of Hong Kong Chinese who have a future and growth orientation' (Lau and Ngo 1996, p. 481). Adaptability culture seems to provide Hong Kong employees with a clear direction and high morale at work. Arguably, such alignment of organizational values with cultural values is conducive to organizational performance (Ngo, Turban, Lau and Lui 1998). We thus put forward the following hypothesis:

*Hypothesis 3:* Adaptability culture is positively related to both HR-related and market-related performance.

## Methodology

### *Sample and procedures*

The data for this study were collected from a survey administered to HR directors/managers of MNCs operating in Hong Kong in early 2006. The names and addresses of the target respondents were provided by Dun and Bradstreet. A self-administered questionnaire in English was mailed to 1,400 potential respondents, together with a cover letter that explained the purpose of the survey and assured the anonymity and confidentiality of their responses. Respondents were asked to return the completed questionnaire to the researchers in a postage-paid return envelope. Two weeks after the initial mail, a follow-up mail was sent out in which respondents received another copy of the questionnaire. A total of 181 completed questionnaires were finally returned, representing a response rate of 12.9%.

One of the major issues of mail survey is the possible non-response bias that may affect the generalizability of the findings to the whole population (Fowler 1993). To deal with this issue, we employed two procedures. First, we compared our sample to the population on some characteristics known *a priori*, based on the information available in Dun and Bradstreet's directory of foreign firms in Hong Kong (2005/06). No significant differences were found

between the sample and the population with respect to the distribution of industry and country of origin. Second, we also compared early and late respondents on some organizational variables, since later respondents are supposed to be similar to non-respondents (Armstrong and Overton 1977). Early respondents are those who returned the questionnaire to us within two weeks and they comprised 56.4% of our sample. Using chi-square tests and t-tests, we found no significant difference between the two groups with respect to employee size, industry, location of headquarters, and organizational age. In view of the above, non-response bias should not pose a serious threat in our study.

Of the sample firms, 58 (32.0%) are MNCs from the United States. 53 firms (29.3%) have their headquarters in European Union, including countries such as Great Britain, France, Germany, Netherlands and Switzerland. A further 49 firms (27.1%) are from Asian countries such as Japan, Taiwan, Singapore and South Korea. The remaining are from the rest of the world such as Australia and South Africa. By industry, these firms split into 16.0% in manufacturing, 11.0% in transportation and logistics, 21.0% in trading, 16.6% in marketing and sales, 12.7% in financial services, and 13.3% in professional services. Their average employee size is 316.9 and their average organizational age is 24.8.

### *Measurement of variables*

Respondents used a six-point Likert-type scale (1 = 'strongly disagree'; 6 = 'strongly agree') to respond to the items in the following measures, except for organizational performance.

#### *Employee skill flexibility*

We used a shortened version of the scale developed by Bhattacharya et al. (2005) to measure this variable. It has the following three items: 'Our firm can shift employees to different jobs when needed', 'Our employees can put new skills to use within a short time', and 'We employ people with a broad variety of skills'. In this study, the alpha coefficient for this scale was 0.752.

#### *Employee behaviour flexibility*

This variable was measured by a three-item scale. The items were selected from the original scale of Bhattacharya et al. (2005), based on their high factor loadings. The items include: 'The flexibility of our employees' work habits helps us to change according to market demands', 'Our employees respond to changing situations within a short time', and 'Most of our employees are flexible enough to adjust to dynamic work requirements'. This scale had an alpha coefficient of 0.853.

#### *HR practice flexibility*

A three-item scale was used to measure HR practice flexibility. We selected the three items with the highest factor loadings in the original scale developed by Bhattacharya et al. (2005). The items are: 'Flexibility of our HR practices helps us to adjust to the changing demands of the environment', 'Our firm modifies its HR system to keep pace with the changing competitive environment', and 'Our HR practices are designed in such a way that they can adjust quickly to changes in business conditions'. The alpha coefficient for this abbreviated scale was recorded at 0.876.

#### *Adaptability culture*

We developed a three-item scale to measure adaptability culture based on previous studies (e.g. Quinn and Spreitzer 1991; Denison and Mishra 1995; Lau and Ngo 2004). The scale

captures the basic characteristics of this type of organizational culture, and includes the following items: 'The culture of this firm could be characterized as flexible', 'Our firm values adaptability and responsiveness to change', and 'Our firm emphasizes creativity and innovation'. The alpha coefficient of this new scale was 0.871 with sufficient reliability.

#### *Human resource-related performance*

Respondents were asked to evaluate the performance of their organization over the last two years as compared to industry's average in the areas of: 1) morale of employees; 2) retention of employees; 3) employment relations; and 4) employee grievances. Responses were scored on a 5-point Likert-type scale with anchors ranging from 1 (very poor) to 5 (very good). An index was then calculated by averaging the four items, which had an alpha coefficient of 0.817.

#### *Market-related performance*

Similar to the measure of HR-related performance, respondents were asked to assess their firm's organizational performance over the last two years as compared to industry's average in the areas of: 1) sales/turnover; 2) net profit; and (3) new product development. The items were measured on a 5-point Likert-type scale, ranging from 1 (very poor) to 5 (very good). The alpha reliability for this index was 0.724 in the present study.

#### *Analytical strategy*

We employed structural equation modelling (SEM) to analyse the data. The fit of the measurement and structural models<sup>1</sup> were assessed using LISREL 8.54. Apart from the model's chi-square ( $\chi^2$ ) value, we calculated the incremental fit index (IFI) (Bollen 1989), the comparative fit index (CFI) (Bentler 1990), the Tucker-Lewis index (TLI) (Tucker and Lewis 1973), and the root mean square error of approximation (RMSEA) (Steiger 1990). Following the common practice, a model is said to be acceptable if the IFI, CFI, and TLI exceed 0.90, and the RMSEA value is below 0.08. The parameter estimates in the structural model were used to test the hypotheses.

### **Results**

Before testing the hypotheses, confirmatory factor analysis was performed to evaluate whether the respondents could distinguish the variables under study. We first assessed the model fit of a six-factor measurement model that includes the three sub-dimensions of HR flexibility, adaptability culture, and the two measures of firm performance. The chi-square value for this model was 301.56 with 137 *d.f.* ( $p < 0.01$ ). The IFI, CFI, TLI, and RMSEA were 0.96, 0.96, 0.95, and 0.077, respectively. These statistics were within the recommended range. We also pooled all items of the six variables to one single factor and performed the Harman's one-factor test. The results of this model were as follows:  $\chi^2 = 901.50$  with 152 *d.f.*, ( $p < 0.01$ ), IFI = 0.82, CFI = 0.82, TLI = 0.80, and RMSEA = 0.18, which displayed a poor model fit. Taking these results together, it can be concluded that all the study variables were found to be distinct with sufficient discriminant validity.

Table 1 presents the means, standard deviations, and correlations among study variables. Among the three sub-dimensions of HR flexibility, employee skill flexibility had the highest mean value ( $\bar{x} = 4.31$ ). The mean value of adaptability culture was also relatively high ( $\bar{x} = 4.48$ ), implying that this type of culture is popular among MNCs in Hong Kong. Besides, our sample firms reported a slightly higher market-related performance ( $\bar{x} = 3.49$ ) than

Table 1. Means, standard deviations, and correlations among study variables.

Variables	$\bar{x}$	s.d.	1	2	3	4	5
1. Employee skill flexibility	4.31	0.76					
2. Employee behaviour flexibility	4.14	0.84	0.53				
3. HR practice flexibility	4.20	0.84	0.42	0.56			
4. Adaptability culture	4.48	0.89	0.37	0.65	0.57		
5. HR-related performance	3.36	0.57	0.33	0.37	0.31	0.38	
6. Market-related performance	3.49	0.65	0.26	0.36	0.25	0.29	0.55

Notes: All correlations are significant at 0.01 level; N ranges from 174 to 181.

HR-related performance ( $\bar{x} = 3.36$ ). All of the three sub-dimensions of HR flexibility were positively correlated with adaptability culture (ranging from  $r = 0.37$  to  $0.65$ ), as well as with the two measures of organizational performance (ranging from  $r = 0.25$  to  $0.37$ ). As expected, adaptability culture had a positive correlation with both HR-related performance ( $r = 0.38$ ) and market-related performance ( $r = 0.29$ ). The two measures of performance were also highly correlated with each other ( $r = 0.55$ ). In brief, the correlation analysis provided initial support to our hypotheses.

With an acceptable confirmatory factor analysis, we proceeded to test our hypotheses by estimating the full model. The results, as depicted in Figure 1, revealed only a marginal fit between our conceptual model and the data ( $\chi^2 = 356.52$  with 144 *d.f.* ( $p < 0.01$ ), IFI = 0.95, CFI = 0.95, TLI = 0.94, and RMSEA = 0.085) since the RMSEA is above the acceptable level of 0.08. The modification index of SEM<sup>2</sup> suggested adding a path from HR-related performance to market-related performance in that model to improve the overall model fit. We did so and found all the fit statistics fell within the acceptable range in the modified model ( $\chi^2 = 317.02$  with 143 *d.f.* ( $p < 0.01$ ), IFI = 0.96, CFI = 0.96, TLI = 0.95, and RMSEA = 0.079). Figure 2 displays the results for the new model. As this modified model fits the data better than the original one, we tested the hypotheses based on its parameter estimates.

Hypothesis 1 states that HR flexibility is positively related to adaptability culture. As showed in Figure 2, the coefficients for employee behaviour flexibility ( $\gamma = 0.67$ ,  $p < 0.001$ ) and HR practice flexibility ( $\gamma = 0.40$ ,  $p < 0.001$ ) were significant in the expected direction. However,

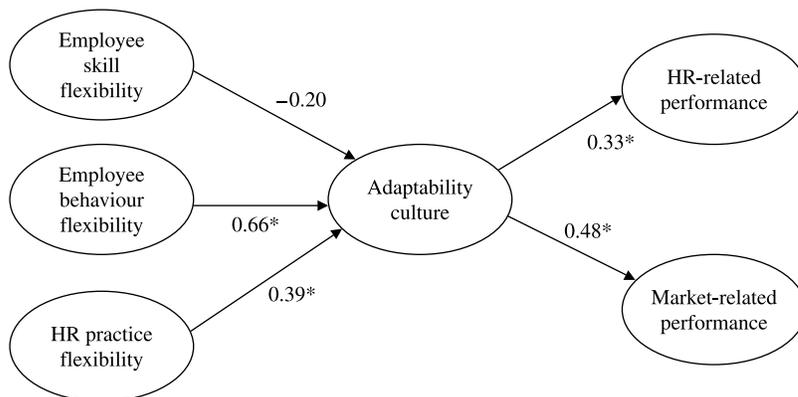


Figure 1. Results of original conceptual model. Notes: Standardized path coefficients are reported; \*  $p < 0.001$ .

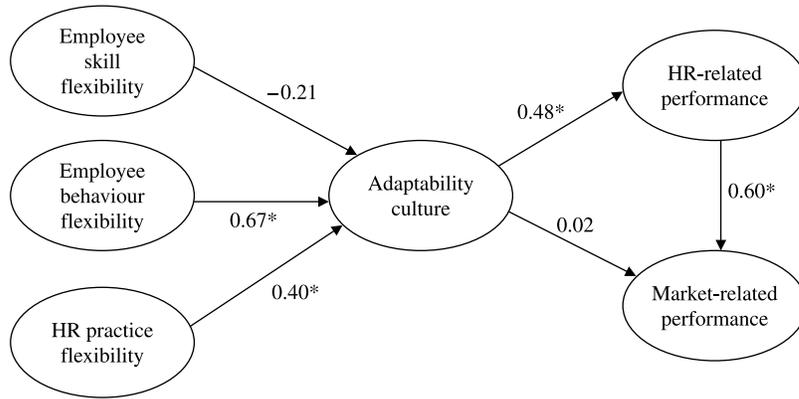


Figure 2. Results of modified model.

Notes: Standardized path coefficients are reported; \*  $p < 0.001$ .

the coefficient for employee skill flexibility was not ( $\gamma = -0.21$ , n.s.). In other words, hypothesis 1 was partially supported, as not all of the three sub-dimensions of HR flexibility affected adaptability culture in the same way. Since we also hypothesized that the effects of employee behaviour flexibility and HR practice flexibility are stronger than that of employee skill flexibility, the above findings provided support for hypothesis 2.

Turning to the outcomes of adaptability culture, we found that this type of culture had a positive effect on HR-related performance ( $\beta = 0.48$ ,  $p < 0.001$ ). Interestingly, its effect on market-related performance appears to be an indirect one. As revealed in Figure 1, the coefficient of adaptability culture on market-related performance was positive and significant ( $\beta = 0.48$ ,  $p < 0.001$ ). However, in Figure 2, when a path has been added from HR-related performance to market-related performance, the original coefficient became insignificant ( $\beta = 0.02$ , n.s.). It is also worthy to note that HR-related performance had a strong positive effect on market-related performance ( $\beta = 0.60$ ,  $p < 0.001$ ) in that model. This suggests that HR-related performance mediates the relationship between adaptability culture and market-related performance. Taking the above findings together, hypothesis 3 was supported.

## Discussion

In this study, we investigated the relationships among HR flexibility, organizational culture, and firm performance using a data set collected from MNCs in Hong Kong. We expected that HR flexibility would foster the development of adaptability culture, a type of organizational culture that emphasizes responsiveness and flexibility. In turn, adaptability culture would lead to high HR-related and market-related performance. The empirical results largely supported our hypotheses. We found that employee behaviour flexibility and HR practice flexibility, but not employee skill flexibility, had positive effects on adaptability culture. Organizational culture appears to be more related to employees' behaviours and HR practices than to employees' skills. Additionally, we also found that adaptability culture had a direct impact on HR-related performance and an indirect impact on market-related performance as mediated by HR-related performance. We believe that HR-related performance (e.g. employees' morale and staff retention) is a proximate outcome of HRM and organizational culture. This aspect of firm performance subsequently affects performance in other aspects such as sales, profitability and new product development. In fact, this argument is consistent with the findings of some recent HRM-firm performance studies (Way and Johnson 2005; Katou and Budhwar 2006). Although we did not find a significant impact of

employee skill flexibility on adaptability culture, this sub-dimension of HR flexibility may have a direct effect on firm performance, and not through adaptability culture. As pointed out by Eldridge and Nisar (2006), employee skills are critical in flexible work organizations, particularly when workers with multiple skills can be redeployed quickly within the firm.

### ***Theoretical and practical implications***

There is a growing body of literature examining the linkage between HR flexibility and performance (e.g. Bhattacharya et al. 2005; Wright and Snell 1998). The present study makes an additional contribution to this stream of research. We answer the call for research to explore the underlying mechanisms between HRM and organizational performance (Wood 1999; Wright and Gardner 2003). Our findings highlighted the vital role of adaptability culture in mediating the relationship between HR flexibility and firm performance. As suggested by some researchers, the congruence between HRM system and organizational culture has important implications for firm performance (Khatri and Budhwar 2002; Chan et al. 2004; Lau and Ngo 2004). In our study, we emphasized that HR flexibility and adaptability culture share the same underlying ideas and strategic focus. More importantly, the former appears to reinforce the latter, which then contributes to firm performance.

Furthermore, by focusing on MNCs, the present study enhances our knowledge about how these firms manage HRM and organizational culture in a global competitive environment (Edwards and Ferner 2005). Practically speaking, to achieve better performance, a MNC needs to foster an organizational culture that emphasizes flexibility and adaptability. As indicated by our findings, a key to the creation of such a kind of culture is to permit a high level of flexibility in employees' behaviours and HR practices. Managers should also pay attention to the congruence of HR practices and organizational culture so that they can exert a joint positive effect on firm performance.

### ***Limitations and future research***

Several methodological limitations of our study need to be noted. First of all, our research design was cross-sectional in nature, which makes causality difficult to determine. Although we argue that HR flexibility fosters adaptability culture, it is also likely that adaptability culture may also affect employees' behaviours and the adoption of flexible HR practices in a firm. Second, since our perceptual data were collected from single informants, common method bias could be an issue. We attempted to deal with this issue by conducting confirmatory factor analysis and showing the distinctiveness of the constructs. Third, the response rate of this study (12.9%) was relatively low, though comparable to other local HRM studies (Ngo et al. 1998; Chan et al. 2004; Lui, Lau and Ngo 2004). However, as discussed in the method section, non-response bias does not seem to be a serious problem in the present study. Finally, since our data were collected from MNCs in Hong Kong, the generalizability of our findings is restricted. Nevertheless, being an international city with a global outlook, Hong Kong provides an ideal research site to conduct this kind of study.

With regard to future research directions, it is desirable to conduct longitudinal studies with multiple informants that can tackle the issues of causality and common method bias. Some of the key constructs (e.g. adaptability culture) need to be refined and objective measures of firm performance (e.g. employee turnover rate and return on investment) should be incorporated in future work. The present study should also be replicated in different settings (e.g. organizations, industries and countries) to test for the generalizability of its findings. In addition, the linkage between strategic HRM and HR flexibility deserves further exploration, particularly using some new theories like the systematic agreement theory (Way and Johnson 2005). The theory holds

that the alignment of organizational design, strategies, practices and culture are critical to create competitive advantage and to enhance organizational effectiveness (Semler 1997). It follows that, to have significant impact on performance, HR flexibility needs to be aligned with certain organizational characteristics. Furthermore, Wright and Snell (1998) pointed out that some HR practices including innovative selection system, training and development programmes (e.g. job rotation), and job design (e.g. cross-functional teams and project-based work arrangements) may enhance HR flexibility through the development of a wide range of employee skills and behavioural repertoires. More empirical research should be conducted to examine the effects of these programmes and practices on HR flexibility. Last but not least, in this study we considered adaptability culture as an intervening variable between HR flexibility and firm performance. There may be some other firm-level factors that act as mediators and/ or moderators in the relationship. To provide a full picture, it is important to identify these factors and to evaluate their impacts in future research.

### Conclusions

HR flexibility is a new construct that has attracted increasing research attention in recent years. Its emphasis is on adapting employee attributes such as knowledge, skills, and behaviours to changing environmental conditions. Based on resource-based view, HR flexibility is expected to enhance firm performance. In the study, we developed a conceptual model that links HR flexibility to organizational performance via adaptability culture. Some interesting findings have been obtained which supported our hypotheses. We hope that the study spurs additional research that advances our understanding of the set of issues and relationships surrounding HRM, organizational culture, and firm performance in the context of MNCs.

### Notes

1. The measurement model shows the links between the latent variables (i.e. the three sub-dimensions of HR flexibility, adaptability culture and two performance indices) and their measurement items, while the structural model depicts the links among the latent variables under study. The acceptability of the model can be evaluated on the basis of the various fit indices as stipulated in the text. In conducting the confirmatory factor analysis, we ran the measurement model only. In testing the hypotheses, we ran a full model which comprises of both the measurement model and the structural model.
2. In structural equation modelling, if an initial model does not fit the data well, the model can be modified and tested again using the same data. Modification index shows the degree of improvement of the model fit when one parameter of the model is freely estimated instead of fixed. It helps to detect the misfitting parameters in the original hypothesized model (Joreskog 1993; Byrne 1998). In Figure 2 (i.e. modified model), we allowed the path from HR-related performance to market-related performance to be freely estimated. Compared with the original model in Figure 1, the RMSEA value of the new model reduced and fell within the acceptable level. In addition, the chi-square difference test ( $\Delta \chi^2(1) = 39.5$ ,  $p < 0.001$ ) also evidenced that the new model fits the data better than the original one.

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