

- 一、2013年12月第13卷第4期人力資源管理學報中，第一篇論文「領導效能研究的回顧與展望：1985-2012」(第1-39頁)。
 1. 該論文所得到的主要研究發現(Research Findings)為何?(5分)
 2. 該論文探討到哪些具有華人本土特色的領導理論?(5分)
- 二、2014年3月第14卷第1期人力資源管理學報中，第二篇論文「主管支持如何造就滿意員工？不確定管理理論的觀點」(第23-52頁)。
 1. 該研究結果顯示「程序公平」(Procedural Justice)的中介效果(Mediating Effect)為何?(5分)
 2. 同時，「情緒不確定性」(Emotional Uncertainty)之調節效果(Moderating Effect)為何?(5分)
- 三、在"Human Resource Management"期刊 Vol.53, No.1, pp.131-155 的論文，題目為"Meeting the Challenges of Effective International HRM: Analysis of the Antecedents of Global Mindset"。
 1. 請以中文敘述該論文摘要(Abstract)之主要意思。(5分)
 2. 該研究如何處理共同方法偏誤(Common Method Variance)之問題?(5分)
- 四、假設企業策略(Corporate Strategy)是採取 Michael Porter 三個一般策略中的"Low Cost Leadership"，請問該企業應具備有哪些基本的「組織特性」？而人資部門應採取哪些對應的"Human Resource Strategies"？並分別簡要說明其理由。(5分)
- 五、衡量組織整體績效的「平衡計分卡」(BSC)與衡量人力資源管理績效的「人力資源計分卡」(HR Scorecard)其構面及指標內涵有何差異？請分別說明之。(5分)
- 六、常見的非典型雇用(Atypical Employment)有哪些種類？並分別簡要說明之。(5分)
- 七、請說明國際人力資源管理(IHRM)中，
 1. Inpatriate 之意義為何?(2分)
 2. Expatriate Adjustment U-type Curve 的意涵為何?(3分)

- 一、請舉實例說明「企業倫理」對企業與社會的影響(例如: 近兩年在台灣發生的食安事件)。(10分)
- 二、請閱讀這篇期刊論文“Achieving Organizational Effectiveness through Human Capital Acquisition Practices -- The Moderating Effects of Environment Turbulence and Knowledge Sharing Climate”, pp.1-25. (2013年第13卷、第3期(9月)人力資源管理學報)

以中文或英文回答下列問題：

1. 請敘述這篇論文的研究動機。(6分)
2. 請繪製研究架構圖。(4分)
3. 哪些為 independent variables? (1分) 由誰填寫問卷題項? (1分)
4. 哪些為 moderating variables? (2分) 由誰填寫問卷題項? (1分)
5. 哪些為 dependent variables? (2分) 由誰填寫問卷題項? (1分)
作者以哪些指標獲取資料? (2分)
計算方式為何? (4分)
6. 哪些為 control variables? (5分)
7. 作者為何設計兩份不同的問卷? (3分)
8. 作者採用何種統計方法驗證研究假設? (2分)
9. 請敘述研究結果。(6分)

Achieving Organizational Effectiveness through Human Capital Acquisition Practices – The Moderating Effects of Environment Turbulence and Knowledge Sharing Climate

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ABSTRACT

To acquire talents from outside to enhance competitive advantage has become a leading issue in modern business organizations. When firms face constantly changing environments, build talents purely from inside may be inefficiency. However, new talents recruited from outside can only deliver their well-prepared know-how smoothly in knowledge-sharing climate. This study then aimed to explore the impacts of a group of external human capital acquisition (EHCA) practices on organizational performance and to examine the moderating effects of two contingencies, environmental turbulence and the knowledge-sharing climate, on the effectiveness of these EHCA practices. Our findings imply that organizational abilities to attract and acquire human capital become a key competence for high performance companies. After successfully selecting and retaining external intelligence from outside, a firm can expect to accumulate, diversify, and then utilize its knowledge stores to promote operational efficiency and earn a positive expectation from the stock market. While typical strategic HRM models encourage building an internal labor market to gain an un-imitated advantage, paying skilled employees to reap profit promptly is still essential. However, talented employees from outside who join an organization must learn

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the shared language, fit in the social context, and embed themselves in the network composed by the original members before they can contribute to the firm's performance.

Keywords: human capital acquisition, human resource management practices, knowledge-based view, knowledge-sharing climate, organizational performance

向外求才人資活動對組織績效的影響—— 環境變遷程度及知識分享氣候之干擾效果

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摘要

除了由內部自行培育人才外，向外求取人才以強化競爭優勢，已成為現代企業重要的管理課題。隨著企業面對的外部環境變動愈形劇烈，這樣向外求才的必要性也愈加重要。同時當外來人才進入企業，組織也應具備宜於知識分享的氣候，如此方能順暢地傳遞知識並提升組織績效。因此，本研究將探討向外求才之人力資源管理活動對組織績效的影響，並檢驗環境變遷程度、知識分享氣候，此二個變項之干擾效果。本研究結果顯示，能審慎甄選並留任外在人才的組織，不但組織績效較好、資本市場的價值也較高；而且當環境變遷愈劇烈、組織知識分享氣候愈強時，上述效果愈強。因此組織應該強化向外求才之人力資源活動，並提升知識分享氣候，使外來人才之知識得以為組織所用，尤以處於環境變遷程度較高的企業為然。

關鍵詞：人力資源管理活動、知識基礎觀點、知識分享氣候、組織績效、人力資本

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INTRODUCTION

Human capital has long been recognized as one of the imperative resources that can create competitive advantages for firms (Barney, 1991; Wright, Dunford, & Snell, 2001). Human capital can enhance firms' capabilities of discovering and exploiting business opportunities and then can help them attain innovation, speed, flexibility, and adaptability. Even more importantly, when firms face turbulent and dynamic markets, human capital plays a more crucial role in achieving success (Datta, Guthrie, & Wright, 2005; Unger, Rauch, Frese, & Rosenbusch, 2006).

Expanded from the resource-based view (RBV) arguments, a knowledge-based view (KBV) of a firm considers knowledge as the most important resource to help a firm gain sustained competitive advantages (Eisenhardt, & Santos, 2002; Grant, 1996). Acquiring talent from outside increases the heterogeneity of the knowledge of a firm. This is particularly important for sustainable differentiation. Prior studies suggest that acquiring talent from outside can lead to looked-for human capital, develop product innovation (Oliver, 1997), reach new information (Rule & Irwin, 1988), and absorb managerial skills (Penrose, 1980). Acquiring valuable human capital externally is even more essential when desired human capital may not be sufficiently developed from within. Thus, although most of the strategic human resource management (SHRM) literature still strongly advocates the argument of internalization of human capital development, acquiring talent externally is becoming a leading issue in human resource (HR) management, which no firm can ignore (Lepak & Snell, 1999).

To acquire talent externally, firms need to design and deploy specific human resource management (HRM) practices, referred as external human capital acquisition (EHCA) practices in this study. Drawing from the KBV, EHCA practices as a mechanism to capture outside sources of knowledge. EHCA practices generally include a combination of practices that focus on attracting appropriate candidates, choosing the selection mechanisms, and selecting suitable employees (Becker, 1964; Dakhli & de Clercq, 2004; Delaney & Huselid, 1996; Guthrie & Olian, 1991). Among them, strategic staffing practices and competitive compensation schemes are regarded as a typical set of EHCA practices used to assist firms in attracting and selecting talent (Snell & Dean, 1992; Youndt & Snell, 2004).

The idea that elite-focused HR practices should be addressed may be true; however, limited empirical efforts have been spent on understanding the degree to which external human capital acquisition practices can affect organizational performance (Ployhart, Weekly, & Baughman, 2006). Despite the paucity of these empirical studies, studies have reported inconsistent results. For example, Youndt and Snell (2004) found the positive effects of acquisition HR practices on organizational profitability while Cappelli and Wilk (1997) found that emphasizing selection practices were negatively associated with organizational productivity. Scholars have found the largest differences between academic findings and the beliefs of managers in the

staffing domain (Rynes, Brown, & Colbert, 2002); although there is still a lack of sufficient evidence to convince managers that human capital acquisition practices can influence organizational effectiveness (Ployhart et al., 2006). Therefore, we sought to fill this research gap by examining empirically the effects of EHCA on two different aspects of organizational performance, organizational productivity and market performance, and by discussing the implications of these practices on both types of performance.

Furthermore, the effectiveness of these practices seems to vary across contingencies. This study empirically examines two contingencies. The first contingency is environmental turbulence because the ability to exploit external knowledge is more critical when a firm tries to engender its competence to address environmental rapid change (Cohen & Levinthal, 1990). The second contingency is the knowledge-sharing climate within a firm, which may influence the extent with which the knowledge held by individuals can be passed to others for its value to be appropriated and leveraged (Cabrera & Cabrera, 2005). This study also emphasizes the contingency notion of external human capital acquisition practices and seeks to draw more theoretical and practical implications.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

External Human Capital as a Knowledge Source

Human capital is derived from the fundamental assumption that humans possess knowledge, skills, and abilities that can be improved upon and that the economic value people have gained has increased (Becker, 1964). According to KBV, human capital is central to creating knowledge, which is the most strategically significant resource of the firm, whereas human capital is assumed to be able to reserve, assimilate, aggregate, and transform knowledge to create organizational outcomes (Esenhardt & Santos, 2002; Grant, 1996). More specifically, tacit knowledge is usually embedded in the skills and knowledge held by individuals and in the social relationships of individuals (Hitt, Bierman, Shimizu, & Kochhar, 2001).

Human capital develops when a firm makes a deliberate investment, either through hiring trained individuals or training them in-house (Snell & Dean, 1992). Recruiting talent from outside with "ready-made" knowledge becomes a preferred way to enhance the stock of human capital (Parnes, 1984), particularly when firms face the transformation of business environments and growing gaps between the skilled labor supply and demand (Beechler & Woodward, 2009).

Firms that acquire human capital externally usually believe that outsiders might enable and accelerate their subsequent creation of new knowledge for product innovations (Zajac & Kraatz, 1993), build extrinsic social networks (Baty, Evans, & Rothermel, 1971), develop innovative process (Rao, & Drazin, 2002), and then increase organizational performance (Maliranta, Mohnen, & Rouvinen, 2009; Power, & Lundmark, 2004), especially because knowledge-based value creations are increasingly rooted in experts, superstars,

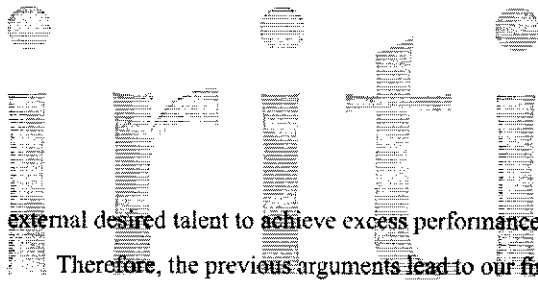
and other highly productive individuals (Teece, 2003). The input of vital and diverse experiences owned by these external talents can then significantly contribute to the firm's strategy and goals (Huber, 1991; Song, Almeida, & Wu, 2003; Youndt, Snell, Dean, & Lepak, 1996).

The perspective of KBV does not only recognize external human capital as a critical resource of firms' competitive advantage, but also emphasizes the significant contribution of bridging and acquiring external knowledge sources to realize the full potential of competitive advantages (Eisenhardt & Santos, 2002). The RBV of the firm, in which KBV is rooted, argues that firms should apply a superior capability to choose resources from the resource markets (Barney, 1986). The fact that firms need to utilize their superior capabilities to choose resources may affect their economic performance, even when the firms have not actually acquired the resources (Makadok, 2001). Therefore, how effectively a firm can identify and acquire external human capital also determines the success of a firm.

According to Youndt and Snell (2004), extensive recruiting and selection practices are usually "champions" in human capital acquiring, and the fact that firms are paying higher compensations than their competitors in the market can also lead to their attracting and retaining talent. The authors define these practices as an "acquisition HR configuration" to obtain external human capital. In addition, Snell and Dean (1992) argued that selective staffing and externally equitable reward did strengthen the integrated manufacturing systems such as advanced manufacturing technology (AMT) and total quality management (TQ). They mentioned that staffing practices in manufacturing firms traditionally could only hire unskilled or semiskilled employees, but 'increase selectivity imply that payoff from hiring qualified applicants offsets the additional expense.' On the other hand, Snell and Dean (1992) also illustrated that firms not actually owned their human capital, therefore they had to enforce the reward systems to retain experienced employees.

In this study, we label practices that are used to obtain the necessary talents outside the organization effectively as EHCA practices.

Sophisticated EHCA practices have been proven to improve a firm's performance because through extensive recruiting and formal selection, they can identify whether external candidates' competences are appropriate in the firm's idiosyncratic environment and whether they bring new knowledge or certain expertise (Hatch & Dyer, 2004; Tsui, Pearce, Porter, & Tripoli, 1997). Collins and Han (2004) also demonstrated that well-established recruitment strategies could highlight a firm's social reputation and attract more talent while recruiting. Firms can also provide competitive compensation to attract and retain critical talent (Delery & Doty, 1996; Delaney & Huselid, 1996). Therefore, these EHCA practices can constitute a complex bundle of virtually inimitable tactics, which can then become non-substitutable organizational practices offering a competitive advantage (Taylor & Collins, 2000). In summary, this paper addresses the fact that EHCA practices include superior capabilities that can support firms to attract, select, and retain



external desired talent to achieve excess performance.

Therefore, the previous arguments lead to our first hypothesis:

Hypothesis 1: EHCA practices will be positively related to the firm's performance.

Environmental Turbulence as a Moderator

Although RBV research focuses mainly on examining the internal capability of organizations, contextual environmental conditions are important factors moderating the efficacy of those abilities. Guided by contingency theory, a firm's external environments are believed to interplay with its management structure or style (Lawrence & Lorsch, 1967). Industries in fluctuant environments suppose to demand much heterogeneity know-how to adapt change, and more efficiency way to gain the know-how is recruiting talents from outside. On the other hand, relatively stable environment may tolerate organizations keep steady routine that can be trained inside in time. Therefore, to test the true value of HRM practices on the firm's performance, most exiting studies emphasize the moderating effects of environmental context (Datta et al., 2005). This research then uses environment turbulence as a moderator between EHCA practices and firm performance.

A high degree of environmental turbulence indicates strong competition, unstable beneficial margins, and an unpredictable industrial future. It is believed that the strong environmental turbulence forces organizations to utilize knowledge as a dominant source of competitive advantage (Jansen, van den Bosch, & Volberda, 2006). Firms have to be quick to recognize, assimilate, and apply new external knowledge to face selective pressure (Cohen & Levinthal, 1990). However, organizations in comparable, slowly evolving industries with either more gentle competition or a stable market tend to attenuate learning needs (Keck & Tushman, 1993). In these organizations, problem-solving steps are more systematic, and decision-making processes are more linear (Eisenhardt & Martin, 2000).

Knowledge management theory illustrates that organizational knowledge is embedded in routines, but those routines may not be appropriate at some later time when environments change (Bontis, 1999). The organization itself had been viewed as a key process in the adaptation of environment (Argote, 1999). As organizations have to respond environmental turbulence, such like world-wide competitive pressures and swift technological change, they have to force employees at all levels to learn (Eisenhardt & Santos, 2002). As organizations have to respond environmental turbulence, such like world-wide competitive pressures and swift technological change, they have to force employees at all levels to learn. Gassmann and Keupp (2007) studied internationally active biotechnology small and medium enterprises, and found that the successes were rooted in rapid and early internationalization. While the prior challenge of multi-national companies is

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environmental factors and the biotech industry is knowledge intensive, the authors applied the knowledge-based view to complement with social capital theory and the network perspective of the firm to gain competitive advantage.

Predictably, organizations experiencing high environmental turbulence are keen to conduct effective EHCA practices to recruit new talent and to absorb new knowledge to meet high competition; therefore, they can expect added benefit. On the other hand, to nose out the new techniques of competitors may not their first priorities of companies in stable industries. New hires with heterogenetic skills then have fewer influences of organizational routines (Bontis, 1999). The abovementioned arguments lead us to the second hypothesis:

Hypothesis 2: Environmental turbulence will moderate the effect between the EHCA practices and the firm's performance. The greater the environmental turbulence, the stronger the EHCA practices positively influence the firm's performance.

Knowledge-Sharing Climate as a Moderator

Through the EHCA practices, organizations attract and retain external human capital with their ready-made knowledge. However, organizational success is not reliant on the static stock of exited knowledge, but rather on utilizing this knowledge to create more valuable business intelligence (Huber, 1991; Nonaka, 1994). Organizational climate, researches illustrated a collective perception of formal and informal policies, practices and procedures (Bowen & Ostroff, 2004; Reicheirs & Schneider, 1990), can be a medium for the effectiveness of EHCA practices on organizational performance. Through the appropriated organizational climate, talents from outside expected to fit in with co-workers and diffuse their knowledge more easily.

When a firm provides an appropriate social context in which knowledge can be shared and applied, employees are glad to transfer information and learn from one another. If employees collaborated with each other to diagnose and solve problems, knowledge would flow between senders and receivers smoothly. Through this process, knowledge can be assimilated, integrated, and then transformed and institutionalized (Youndt & Snell, 2004). Such collaborations are the basis for the socialization of organizational knowledge, which can also add value to the existing knowledge of employees via synergistic combinations, creating new knowledge for the sustainability of the firm (Gold, Malhotra, & Segars, 2001; Huber, 1991; Zack, 1999). Furthermore, knowledge sharing within an organization has been proven to reduce redundancy, enhance consistent representation, replace outdated knowledge, and improve efficiency by eliminating excess volume (Nonaka, Toyama, & Nagata, 2000).

Based on Knowledge-Based View, Harvey, Speier and Novicevic (1999) presented a model of global staffing practices. They suggested that appropriate expatriate and inpatriate managers can 'exporting'

corporate culture (i.e., roles, norms, values, and climate) to subsidiaries in emerging markets. These managers were expected to exercise controlling in an acceptable and effective manner through decrease culture distances and increase knowledge sharing. Furthermore, Bock, Lee, and Zmud (2005) found that organization climates conducted to knowledge sharing could exert a strong influence on the information of subjective norms and behaviors regarding knowledge sharing. They argued that organizational climate building, contrary to commonly accepted practices associated with knowledge management initiations, appears to be the exception rather than the rules.

Although the aforementioned linkage between knowledge sharing and the firm's performance is clear, many researchers argue that the organizational ability to transfer valuable knowledge externally is critical to building a firm's competitive advantages (Oddou, Osland, & Blakeney, 2009; Williams, 2007). Based on these arguments, we propose that a knowledge-sharing climate would strengthen the positive linkage among human capital acquisition, HRM practices, and the firm's performance. This leads to Hypothesis 3:

Hypothesis 3: A knowledge-sharing climate will moderate the effect between the EHCA practices and the firm's performance. The stronger the knowledge-sharing climate is, the stronger that the EHCA practices positively influence the firm's performance.

RESEARCH METHOD

As we noted previously, the purpose of this study was to investigate the effects of EHCA practices, environmental turbulence, and the knowledge-sharing climate on organizational and market performance and to determine the existence of the moderating effects of environmental turbulence and knowledge sharing. Figure 1 depicts our study's framework.

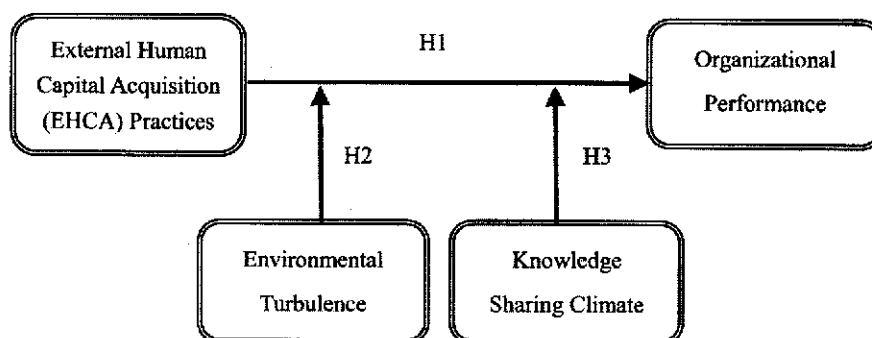


FIGURE1. Research Framework

Sample and Data Collection

To test and verify our hypotheses, we collected data through a questionnaire survey in addition to using secondary data. We adopted the survey procedure and criteria of sample selection suggested by Datta et al. (2005). The firms in the sample had to satisfy certain conditions. First, these firms needed to be public, have a minimum of 50 employees, and have US \$5 million revenue in total sales. Second, only companies in which we could identify both the HR directors and CEO/senior executives were included. Overall, 1,080 firms matched these conditions. Furthermore, we limited the problems associated with the common method variance by collecting measures to assess the independent, moderating, and dependent variables from different data sources. We mailed two different questionnaires to HR directors and CEOs/executives separately at the beginning of 2006. The first survey, sent to the HR director of each firm, assessed EHCA practices. The other survey, which was to be completed by either the CEO or another executive, evaluated moderating mechanisms (i.e., environmental turbulence and the knowledge-sharing climate). A reminder letter, a second survey, and finally, a telephone reminder followed both surveys.

The outcome variables, the organizational and financial performance, and other control variables were obtained from the Taiwan Economical Journal (TEJ) database, which is similar to the COMPUSTAT dataset. We also eliminated "contemporaneous" issues, which may have resulted in reverse causality (Wright, Gardner, Moynihan, & Allen, 2005) by collecting the firms' subsequent performance in 2007.

Three months after mailing the questionnaires, we collected questionnaires from both CEO and HR director, deleted the questionnaires with missing variables, excluded firms without financial data for the year 2007, and obtained our final data set, which resulted in 141 matched samples. The response rate was around 13%.

Of the 141 participating firms, 71 were high-tech industry firms (50.4%), 49 were manufacturing industry firms (34.8%), and 21 were service-related firms or firms in other industries (14.8%). The average age of the firms was approximately 25 years. Only 32 firms within the sample had unions. The mean employee size was 1,754 ($SD = 3,262$), and the total assets of the respondent firms were approximately NT \$34.66 billion (US \$1.15 billion). The amount of mean sales was approximately NT \$34.64 billion (US \$1.15 billion).

Compared to the entire sampling frame (986 employees, US \$1.16 billion in total assets, and US\$0.49 billion in sales), our sample has been skewed toward larger and more successful corporations, even though we endeavored to contact all possible companies. This may be attributed to the potential response bias, which is consistent with Ichniowski, Kochan, Levine, Olson and Strauss's (1996) observation. They stated that successful firms with more innovative practices are more likely to participate in surveys compared to less successful firms.

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Measures

Dependent Variables

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The current study used both organizational performance (i.e., labor productivity) and financial performance (i.e., Tobin's Q) as outcome variables. Labor productivity has been most frequently used as an outcome variable in prior strategic HR management studies (Datta et al., 2005; Huselid, 1995; Koch & McGrath, 1996). Furthermore, labor productivity tends to reflect whether corporations make an appropriate investment in HR policies through comparing the input of employees to the output of sales (Koch & McGrath, 1996).

To compute labor productivity, we divided the business unit's net sales by the number of employees. Tobin's Q, defined as the ratio of the market value to the replacement cost of the firm, represents a predictor of a firm's future investments (Tobin, 1969) and the value added by management (Huselid, 1995). Therefore, the Q ratio is appropriate for evaluating the intangible assets (Megna & Klock, 1993). We used Chung and Pruitt's (1994) method, which is defined as follows:

$$\text{Tobin's Q} = (\text{MVE} + \text{PS} + \text{DEBT}) / \text{TA}$$

where MVE is the average price of shares multiplied by the number of common shares outstanding, PS is the liquidating value of the firm's outstanding preferred stock, DEBT is the short-term and long-term debt, and TA is the book value of the total assets. These financial indexes were the year-end measures for 2007 collected from the TEJ database.

Independent Variables

Five items adapted from the prior study (Snell & Dean, 1992; Youndt & Snell, 2004) measured EHCA practices in the questionnaire for HR managers. These items included the following items: "Our hiring process is thorough and comprehensive," "We screen many applicants to fill job openings," "We use many different recruiting sources," "We pay higher wages than our competitors," and "Our wages are very competitive for this industry." All items were measured on a Likert scale ranging from 1 to 5, where 1 represented "strongly disagree" and 5 represented "strongly agree." We performed a principal component factor analysis with varimax rotation to categorize EHCA practices. Only one factor was extracted, and this factor explained 55.12% of the variance. We then averaged these items as independent variables. The Cronbach's alpha and mean scores for this scale were .79 and 3.42 (SD = .57), respectively.

Environmental turbulence was measured with three items adapted from Yeung, Ulrich, Nason and

Glinow (1999). Examples of these items include: "The changes in the industry in which our business operates are unpredictable," "Competition in the industry in which our business operates is intensive," and "New products/services of our company are introduced rapidly." The scores were collected from CEOs/executives, again based on a five-point Likert scale. The result of the principal component factor analysis showed that one factor explained 51.08% of the variance, with an eigenvalue greater than 1 being extracted. We then averaged the scores of these items as moderator variables (Cronbach's alpha = .51). The mean score was 3.88 (SD = .62).

In the original questionnaire of Youndt and Snell (2004), there are five items to ask about perceptions of sharing and exchanging knowledge, and the authors named this group of items 'social capital'. We selected two items of it to shorten questionnaires and increase response rate. These items included: "Our employees share information and learn from one another" and "Our employees interact and exchange ideas with people from different areas of the company." However, consider term 'social capital' is essentially defined on the networks of strong, crosscutting personal relationships developed overtime that provides the basis for collective actions (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998). We rename these two items 'knowledge sharing climate' as perception of sharing and exchanging information and skills usually found in literatures that focus on knowledge sharing climate (Bock et al., 2005; Van den Hooff & De Ridder, 2004). The CEO/executives were asked to evaluate these items based on the five-point Likert scale. The result of the principal component factor analysis also showed that only one factor with an eigenvalue greater than 1 was extracted, and this factor explained 63.45% of the variance. We then averaged the scores of these items as moderator variables (Cronbach's alpha = .86). The mean score was 3.79 (SD = .56).

Control Variables

Several variables were controlled for in the estimated models, including industry categories, organizational size, the profitability of the previous year, the firm's age, and the existence of unions. Firms in different industries were likely to face different market conditions (Collins & Smith, 2006). Thus, we controlled for industry differences based on the standard industrial classification (SIC) system that discriminates the industry categories according to the main product or service that each firm offers. We divided our samples into three industry categories: high technology, manufacturing, and services-related industries. More specifically, two dummy variables and a service-related group were used for comparisons in the regression analysis.

To capture other organizational resources and institutional forces related to both the adoption of the HR management practices and the organizational performance (Datta et al., 2005; Delaney & Huselid, 1996; Koch & McGrath, 1996), we controlled for organizational size, prior profitability. Organizational size was

operationalized as the natural logarithm of the amount of the total assets (in thousand NT) per employee. The return on assets (ROA) in 2006 stood for prior profitability.

While union presence had been proved a positive effect on HRM practices, especially on compensation, and firm performance (Huselid, 1995), we used it as a control variable. Union presence was a dummy variable such that union presence was coded as 1, otherwise 0. As Delaney and Huselid (1996) noted, organizations may adopt different HR management practices in different organizational life stages. Younger firms may adopt more extensive and competitive EHCA practices to help with operations and growth, whereas older firms may not. Consequently, we also controlled for the firm's age.

RESULT

Table 1 presents the means, standard deviations, and correlations for all variables. As was hypothesized, EHCA practices did not relate to either labor productivity ($r = .32, p < .01$) or Tobin's Q ($r = .16, p < .10$) independently. The results provide preliminary evidence for the positive relationships between EHCA practices and both organizational performance indices. Environmental turbulence also has a significant relationship with labor productivity ($r = .24, p < .01$). However, we did not find significant relationships between the knowledge-sharing climate and two performance measures. In addition, the correlation coefficient between EHCA practices and the knowledge-sharing climate ($r = .30, p < .01$) was significant, whereas the coefficient between HRM practices and environmental turbulence was not ($r = .02, n.s.$).

TABLE 1. Means, Standard Deviations, and Correlations for All Variables

Variable	Max	Min	Mean	SD	1	2	3	4	5	6	7	8	9
1. Labor Productivity ^a	12.49	7.08	9.17	1.07	1.00								
2. Tobin's Q	8.27	.69	1.70	1.06	-.07	1.00							
3. EHCA Practices	5.00	1.80	3.42	.57	.32**	.16†	1.00						
4. Environmental Turbulence	5.00	2.67	3.88	.62	.24**	-.08	.02	1.00					
5. Knowledge Sharing Climate	5.00	2.20	3.79	.56	.00	.07	.30**	.10	1.00				
6. Organizational Size ^b	13.09	7.48	9.37	.90	.82**	-.11	.31**	.21 [†]	-.03	1.00			
7. Prior Profitability	43.16	-2.00	7.98	9.67	-.06	.66**	.11	-.10	.18 [†]	-.04	1.00		
8. Firm Age	60.00	5.00	24.91	12.51	.02	-.33**	.13	-.16†	.08	.11	-.23**	1.00	
9. Union	1.00	.00	.23	.42	.00	-.19 [†]	.22 [†]	.03	.11	.10	-.11	.32**	1.00

N = 141

† $p < .10$, * $p < .05$, ** $p < .01$

^a Natural logarithm of sales per employee in 2007

^b Natural logarithm of amount of total assets per employee in 2007

EHCA = External Human Capital Acquisition

To further test our hypotheses, Table 2 presents the results of the multiple regression analysis models in which several variables were controlled for, including industry effect, organizational size, prior profitability,

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the firm's age, and the unionization status. The Model 1 through Model 4 show the main effect of EHCA practices and the moderating effects of environmental turbulence and the knowledge-sharing climate on labor productivity. Model 5 through Model 8 show both the main effect and interaction effect on market performance (i.e., Tobin's Q).

TABLE 2. Results of Hierarchical Regression Analysis

Variable	Labor Productivity ^a								Tobin's Q								
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7		Model 8		
	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	β	s.e.	
Intercept	-.06	(.56)	.34	(.58)	.79	(.59)	.51	(.58)	2.40**	(.70)	3.09**	(.72)	2.85**	(.75)	3.29	(.73)	
High-Technology Industry	.29†	(.16)	.28†	(.16)	.31†	(.16)	.32†	(.16)	.00	(.21)	-.03	(.20)	-.04	(.20)	-.02	(.20)	
Manufacturing Industry	.24	(.16)	.22	(.16)	.21	(.16)	.25	(.16)	-.40†	(.20)	-.43*	(.20)	-.43*	(.20)	-.39*	(.20)	
Organizational Size ^b	.98**	(.06)	.94**	(.06)	.89**	(.06)	.92**	(.06)	-.10	(.07)	-.16*	(.08)	-.13†	(.08)	-.01	(.08)	
Prior Profitability	.00	(.01)	-.01	(.01)	-.01	(.01)	-.01	(.01)	.07**	(.01)	.06**	(.01)	.06**	(.01)	-.20	(.01)	
Firm Age	.00	(.01)	.00	(.01)	.00	(.01)	.00	(.01)	-.01	(.01)	-.01	(.01)	-.01	(.01)	-.01	(.01)	
Union	-.13	(.13)	-.18	(.13)	-.20	(.13)	-.22	(.13)	-.13	(.17)	-.22	(.16)	-.21	(.17)	-.22	(.16)	
EHCA practices			.20*	(.10)	.18†	(.10)	.16†	(.10)			.34**	(.12)	.35**	(.12)	.38**	(.13)	
Environmental Turbulence					.06	(.09)							-.05	(.11)			
EHCA practices * ET					.42**	(.15)							-.20	(.19)			
Knowledge Sharing Climate							.06	(.10)								-.14	(.12)
EHCA practices * KSC							.34*	(.13)								.17	(.16)
R ²	.69		.69		.71		.71		.50		.53		.54		.54		
Adjusted R ²	.67		.68		.70		.69		.48		.51		.50		.51		
ΔR^2			.00		.02		.01				.02		.00		.00		
ΔF	49.69**		4.20*		4.56*		3.47*		22.96**		8.23**		.72		1.32		

N = 141

† $p < .10$, * $p < .05$, ** $p < .01$

^a Natural logarithm of sales per employee

^b Natural logarithm of amount of total assets per employee Unstandardized coefficients are reported; the figures in parentheses are standard errors. EHCA = External Human Capital Acquisition; ET = Environmental turbulence; KSC = Knowledge Sharing Climate

Model 1 and Model 5 show that the control variables explained 69.0% of the variance in labor productivity and 50.7% of the variance in Tobin's Q. Regarding Model 2, the results indicate that EHCA practices have a significant positive effect on labor productivity ($\beta = .20$, $p < .05$). The results of Model 6 also show that EHCA practices have significant positive effects on Tobin's Q ($\beta = .34$, $p < .01$). These findings indicate that EHCA practices could help firms obtain a higher quality of human capital and achieve subsequent organizational and financial performance. Therefore, Hypothesis 1 was supported.

In Model 3 and Model 7, we examined environmental turbulence as a moderator, which was expected to interact with EHCA practices to influence organizational performance. That is, in Hypothesis 2, we predicted the relation between HR practices and environmental turbulence. To reduce the possible multicollinearity effects, we centered the variables by subtracting the mean value of the variable from each score (Cohen, Cohen, West, & Aiken, 2003). As seen in Model 3, although the effect of environmental turbulence is unrelated to labor productivity ($\beta = .06$, n.s.), the interaction effect is strongly significant in the regression equation ($\beta = .42$, $p < .01$). This result indicates that environmental turbulence can moderate the relationship between the EHCA practices and labor productivity. However, we did not find the interaction effect present when predicting Tobin's Q in Model 7, as reflected in a non-significant coefficient ($\beta = -.20$, n.s.). Therefore, Hypothesis 2 was only supported in terms of predicting productivity.

Similarly, Model 4 and Model 8 were used to examine whether internal knowledge sharing interacts with EHCA practice to influence organizational performance (i.e., Hypothesis 3). The results show that the moderating effect of knowledge sharing exists because the regression coefficient is significant at .05 level ($\beta = .34$) in Model 4. However, we did not find any evidence to support the interaction when the outcome variable is Tobin's Q ($\beta = .17$, n.s.). Thus, Hypothesis 3 was also only partially supported.

To further understand the interactive relationship, we depict these results in the figures below. As Figure 2 shows, the significant interaction indicates that the positive link between the EHCA practices and labor productivity is stronger when firms face highly intensive environmental turbulence. In contrast, if a firm faces a relatively stable environment, investment in EHCA practices does not work efficiently.

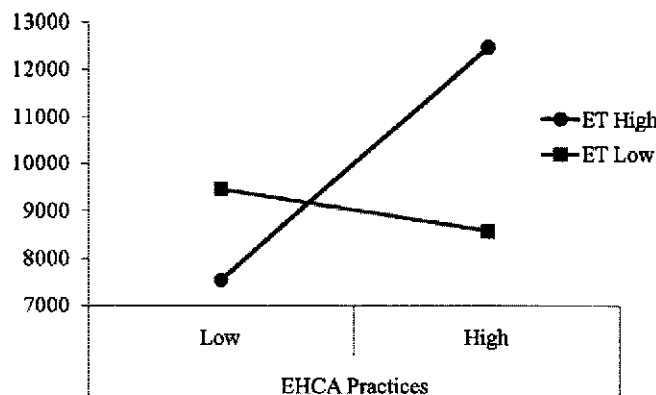


FIGURE 2. The Moderating Effect of Environmental Turbulence on the Relationship between EHCA Practices and Labor Productivity

A similar result is depicted in Figure 3. EHCA practices would be beneficial for productivity only when a firm has a relatively fluent knowledge flow. If firms lack an internal knowledge-sharing mechanism,

acquiring talent from outside does not create value and may even injure the productivity.

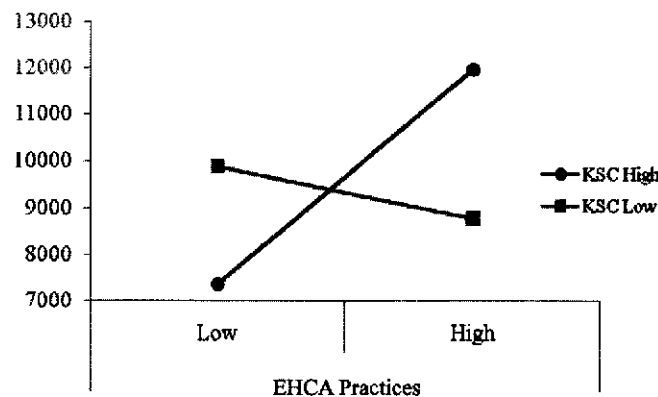


FIGURE 3. The Moderating Effect of Knowledge Sharing Climate on the Relationship between EHCA Practices and Labor Productivity

Furthermore, practical effects imply a critical issue for strategic HR management research (Becker & Gerhart, 1996; Datta et al., 2005; Huselid, 1995). We present the results of the interaction effect by calculating the effect of a one-standard-deviation increase in introducing EHCA practices on labor productivity under different levels of a knowledge-sharing climate.

Based on Model 3 from Table 2, when all other variables are held at the mean and the level of environmental turbulence is high (one-standard-deviation above the sample mean), the firms' average sales per employee is approximately NT \$9,694,597 (approximately US \$321,013). A one-standard-deviation increase in EHCA practices is associated with NT \$12,466,535 (approximately US \$412,799) in sales per employee. This substantial figure represents nearly a 28.6% increase (approximately NT \$2,771,938; US \$91,786) over the mean sales per employee. This percentage is slightly higher than Huselid's 16% (1995) and Datta et al.'s 14% (2005). Conversely with the higher level of environmental turbulence, when the level of environmental turbulence is low (one-standard-deviation below the sample mean), the sales per employee is approximately NT \$8,997,662 (approximately US \$297,936). Furthermore, when these organizations have a higher level of EHCA practices (one-standard-deviation above the sample mean), the firms' average sales per employee further drops to NT \$8,565,218 (approximately US \$283,616 U.S.), which represents a substantial 4.8% loss in the mean sales per employee.

Similarly, we examined the practical effects of knowledge sharing in Model 4. When the level of the knowledge-sharing climate is high, the firms' average sales per employee is approximately NT \$9,643,803 (approximately US \$319,331). If firms increase their EHCA practices (one-standard-deviation above the

sample mean), their sales per employee would increase to NT \$11,939,968 (approximately US \$395,363), which represents a 23.8% increase (approximately NT \$2,296,165 NT; US \$76,032). In contrast, when the level of the knowledge-sharing climate is low, the sales per employee is approximately NT \$9,045,052 (approximately US \$299,505). In this vein, if firms adopt intensive EHCA practices as their talent-requiring policy (one-standard-deviation above the sample mean), the firms' average sales per employee would drop to NT \$8,768,467 (approximately US \$290,347), which represents a substantial 3.06% loss in the mean sales per employee.

DISCUSSION

HR management practices have long been contingent on organizational capabilities to gain a competitive advantage through the stream of RBV (Combs, Ketchen, Hall, & Liu, 2006). Therefore, this paper argues that EHCA practices, or so-called precious capabilities, drive organizations to target and attract talented knowledge workers. Although the literature on SHRM does not provide consistent empirical evidence, the results here confirm that EHCA practices relate positively to firms' performances. Our preliminary results revealed that after successfully selecting and retaining external intelligence from outside, a firm expects to accumulate, diversify, and then utilize its knowledge stores to promote operational efficiency (Gold et al., 2001). In addition, the result that indicated a significant effect on Tobin's Q suggests that firms with high levels of human capital acquisition through HRM practices earn a more positive expectation from the stock market. Meanwhile, EHCA practice obviously signals that organizational ambitions are to acquire high-quality human capital and present a firm's future performance potential.

Some research argues, in favor of KBV, that a firm's competitive advantage will be derived from how well it performs the function of exploring and integrating the specialized and tacit knowledge of employees (creating and exchanging knowledge from each other) and how effectively it maximizes and utilizes the value from the knowledge learned (Sharkie, 2004). Therefore, we illustrated how human capital-possessed knowledge affecting a firm's performance must depend on two contingences. The first contingency is environmental turbulence, and the result strongly supports this assumption. This new knowledge will bring added benefit to organizations within an unstable environment compared to firms within a stable environment. The second contingency discussed in this paper is the knowledge-sharing climate. Talented employees from outside who join an organization must learn the shared language, fit in the social context, and embed themselves in the network composed by the original members before they can contribute to the firm's performance (Dakhli & de Clercq, 2004).

The effects of EHCA are expected stronger in some contingencies. Nevertheless, organizations have to set up the strategy of human resources management before deploying appropriate practices. Lepak and

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Snell (1999) introduced an architecture that divided human resources into four dimensions by degrees of unique and value of human capitals through resource-based view and transaction cost economics. Beside quadrant 2 of their model, which was defined as 'acquiring human capital' and include high valuable vs. low unique employees, the authors suggested building workforces by developing, contracting or create alliance. On this point of view, the moderating effects of this research are very possibly interfered by 'contingencies' of diverse natures of departments in a firm. For example, it will be difficult to enhance knowledge sharing climates on workforce in quadrant 3 (low uniqueness and low valuable) especially the employee relationship is defined to be transactional.

Another research provided a four-cell typology of career system for firms' staffing strategy (Sonnenfeild & Peiperl, 1988). Authors divided typical career into four dimensions by supply flow and assignment flow. The supply flow was measured by the openness of the career system to the external labor market at other than entry level, and the assignment flow described positions' assignment and promotion depend on individual or group contribution. For example, Sonnenfeild and Peiperl (1988) named high external supply flow and individual contribution assignment flow as 'baseball team-recruitment', and suggested that selection would the most important practice via formal training is the least. They category some industry belong to, or suit to, this style of staffing: entertainment, investment banking, software development...etc. Its obviously the competition of the previous mentioned industries is fierce and the environment they seated is constantly change. However, environment turbulence is not the main challenge in industries of other types in their model, such like 'academy-development'.

These two thoughtful studies both mentioned the importance of EHCA, and some of dimensions of their models illustrate influences of environment and climate. They also implied the two moderators might not effect as expected in some contexts of firms, although all firm level empirical tests have limitations by using a few employees to infer a company.

Actually, we did not find the moderating influences of these two contingences on the relationship between EHCA practices and market value. This result implies that these mechanisms were not complementary to EHCA practices to increase stock market expectations. Investors are more interested in observable actions, which send clear signals such as ambitious talent-hunting and newsy bonus topics (Klassen & McLaughlin, 1996). The EHCA do not focus purely on recruit knowledge workers, such like R&D forces' hunting, therefore lack of signal effects (Hall, 1993). In addition, the organizational climate embedded in the organization and existing in the "black box" of the organizational transformation process is usually difficult for outsiders to observe (Bowen & Ostroff, 2004).

As human capital is embodied in employees "who are free to move from one firm to another," (Becker, 1964; Jacoby, 1991), the ability to attract and acquire human capital becomes a key competence for high

performance companies. It provides an important implication, suggesting that while typical strategic HRM models encourage building an internal labor market to gain an un-imitated advantage (Lado & Wilson, 1994), paying skilled employees to reap profit promptly (Lepak & Snell, 1999) might also be efficient.

We have no intention to degrade the effects of internal training and developing practices. We just like to point out that acquire talents from outside is unavoidable, and suggest practioners best to consider the contingencies of their firms when they choose what kind of HRM practices to initiate. Base on our results, organizations in a constant changing environment, such like high tech companies, build R&D teams purely from inside is very difficult. In this situation, implement activities to enforce organizational knowledge-sharing climates can be more efficiency than conduct in-house training courses. When resources are not unlimited, HR practioners in modern business have to choose best practices with great return on investment (ROI) for their firms. However, firms put efforts on building talents inside and OJT (on the job training) surely will not be in vain if collocated with appropriated situations. Except hiring talents from outside who bring already made skills and knowledge, firms also find new blood with better education or good pre-employment test scores in selection procedures. Base on human capital theory (Becker, 1964) and screening hypothesis (Layard & Psacharopoulos, 1974), those candidates act high potentials of learning by doing and then positively influence firm performance. When internal human resources development programs are conducted, such like knowledge sharing from 'guru' of the firm, better effects will be expected when employees absorb new ideas soon (Hatch & Dyer, 2004). So obviously, the complementary effects on variety HR practices should not be ignored. In the pre-mentioned case, quick learners and internal develop mechanism are indispensable to each other. Besides, 'bundles' of human resources practices and their complex connections with firm performance usually the main issues of strategic human resource researches (Ulrich & Ulrich, 1997). While human capital as a preliminary resource, and the knowledge-sharing climate as a social complexity, the inimitable competitive advantage has been built (Barney, 1991), the end results are exceeded firm performance.

Limitations and Future Research

As with most studies, our study has several limitations. First, the sample only consisted of publicly-listed companies for financial data collection. We find that the coefficient is very high of labor productivity and firm size ($\beta = .98, p < .00$), which implies capital-intensive yield higher average output. We then use numbers of employees as an additional control variable to try to weaken the relativity, but it's not change much ($\beta = .98, p < .00$). Thus, the results cannot be generalized beyond the large-scale firms without further exploration. The inclusion of the knowledge-based, new economy firms could provide a more comprehensive

management. However, data from financial statements are still the most promising indexes available for measuring the firm's performance.

Second, using subjective perceptual data as a proxy of human capital acquisition, HRM practices present perhaps another limitation. Because the perceptual, self-reported data may not capture all aspects of the inputs in acquiring human capital within an organization, our findings do not account for the firm's performance resulting from other types of human capital acquiring investments. Future studies should attempt to amplify relevant objective measures of human capital acquiring activities and replicate the findings linking human capital to the firm's performance.

Finally, because it is recognized that knowledge sharing occurs at multiple levels of an organization (i.e., at the individual, group and organization levels), this current study was limited to the organizational level as the unit of analysis. Hence, this study could neither provide recommendations with respect to the individuals in the knowledge-sharing network, nor establish the links between the work teams. Future cross-level research on human capital investment and the knowledge sharing process would be welcomed to extend our results.

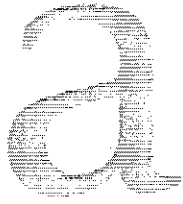
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1. 請說明 (佔 20分)

(a) 何謂企業資源規劃 (ERP: Enterprise Resource Planning) 系統?

(b) 如果你是一家企業的 CIO (chief information officer) , 你將如何為貴公司導入ERP進行規劃?

2. 請說明(佔 20分)

(a) 「雲端運算 (cloud computing)」可能的運作模式?

(b) 針對近來台灣發生的食安問題, 如果政府想建置「食品雲」來加以管理, 可以採用何種方式?

3. 從人力資源管理的角度而言, 如何管理員工在上班時間使用 Facebook 社群網站? (佔 10分)

1. 請描述軟體產品生命週期(Software Product Life Cycle)各階段的工作內容。
2. 請說明軟體系統的系统需求規範(System Requirement Specification)應包含哪些內容。
3. 請說明專案管理師執行專案管理的一般業務流程。
4. 請說明資料倉儲(Data warehouse)為了滿足OLAP(Online analytical processing)的需求，倉儲內的資料除了必須完備外，還需要具備那些特性，請加以說明。
5. 請描述在資訊安全管理實務中，風險管理流程(risk management process)所應包含的工作事項。

行銷管理試題(A卷)

- 一、請論述何謂TM(transactional marketing)?何謂RM(relationship marketing)?請寫出其定義，並做兩者之比較。Brodie et al.(1997)採納連續帶的概念，並指出實務上所推的行銷主要有四種類型，1、交易式行銷，2、資料庫行銷，3、互動式行銷，4、網路行銷，請論述這些不同類型的策略，其行銷的做法與各種策略之相關特色，並說明其在管理上有何意義? 15%
- 二、當今的企業正面臨前所未有的競爭，若公司能從產品與銷售的哲學轉移至行銷哲學，就可駕馭競爭。以顧客為中心的公司，顧客滿意度是個目標，也是個行銷工具，產品與服務品質決定了滿意度，美國品質管理協會將品質(quality)定義為：是一產品或服務，基於其可滿足顧客陳述的或暗喻的需要之整體特色或特徵，這是以顧客為中心的定義。顧客有一組需要、要求與期望，只有賣方的產品或服務達成或滿足顧客的期望，品質才算是送達顧客手中。請論述K. Sivakumar, Mei Li, & Beibei Dong在其文章: **Service Quality: The Impact of Frequency, Timing, Proximity, and Sequence of Failures and Delights**(*Journal of Marketing*, Volume 78 (January 2014), 41-58)該篇文章主要內容為何?有何研究貢獻?(請參閱附件) 15%
- 三、請論述何謂CRM(customer relationship management)?其組成要素有哪些? 10%
- 四、請論述何謂Herzberg的理論?對行銷者而言有何重要意義? 10%

- 一、 行銷對於企業績效所扮演的角色，一直是學者與管理者討論的焦點議題之一。故請闡述並討論行銷(marketing)與企業績效(business performance)之間的關聯性。(30%)
- 二、 行銷典範歷經了多次的移轉，從傳統上重視交易關係、獲取顧客...等的行銷觀念已經移轉到對關係(relationship)行銷的重視。請討論傳統行銷觀念與關係行銷觀念上的差異。(20%)