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The effects of culture and HRM practices on firm performance

Empirical evidence from Singapore

Irene K.H. Chew

Nanyang Business School, Nanyang Technological University, Singapore, and

Basu Sharma

*Faculty of Business Administration, University of New Brunswick, Fredericton,
New Brunswick, Canada*

Abstract

Purpose – The purpose of this study was to examine the effects of organizational culture and human resource management (HRM) effectiveness on financial performance of a sample of Singapore-based companies involved in mergers and acquisition activities.

Design/methodology/approach – The study used the method of content analysis to collect information on cultural values and HRM effectiveness, using Kabanoff's content analysis dictionary. Culture profiles were then assigned to organizations in the sample following the results from cluster analysis. Various financial ratios were used to measure organizational performance. Finally, regression analysis was performed to test various hypotheses.

Findings – The key finding of the study is that organizations with either elite or leader value profile, when complemented by human resource effectiveness, had a better financial performance as compared to organizations with meritocratic or collegial value profiles. It thus follows that, to achieve better financial results by undertaking merger and acquisition activities organizations need to have elite or leadership value profile.

Originality/value – This study makes a contribution to the literature by producing new empirical evidence to bear on the effect of organizational culture and human resource effectiveness on financial performance of merging acquiring organizations from a newly industrialized Asian country.

Keywords National cultures, Organizational performance, Human resource management, Acquisitions and mergers, Singapore

Paper type Case study

Introduction

Mergers and acquisitions (M&As) have become a compelling strategy for corporate growth in several developed countries in recent years. The US economy has experienced this phenomenon the most. However, not all M&As succeed. One in five of these activities results in a failure, with losses amounting to millions or billions of dollars (Deogun and Lipin, 1999). Agrawal *et al.* (1992) have reported that stockholders of acquiring firms also experience a loss of about 10 percent, five years after the merger. There may be more casualties than reported by these studies because about 60 percent of all the M&As involve less than million-dollar deals which do not come to public attention at all. Therefore, precise figures as to the success rate of M&As are not available even for the US (Pritchett *et al.*, 1997). In fact, a more comprehensive study conducted by German carmaker Daimler-Benz and its American Partner Chrysler before their merger, showed that mergers fail 70 per cent of the time (Ho, 2000).



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Nevertheless, the high failure rate has not stopped companies from M&A activities. The number of deals was at an all-time high in 1996 in the US, and the size of those deals has increased past those in the 1980s. As for Singapore, there has been an increasing trend in M&A activities, even though the number in Singapore is still far behind that in the US. For M&As to be successful, the resulting firm must achieve significant economies of scale; and savings from cost reductions must be sufficiently large. However, firms tend to overestimate these, whereas costs incurred in integrating two different companies are usually underestimated (Ho, 2000).

Even though all acquirers start out with well-intentioned growth plans and an anticipation of financial gain from the ventures, some failures are inevitable due to unforeseen events or a mismatch. The acquirer could have started out as planned and sought the target companies systematically, but may have failed due to bad follow-up. Incredible as it may seem because of the large stakes involved, evidence has proven this. For example, a study conducted by the Boston Consulting Group found that before an acquisition, fewer than 20 percent of companies had considered the steps necessary to fully integrate the acquisition into their own companies.

Few empirical studies on the impact of organizational cultures and human resource management (HRM) effectiveness have been done in the area of M&As, and more so for the Asian regions. The purpose of this paper is to make an attempt to begin to fill this lacuna in the literature. Hence we examine the effects of organization culture and HRM effectiveness on financial performance of companies involved in M&As in Singapore. We measure the financial performance of the firm before and after M&As, using accounting data extracted from the firms' annual reports and analyzing them using the relevant financial ratios mainly in the areas of internal liquidity (solvency), operating performance and the degree of leverage. Financial ratios, which draw attention to as a firm's most important items, would be particularly useful when examining the development of the firm over several years and comparing its performance to the average performance of its particular industry (Reilly and Brown, 2000). It would have been easier to analyze the firm's performance if all the financial information was available. However, the financial statements presented in firm's annual reports are often limited. Thus in our research, we can only see the firm's performance through financial ratios.

In what follows, we first discuss the critical organizational variables, namely HRM effectiveness, organization culture, and their interaction to spell out our key hypotheses pertaining to their effects on the financial performance of firms involved in M&As. We then describe the methodology used in executing this research. This is followed by a presentation and discussion of empirical findings. In the concluding section of the paper, we discuss implication of this study's findings for further research and policy development.

Critical organizational variables and related hypotheses

Globalization has led to a highly competitive business environment. M&As serve as a key weapon through which organizations often try to counter the blows of globalization. This is one reason why M&As numbers have been escalating internationally, including in Singapore. At the same time, failure rates for M&As are also very high. When firms venture into M&As, large-scale and sudden organizational changes are often implemented. As the organizational title changes hands, so does

the ownership and control of the entire workforce. In addition, the company logos, the organizational chart, management and the style of work organization all would change. Changing the way the firm conducts its business – its managerial style, systems, procedures and the symbols of its identity – means changing its workforce and organizational culture. And this change may critically influence the financial success or failure of M&As.

Organizational culture. Organizational culture – management teams, hierarchical structures and technology systems – does matter as proposed by several studies. Cartwright and Cooper (1992) first brought the importance of organizational culture into the forefront. They assessed the contribution that it can make to the understanding of the merger phenomena both in terms of its impact on organizational performance and on the managers and employees involved. Particular focus has been put on the issue of cultural compatibility as it concerns partner selection, integration practices and venture outcomes.

Culture involves a set of cognitions that are shared by all or many members of a social unit; these cognitions are acquired through social learning and socialization processes, and they include values, common understandings, and patterns of beliefs and expectations (Rousseau, 1990). It is a multi-layered construct with fundamental assumptions and values at the deepest, least accessible levels while artifacts and patterns of behavior are more “surface” expressions of culture.

According to Schein (1985), culture is defined as a pattern of basic assumptions – invented, discovered, or developed by a given group as it learns to cope with the problems of external adaptation and internal integration – that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems. He grouped organizational culture into three layers. It is easier to tap into and analyze the culture of the company through Layer 1, and measure Layer 2 (espoused values) of the organizations through mission statements, annual reports and in particular, the Chairman’s statement. The values of top management are relevant in our research for four reasons (Weber, 1996):

- (1) senior managers play the most important role in shaping cultural values;
- (2) cultural differences at the top management level are most likely to influence the success of the merger;
- (3) the greatest likelihood of contact between the acquirer and target is likely to be at the top management level; and
- (4) top managers are intensely involved in the integration process.

Concern for organizational culture was well demonstrated in a study carried out by Kabanoff (1992). In this research, he used a typology he developed himself (Kabanoff, 1991) that describes four value profile types organizations can fall into – “Elite”, “Meritocratic”, “Leadership” and “Collegial”. The value profile of an organization is determined by two factors – the degree of equality versus inequality in their structures and the degree of equity versus egalitarianism in their processes.

The Collegial profile describes an organization where cohesion is the principal concern. Power, rewards and resources are evenly distributed; it relies upon a commitment to shared values and individual responsibility for actions as the basis for task-achievement rather than upon more tangible rewards; the organization exercises

relatively little control over people's activities (e.g. professional bureaucracies). The Meritocratic profile describes an organization whose members are highly concerned with both cohesion and productivity. This type shares many of the integration-oriented qualities of the collegial culture but with increased emphasis on performance and rewarding people for performance; a set of collegial, interpersonal values is matched with a strong set of task-performance values (e.g. Silicon Valley start-ups). The Elite value profile describes an organization with a highly developed authority structure and rewards as well as power concentrated at its apex. This is the least integration-oriented, most differentiated culture; economic performance values dominate interpersonal values (e.g. a classical machine bureaucracy). The Leadership profile shares many of the same characteristics as the Elite profile but compensates for the strict emphasis on authority by interposing a cadre of leaders who act as a force for cohesion (e.g. military organizations).

The importance of organizational cultures was also recognized across different nations and a study done by Kabanoff and Daly (2000) further substantiates it. The study concluded that there is a higher incidence of Meritocratic types of value structures among US organizations and a higher incidence of Elite types among Australian organizations. This was again tested in a study done by Kabanoff and Daly (2000).

National culture also plays a dominant role in shaping organizational culture. In fact, management practices and organizational culture are reflections of the national culture in which the organizations were first founded (Chew, 2000; Chew and Putti, 1995). National culture refers to the culture specific to a national group. It is shaped by a number of factors unique to a country, some of which are the history and political background, social norms and customary beliefs that are passed on from generation to generation in a particular racial or ethnic group.

National culture is entrenched deeply in everyday life and is relatively resistant to change. As such, these deeply entrenched values which people hold will subconsciously affect how they structure and carry out management practices, which is what organization culture is all about. We therefore believe that the national culture of Singapore is an important factor that will affect the culture profile local companies will fall into.

Hofstede (1984) found that the national culture of Singapore is high in power distance[1]. In high power distance cultures, superiors and subordinates consider each other as unequals. Thus based on these findings, Hofstede asserted that a Singaporean company would be more centralized in its management, leading to steep organizational pyramids. Low (1984) supported Hofstede's finding in his study that revealed that participation was restricted mostly to top management. Besides, managers would also see themselves as benevolent decision-makers.

Based on Singapore's high power distance and the fact that Elite and Leadership culture profiles are of unequal power structures, we propose the following hypothesis.

H1. There is a higher incidence of both Elite- and Leadership-type value structures among Singaporean organizations.

HRM effectiveness and firm performance

The intense competition arising from globalization demands innovation, speed, adaptability, and low cost. It has also brought about the need to manage HR strategically so that they become a source of competitive advantage. The traditional

sources of competitive advantage such as patents and economies of scale (Pfeffer, 1994) are no longer the assets that differentiate the firm. Instead people management practices are the drivers (Cappelli and Crocker-Hefter, 1996), core competencies (Hamel and Prahalad, 1994), and capabilities (Stalk *et al.*, 1992) that help to develop new products, provide world-class customer service, and implement appropriate organizational strategy. A chief executive officer (CEO) of a big company in Asia, tapping the many new opportunities in the growth corridor of the Asia-Pacific region, or even the world, noted that it is the human matrix that determines the success of ventures (The Straits Times, 1995).

Further, one needs to bear in mind that people, not the firm, are the adaptive mechanisms in determining how the firm will respond to the competitive environment (Rundle, 1997). As such, recent decades have seen the HR becoming a unique and differentiating asset and playing an increasingly important role in organizations. For example, in a majority of the Fortune 500 companies, the head of the HRM is an officer (usually a vice-president) who answers directly to the CEO. In many companies, the head of HRM sits on the board of directors, or the planning committee or both. A 1992 survey of the top HR executives in 151 Fortune 500 companies found that a majority of the top HR executives have significant input in corporate decision-making. Seventy-one percent of the same executives reported that their current HR functions were more involved in implementing business strategies than in past years. Several recent large samples, cross-industry studies have reported that firms using innovative HR practices financially outperform firms that do not use such practices (Research Reports, 1995).

One study found that HR strategy drives 15 percent of profit performance for the average company (Roberts, 1995). As a direct result of increasingly available computing power, numerous strategies can be used to help the HR department contribute to the bottom line (Rhodeback, 1991). The basic idea behind these strategies is to translate knowledge of HR into terms that have tangible and recognizable economic benefits, especially to the operating managers.

Many empirical studies have explored the HRM-firm performance link (Arthur, 1994; Delaney and Huselid, 1996; Huselid, 1995; Huselid and Becker, 1996; Huselid *et al.*, 1997; Pfeffer, 1994). In particular, Huselid *et al.* (1997) found that strategic HRM effectiveness has positive correlation with firm performance, while technical HRM effectiveness was found not to have any correlation. Technical HRM effectiveness are the more conventional HRM functions and will hence be more common in the majority of firms while the strategic HRM effectiveness comprise of newer concepts and practices, which then are likely to be less common in firms. Hence it is more likely that strategic HRM effectiveness would be the competitive advantage for the company as it plays a major and pivotal role in deciding firm performance, including the success of M&A.

As strategic HRM effectiveness is comprised of bigger and more complex systems, compared to the traditional technical HRM effectiveness, they are unique and thus more difficult to be replicated by other companies. In light of this, the strategic HRM effectiveness is more relevant to our research and hence our second hypothesis is:

- H2. After an M&A, acquiring organizations with more emphasis on strategic HRM effectiveness than technical HRM effectiveness will outperform, in terms of financial performance, organizations with less emphasis on strategic HRM effectiveness.

Cultural value profile, HRM effectiveness and firm performance

The cultural value profile, organizational processes, and the power structure of the organization could also affect the success of the M&As. Based on Kabanoff's typology, Elite and Leadership value profiles possess unequal power structures, whereas Meritocratic and Collegial value profile possess equal power structures. Authority is emphasized and valued in the organization under an unequal power structure. As events such as M&As affect the entire company and cause uncertainty, insecurity, stress (Marks, 1982) and weakening trust levels (Pritchett *et al.*, 1997) among employees, strong leadership is pivotal and crucial to guide the organization and its members to achieve success, and more so in high power distance cultures. High authority figures are important here because they are the ones who are intensely involved in the integration process. Cultural differences at the top management level are most likely to influence the success of the merger and the likelihood of contact between the acquirer and target is most likely to be at the top management level. Hence it might be reasonable to expect that organizations having Elite and Leadership value profile complemented by strategic HRM effectiveness will achieve a better performance than the other two value profiles. Thus we propose the following hypothesis:

- H3. After an M&A, acquiring organizations with a value profile of Elite or Leadership, complemented with strategic HRM effectiveness, will outperform in financial terms, organizations with the Meritocratic or Collegial value profile.

Following hypothesis 3, hypothesis 4 attempts to examine the effect of power structure on the organizational performance.

- H4. After an M&A, acquiring organizations with an unequal power structure will outperform in financial terms as compared to organizations with an equal power structure.

Research methodology

The purpose of the research is to determine the effects of organizational culture and human resource management effectiveness on financial performance of firms before and after M&A. The first step for accomplishing this task is operationalization of variables under investigation. While measures of financial performance are generally quantitative and easily available, operationalization of organizational culture and HRM effectiveness is not so straightforward. These variables are more qualitative in nature. One of the common methods used in the operationalization of qualitative variables is content analysis.

Content analysis

Content analysis has been defined as "a research technique for making replicable and valid inferences from data according to their context" (Krippendorff, 1980). There are generally two different levels of content in the area of content analysis: manifest and latent. Manifest content – the physical or non-inferential material that makes up an archive – is usually coded in terms of words or letters in written material, words and pauses in audio material, concrete actions in visual material, and so forth. Whereas, latent content refers to inferred, underlying, or hidden meaning in material that makes

up an archive. It may be coded in terms of words, or actions, and it usually involves making inferences from sentences, paragraphs, facial expressions, and tone of voice, as well as other indications of meaning (Dane, 1990). Since we are interested in what organizations "say about themselves" in these two areas of content, content analysis is the most appropriate and accurate method of research.

We analyzed annual reports of firms selected for the purpose of this study. In general, annual reports consist of the organization's mission statement, Chairman's statement, operations review and financial statements. We extracted for analysis all sections referred to as organizational values, HRM policies, management overviews, and so on. Usually, the organizational culture and the organization's emphasis on HRM effectiveness will be stated in the above sections extracted.

To investigate the above relationship through surveys would be less appropriate as the accuracy of the results will depend on the respondents' (CEO and HR directors) willingness and ability to give information. In contrast, content analysis has a number of advantages. This includes its non-obtrusive character; use of naturally evoked verbal behavior as the source of value-data; suitability for carrying out longitudinal research given the availability of different kinds of text over long periods of time; and its systematic and quantitative approach to dealing with qualitative, text data (Kabanoff and Daly, 2000). Content analysis is also a cost-effective method as the materials necessary for conducting the analysis are easily available and inexpensively accessible (Berg, 1954). A further advantage of content analysis is that we can study concerns and values in organizations over time, as long as comparable documents for the period of interest are available for analysis. That means we can study the *changes* in organizations' concerns with various issues over long periods, a capability that is beyond survey methodology (D'Aveni and MacMillan, 1990).

There are different types of quantification procedures for carrying out content analysis. The procedure to be used depends on the units of observation and the coding procedures that one selects. In our research, we used the frequency method of quantification, which is also one of the most common methods[2] for content analysis. This method usually involves counting or in some other way quantifying the presence of "target" words, or themes in written text. Based upon the frequency with which the measured words or meaning are present in the text, we attempt to draw some inferences about either the sender of the message (CEO in the Chairman's statement), the audience of the message (stakeholders and the public), or the intended consequences of the message (Kabanoff, 1992).

One common difficulty with this method, however, is deciding what to do with repetitions. There is no single solution, for the decision depends on the hypotheses and other considerations (Dane, 1990). In our case, we counted them as they appear because the higher the frequency of the word, the greater the importance of the dimension in concern.

At this point, it is also necessary to be clear about the assumptions this particular study makes. We assume that language is one important reflection of organizations' cultures (Courtright *et al.*, 1989). We feel that language is also an indication of the emphasis that an organization places on its HRM effectiveness. In other words, this study deals with espoused rather than enacted cultures (Argyris and Schon, 1978). As such, we are describing what organizations are "saying" or "projecting", rather than what they are actually doing.

Sample

In our study, we focused on the following sample: Singapore-based companies involved in M&As, mergers involving Singapore and foreign companies, acquisitions involving Singapore companies as the acquirer and foreign companies as the target, and acquisitions, where over 50 percent of the company is being taken over.

We took into account the M&As that had occurred in Singapore during 1984-1998 in. In cases where a company acquires more than one company, we treated each acquisition as a separate case. At this point, it is necessary to emphasize that our research is concerned with the acquiring companies due to a lack of information about the target companies.

We approached the Registry of Companies and Businesses for assistance with the list of Singapore-based M&As, however they did not have such information on hand. We then searched the homepage of the Singapore Exchange (SGX) to obtain the names of listed companies engaging in M&As. Next, we generated more M&A cases, specially those small, private companies not listed in SGX using *Securities Data Company (SDC) Platinum* and *Reuters Business Briefing* databases. Finally, we selected 120 cases with readily available annual reports and categorized them according to industry and the year that the M&A took place. This information has been summarized in Table I.

As it is obvious, this research uses secondary data. We collected relevant documents of the sampled organizations 3 years before and after the M&A took place. The use of a time frame of 3 years is assumed to generate sufficient text to help us carry out our analysis. Annual reports are obtained from publicly available sources such as libraries (NTU, NUS, and SGX), the internet, annual reviews and annual reports.

Measures

We used the method of content analysis to collect information on cultural values and its HRM effectiveness. To measure organization's espoused values, we used the theory developed by Kabanoff (1991) as a backdrop for our research. Also, we utilized the content analysis dictionary developed by Kabanoff (1992) in his previous research (Appendix – Table AI). Being one of the pioneers in this research area, his theory is held in high regard and furthermore, no other theories have been developed to challenge his assertions. Hence, this study attempts to explore its applicability in the Singapore context. Similarly, to analyze the impact of HRM effectiveness on

Industry	Time period				Number of cases
	1984-1985	1986-1990	1991-1995	1996-1998	
Commerce			4	2	6
Construction		1	2		3
Finance		2	4	4	10
Hotel/restaurants		1	1		2
Manufacturing	2	3	14	4	23
Multi-industry		14	14	4	32
Services			2	1	3
Transport/storage/communications		3	8	4	15
Property		2	11	6	19
Others		1	5	1	7
Total	2	27	65	26	120

Table I.
Details of the cases
analyzed from 1984 to
1998

organization's performance, a dictionary for strategic and technical HRM effectiveness (Appendix – Table AII) was developed based on the factor structure of Huselid *et al.* (1997) and some aspects of the content dictionary mentioned in the Appendix (Table AI). Our research methodology differs from the above research which used surveys because we are measuring the espoused HRM effectiveness. Our analysis focused on the period after the M&A took place since we are only interested on the impact of HRM effectiveness on the organization performance.

Also we relied on human coders to read the material and count the frequency of occurrence of target value statements against those specified in a content analysis dictionary (described below). Human coders are used because they are better able to judge the meaning of a particular word within a specific context, unlike the use of computer-aided text analysis, where there is a lower context-sensitivity. To ensure the reliability of the coded data, three coders were used. High inter-rater reliability in our analysis is indicated by low discrepancies between the coders. In the event of discrepancy, the content was re-analyzed and the differences resolved.

Cultural value scores. To find out the culture profile of the 120 cases, a mean score (average value score = total frequency count/total number of sentences) for each organization on all of the nine value categories described in the Appendix (Table AI) was calculated for 3 years before and after the M&A took place. This is done to control for the differences in the number of sentences analyzed from different organizations. Since we are interested in comparing the frequency with which different organizations refer to the nine value categories and each category has different, average frequencies, all of the value scores were given a common scale by transforming them into a Z-score form ($Z\text{-score} = [\text{company mean} - \text{sample mean}] / \text{standard deviation for the sample}$).

To identify groups of organizations that were similar to one another, a statistical technique known as cluster analysis (Quick Cluster, SPSS Version 10.0) was used. Cluster analysis is a multivariate statistical procedure that starts with a data set containing information about a sample of entities and attempts to reorganize these entities into relatively homogeneous groups called clusters. This assisted in categorizing organizations in terms of their similarity to one of the four "pure" culture types discussed earlier by comparing organizations' Z-scores with the four, theoretically based value templates, representing each of the four culture types. Initial cluster centers so obtained are presented in Table II.

For a strong value, the initial value-center for the cluster was set as 1.0 while for a weak value, the initial value-center was set as -1.0. For example, the selection template for organizations with an Elite value structure was: Affiliation (-1.0), Authority (1.0), Commitment (-1.0), Normative (-1.0), Leadership (-1.0), Participation (-1.0), Performance (1.0), Reward (1.0), and Teamwork (-1.0).

HRM effectiveness scores. The average scores for strategic and technical HRM variables for all the organizations were calculated separately (average value score = total frequency count/total number of sentences). By comparing the respective average scores, organizations were classified by their relative emphasis on HRM effectiveness.

Measure of financial performance. We measured the performance of the organization by using financial ratios to tap into the organization's internal liquidity

	Elite	Leadership	Cluster Meritocratic	Collegial
Authority	1.0	1.0	-1.0	-1.0
Leadership	-1.0	1.0	-1.0	-1.0
Team	-1.0	1.0	1.0	1.0
Participation	-1.0	-1.0	1.0	1.0
Commitment	-1.0	1.0	1.0	1.0
Performance	1.0	1.0	1.0	-1.0
Reward	1.0	1.0	1.0	-1.0
Affiliation	-1.0	1.0	1.0	1.0
Normative	-1.0	-1.0	1.0	1.0

Table II.
Initial cluster centers

(solvency), operating performance and the degree of leverage[3], and calculated the average score. The financial ratios used are shown in the Appendix (Table AIII).

Empirical analysis and results

Cluster analysis

The sampled organizations were assigned to their respective culture profiles by cluster analysis. The number of cases in each cluster is shown in Table III and the ANOVA tests for the nine culture values before and after the M&A are shown in Tables IV and V, respectively.

One interesting finding is that the *F*-value for "reward" is not significant after the M&A. We believe it is because during the post 3-year M&A period, organizations were concentrating on restructuring the program and thus they placed less emphasis on compensation issues like reward. We do however believe that organizations will re-emphasize reward after they are fully integrated.

It is important to note that because an organization has been assigned to one culture type does not mean it does not have any characteristic of another culture type. Nevertheless, cluster analysis serves as a convenient method of differentiating between broadly different value profiles.

Descriptive statistics

Table VI shows means, standard deviations and correlations.

Within each category, the strategic and technical HRM effectiveness are positively and significantly correlated except for the collegial culture profile. However, this did not affect our results as we focused our research on the Elite and Leadership value profiles.

	Before		Cluster		After	
	No.	%	No.	%	No.	%
Elite	49	40.8	54	45.0		
Leadership	36	30.0	30	25.0		
Meritocratic	22	18.3	17	14.2		
Collegial	13	10.8	19	15.8		
Total	120		120			

Table III.
Number of cases in each
cluster

Table IV.
Means, standard
deviations, and
correlations for the
respective culture profiles

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
Overall	0.055	0.055													
Strategic	0.055	0.036	0.701**												
Technical	0.037	0.065	0.071	0.097											
Elite	0.032	0.060	0.023	0.043	0.763**										
Strategic	0.070	0.064	-0.061	0.046	-0.071	0.037									
Technical	0.068	0.084	-0.142	0.041	-0.190	-0.077	0.866**								
Leadership	0.084	0.042	0.001	0.066	-0.269	-0.114	0.166	0.203							
Strategic	0.112	0.075	0.093	0.189	-0.090	-0.026	0.333	0.231	0.604**						
Technical	0.068	0.025	0.077	0.086	0.171	-0.141	-0.123	-0.126	0.304	0.035					
Collegial	0.064	0.051	0.408*	0.354	0.415	0.358	-0.158	0.037	-0.250	-0.268	0.207				
Strategic	0.049	0.066	0.065	0.069	1.000**	0.763**	-0.710	-0.190	-0.269	-0.090	0.171	0.415*			
Technical	0.044	0.071	0.055	0.018	0.763**	1.000**	0.037	-0.077	-0.114	-0.260	0.141	0.358	0.808**		
Unequal	0.076	0.034	0.019	0.119	-0.184	0.013	0.202	0.234	1.000**	0.606**	0.219	-0.234	-0.184	0.013	
Strategic	0.087	0.067	-0.050	0.133	-0.057	0.040	0.261	0.172	0.604**	1.000**	-0.018	-0.269	-0.057	0.040	0.517**
Technical															

Notes: Correlation is significant at: *0.05 level (one-tailed) and **0.01 level (one-tailed)

	Cluster		Error		F
	Mean square	df	Mean square	df	
Authority	0.010	3	0.001	116	7.033*
Leadership	0.015	3	0.002	116	6.411*
Team	0.017	3	0.002	116	8.668*
Participation	0.094	3	0.004	116	23.473*
Commitment	0.063	3	0.002	116	27.259*
Performance	0.005	3	0.001	116	7.037*
Reward	0.014	3	0.001	116	10.469*
Affiliation	0.031	3	0.001	116	20.988*
Normative	0.028	3	0.002	116	12.072*

Table V.
ANOVA for the nine
culture values (before
M&A)

Notes: Critical values for $F_{0.10} \approx 2.13$; $F_{0.05} \approx 2.68$; and $F_{0.01} \approx 3.95$, * $p < 0.01$

Test of hypotheses

	Cluster		Error		F
	Mean square	df	Mean square	df	
Authority	0.021	3	0.002	116	12.987**
Leadership	0.033	3	0.003	116	11.344**
Team	0.029	3	0.004	116	6.926**
Participation	0.232	3	0.073	116	3.17*
Commitment	0.036	3	0.002	116	19.117**
Performance	0.005	3	0.000	116	11.268**
Reward	0.008	3	0.019	116	0.447
Affiliation	0.031	3	0.002	116	20.369**
Normative	0.065	3	0.003	116	24.636**

Table VI.
ANOVA for the nine
culture values (after
M&A)

Notes: Critical values for $F_{0.10} \approx 2.13$; $F_{0.05} \approx 2.68$, * $p < 0.05$; and $F_{0.01} \approx 3.95$, ** $p < 0.01$

Hypothesis 1 predicts that there is a higher incidence of both Elite- and Leadership-type value structures among Singaporean organizations. Table III shows that, over the 15-year period studied, the largest cluster and thus the most frequent culture type before and after the M&As was the Elite cluster ($N = 49, 54$), followed by the Leadership cluster ($N = 36, 30$), the Meritocratic cluster ($N = 22, 17$), and finally the Collegial cluster ($N = 13, 19$). These results are based upon the average value scores of the organizations before and after the M&A over the whole period analyzed.

Hypothesis 2 predicts that acquiring organizations with more emphasis on strategic HRM effectiveness than technical HRM effectiveness will outperform, in terms of financial performance, organizations with less emphasis on strategic HRM effectiveness. Table VII shows the results of the regression analyses used to test the hypothesis.

The coefficient for strategic HRM effectiveness is positive and significant ($p < 0.01$). Conversely, the coefficient for technical HRM effectiveness is not significant ($p > 0.05$). Consistent with prior work (Huselid *et al.*, 1997), strategic HRM effectiveness is significantly associated with firm performance, whereas technical HRM effectiveness is not.

Hypothesis 3 predicts that acquiring organizations with either Elite or Leadership culture profiles after M&As, complemented with strategic HRM effectiveness, will outperform in financial terms, organizations with either Meritocratic or Collegial culture value profile. Table VIII shows the results of the regression analyses used to test the hypothesis.

Under the Elite culture type, the coefficient for strategic HRM effectiveness is positive and significant ($p < 0.01$), whereas the coefficient for technical HRM effectiveness is negative and significant ($p < 0.05$). Similarly, under the Leadership culture type, the coefficient for strategic HRM effectiveness is positive and significant ($p < 0.01$), whereas the coefficient for technical HRM effectiveness is negative and significant ($p < 0.05$).

Conversely, under the Meritocratic culture type, the coefficient for strategic HRM effectiveness is negative and not significant ($p > 0.1$), and for technical HRM effectiveness it is positive but not significant ($p > 0.1$). On the other hand, under the Collegial culture type, the coefficients for both strategic and technical HRM effectiveness are negative but not significant ($p > 0.1$). Thus, we conclude that our results provide support for Hypothesis 3.

Hypothesis 4 predicts that acquiring organizations with unequal power structures (Elite or Leadership) will outperform in terms of financial performance, organizations with equal power structures (Meritocratic or Collegial). Table IX shows that under unequal power structures, the coefficient for strategic HRM effectiveness is positive and significant ($p < 0.001$) and the coefficient for technical HRM effectiveness is negative and significant ($p < 0.01$).

Under the equal power structure, however, the coefficient of strategic HRM effectiveness is negative but not significant ($p > 0.1$), and the coefficient of technical

Table VII.
Results of regression
analyses for HRM
effectiveness and
financial performance

	Constant	Strategic	Technical	R^2	Adjusted R^2	F	N
Financial performance	5.580	2.891 *	-1.679	0.068	0.053	4.298 **	120
β		0.362	-0.210				

Notes: * $p < 0.01$ (one-tailed test); ** $p < 0.05$ (one-tailed test)

Table VIII.
Results of regression
analyses for the
respective culture profiles

	Constant	Strategic	Technical	R^2	Adjusted R^2	F	N
Elite	5.469	3.157 **	-2.417 *	0.167	0.135	5.119 **	54
β		0.624	-0.409				
Leadership	-0.159	3.903 **	-1.529 *	0.415	0.371	9.571 **	30
β		1.149	-0.704				
Meritocratic	2.538	-1.05	0.497	0.075	-0.057	0.566	17
β		-0.339	0.161				
Collegial	2.476	-0.888	-0.165	0.054	-0.064	0.457	19
β		-0.221	-0.041				

Notes: * $p < 0.05$ (one-tailed test) ** $p < 0.01$ (one-tailed test)

HRM effectiveness is positive but not significant ($p > 0.1$). Therefore, our results provide support for hypothesis 4.

Table X shows the distribution of the 120 cases into their respective culture profile and their relative emphasis on HRM effectiveness.

Under the unequal power structure, *strategic*[4] cases are three times those under the equal power structure. The number of cases under *financial* performance, which have performed better after M&A, is around 46 percent of the total sample. The number of *successful*[5] cases under the unequal power structure is around three times more than that of the equal power structure.

Discussions of results

We assume that language is one important reflection of organizations' cultures (Courtright *et al.*, 1989) and language could also reflect the HRM practices adopted in an organization. In this study, we deal with espoused rather than enacted cultures (Argyris and Schon, 1978) and HRM effectiveness. Our results provide a means for an organization to monitor its own espoused values and concerns. Thus, this form of analysis could help an organization to decide what the management has been communicating and what has not been communicated to its employees. Likewise, organizations can use this information to compare themselves with their competitors and to see if changes in their espoused values are in line with their overall strategies. Knowing about the organizations' espoused value profile and HRM practices can also enhance person-organization fit, thereby minimizing any unnecessary employee turnover.

	Constant	Strategic	Technical	R^2	Adjusted R^2	F	N
Unequal β	4.859	4.113*** 0.702	-2.7** -0.461	0.182	0.162	9.019***	84
Equal β	3.945	-1.354 -0.267	0.319 0.063	0.058	0.001	1.016	36

Notes: * $p < 0.05$ (one-tailed test); ** $p < 0.01$ (one-tailed test); and *** $p < 0.001$ (one-tailed test)

Table IX.
Results of regression
analyses for the unequal
and equal power
structures

Culture profile	Number of cases				Percent of total cases
	Strategic ^a	Technical ^a	Financial performance ^b	Successful ^c	
Elite	30	24	26	22	18
Leadership	16	14	9	7	6
Unequal	46	38	35	29	24
Meritocratic	5	12	9	3	3
Collegial	10	9	11	6	5
Equal	15	21	20	9	8
Total	61	59	55	38	56

^aNotes: Cases that emphasizes more on strategic HRM effectiveness will fall under *Strategic*, and vice versa.; ^bCases that have performed better after M&As.; ^cCases that have performed better after M&As and complemented with strategic HRM effectiveness

Table X.
Overall results

The cluster analysis of our sampled Singaporean organizations shows that the two largest clusters are the Elite and Leadership value profiles. These two value profiles belong to the unequal power structure and thus imply the existence of high power distance in Singaporean companies. This result is consistent with Hofstede's findings (Hofstede, 1984), which ranked Singapore high in power distance. This could be attributable to the fact that the President or CEO is of an older generation who may have been through the British and Japanese autocratic rule (Yeh, 1988). However, as the younger and Western-educated workforce, who are more exposed to the democratic and egalitarian principles of the Western government (The Straits Times, 27 Nov 1989) enter the labor market, the power structure might change to one of more equality. However whether this change will impact the financial performance is beyond the scope of our research.

Our results show that strategic HRM effectiveness has a positive relationship with financial performance. This is consistent with the research done by Huselid *et al.* (1997) even though the methodology adopted here is different. Furthermore, HRM information should provide some indication of the organization's emphasis on its HRM issues. According to Kaplan and Norton (1996), optimizing people resources and development, the objectives in the learning and growth perspective, are drivers for achieving excellent outcomes in the other three scorecards – financial, customer and internal business processes. Therefore, organizations can use the HRM information derived from content analysis to judge whether the investment in strategic HRM practices is adequate, so as to achieve a long-term financial growth objective[6].

The resource-based view of the firm (RBV) combines the internal analysis of phenomena within companies with the external analysis of the industry and the competitive environment (Collis and Montgomery, 1995). It further suggests that a firm's pool of human capital can be "leveraged" to provide a source of competitive advantage (Barney, 1991; Wright *et al.*, 1994). With increased globalization and HR being the only natural resource of Singapore, it is more important that HR is managed strategically so that companies can compete globally on a more favorable footing. However, if a firm's technical HRM effectiveness is low, they may not have the foundation needed to successfully implement strategic HRM activities. As such, firms need to ensure that their technical HRM effectiveness is of a certain standard before developing strategic HRM effectiveness.

Another important point to note is that in order to effectively implement strategic HRM systems, HR managers and executives need to be well equipped with HR competencies. Four sets of HR competencies have been identified (Ulrich *et al.*, 1995; 1996): knowledge of HR practices, knowledge of business, personal credibility and ability to manage change. However, it is found that HR managers in Singapore are lacking in these areas (Cunningham and Debrah, 1995). If the HR managers can re-evaluate their priorities and acquire these competencies, they will be able to focus attention on strategic HRM that will translate into a source of competitive advantage for the companies.

Our results show that organizations with a value profile of either Elite or Leadership, complemented with strategic HRM effectiveness will bring about better financial performance. It is evident from our results that in order for organizations to undertake M&A, it is recommended that they belong to the Elite or Leadership value profile so as to achieve better financial results.

Nevertheless, organizations should not jump on the bandwagon and undertake M&As just because they are in the Elite or Leadership value profiles. All the necessary steps to fully integrate the acquisition into their own companies and thus contribute to the success of M&As, should still be carried out. Despite this, organizations that belong to the other two value profiles should not forgo M&A plans impulsively. Well-planned M&As may also be successful if these organizations are equipped with strategic HRM effectiveness.

Concluding remarks

Given the paucity of empirical studies in strategic human resource management, especially corporate merger and acquisition activities, this study makes a contribution by bringing new empirical evidence to bear on the effect of organizational culture and human resource management effectiveness on financial performance of merging and acquiring organizations from a newly industrialized Asian country.

While our results are encouraging, this study has a number of limitations. The first limitation concerns the content analysis that we conducted. Human coders are used instead of using computer-aided text analysis. A major disadvantage of manual methods is that it is time-consuming and tedious. However, human coders are better able to judge the meaning of a particular word within a specific context, unlike the use of computer-aided text analysis, where there is a lower context-sensitivity. The second limitation is the existence of external factors that affect the organization's performance. The oil crisis of 1970s and the economic crises of 1985 and 1997 had an impact on the organization's performance. However, we try to overcome this setback by comparing the averages of the financial ratios three years before and after the M&A. In this way, we even out the effects of the above impact on the organization's performance.

The value profiles and the HRM effectiveness we have described is not an end in itself. Rather, it is only a step towards linking culture profile and HRM practices with financial performance. Future research in this field can be directed to different countries and regions especially in the Asian context since there is a dearth of such empirical research. Such research can serve as a basis for comparative studies between the West and the East. Research could also be extended to consider potential costs and benefits of technical and strategic HRM effectiveness to individual employees and the broader economic and social system.

Notes

1. Singapore was ranked 13th with a power distance index (PDI) score of 74 as compared to Malaysia that was ranked first with a PDI score of 104 and Austria, 53rd with a PDI score of 11.
2. Another procedure involves measuring the amount of space (for written material) or time (for audio and visual material) appropriated to the variable, where the relationship examined is between verdicts and time spent discussing topics. Another alternative is to use the intensity method that assessed the relationship between verdicts and strength of opinion. Whenever the units of analysis might vary in intensity – some statements have more meaning or more relevance than others – it is often the case that simple frequency or space/time enumerations are insufficient (Dane, 1990).

4. Internal liquidity indicates the ability of the firm to meet future short-term financial obligations as they come through. The current ratio is the best-known liquidity measure and alternatively, the quick ratio could also be used.
4. Cases that emphasize more on strategic HRM effectiveness will fall under *Strategic*, and vice versa.
5. Cases that have performed better after M&As and complemented with strategic HRM effectiveness.
6. The balanced scorecard translates mission and strategy into objectives and measures, organized into four perspectives: financial, customer, internal business process, and learning and growth. The scorecard includes measures of desired outcomes as well as processes that will drive the desired outcomes for the future (Kaplan and Norton, 1996).

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Further reading

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Name	Status/source	Content (and exclusions) ←	Interpretation
Authority figures	Category	Executive ↑, [manage] →, board, council, top executive, chief executive, chief general manager, dean, professor, vice-chancellor, director, senior, board of director (not "Total Quality Management") [Leader] (not "market leader, world leader, Singaporean leadership" etc) ←	Concern with authority figures and relations
Leadership	Category	[Team], cooperation, synergy	Concern with leadership
Team	Category	Employee, staff (not management staff)	Concern with teams and teamwork
Employees	Not a separate category		Concern with non-managerial roles (used in conjunction with Participation category)
Participation	Co-occurrence category	[Participat] or [Consult] co-occurs with Employees category (not consultants), contribution	Concern with involvement and participation by non-managerial levels
Commitment	Category	Commitment, committed, hard work (of employee), [loyal], [dedicat], [cohes]	Concern with organizational commitment and loyalty
Performance	Category	Achievement, achievers, [performance], service, revenue, turnover, [efficient], merit, [productivity], initiative, [excell], [growth], [profit] (not "years of service, service department, service industry, safety performance" etc)	Concern with organizational performance
Reward	Co-occurrence Category	Bonus, compensation, reward, salary, [apprais] →, [incentiv], [recogni], [remunerat] → share, <i>with</i> Authority or Employees categories (not "bonus" with "shareholders" or "shares" with "shareholders")	Concern with reward system within organization
Affiliation	Harvard IV	All words with connotation of affiliation or supportiveness – e.g. esprit de corps, encouraging, happy, appreciation, grateful, support, confidence, pleased, behalf, welcome	Concern with interpersonal warmth and solidarity
Normative (Rectitude ethics)	Lasswell	All rectitude values invoking in the final analysis the social order and its demands as the justification – e.g. sponsor, responsibility, should, community service, [charity], donation	Concern with normative control and actions

Source: Kabanoff (1991)

Notes: ← : Exclusion words or phrases are those that are incorrectly counted by the "tag" category. These excluded words or phrases that were counted separately and then subtracted form the frequency count of the "tag" category; ↑ : All words expressed in the singular also imply their plural form, i.e. "executive" and "executives"; → : Words in the [] are word roots that count all words containing this root, i.e. [manage] includes "manager, management, managers", etc

Table AI.
The content analysis
dictionary (for
organization cultural
values)

Table AII.
The content analysis
dictionary (for HRM
effectiveness)

Name	Status/source	Content (and exclusions)	Interpretation
<i>Strategic HRM effectiveness</i>			
Team	Category	[Team] → , cooperation, synergy	Concern with teams and teamwork
Participation by employees/empowerment ^a	Co-occurrence	[Participat] or [Consult] co-occurs with	Concern with involvement by non-managerial levels
Workforce planning (deployment/flexibility)	Category	Employees category	Concern with the deployment of the workforce
Workforce productivity	Category	[Deploy], [flexible]	Concern with all employee productivity
Quality output (product/service)	Category	[Efficient], [productivity]	Concern with the quality of the output produced
Management development/development plan	Category	Quality goods, products and services	Concern with development of management staff
Employee and manager communications	Category	Management/professional training and development	Concern with organization-wide communication
Work family program	Category	Interaction, [communicate]	Concern with social program for all employees
<i>Technical HRM effectiveness</i>			
Benefits and compensation	Category	Family day, recreation club, inter-department sports	Concern with benefits and allowances available for all staff
Recruiting and training	Category	Benefits, compensation, reward, incentive, bonus, employee stock options, salary, retrenchment benefits	Concern with recruitment and training of staff
Employee education/training	Category	[Train], [recruit]	Concern with education and training for employee
Safety/health	Category	Education, training	Concern with safety and health issues of staff
Employee/industrial relations	Category	[safety], health	Concern with the employee involvement in unions
Social responsibility programs ^a	Category	Industrial union	Concern with organization's involvement in community events
Performance appraisal	Category	[Sponsor], community service, responsibility, should, [charity], donation [appraise], performance management system	Concern with the performance appraisal of staff

Notes: ^aAs that specified by the content analysis dictionary (Appendix – Table AI) mentioned in Kabanoff (1991); → : Words in the [] are word roots that count all words containing this root, i.e. [manage] includes “manager, management, managers”, etc

	Formulae
Internal liquidity	
Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$
Quick ratio	$\frac{\text{Current assets-inventory}}{\text{Current liabilities}}$
Receivables turnover	$\frac{\text{Net annual sales}}{\text{Average receivables}}$
Efficiency	
Total asset turnover	$\frac{\text{Net annual sales}}{\text{Average total net assets}}$
Net fixed assets turnover	$\frac{\text{Net annual sales}}{\text{Average net fixed assets}}$
Equity turnover	$\frac{\text{Net annual sales}}{\text{Average equity}}$
Profitability	
Net profit margin	$\frac{\text{Net profit}}{\text{Net annual sales}}$
Return on owner's equity	$\frac{\text{Net profit-preferred dividend}}{\text{Average common equity}}$
Leverage	
Debt-equity ratio	$\frac{\text{Total debt}}{\text{Total equity}}$

About the authors

Wang Anquan

Wang Anquan is Master of School of Management, Zhejiang University, majored in human resource management and innovation management. Email: chic_wangaq@sina.com

Jin Chen

Jin Chen is Professor of Zhejiang University, vice-director of Research Center for "Innovation & Development" (RCID) of Zhejiang University, is a famous scholar of innovation in China. He specializes in innovation management, innovation policy, and system dynamics, published more than ten books in innovation management and more than 200 papers in various journals. E-mail: cjhd@cma.zju.edu.cn

Irene K.H. Chew

Irene K.H. Chew is Associate Professor of Strategy, Management and Organizations at the Nanyang Business School at the Nanyang Technological University in Singapore, worked in Singapore and England before joining academia. She has published in international journals on topics related to job design, leadership, stress, executive compensation, unions and human resource management. Her current research interests include organisational flexibility, strategic human resource management and cross-cultural Studies. E-mail: asjheng@ntu.edu.sg

Yun-Hwa Chiang

Yun-Hwa Chiang is a faculty member in the Department of Management at Ming-Chuan University, Taiwan. His current research interests include strategic human resource management, compensation and performance management. E-mail: hui3789@ms18.hinet.net

Eunseong Cho

Eunseong Cho is a post-doctoral researcher at KAIST Graduate School of Management, Korea. He received his MS, BS, and PhD from KAIST. His current research interests are marketing and R&D's sociocultural differences, interfunctional conflict, and departmental power in new product development. E-mail: alejwh999@hotmail.com

Jo M.L. van Engelen

Jo M.L. van Engelen is Professor for Business Development and Business Research Methods at the Faculty of Management and Organization at the University of Groningen, The Netherlands. In addition he works as consultant and board member of several leading companies in The Netherlands. His main research is concentrated on the execution of innovation activities in general. E-mail: vanengelen@compaqnet.nl

J. Kratzer

J. Kratzer is Assistant Professor for Business Development and Strategy at the Faculty of Management and Organization at the University of Groningen, The Netherlands.

Currently his main research interests concern human factors and human networks in innovation processes. In different empirical studies he investigated the human side of innovation processes and its impact on different performance aspects, for instance creativity, and under different circumstances, for example a high degree of virtuality. E-mail: j.kratzer@rug.nl

Mushin Lee

Mushin Lee is a Professor at the Korea Advance Institute of Science and Technology (KAIST), Korea. He received his BL and MPA degrees from Seoul National University, Korea, and his PhD degree from Carnegie-Mellon University, Pittsburgh, PA in 1977. His current research interests are project and personnel evaluation and management. E-mail: mlee@kaist.ac.kr

Roger Th. A.J. Leenders

Roger Th. A.J. Leenders is Associate Professor for Business Development and Strategy at the Faculty of Management and Organization at the University of Groningen, The Netherlands. His current research focuses on the positive and negative effects of social networks on organizations in general, and innovation activity in particular. He is mainly interested in how social networks assist or obstruct the performance of innovation teams and their member. E-mail: r.t.a.j.leenders@rug.nl

Arne Stjernholm Madsen

Arne Stjernholm Madsen is currently employed by Novozymes in Denmark as an Innovation Manager. From 1997 to 2001 he was a business developer at Ericsson Denmark. Mr Madsen has also worked as an independent consultant for many years and his key area of interest is the intersection between innovation and the minds of individuals as well as organizations. Since 1997 he has been president for an independent institution called "The Initiative for Creativity and Innovation", whose members include individuals as well as organizations interested in exploring creativity and innovation. E-mail: astm@novonordisk.com

Basu Sharma

Basu Sharma is currently a Professor of Business Policy, Human Resource Management and E-commerce at the University of New Brunswick in Fredericton, New Brunswick, Canada. He has authored, co-authored, and edited over 50 publications including five books, a dozen book chapters, and over three dozen scholarly papers in peer-reviewed journals on a variety of topics. His current research interests are in the areas of human resource management, executive compensation, digital divide and ASEAN industrial relations. E-mail: bsharma@unb.ca

Hsi-An Shih

Hsi-An Shih is an Assistant Professor in the Institute of International Business at National Cheng Kung University, Taiwan. His current academic research focuses on strategic human resource management, knowledge management and international human resource management. E-mail: hashih@mail.ncku.edu.tw