THE 'BLACK BOX' BETWEEN HUMAN RESOURCE MANAGEMENT PRACTICE AND ORGANISATIONAL PERFORMANCE

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ABSTRACT

Recent HRM research finds a collectively held value system amongst workplace members to be a pivotal characteristic evident in successful organisations. It is considered a strong sense of shared values, developed and reinforced through supportive HRM practices, help to foster desirable work attitudes, and this, in turn, leads to superior individual and hence firm performance. This study examines this relationship and finds relatively little value congruence to actually exist amongst different organisation groups. Moreover, when the relationship between values and attitudes is examined, values are found to have a strong impact on attitudes, but when this impact is viewed in conjunction with HRM practice, it becomes negligible. The researchers conclude that while values play a role in reinforcing desirable workplace attitudes, it is the HRM practices themselves that have the greatest influence. Practitioners are therefore cautioned to be wary of an agenda that sees the development of a shared value system as the key to superior firm performance. Instead it is suggested the values of the organisation should be considered as the foundation from which a set of mutually reinforcing and supportive HRM practices can be developed and implemented.

Keywords: Human Resource Management and Organisational Performance.

Introduction

Human Resource Management (HRM) adopts a proactive approach to people management and places a heavy emphasis on the relationship between the style of people management adopted and the performance outcomes achievable by the firm. HRM largely built itself around the resource-based view of the firm (Barney, 1991). This view posits a sustained competitive advantage could be achieved where resources are (a) rare; (b) difficult to copy; (c) not readily substituted; and (d) capable of adding value to the firm. Building on this work Huselid *et al.* (1997) popularised a view that saw people as a potential resource – a *human* resource - capable of providing firms with this advantage. One focus for researchers now is examining the relationship between the input of HRM practices and firm-level performance outcomes (Arthur, 1994; Youndt *et al.*, 1995; Huselid, 1995). The actual transformation process that occurs in the HRM-performance relationship remains a somewhat indefinable phenomenon (Marchington and Grugulis, 2000). Often referred to as the 'black box', the intervening or intermediary linkages that exist between the input of best practice HRM and the subsequent output of good firm performance have, to date, not been clearly established (Hope-Hailey *et al.*, 2005; Ferris *et al.*, 2004; Wright and Haggerty, 2004; Ferris *et al.*, 1999). The actual workings

of the 'black box' thus remains somewhat 'mysterious' and elusive. (Boseli *et al.*, 2005: 77). This research aims to explore how individual perceptions about HRM practice, shared values, organisational commitment, satisfaction, and employment relations climate interrelate with each other. In doing so it helps to assess whether a shared value system should be considered a significant part of the 'black box'.

The HRM-firm performance relationship

Inputs - Many researchers have focused on the compilation of lists of best practices in their efforts to achieve competitive advantage (Pfeffer, 1998; Huselid *et al*., 1997; Youndt *et al.*, 1996; Wood and Albanese, 1995). Conventional wisdom was that these 'best' practices would produce superior performance (Deery and Iverson, 2005) by increasing the commitment of the workforce through shaping their attitudes and behaviours. Those HRM practices considered most effective in achieving advantage, along with the rationale for their effectiveness, include teamwork, egalitarianism, participation, autonomy and so on (for a fuller discussion see the work of Burke, 2006; Purcell *et al.,* 2006; and Wood,1995).

Outputs - Working simultaneously alongside, and in many cases in conjunction with studies attempting to identify best HRM practices, was a related research agenda that sought to establish a link between the use of HRM practices and the outcome of firm performance. Over the past decade many studies exploring this relationship have appeared in the literature (Guest *et al.*, 2003; Guthrie, 2001; Huselid *et al.*, 1997; Delaney and Huselid, 1996). These studies mainly use firm-level indicators including profit; market value; market share; sales increases; productivity levels; and the like as measures of performance. Most find overwhelming support for a relationship between HRM practice and the aforementioned outcomes. Of interest, however, is that while these studies were predicated on the notion HRM leads to firm advantage by facilitating desirable worker attitudes and behaviours, this intermediary phase of the relationship has largely been ignored in the research, prompting some to refer to this facet of the HRM-performance relationship as the 'black box' (Boselie *et al.*, 2005).

The 'Black Box' - Recognition that this relationship needed investigation resulted in the development of a new agenda for HRM research which required the acquisition of specific knowledge about the causes and nature of attitudinal and behavioural changes resulting from HRM. A few models have since been developed which attempt to map out all the relationships, including the intermediary ones, in the HRM-performance chain (see for example Paauwe and Richardson, 1997; Becker *et al.*, 1997). The intermediary phase of this relationship at this stage includes the outcomes of satisfaction, motivation, retention, social climate, involvement, trust and loyalty (Paauwe and Richardson, 1997). The list should not, however, be considered definitive or complete. For example, with respect to the former, Truss *et al*. (2005: 50) comment: 'A primary issue in the development of conceptual models for research in this area is which variables should be included in making the step … to firm performance'. In relation to the latter, Boselie *et al.* (2005: 77) report scant attention has been paid to examining the 'linking mechanisms' and the 'mediating effects of key variables' in this relationship. It therefore comes as no surprise that a recent study suggests there is a further item that may warrant inclusion in this list. The existence of a 'Big Idea' has also been identified as a key factor evident in firms with superior firm performance (Purcell *et al.*, 2006: 22). Essentially, the 'Big Idea' represents a strong organisation culture - a culture that emanates from its mission; is strongly embedded within the firm and all its stakeholders; and, most importantly comprises a set of organisation values that are collectively shared by *all* workplace members. Currently we can only speculate about why shared values might contribute to superior firm performance, and how these might develop; however, their assumed importance to behaviour and performance is not a new notion. Behaviourally, Employment Relations (ER) scholars have long recognised that values and beliefs (referred to as ideology in the ER literature) have persuasive qualities; and from the performance perspective, Waterman *et al.*'s (1980) research also identified shared values[2] as a crucial feature of successful firms, suggesting the infusion of "guiding concepts – a set of values and aspirations" which are "often unwritten", and which go "beyond the conventional formal statement of corporate objectives" and are present in most "superior" performing firms. These values come to represent the fundamental values of the firm, and the drive for accomplishment of them by members, they conclude, is the feature that 'pulls an organisation together' (Waterman, *et al*., 1980: 25). A lack of 'consistent and widely shared values',

on the other hand, is cited as a feature shared by 'less successful organisations' (Ulrich, 1984: 122). At present, supposition and speculation appears to be all we have on the value of values to the HRM-firm performance relationship. This research therefore takes the necessary first step in examining the relationship between individual perceptions of HRM practice, shared values and several other work-related attitudes to see how these might interrelate with each other. The aim is to provide some preliminary evidence that can be used in making a determination as to how and whether a shared value system might belong within the framework of relationships currently locked deep inside the 'black box'.

Methodology

The aim of this study is to explore the relationship between perceptions about HRM practice, shared values and several other work-related attitudes. This study followed earlier research which surveyed a randomly selected sample of HR Managers from a range of small, medium and large organisations, from four main New Zealand cities. some of the managers agreed to further research on a cross section of their workforce. The final sample is 481 respondents – comprising 156 managers, 86 supervisors, and 239 workers from 27 firms.

Measures - The survey comprised four parts. Part one of the survey asked respondents to report on a range of demographic questions including sex, age, ethnicity, occupation, service, respondent's role in the organisation, and features of their organisation including industry, sector, and size. Part two of the survey measured perceptions about HRM practice, using an adapted version of the measure (a = .801) developed by Wood (1995). Twelve statements were included (examples include: *Job design is such that skills and abilities are used to their fullest extent; The predominant system of organising work in this organisation is team-working*). Using a five-point Likert scale (1 = strongly disagree; 5 = strongly agree), respondents were asked to indicate the extent to which they agree each practice occurs in their organisation (Delery, 1998). Four employee workplace attitudes were measured - organisational commitment, job satisfaction, employment relations climate and perceptions about shared values. Organisational commitment was measured using three statements (a = 0.759), adapted from the

measure originally developed by Mowday *et al.* (1979). Job Satisfaction was measured using three statements (a = 0.824), taken from a measure developed by Warr *et al.* (1979) and one statement each assessed views on the current employment relations climate, and the extent to which respondents believed ??? exists between the goals of the organisation and of employees.

Results

An exploratory examination, at the organisation-level, of the extent to which a strongly held sense of shared values exists between three workplace groups – managers, supervisors, and workers was first conducted. Analysis revealed a wide degree of discrepancy exists amongst these three groups, with a number of these differences being statistically significant. Within-group data show the manager group to report the strongest sense of shared values. It is found that in 44 per cent (n=12) of organisations, managers reported a stronger sense of shared values compared with the supervisor group (in 15 per cent (n=4) of organisations this group held the highest score) and workers (in 30 per cent (n=8) organisations this group held the highest score). When data from the entire sample was tested, mean group differences are also evident (managers M = 3.56, SD 0.896; supervisors M = 3.35, SD = 1.182; and workers M = 3.30, SD 1.193), but these differences are not found to be statistically significant (X^2 = 3.651, p > 0.161). In only 3 of the 27 participating firms was a reasonable degree of consensus found supporting a view a shared value system existed.

Ulrich, along with Purcell et al.'s (2006) conceptualisation of shared values implies *all* workforce members should share the goals of the firm for superior performance to be achieved – thus a shared value system appears to be viewed as a firm-level phenomenon. These data show a collectively-held value system (whatever these values may be) is a perception held by some groups in some organisations; but it is certainly not a characterising feature of all groups in all organisations. Indeed a collectively shared sense of values is a phenomenon found to be present in relatively few organisations, with a strongly held sense of shared values across all three groups evident in only five of the participating organisations (19 per cent). Fostering a collectively-held value system at the group or firm level may therefore be a difficult task.

However, attitudinal outcomes occur at the individual, not the group or firm level. This means that a goal of the firm might idealistically be for *all* members to be highly committed and hence motivated, any impact is going to be dependent on the perceptions of individuals within the firm and not the entire workforce. This is not to suggest that potentially an exponential or even optimum improvement in firm performance cannot be realised should all members share the goals of the firm, relative to the degree of improvement that comes from having a number of individuals singularly perceiving a shared value system to exist. Instead it is suggesting the focus of analysis necessarily needs to be on individuals in the first instance and not the workforce in its entirety. This level of analysis is the focus in the next section of this study.

HRM practices and attitudinal outcomes - The intermediary relationships in the HRM-firm performance relationship using individual-level data are now examined. In this analysis perceptions about shared values and their relationship to other desirable work-related attitudinal outcomes, and perceptions about HRM practices is explored. Table 1 reports the mean scores and correlations for all variables.

Table 1: Correlations

The mean scores suggest the sample has only moderate levels of the desired work-related attitudes, and correspondingly HRM appears to be practised to a moderate degree within the participant firms in this study. Data reveal relationships between perceptions about shared values, the work-related attitudinal outcomes of organisational commitment, job satisfaction and employment relations climate and perceptions about HRM practices to be, in nearly all cases, highly correlated and statistically significant. Exceptions where relatively low levels of correlation were found were between all the attitudes examined and the HRM practices of job security, egalitarianism and job flexibility. Regressions (see Tables 2 (a-d)) were conducted to establish the impact of HRM on the various attitudinal outcomes. Aggregate measures of organisational commitment and job satisfaction were calculated and used in this analysis.

Tables 2(a-d): Regressions: HRM Practice and Shared Values, Organisational Commitment, Job Satisfaction, Employment Relations Climate

The relation between HRM practice and shared values reveal 7 of the 12 practices to impact values (see Table 2 (a)), with 44 per cent of the variance in values being explained by them. However, of these seven practices, one in particular and only 3 in total (job design (26 per cent); participation (7 per cent) and work/life balance 4 per cent)) have any sizeable effect. The direct relationship between HRM practice and organisational commitment, job satisfaction and employment relations climate was then examined. These data revealed the HRM practices explained 44 per cent of the variance in organisational commitment and 45 per cent of the variance in job satisfaction (see Tables 2 (b), (c) and (d)). Job design and work/life balance were again found to have considerable explanatory power. Less explanatory variance was evident for employment relations climate (33 per cent), and most of the variance (21 per cent) is explained by participation with a further seven percent by work/life balance.

To see if values play a linkage role between HRM practices and the three other attitudinal outcomes, regressions, as well as partial correlations, were performed using aggregated variable data for HRM practice, organisational commitment and job satisfaction. As well as this analysis, attitudinal data from those five firms identified as having a relatively strong sense of shared values amongst the three groups studied was compared to attitudinal data from the five firms which had the lowest consensus with regard to a sense of shared values enabling the attitudinal benefits that might accrue from having a collectively-held value system amongst *all* workforce members to be explored. The first analysis used t-tests on comparative data. It showed a number of statistically significant differences to exist between those firms where a strong sense of shared values amongst the workforce was evident and those where this was not the case. HRM practice exceptions include promotional prospects, egalitarianism and job security. Across nearly all of the relationships examined increased levels of attitudinal outcomes were found for those firms with a strong sense of shared values (see Table 3). The perceived strength of HRM practice, however, was also much stronger in these firms.

Table 3: HRM Practice and Attitudinal Outcomes by Firms with Strong and Weak Value Systems

When shared values is placed in a two-step regression model alongside of HRM practice (see Table 4), it is found to account for less than one per cent of the explained variance in organisational

commitment and employment relations climate, and just over one per cent of job satisfaction. Partial correlations show all five of the variables to drop in strength when an individual variable was controlled for (see Table 5). This suggests no one particular variable is more significant than another, with each partially mediating the others. Thus it appears perceptions about shared values, as with the other attitudes examined, are likely outcomes of HRM practice, with all having a contributory role to play in terms of mediating the strength of this relationship. Put together these data suggest perceptions about shared values do not play a linkage role in facilitating desirable attitudinal outcomes – in effect, shared values systems appears to be an outcome in itself.

Table 4: Regressions
Table 5: Partial Correlations

Discussion and Concluding Remarks

The main focus of this study was an exploration of some of the relationships hidden inside the 'black box'. In this regard, perceptions about HRM practice, and a range of attitudinal outcomes were assessed. Purcell *et al.* (2005, p. ix) identified shared values as a potential item for inclusion in the black box, finding it as a feature evident in superior performing firms as well as being highly related to the outcome of organisational commitment. Preliminary analysis of data in this study lent support for this relationship. Further analysis revealed, however, that relationships between these variables existed only in isolation; that is a relationship was evident between perceived strong usage of HRM practices and a strong sense of shared values; and similarly, between HRM practices and the other three desirable work-related attitudes examined – organisational commitment, job satisfaction and employment relations climate. It was unclear though whether shared values should be considered an outcome of HRM practices, or rather an intermediary linkage in the relationship between HRM activities and the other attitudinal outcomes examined. Conventional wisdom and much of the HRM literature supports the latter. While this study did not explore causality, the results lead us to tentatively suggest, at this stage, it is perceptions about HRM practice that seems to be a more significant factor, and hence the most likely determinant of desirable attitudinal outcomes.

However, not all HRM practices appear to be equally influential in this regard. Indeed, this study consistently identifies three particular practices to account for a considerable proportion of the variance in all four outcomes – these being job design, participation and work/life balance. To some extent, these findings are similar, or at least do not contradict, those found by Purcell *et al.* (2005), whose study found supervisors to consider career opportunities, training and some form of participation to be important to them; workers to consider job challenge, job security, career opportunities and participation as being important; while professionals considered job challenge, performance-based pay, work/life balance and employment relations climate important.

So while a shared value system, which is the emerging new player trying to gain entry into the black box, appear strongly related to HRM practice, it does not appear to contribute, at least in relative terms, to enhancing levels of the three other work-related attitudes examined. HRM practice itself is the strongest determinant of this outcome, with a strongly held sense of values by an individual appearing to be more likely a by-product of effective HRM within the organisation. It may however serve to act as pivotal reinforcement for messages sent to the workforce about the purposes of the practices themselves. Future research needs to explore this possibility.

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Table 2 (a): Regression HRM Practice and Shared Values

HRM Practice	Adjusted R Square	F-Statistic	Sig.
Job Design	.262	145.850	.000
Participation	.334	103.227	.000
Work/Life Balance	.376	82.635	.000
Promotional Prospects	.398	68.279	.000
Egalitarianism	.416	58.993	.000

Table 2 (b): Regression HRM Practice and Organisational commitment

HRM Practice	Adjusted R Square	F-Statistic	Sig.
Job Design	.272	154.865	.000
Work/Life Balance	.381	127.558	.000
Training and Development	.407	95.370	.000
Participation	.416	74.489	.000
Communication	.424	61.750	.000
Teamwork	.435	53.816	.000
Job Security	.441	47.339	.000

Table 2 (c): Regression HRM Practice and Job Satisfaction

HRM Practice	Adjusted R Square	F-Statistic	Sig.
Job Design	.274	156.722	.000
Participation	.349	111.283	.000
Work/Life Balance	.387	87.575	.000
Promotional Prospects	.408	72.099	.000
Egalitarianism	.428	62.543	.000
Teamwork	.440	54.909	.000
Job Security	.445	48.122	.000

Table 2 (d): Regression HRM Practice and Employment Relations Climate

HRM Practice	Adjusted R Square	F-Statistic	Sig.
Participation	.210	110.269	.000
Work/Life Balance	.282	82.064	.000
Job Design	.312	63.192	.000
Teamwork	.331	51.879	.000

Table 1: Correlations[↖]

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Shared Values	3.39	1.10																			
2. Organ. Commitment (1)	3.53	0.90	.399*																		
3. Organ. Commitment (2)	3.58	1.17	.420*	.581*																	
4. Organ. Commitment (3)	3.60	1.19	.349*	.439*	.545*																
5. Job Satisfaction (1)	3.75	0.96	.362*	.415*	.577*	.546*															
6. Job Satisfaction (2)	3.46	1.14	.499*	.542*	.730*	.569*	.708*														
7. Job Satisfaction (3)	3.46	1.02	.469*	.580*	.551*	.458*	.494*	.628*													
8. ER Climate	3.85	0.99	.436*	.546*	.510*	.380*	.440*	.531*	.603*												
9. Training & Development	3.36	1.24	.409*	.354*	.437*	.357*	.360*	.477*	.488*	.363*											
10. Personal Goals	3.00	1.32	.466*	.348*	.426*	.296*	.313*	.448*	.440*	.397*	.632*										
11. Promotional Prospects	2.77	1.33	.440*	.278*	.396*	.238*	.328*	.449*	.392*	.285*	.434*	.473*									
12. Communication	3.58	1.29	.419*	.292*	.304*	.185*	.207*	.296*	.343*	.314*	.381*	.418*	.301*								
13. Participation	3.18	1.31	.522*	.351*	.451*	.293*	.322*	.438*	.427*	.449*	.403*	.486*	.349*	.456*							
14. Teamwork	3.79	1.09	.416*	.301*	.341*	.295*	.293*	.392*	.333*	.367*	.377*	.343*	.329*	.436*	.375*						
15. Performance Appraisal	3.63	1.56	.323*	.225*	.318*	.196*	.255*	.313*	.274*	.294*	.396*	.404*	.348*	.386*	.357*	.277*					
16. Egalitarianism	3.43	1.62	.300*	.156*	.191*	.133*	.160*	.139*	.123☎	.101☎	.130☎	.158*	.138☎	.112☎	.231*	.173*	.155*				
17. Job Security	3.37	1.56	.296*	.172*	.180*	.199*	.082*	.151*	.160*	.141**	.185*	.181*	.213*	.212*	.214*	.173*	.162*	.263*			
18. Job Flexibility	3.71	2.21	.216*	.170*	.232*	.158*	.210*	.248*	.167*	.182*	.186*	.154*	.186*	.341*	.244*	.160*	.184*	.102*	.047		
19. Job Design	3.25	1.15	.530*	.374*	.544*	.352*	.414*	.567*	.498*	.440*	.489*	.531*	.451*	.449*	.519*	.336*	.400*	.208*	.193*	.226*	
20. Work/Life Balance	3.36	1.14	.410*	.486*	.428*	.360*	.325*	.452*	.562*	.421*	.338*	.342*	.259*	.345*	.333*	.287*	.185*	.174*	.114☎	.157*	.354*

[↖] All data are perceptual * $p < .001$; ☎ $p < .05$ Scale: 1 = Strongly Disagree to 5 = Strongly Agree

Table 3: HRM Practice and Attitudinal Outcomes by Firms with Strong and Weak Value Systems

	Low Agreement (n=53)		High Agreement (n=62)		t-test	Sig.
	Mean	SD	Mean	SD		
1. Organ. Commitment (1)	3.42	0.98	3.81	0.76	-2.390	.018☎
2. Organ. Commitment (2)	3.26	1.33	4.19	0.90	-4.432	.000*
3. Organ. Commitment (3)	3.55	1.24	4.02	0.94	-2.284	.024☎
4. Job Satisfaction (1)	3.47	0.94	4.18	0.66	-4.395	.000*
5. Job Satisfaction (2)	2.89	1.24	4.00	0.81	-5.394	.000*
6. Job Satisfaction (3)	3.18	1.16	3.94	0.84	-3.816	.000*
7. ER Climate	3.37	1.12	4.35	0.68	-5.798	.000*
8. Training & Development	3.06	1.40	3.73	1.13	-2.850	.005☎
9. Personal Goals	2.75	1.45	3.37	1.20	-2.487	.014☎
10. Promotional Prospects	2.55	1.20	2.79	1.47	-0.934	.352
11. Communication	3.44	1.40	3.90	1.14	-1.932	.056
12. Participation	3.04	1.42	3.56	1.26	-2.100	.038☎
13. Teamwork	3.57	1.15	4.05	0.91	-2.468	.015☎
14. Performance Appraisal	2.71	1.73	3.92	1.46	-4.033	.000*
15. Egalitarianism	3.62	1.30	3.70	1.47	-0.290	.772
16. Job Security	3.56	1.30	3.66	1.48	-0.392	.695
17. Job Flexibility	3.28	1.29	3.92	1.16	-2.779	.006☎
18. Job Design	3.06	1.40	3.71	0.85	-3.054	.003☎
19. Work/Life Balance	3.13	1.08	3.85	1.04	-3.475	.001*

* $p < .001$; ☎ $p < .05$ Scale: 1 = Strongly Disagree to 5 = Strongly Agree

Table 4: Regressions*

	Adjusted R Square	F-Statistic	Sig.
Organisational commitment			
Model 1 (HRM Practice)	.438	27.791	.000
Model 2 (Values)	.443	26.202	.000
Job Satisfaction			.000
Model 1 (HRM Practice)	.507	36.363	.000
Model 2 (Values)	.518	35.004	.000
Employment Relations Climate			
Model 1 (HRM Practice)	.354	18.288	.000
Model 2 (Values)	.366	17.753	.000

* Independent Variables = HRM Practices & Values, Dependent Variable = Attitudes

Table 5: Partial Correlations

	Mean	SD	1	2	3	4
Pearson Correlations						
1. Shared Values	3.39	1.10				
2. Organisational commitment	3.57	0.91	.468*			
3. Job Satisfaction	3.55	0.90	.518*	.789*		
4. ER Climate	3.85	0.99	.436*	.570*	.611*	
5. HRM Practice	62.58	15.41	.648*	.521*	.556*	.460*
Partial Correlations			**1**	**2**	**3**	
Control: Shared Values						
1. Organisational commitment						
2. Job Satisfaction			.714*			
3. ER Climate			.459*	.471*		
4. HRM Practice			.295*	.333*	.264*	
Control: Organisational commitment						
1. Shared Values						
2. Job Satisfaction			.295*			
3. ER Climate			.241*	.285*		
4. HRM Practice			.533*	.306*	.253*	
Control: Job Satisfaction						
1. Shared Values						
2. Organisational commitment			.402**			
3. ER Climate			.188*	.213*		
4. HRM Practice			.493*	.125**	.203*	
Control: ER Climate						
1. Shared Values						
2. Organisational commitment			.292*			
3. Job Satisfaction			.369*	.673*		
4. HRM Practice			.549*	.323*	.393*	
Control: HRM Practice						
1. Shared Values						
2. Organisational commitment			.221*			
3. Job Satisfaction			.269*	.702*		
4. ER Climate			.211*	.440*	.453*	

* $p < .001$; ** $p < .05$