

Issues in People Management

**Impact of People Management Practices
on Business Performance**

Malcolm G Patterson

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Institute of Work Psychology

University of Sheffield

and

Centre for Economic Performance

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INSTITUTE OF PERSONNEL AND DEVELOPMENT

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Typeset by Paperweight

Printed in Great Britain by
The Cromwell Press, Wiltshire

British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN 0 85292 725 8



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AND DEVELOPMENT

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Registered Charity No. 1038333.

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Registered office as above.

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Preface

Managers know that people make the critical difference between success and failure. The effectiveness with which organisations manage, develop, motivate, involve and engage the willing contribution of the people who work in them is a key determinant of how well those organisations perform.

Yet there is surprisingly little research demonstrating the causal links between people management and business performance. Many studies describe particular management practices and styles which are claimed to lead to more motivated, or satisfied, or productive employees. However, there are few that apply rigorous, comparative analysis over time to the individual elements of management activity and measure the contribution they make to performance.

When the IPD commissioned such an analysis from the Institute of Work Psychology at Sheffield we did not know what the results would show. We were however aware that in the course of a major ongoing study the Institute had built up extensive and detailed information about a large number of manufacturing companies. This includes material based on lengthy interviews with senior managers about a wide range of company activities, the findings of employee attitude surveys and economic performance data.

The study shares some of the characteristics of recent US research in that it focuses on measuring the relationship over time between people management and other managerial inputs, and business performance outputs. However, it also has some distinctive features: for example, companies are predominantly single site and single product operations, so as to increase the relevance and comparability of the data collected. The measurement framework is also extremely comprehensive.

It is necessary to spell out this background because the results of the study are so remarkable. They show decisively that people management practices have a powerful impact on performance. Whether performance is measured in terms of productivity – which might be expected to have stronger links with the way in which companies manage their people – or profitability, in both cases the effect is substantial.

Even more dramatic are the comparisons with other management practices, including use of competitive strategies, quality focus and investment in research and development. None of these other management practices appear to have anything like the same effect on performance as people management. The study looked additionally at employee satisfaction and commitment, and organisational culture. The findings here underline the general message that it is how companies manage their employees that is crucial to business success.

In the Institute's view these findings deserve the widest possible audience. They are not just relevant to people management practitioners but also to line managers, boards of directors and investors. What should companies do to raise their performance? The answer strongly suggested by this research is to look first at how they manage their people.

There is of course no single model of good practice that all firms should adopt: this research does not imply that there is. The list of practices identified and measured in the course of this study ranges from selection and recruitment through appraisal and team working to incentive compensation systems. However, the findings do show two ‘clusters’ of practices that are particularly significant:

- acquisition and development of employee skills (including selection, induction, training and use of appraisals);
- job design (including skill flexibility, job responsibility, variety and use of formal teams).

These factors would generally be seen as important elements in ‘progressive’ or ‘high performance’ work practices.

Are such progressive people management practices the only route to enhanced business performance? It is a fact of life that some companies are profitable despite making little or no use of such practices. These companies may possibly be in production sectors where jobs require little input from the employee other than sustained effort; or in small service operations competing on price rather than quality.

However, where businesses face international competition; where they are committed to excellence and quality standards; where creativity and innovation are essential to moving the business forward – employee commitment and a positive ‘psychological contract’ between employer and employee are fundamental to improving performance. This message emerges loud and clear from the findings of this report.

This research is not the end of the road in terms of researching the link between people management and business performance. Essentially, this study relies on statistical techniques to paint a picture which has wide validity. Other approaches, such as case studies, will be needed if we are to put flesh on the bones and get a better understanding of the casual links between practice and performance and how they work in specific contexts.

The findings of this study deserve a wide audience. They should be of interest to all those concerned with raising the performance of organisations in the United Kingdom, and with increasing our national competitiveness.

Mike Emmott
IPD Policy Adviser (Employee Relations)

Executive Summary

What factors most influence company performance? In the latter half of the twentieth century, a litany in many companies has been ‘our employees are our most valuable resource’. This rhetoric has been so often repeated that it is now a cliché. Despite this, many small and medium sized enterprises still neglect to invest resources, time and creativity in the management of people within organisations (West, Lawthom, Patterson and Staniforth, 1996).

But the two assumptions of this position need to be carefully tested. These are: *that people are the most valuable resource of an organisation, and that the management of people makes a difference to company performance.*

In this report, we address these assumptions directly. But rather than focusing simply on the traditional question of whether and which human resource management practices most affect performance, we ask four central questions:

- 1 Is there any relationship between employee attitudes (job satisfaction and commitment to their organisations) and the performance of their companies?
- 2 Does organisational culture predict the subsequent performance of organisations?
- 3 Do human resource management practices make a difference to company performance and, if so, which of these practices appear most important?
- 4 How do other managerial practices, such as competitive strategies, emphasis on quality, investment in research and development, and investment in technology, compare in terms of their influence upon company performance with the influence of human resource management practices?

Our fundamental aim in this report is to aid managers in determining where to direct their efforts in order to have most impact upon the performance of their companies. We have drawn upon data gathered from an intensive ongoing ten-year study of over a hundred small and medium-sized manufacturing enterprises in the United Kingdom. These data provide a clear picture of the links between various managerial practices and company performance.

Question 1: Do employee attitudes predict company performance?

- *Job satisfaction explains 5 per cent of the variation between companies in change in profitability after controlling for prior profit. Organisational commitment also explains 5 per cent of the variation.*
- *In relation to change in productivity, job satisfaction explains 16 per cent of the variation between companies in their subsequent change in performance. Organisational commitment explains some 7 per cent of the variation.*

These results demonstrate the relationship between employee attitudes and company performance. They suggest that managers of organisations eager to promote productivity and profitability should pay close attention to the attitudes

of their employees and how they can be influenced to be more positive. The results demonstrate that the more satisfied workers are with their jobs the better the company is likely to perform in terms of subsequent profitability and particularly productivity.

Question 2: Does organisational culture significantly predict variation between companies in their performance, and if so, which aspects of culture appear most important?

- *Cultural factors accounted for some 10 per cent of the variation in profitability between companies between the two periods measured during the study. The variable which most explained change in profitability was concern for employee welfare.*
- *In relation to change in productivity, the results were even more striking. We can explain some 29 per cent of the variation between companies in change in productivity over a 3 or 4 year period in human relations terms. This is clear confirmation of the importance of organisational culture in relation to company performance. Concern for employee welfare was by far and away the most significant predictor.*

Question 3: Do human resource management practices explain variation between companies in profit and productivity?

- *When we examine change in profitability after controlling for prior profitability, the results reveal that human resource management (HRM) practices taken together explain 19 per cent of the variation between companies in change in profitability. Job design (flexibility and responsibility of shopfloor jobs) and acquisition and development of skills (selection, induction, training and appraisal) explain a significant amount of the variation. This demonstrates the importance of HRM practices.*
- *In relation to productivity, HRM practices taken together account for 18 per cent of the variation between companies in change in productivity. Job design and acquisition and development of skills explain a significant proportion of the variation.*

This is the most convincing demonstration of which we are aware in the research literature of the link between the management of people and the performance of companies.

Question 4: Which managerial practices are most important in predicting company performance?

Given that most of the analyses that we have conducted indicate very strong relationships between employee attitudes, organisational culture, HRM practices and company performance, it is reasonable to ask 'What factors do *not* account for significant variation between companies?'. Another way of putting this question is 'which managerial practice are most important in explaining variation between companies in performance?'. In order to answer this question we identified four areas of managerial practices which have traditionally been thought to influence company performance. These are business strategy, emphasis on quality, use of

-x-

advanced manufacturing technology and research and development investment.

- *The results reveal that strategy explains 2 per cent of the change in profitability in companies and less than 3 per cent of the change in productivity in companies. These results are not statistically significant.*
- *Emphasis on quality explains less than 1 per cent of the change in profitability within companies over time and less than 1 per cent of the change in productivity. Of course it may be that these factors explain more of the variation between companies over a longer period of time, but as yet we have no data which bear upon this.*
- *Emphasis on, and sophistication of, technology explains only 1 per cent of the variation between companies in change in productivity over time, and 1 per cent of the variation between companies in change in profitability.*
- *Expenditure and emphasis on Research and Development accounts for 6 per cent of the variation in productivity, though this is not a statistically significant finding. It also accounts for 8 per cent of the variation in change in profitability between companies.*

Compared with these four domains (R&D, technology, quality and strategy) HRM practices, which explain 18 per cent of the variation in productivity and 19 per cent of the variation in profitability in companies, are the more powerful predictors of change in company performance.

Overall, these results very clearly indicate the importance of people management practices in predicting company performance. The results are unique, since no similar study has been conducted which compares the influence of different managerial practices upon performance. The results suggest that, if managers wish to influence the performance of their companies, the most important area they should emphasise is the management of people. This is ironic, given that our research has also demonstrated that emphasis on HRM is one of the most neglected areas of managerial practice within organisations. The implications are clear.

Chapter 1

The Study

Background

What factors most influence company performance and what can managers do to ensure the effectiveness of their companies? The answers to these questions are, in reality, complex because of the vast number of factors that may influence company performance. These include external factors such as market share and market environment, as well as internal company factors including organisational culture, management styles and human resource management practices. Recently, the increasing level of competition worldwide has led managers and researchers to focus even more sharply on these questions. Reducing labour costs in some countries, particularly in the newly industrialising countries, has raised the level of competitive threat for countries which have been industrialised for some time. There is an increased capacity for diversity and customisation inherent in microprocessor-based technologies, eliminating the cost advantage of mass production. Companies must now compete on the basis of cost, quality and customisation. The pressures on managers to manage the complex and varied influences on company performance are greater than ever before.

The research

The research reported here draws from the work of the Sheffield Effectiveness Programme, based jointly at the Centre for Economic Performance, London School of Economics and the Institute of Work Psychology at the University of Sheffield¹. This ten year longitudinal study (1991-2001) examines market environment, organisational characteristics and managerial practices in over a hundred UK manufacturing companies. The overall aim of the research programme is to determine what factors principally influence company effectiveness. These factors are empirically related to company financial performance. The following data are collected:

- Economic performance data are gathered annually from 1990 to 2000.
- Every two years, senior managers in these companies are re-interviewed on site, for a period of one to two days. Areas covered in the interview include: organisational structure, market environment, competitive strategies, production technology, work design, quality emphasis, 'Just-in-Time' practices, human resource management, and research and development.
- Over half of the companies participated in employee attitude and organisational culture surveys in the first wave of data collection. Questionnaires are distributed to all or a large sample of staff (Lawthom, Patterson, West and Maitlis, 1997). These explore employee attitudes to 15 areas of company functioning, including innovation, training, concern for employee welfare, performance pressure and formalisation, as well as measuring employee job satisfaction and organisational commitment.

Sample and data collection

The sampling strategy required that companies were predominantly single site and single product operations, with less than a thousand employees. These three criteria were adopted for two important methodological reasons. The first of these concerns our research strategy of attempting to describe managerial practices within an organisation in particular domains (eg performance appraisal) by a single summated description. Previously researchers have characterised managerial practices in this way in both large and small organisations, using broad, global descriptions. This ignores the fact that such organisations may span several divisions, sites and product types, and that managerial practices in one area may be quite dissimilar from those in others. The second reason for seeking specificity of organisational type is because comparison of changes within and across organisations over time requires that the organisational types studied are relatively comparable. This particularly relates to size of organisations.

Manufacturing companies throughout the United Kingdom were identified from sector data bases. In addition, a number of companies were identified by local Chambers of Commerce and Trade Associations. Companies from four manufacturing sectors were approached: mechanical engineering, plastics and rubber processing, electrical and electronic engineering, and food and drink, and a small number of companies from other sectors were included in a miscellaneous category. Analysis of the 1988–1992 ratio of labour productivity within firms to labour productivity within the industry, reveals that firms in the sample are similarly productive to the typical firm in the industry².

The data used in the analysis described here relate to 67 UK manufacturing firms³. For 36 of them, we also have employee ratings of organisational culture. The companies range in size from 60 to 1000 employees, averaging 253.

The interviewees

Interviews were carried out with senior managers in each of the organisations which elected to participate in the Sheffield Effectiveness Programme. Usually four or five senior managers participated in the interviews, including the chief executive of the company, production director/manager and often the finance director and human resources director/manager (where there was one). Interviews always took place at the site of company production and in all cases coincided with a tour of the production areas by the researchers. Interviewers were all qualified industrial/organisational psychologists who had received a minimum of two weeks training in administering the interview schedule. All interviews were audio taped. Full details of the content of the interviews can be found in a report produced by West, Patterson, Lawthom, Maitlis and Nicolitsas (1997).

Both prior to and during company visits, researchers sought examples of documentation from senior managers in order that, for example, responses about the existence of strategies relating to HRM, training, equal opportunities, appraisal or quality could be validated by reference to formalised documents produced by the organisations. This material was also used to inform interviewers' judgements about organisational functioning and managerial practices.

On each visit interviewers toured the production plant in order to observe production processes, the technology employed, job design (eg employee autonomy), job cycle time, quality feedback mechanisms, JIT practices, staff facilities, emphasis on safety, etc. These factory tours provided important observational data about the functioning of the companies, which enabled researchers to validate or moderate the responses of managers to the questions posed during the interview. They also provided very important data which enabled interviewers to make judgements about managerial practices and organisational practices from their observations of the shop floor.

Company performance

Three main sources of information are used to determine company performance:

- company accounts
- management accounts
- Central Statistical Office database.

The following measures are used in this report:

- 1 Labour productivity in the firm relative to the industry to which the firm belongs: this is defined as the ratio of sales over employment in the firm, divided by the ratio of sales over employment in the industry.
- 2 Real profits per employee: this is profits before tax, deflated by the producer price index of the industry to which the firm belongs and controlling for size of firm (based on the number of employees).

Performance data for two time periods are employed:

- 1 Subsequent performance: this is the firm's productivity and profitability for the year following measurement of HRM practices, culture and employee attitudes.
- 2 Prior performance: this is the average of the firm's productivity and profitability for the three years prior to measurement of HRM practices, culture and attitudes.

We employ two data analysis strategies to investigate the relationship between people management and performance. First, we relate HRM practices, culture and attitudes to subsequent profitability and productivity. Second, we investigate whether *higher* levels of HRM practices, culture and attitudes are positively related to an *increase* in performance, by controlling for prior performance when predicting subsequent performance.

Organisational culture and employee attitudes

Each company participating in the interviews was offered the opportunity to have an organisational culture survey carried out in their companies. Thirty-six of the companies covered by this report participated, providing responses from 3,500 employees. In most companies, 100 per cent of employees were surveyed, though in companies with more than 500 employees, a 60 per cent random sample was taken. A questionnaire tapping 15 culture dimensions, plus job satisfaction and organisational commitment was sent or handed to employees on site. Further details are available in Lawthom, Patterson, West, and Maitlis (1997). A response rate in excess of 50 per cent was achieved.

Chapter 2

Employee attitudes and performance

Question 1: Do employee attitudes predict company performance?

If even a small percentage of the variation in organisational performance can be explained by employee attitudes, then managers are likely to take considerable interest in the factors that influence employee attitudes. On the other hand, if there is no link between employee attitudes and organisational performance, then those charged with running organisations may well argue that concerns about job satisfaction, for example, are moral and ideological rather than economic issues.

Researchers have traditionally directed most effort towards examining the relationship between attitudes and individual job performance, particularly focusing upon the impact of job satisfaction. The results of a considerable amount of research indicate that there is a relationship, but that it is somewhat weak. Nevertheless, it has been widely argued over the last 40 years that job satisfaction and employee attitudes are likely to be associated with better organisational performance, on the basis that satisfied workers are likely to work harder than dissatisfied workers.

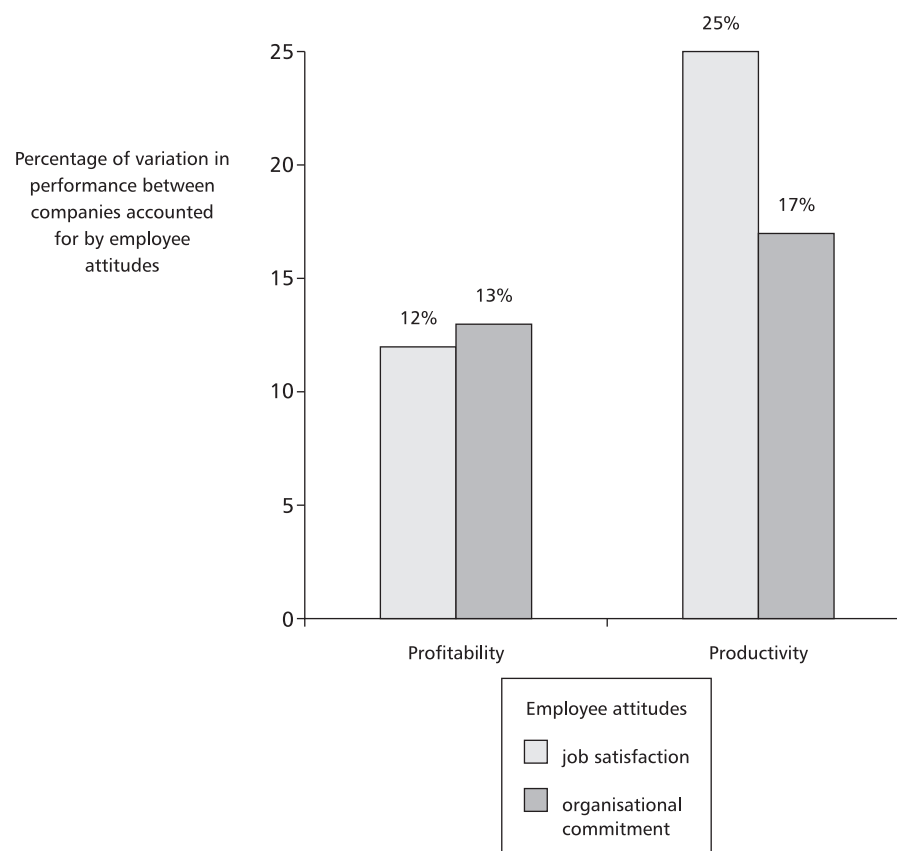
These ideological assumptions about relationships between employee attitudes and company performance are so deeply embedded in the work of organisational scientists that, in many cases, they are taken for granted rather than subjected to critical scrutiny. The evidence of previous research is fairly clear in indicating a weak but significant association between job satisfaction, organisational commitment and individual job performance (Iaffaldano and Muchinsky, 1985; Mathieu and Zajac, 1990). At the organisational level there have been no studies examining relationships between job satisfaction, organisational commitment and company performance.

In the present study job satisfaction and organisational commitment were measured by scales widely used in organisational research (Cook and Wall, 1980; Warr, Cook, and Wall, 1979). Job satisfaction was assessed by 15 items tapping various aspects of work. Employees rated their level of satisfaction with the following features: fellow team members, autonomy to choose work method, job variety, physical working conditions, immediate boss, pay, management worker relations, the way the firm is managed, hours of work, job security, recognition for good work, job responsibility, opportunity to use ability, chances of promotion and attention paid to suggestions. Organisational commitment was measured by a nine-item scale, tapping three interrelated components of employee commitment: identification with, involvement in and loyalty toward the company. A sample statement is 'I feel myself to be part of this company'.

Employee attitudes were measured in 1994 and 1995. The average of employee job satisfaction and organisational commitment was used for each company and these averages were used to predict company performance. Regression analyses⁴ were compiled to determine the extent to which employee attitudes predicted subsequent profitability and productivity.

- The results, depicted in Figure 1, reveal that 12 per cent of the variation between companies in their profitability can be explained by variations in the job satisfaction of their employees. Moreover, 13 per cent of the variation between companies in their profitability can be explained by differences between companies in organisational commitment⁵.
- Some 25 per cent of the variation in subsequent productivity of companies can be explained by job satisfaction of employees, after controlling for size and unionisation. In comparison, 17 per cent of the variation in company productivity is explained by organisational commitment (Figure 1). When both organisational commitment and job satisfaction are examined together, it is job satisfaction which emerges as the most significant predictor of variation between companies in their subsequent performance.

Figure 1: Do employee attitudes predict change in company performance?



The immediate rebuttal of these findings is the argument that positive employee attitudes are a consequence of the company's previous good performance. In effect, the reason that job satisfaction predicts subsequent profitability and productivity is simply because the company's prior performance was either good or bad, thus influencing employee attitudes. This argument suggests that the real link is between prior profitability and subsequent profitability, or prior productivity and subsequent productivity. In order to address this concern, the analyses were re-run and the effect of prior profitability and productivity (taking the average performance figures for each of the companies over the previous three years) were

controlled in each regression equation. In other words, the effects of prior profitability and productivity were taken out from the analysis. This is a very conservative test, since all we have left to explain the difference between a company's prior and subsequent performance is to see if that difference can be partially accounted for by job satisfaction and organisational commitment.

- Figure 2 reveals that job satisfaction explains 5 per cent of the variation between companies in change in profitability. Organisational commitment also explains 5 per cent.
- In relation to change in productivity, job satisfaction explains 16 per cent of the variation between companies in their change in performance. Organisational commitment explains some 7 per cent of the variation (Figure 2).

Figure 2: Do employee attitudes predict change in company performance, taking account of prior company performance?

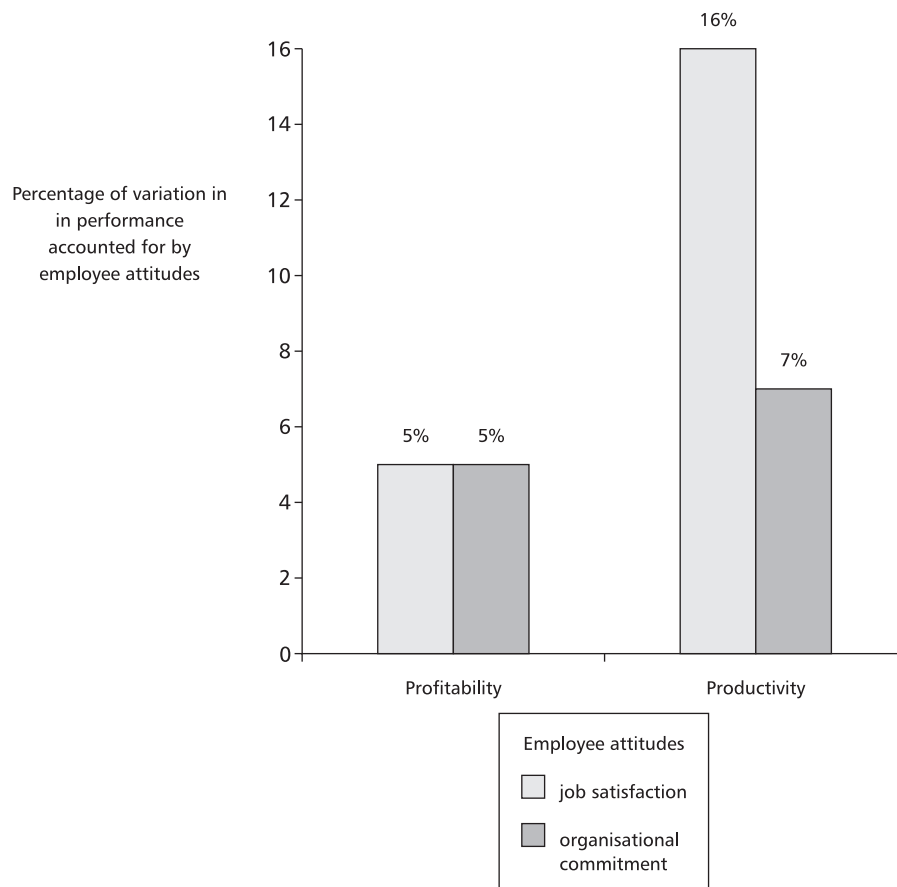


Figure 2 demonstrates the relationship between employee attitudes and company performance. Companies with high levels of satisfaction and commitment show increased performance in terms of profitability and productivity. They suggest that organisations eager to promote productivity and profitability should pay attention to the attitudes of their employees and how they can be influenced to be more positive. The results suggest that the more satisfied workers are with their jobs, the better is the company likely to perform in terms of profitability and particularly productivity.

Chapter 3

Organisational culture and performance

Question 2: Does organisational culture significantly predict variation between companies in their performance, and if so, which aspects of culture appear most important?

Organisational culture is interpreted here as the aggregate of employees' perceptions of aspects of the organisation, for example, quality of communication, support for innovation, level of supervisory support and so on. It is a concept which has attracted considerable interest among practitioners. Increasingly, senior managers are commissioning employee attitude surveys in response to the enormous volume of research on organisational culture and the related concept of climate (for example, Rousseau, 1988, Schneider, 1987, Woodman and Pasmore, 1991), the assumption being that culture influences performance. However, the evidence for the influence of culture upon organisational productivity is limited.

Measuring culture

The development of an Organisational Culture Indicator followed a review of the organisational culture literature, in which particular attention was given to the instruments that have been most commonly used in its measurement. This search established that there was no existing tool which adequately met our requirements for a comprehensive, up-to-date measure, easily completed by all levels of the workforce. Through the review process we were able to identify the cultural dimensions most frequently assessed in organisations and deemed important in this extensively researched field.

A parallel search of literature on current manufacturing practice highlighted other areas less traditionally examined in culture research, but which we thought relevant in capturing critical aspects of organisational culture in the 1990s manufacturing sector. Examples of such domains were: pressure to produce – which commentators suggest is a natural concomitant of advanced technologies (eg Klein, 1991); quality – an important concept in the new manufacturing paradigm and 'world class manufacturing' (eg Schonberger, 1986); and flexibility – a central feature of new forms of work organisation (eg Dean and Snell, 1991).

In addition, a review of the organisational effectiveness literature helped us to identify Quinn and Rohrbaugh's Competing Values Model (1981), which served as an important guide in our work. By using this model, we were able to locate in a sound theoretical framework the cultural dimensions identified as important from the literature reviews described above. Further, it drove us to consider elements of culture that had not immediately been suggested by the literature, but which we believed were likely to relate to long-term organisational effectiveness. Examples here include: reviewing objectives – the ability of organisations to review and change processes and procedures (eg West, 1996); vision – the extent to which organisational members can clearly articulate the way forward; and performance

feedback – linking behaviour with goal setting and feedback (eg Pritchard, 1990).

Described below is the competing values model and the cultural scales written to reflect each model.

Human relations model

The primary emphasis is on norms and values associated with belonging, trust and participation. Motivational factors are attachment, cohesiveness and group membership. Cultural dimensions linked to this are: *concern for employee welfare* – the extent to which employees feel valued and trusted; *autonomy* – designing jobs in ways which give employees wide scope to enact work; *emphasis on training* – a concern with developing employee skills; and *supervisory support*.

Open systems model

The primary emphasis is on change and innovation, where norms and values are associated with growth, resource acquisition, creativity and adaptation. Motivating factors are growth, variety, stimulation. Cultural dimensions which reflect this orientation are: *outward focus* – where the organisation is attuned to the external environment; *flexibility*; *innovation*; and *reviewing objectives* – a concern with reviewing and reflecting upon progress in order to improve (West, 1996).

Rational goal model

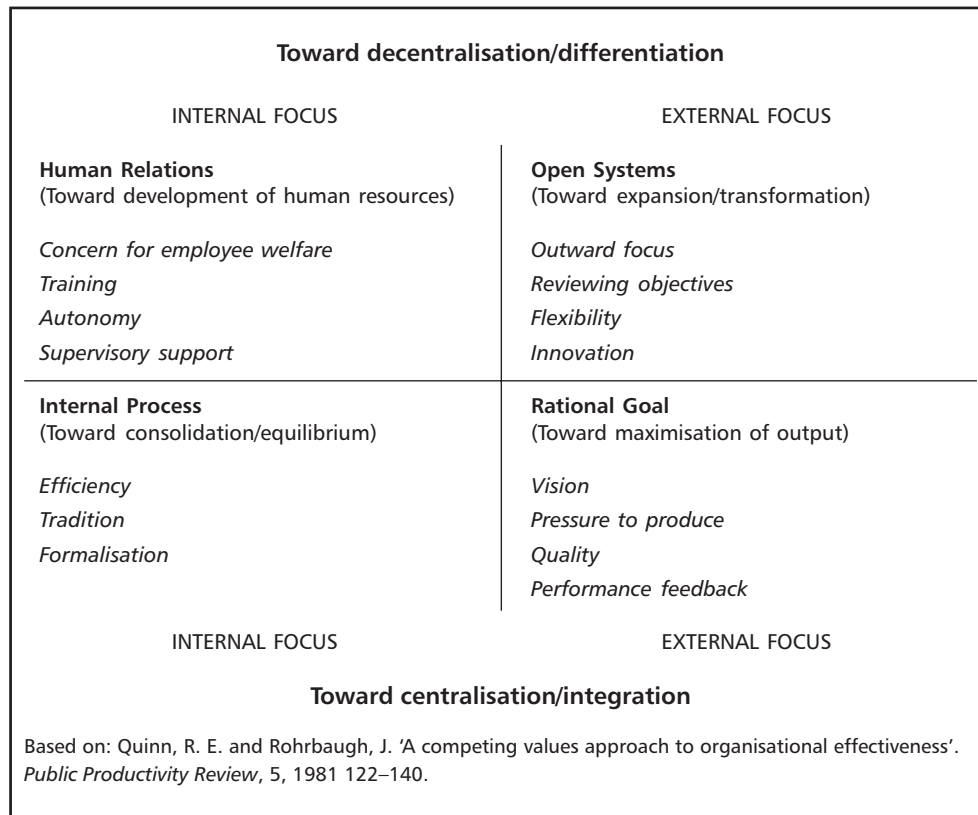
The primary emphasis in this model is on the pursuit and attainment of well-defined objectives, where norms and values are associated with productivity, performance, goal fulfilment and achievement. Motivators are competition and successful achievement of predetermined ends. Cultural dimensions which reflect this model are: *vision* – a concern with clearly defining where the organisation is heading; *emphasis on quality*; *pressure to produce* – where employees feel pressured to meet targets and deadlines; and *performance feedback* – where clear feedback is available for employees about their job performance.

Internal process model

The emphasis is on stability, internal organisation and adherence to rules, where norms and values are associated with efficiency, co-ordination and uniformity. Motivating factors are needs for security, order and rules and regulations. Scales which reflect this model are: *formalisation* – a concern with formal (often written) rules and procedures; *efficiency*; and *tradition* – a concern with maintaining existing policies, practices and procedures.

Definitions and examples of the organisational culture dimensions are shown in the Appendix p26. Figure 3 illustrates the relationship between the two main dimensions, the four models of effectiveness and the cultural dimensions which were linked to these four models.

Figure 3: Competing values framework



In order to answer research question 2, we examined the extent to which factors within each of the four quadrants could explain subsequent profitability and productivity controlling for prior profitability and productivity (ie we examined change in performance). In other words, we took an extremely conservative approach to determining whether organisational culture was a predictor of company performance.

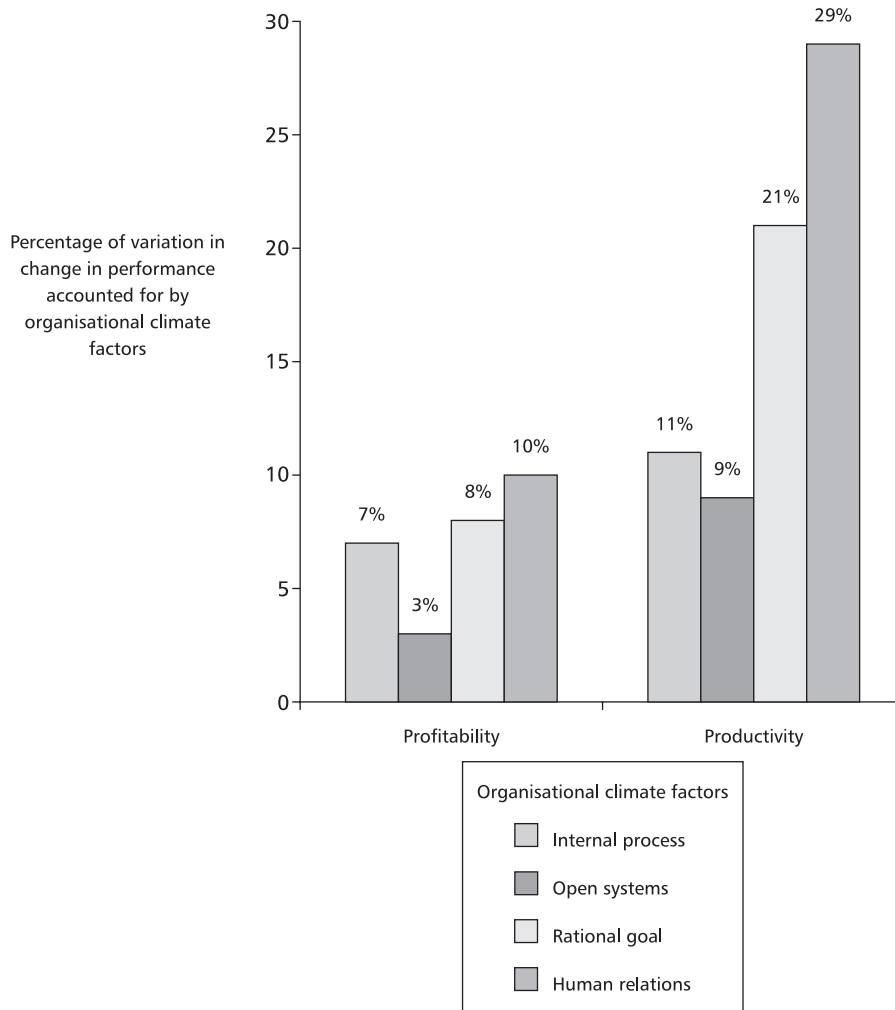
First, we examined the influence of factors in the internal process quadrant, particularly examining whether emphasis on tradition, formalisation and efficiency were predictors of change in company profit and change in company productivity⁶.

- Figure 4 shows that these factors accounted for 7 per cent of the variation between companies in change in profitability. This is not statistically significant.
- 11 per cent of the variation between companies in change in productivity was explained by tradition, formalisation and efficiency. Again, this is not statistically significant.

Second, we examined dimensions in the open systems quadrant (ie, outward focus, innovation, flexibility and reviewing objectives).

- The open systems quadrant explained some 3 per cent of the variation between companies in change in profitability.
- Change in productivity, outward focus, innovation and reviewing objectives

Figure 4: Does organisational culture predict change in company performance?



together explained a non-significant 9 per cent of the variation between companies in change in productivity.

Next, we examined the influence of factors in the rational goal quadrant of our model. This reflects the emphasis upon quality, pressure to perform, performance feedback and clarity of vision within the organisations.

- Although 8 per cent of the variation between companies in change in profitability could be accounted for by these factors, this was not a statistically significant finding.
- However, when we examined change in productivity, some 21 per cent of the variation between companies could be accounted for. In particular, emphasis upon performance feedback was a significant positive predictor of change in productivity.

Finally we examined the influence of dimensions in the human relations quadrant of the competing values model and here the results are more striking than any previously examined. Factors examined were supervisory support, autonomy,

training and concern for employee welfare.

- Taken together, these factors accounted for some 10 per cent of the variation between companies in change in profitability between the two periods measured during our study. However this result was not statistically significant.
- In relation to change in productivity in the companies we examined, the results were clear. We can explain some 29 per cent of the variation between companies in change in productivity over a three- or four-year period in human relations dimensions which is confirmation of the importance of culture in relation to company performance. Emphasis on concern for employee welfare was the most significant predictor.

One further step in the analysis was taken in order to determine which of the four quadrants was most important in predicting change in profitability and productivity (controlling for past performance). Accordingly an average score was computed for each company in relation to each of the four quadrants – human relations, internal process, rational goal and open systems. Here we simply took an average score within the four quadrants, collapsing the data across scales, and thus reducing statistical power. The relative importance of each quadrant revealed the following order: human relations, internal process, rational goal and open systems.

When we tried to predict change in company profitability from the four quadrants, we found that the human relations quadrant emerged as the only significant predictor. In relation to variation between companies in change in productivity, again the human relations quadrant accounted for the most variation. Indeed, as with profitability, this was the only quadrant which emerged as a significant predictor. Again, it seems that an emphasis on people factors is most important in trying to account for productivity change. This makes sense in terms of what we might predict. It is employees within companies who bring about changes in productivity and how they are managed in terms of concern for employee welfare, emphasis on supervisory support, social support, etc, is likely to be critical.

Chapter 4

Human resource management practices and performance

Question 3: Do human resource management practices explain variation between companies in profit and productivity?

In the 1990s, research literature in the organisational sciences has been dominated by the question of whether HRM practices make a difference to company performance. There is now a considerable body of work proposing that high quality people management can provide firms with a source of competitive advantage that it is difficult for competitors to imitate. It is the management of human capital, rather than physical capital, that is seen as the most important determinant of company performance. Indeed, some studies in the United States have demonstrated a relationship between HRM and performance (eg Huselid, 1995; MacDuffie, 1995).

However, the research described here is a progression from previous HRM and performance research in three ways. First, we did not rely on postal questionnaires to gather data on HRM practices, but instead employed face-to-face in-depth interviews with senior management. The validity of the data was further enhanced by the collation of formalised documentation from senior managers, so that responses about the existence of practices relating to, for example, appraisal systems or training and development could be validated. Also, the researchers toured the company site observing practices and procedures in action, and talking to employees about their experiences. Second, we also assessed other company practices (eg quality emphasis, investment in computerised technology) to investigate their differential impact on company performance when compared to HRM practices. Third, we know of no other work in the UK that relates HRM practices to company financial performance.

Although, there are differences across commentators as to what constitutes 'good' HRM practices, many writers (eg Bailey, 1993; Guest, 1997; Huselid, 1995) have argued that HRM practices can improve company performance by:

- increasing employee skills and abilities
- promoting positive attitudes and increasing motivation
- providing employees with expanded responsibilities so that they can make full use of their skills and abilities.

The three causal routes from HRM to performance described above provide a basis for determining 'good' or 'high performance' HRM practices. HRM practices can influence employee skills through the use of valid selection methods to hire appropriately skilled employees and through comprehensive training to develop current employees.

Examples of HRM practices that may encourage the development of a committed and motivated workforce include the use of performance-related pay or high levels of basic pay. We might also expect that more positive employee attitudes will result from a policy of harmonisation (reduction of differences in terms and conditions between managers and workers, such as a shift from hourly to salaried compensation) and from employee involvement (such as through extensive communication to all employees and the use of quality improvement teams).

Finally, firms can make full use of a skilled and motivated workforce by promoting job designs which provide enriched jobs for employees in terms of variety, skill flexibility and increased autonomy, whereby employees have responsibility for such activities as problem solving, maintenance, scheduling and quality assurance. The use of work teams may also positively affect productivity.

The HRM practices examined in this study are shown in Table 1 and broadly reflect the high performance practices discussed in the research literature. The practices were assessed through in-depth interviews with senior management using a semi-structured interview schedule, supported by relevant documentation and tours of the workplace.

Table 1: Human resource management variables

HRM area	Measurement dimensions
Selection and recruitment	Sophistication of processes (eg use of psychometric tests, clear criteria for selection)
Induction	Sophistication in running and evaluating induction programmes for new employees
Training	Sophistication and coverage of training
Appraisal	Coherence and coverage of appraisal system
Skill flexibility	Flexibility of workforce skills
Job variety	Variety in shop-floor jobs (eg job rotation)
Job responsibility	Responsibility in shop-floor jobs for various tasks and problem solving
Teamworking	Use of formal teams
Communication	Frequency and comprehensiveness of communication to workforce (eg newsletter, briefing groups, meetings between top management and workforce)
Quality improvement teams	Use of quality improvement teams
Harmonisation	Extent of harmonised terms and conditions
Comparative pay	Extent to which basic pay is higher or lower than competitors
Incentive compensation systems	Use of individual or group incentive compensation (eg, merit pay)

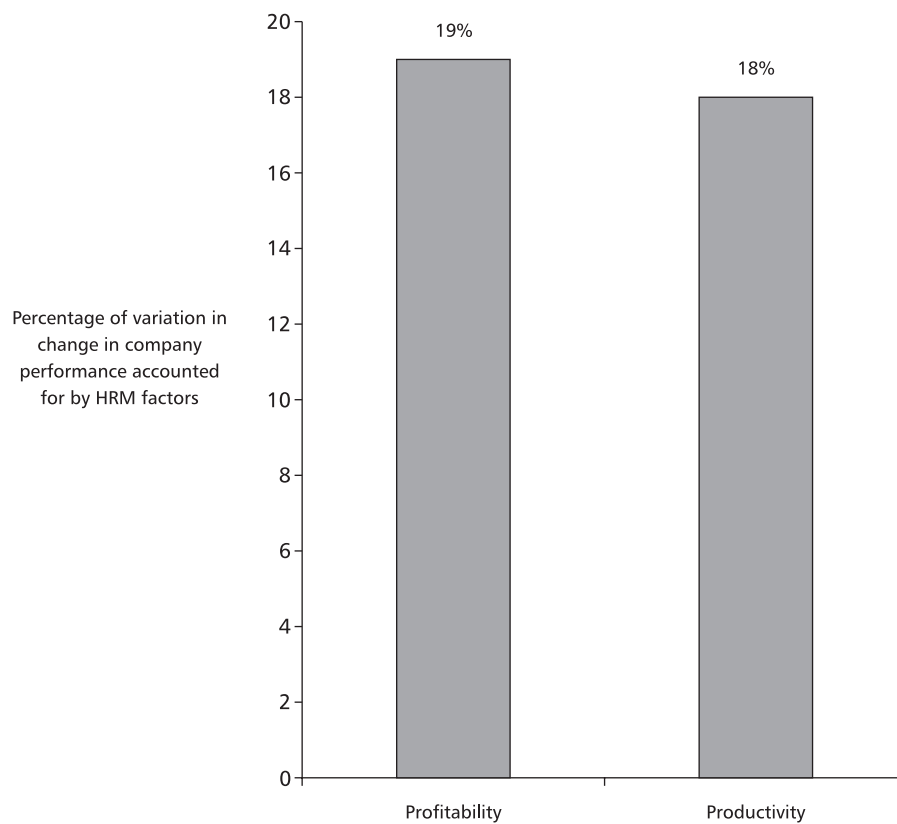
Many writers (eg, Huselid, 1995; MacDuffie, 1995) have argued that it makes sense to assess systems of HRM practices rather than focus on individual practices. The logic behind this proposition is that firm performance will be enhanced by systems of practices that support each other and that have a mutually reinforcing effect on employee contributions to company performance. For example, the effectiveness of a comprehensive training programme may be increased when combined with appraisals to assess employee performance and target development needs. Using the statistical technique of factor analysis, we tested whether any of the HRM practices were interrelated to the extent that they appear to be measuring the same underlying dimension and therefore could be grouped together. The analysis revealed that the following practices converged to reveal underlying dimensions:

- 1 Selection, induction, training and use of appraisals represented one factor which we termed '*acquisition and development of employee skills*'.
- 2 Skill flexibility, job responsibility, job variety and use of formal teams were also interrelated and we termed this factor '*job design*'.

In subsequent regression analyses we therefore used the composite measures of job design and acquisition and development of employee skills, rather than the individual practices comprising these dimensions.

Figure 5 shows the results of the regression analysis relating HRM practices to change in profitability and productivity in the companies in the study.

Figure 5: Do HRM practices predict change in company performance?



- The results reveal that HRM practices taken together accounted for 19 per cent of the variation between companies in change in profitability (ie, subsequent profitability controlling for prior profitability). This is statistically significant.
- When we examine change in productivity, HRM practices together account for 18 per cent of the variation between companies in the change in productivity over the time period of our study.

This is a clear demonstration of the link between the management of people and the performance of companies.

Figures 6 and 7 opposite show which particular HRM factors predict change in company profitability and productivity.

- The results reveal that acquisition and development of skills (selection, induction, training and appraisal) and job design (job variety and responsibility, skill flexibility and teamworking) are significant predictors of both change in profitability and change in productivity.

Figure 6 : HRM factors predicting change in profits

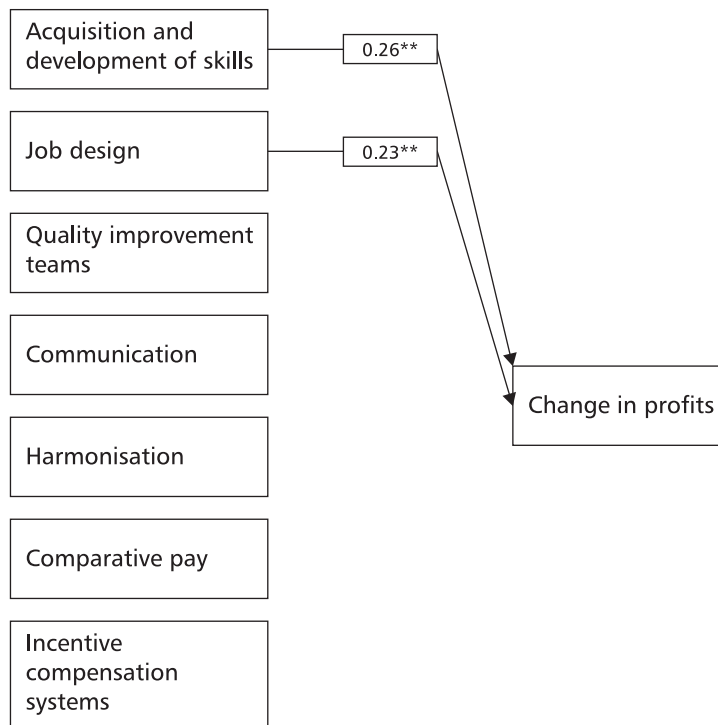
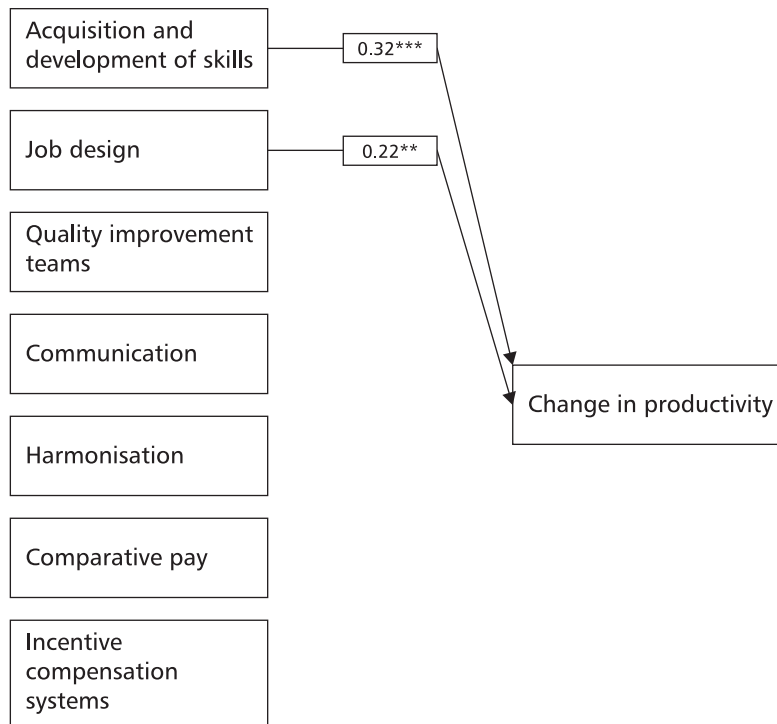


Figure 7: HRM factors predicting change in productivity



The arrows indicate the significant associations. The numbers indicate the size of the relationship – the larger the number, the stronger the association – and also indicate whether it is positive or negative. The asterisks indicate the degree of statistical significance, more asterisks indicating greater significance (*p<0.1, **p<0.05, ***p<0.01)

Chapter 5

Managerial practices and performance

Question 4: Which managerial practices are most important in predicting company performance?

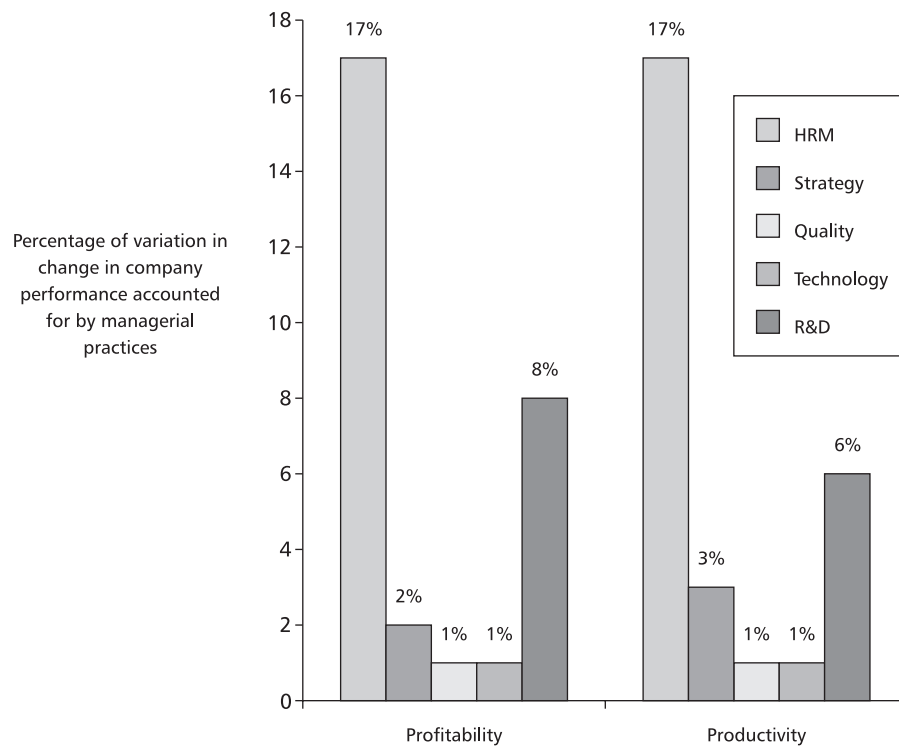
A reasonable question, given that most of the analyses that we have conducted indicate very strong relationships between employee attitudes, organisational culture, HRM practices and company performance, is ‘What factors do *not* account for significant variation between companies?’. Another way of putting this question is ‘Which managerial practices are most important in explaining variation between companies in performance?’. In order to answer this question we identified four areas of managerial practice which have traditionally been thought to influence company performance. These are business strategy, emphasis on quality, use of advanced manufacturing technology and research and development investment. Table 2 shows how these areas were assessed.

Table 2

Practices	Measurement dimensions
Business strategy	Use of a cost leadership or a differentiation business strategy.
Emphasis on quality	Assessed in terms of the following quality practices – sophistication of quality approach; quality emphasis within the production process; quality emphasis with suppliers, with customers and in other areas; extent of quality training; extent of feedback on quality to employees; involvement of operators in quality control; extent of use of statistical process control.
Use of advanced manufacturing technology	Extent of use of the following advanced manufacturing technologies – numerical control (NC); computing numerical control (CNC); direct numerical control (DNC); robotics; computer-aided design (CAD); computer-aided engineering; computer-aided process-planning; manufacturing resource planning (MRP II); flexible manufacturing systems (FMS).
Research and development	Assessed in terms of investment in R&D; sophistication of R&D strategy; and comprehensiveness of R&D strategy.

Figure 8 reveals the amount of variation in performance explained by these four areas of managerial practice in comparison with the amount of variation explained by human resource management practices and job design.

Figure 8: Which managerial practices are most important in predicting change in company performance?



- The results reveal that strategy explains less than 2 per cent of change in profitability in companies and less than 3 per cent of change in productivity in companies. These results are not statistically significant.
- Emphasis on quality explains less than 1 per cent of the change in profitability within companies over time and less than 1 per cent of the change in productivity. Of course it may be that these factors explain more of the variation between companies over a longer period of time, but as yet we have no data which bear upon this.
- Emphasis on, and sophistication of, technology explains only 1 per cent of the variation between companies in change in productivity over time, and 1 per cent of the variation between companies in change in profitability.
- In relation to R&D emphasis and expenditure, 6 per cent of the variation in change in productivity is accounted for by R&D, though this is not a statistically significant finding. Also 8 per cent of the variation in change in profitability between companies is accounted for by R&D expenditure.

Compared with these four domains (R&D, technology, quality and strategy) HRM practices are far more powerful predictors of change in company performance.

Human resource management practices

Why do HRM practices predict so much variation in company performance in comparison with other managerial strategies? We believe this is partly because, in most of the organisations we visit, senior managers are very committed to ensuring high quality and updating production technology, so there is little difference between companies in these areas. The level of investment in R&D is generally low, so again there is little difference between organisations. In other words they are similarly competitive or uncompetitive. However, in relation to human resource management, there is considerable variation, with a few companies making much effort but many others making little. Our interviews revealed shortfalls in many HRM practices. Some examples are:

Personnel/HRM strategy

In half of the organisations no individual had responsibility for personnel matters. In 38 per cent of cases there was one person responsible and in 8 per cent there were two people responsible for personnel matters. Generally, organisations had no professional staff involved in managing personnel though this, of course, may be a function of the size of the organisations. Even so, it is still surprising that so few resources are committed to the well-being and development of individuals within these organisations. More than two-thirds of companies report having no written personnel or HRM strategy.

Training

In relation to training, 52 per cent report having a formal strategy. In only 20 of the 111 companies could this be described as comprehensive, with evidence of careful and good planning. In only 13 per cent of companies was there an indication of effective training needs assessment. Managers themselves described the approaches to training in their organisations as being rather reactive, with only 6 per cent reporting training strategies that were highly planned and organised.

Career development

Planned job rotation and high flier schemes, assessment and development centres, and formal career planning were rarely employed within the organisations in the sample.

Pay

Payment systems for shop-floor workers were dominated by flat time rate (76 per cent of companies) with 21 per cent having profit share, 19 per cent a company bonus and 19 per cent salary schemes. Performance-related pay was not widely used (only about one-in-four companies), and most companies had no other incentive schemes.

Harmonisation

Single status and harmonisation have been widely urged on the basis that it would encourage greater commitment from members of the workforce. A quarter of companies reported that they had made no progress at all in achieving single status

and harmonisation, and a further third felt that they had made little progress. Only 18 per cent of companies reported having achieved a high level of single status/harmonisation.

Attitudes of managers varied considerably when we interviewed them about their HRM practices. Some dismissed the area as being relevant only in larger companies (our companies averaged 253 employees); others indicated they thought investment in HRM was something of a luxury, only to be undertaken when the business was in a stable state. A number of managers commented that their organisations were currently facing crisis, or particularly challenging times, and that they had every intention of dealing with 'people issues' when the business issues had been effectively dealt with. This separation in the minds of senior managers between business and people management indicated that, for most, the rhetoric of employees being the most valuable resource, was often simply rhetoric. Moreover, they did not make a causal connection between people management and company performance. This was in sharp contrast to the minority of organisations we visited, where senior managers make it clear that HRM and employee commitment, satisfaction and participation, were the central elements of their business strategy. Our data suggest this latter orientation is the correct approach for most effectively promoting company profitability and productivity.

Overall, the results of this study very clearly indicate the importance of people management practices in influencing company performance. The results are unique, since no similar study has been conducted, comparing the influence of different types of managerial practices upon performance. If managers wish to influence the performance of their companies, the results show that the most important area to emphasise is the management of people. This is ironic, given that our research has also demonstrated that emphasis on HRM practices is one of the most neglected areas of managerial practice within organisations. The implications we believe are clear.

The next challenges in this research programme are to discover why attitudes and perceptions of culture are so strongly related to organisational performance, and what managerial practices most influence employee satisfaction and commitment. For example, satisfied employees are more likely to cooperate with each other and to perform beyond stipulated job requirements in order to promote organisational effectiveness. Also, are pay or HRM practices, or more intangible aspects of managerial style, the factors which most influence employee satisfaction and commitment? It is these questions we intend to address next in our research. Meanwhile, on the basis of our existing evidence, in the next chapter we offer a set of recommendations for managers eager to consider the practical implications of our research.

Chapter 6

Recommendations

If our findings are dramatic, our recommendations are straightforward. They are that:

- 1 Senior managers should regularly review objectives, strategies and processes associated with people management practices in their organisations and make changes or introduce innovations accordingly.
- 2 Senior managers should monitor the satisfaction and commitment of employees on a regular basis using standardised surveys.
- 3 Senior managers need to monitor employee perceptions of the culture of their organisations, examining areas which contribute towards a people-orientated culture (eg the extent to which employees are enabled, supported and equipped to do their work).
- 4 Organisational changes are made, as necessary, to promote job satisfaction and employee commitment.
- 5 HRM practices are reviewed across the organisation in the following areas:
 - recruitment and selection
 - appraisal
 - training
 - reward systems
 - design of jobs (richness, responsibility and control)
 - communication.
- 6 Senior managers need to receive adequate training and support to provide effective vision and direction for the organisation's 'people management' strategies.
- 7 The central element of each organisation's philosophy and mission should be a commitment to the skill development, well-being and effectiveness of all employees.

What then are the essential ingredients for creating an organisation that views investment in people as a source of competitive advantage? We agree with Douglas Anderson's summary of Mirvis's ideas in a recent edition of the *Academy of Management Executive*:

‘There must be a congenial corporate culture, capable and assertive human resource leadership, and truly supportive top management. The importance of top management’s role must not be underestimated. How executives experience and interpret human resource issues and whether they *truly* see investment in people as a source of competitive advantage will determine the extent to which they pursue a leadership position in human resource management. Like the other essential business tasks, human resource management is the responsibility of operating management, *not* of the human resource department. Still, HR practitioners must take a leadership role in identifying the people issues and opportunities that face the organisation and the specific initiatives that will support the business strategies and objectives.’ (Anderson, 1997)

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Appendix

Organisational culture: definitions and examples

Communication: the openness and effectiveness of communication systems within and between levels

eg 'Important information is often not communicated to people'.

Performance feedback: the extent to which information about job performance is fed back to employees

eg 'People usually receive feedback on the quality of work they have done'.

Concern for employee welfare: the extent to which employees feel valued and trusted

eg 'This company is considerate towards its employees'.

Supervisory support: the extent to which employees experience support and understanding from their immediate supervisor or manager

eg 'Supervisors show an understanding of the people who work for them'.

Formalisation: the degree to which rules and formal procedures govern the way things are done

eg 'Everything has to be done according to the book'.

Autonomy: the degree of freedom employees are given to do their jobs without consultation.

eg 'People are given adequate scope to do their jobs properly'.

Quality: the level of importance placed on producing quality products and services

eg 'Quality is taken very seriously here'.

Effort: the degree of effort and enthusiasm employees put into their work

eg 'People are prepared to make a special effort to do a good job'.

Pressure: the extent to which there is pressure on employees to produce

eg 'People here are under pressure to meet targets'.

Vision: the extent to which employees understand the company vision and long-term aims

eg 'People have a good understanding of what the organisation is trying to do'.

Efficiency: the degree of importance placed on efficiency and productivity at work

eg 'Poor scheduling and planning often results in targets not being met'.

Tradition: the extent to which traditional, established ways of doing things are valued

eg *'The way this organisation does things has never changed very much.'*

Innovation: the level of interest in new ideas and innovative approaches

eg *'There is a lot of support for new ideas here.'*

Flexibility: the extent to which the company can adapt to change

eg *'Management here are quick to spot the need to do things differently.'*

Skill Development: the extent to which employees are encouraged and supported in learning job-relevant skills

eg *'People are strongly encouraged to develop their skills.'*

Outward focus: the degree to which management looks outside for market opportunities and the degree of importance placed on providing a high level of service for the customer

eg *'This organisation is quite inward looking; it does not concern itself with what is happening in the market place.'*

Reviewing objectives: the extent to which organisational members take action in changing objectives, strategies or team processes in order to achieve successful outcomes

eg *'In this organisation, time is taken to review organisational objectives.'*

End Notes

- ¹ This research is supported by the Economic and Social Research Council, whose support is gratefully acknowledged.
- ² Labour productivity for each firm is measured as the ratio of sales per firm over employment per firm. Industry labour productivity is measured as the ratio of sales per industry for the size group in which the firm belongs, over employment for that industry for the size group in which the firm belongs. Values greater than 1 indicate that the firm is more productive than the typical firm in the industry and vice versa. The average value for the firms in the sample is 1.062.
- ³ Although we conducted interviews in over 100 companies, financial performance data specific to the unit studied were available for only 67 companies from the sample.
- ⁴ In all analyses we used hierarchical multiple regression to assess the impact of culture, attitudes and practices on profitability and productivity. The literature suggests that a number of characteristics in the internal and external organisational environment influence HRM activities and performance. To reduce the possibility of extraneous effects by these variables we tested whether the following variables did indeed have a significant impact: union coverage (the percentage of a firm's employees belonging to a union), firm size (total employment) and five dummy variables representing industry type. Those variables that were significant were entered in step 1 of the regression to control for their extraneous effects across industries and organisations. In step 2, we entered the predictor variables (attitudes, culture or practices).
- ⁵ When job satisfaction and commitment are examined together, they explain very little additional variance in performance, due to the high correlation between satisfaction and commitment, ie employees' commitment scores show a similar pattern to their satisfaction scores.
- ⁶ As one would expect, employees' job satisfaction and commitment scores are significantly correlated with their culture scores as well as being significantly associated with certain HRM practices employed by the organisation. Therefore, variation in company performance accounted for by attitudes is not unique from that accounted for by culture and by HRM practices. In other words, the variation in performance explained by attitudes, by culture and by HRM practices is not additive as some of the performance variation will be shared by the predictors.