

ORGANIZATION CULTURE AND PERFORMANCE: A CROSS-CULTURAL STUDY

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ORGANIZATION CULTURE AND PERFORMANCE: A CROSS-CULTURAL STUDY**ABSTRACT**

Earlier studies have found in the U.S. a significant relationship between employee-centered management and financial performance. This paper reports a cross-cultural study designed to determine whether similar relationships exist in other cultures. A primary objective is to invite the participation of other researchers in extending the research design to include organizations in additional countries.

A pilot study indicates that in China and in Canada, as well as in the U.S., employee-centered management can assist in achieving high performance. The longitudinal, cross-cultural study will demonstrate whether similar or different management systems work best in other cultures.

An earlier study (Schuster, 1986) of the 1000 largest industrial and 300 largest non-industrial firms in the United States found a significant relationship between employee-centered management and the financial performance of firms. In this study "employee-centered management" was defined as a strategy for achieving high levels of employee motivation, commitment, and performance through management practices (such as participation and involvement) which emphasize attention to employee needs and goals. Other studies (Blackburn and Rosen, 1993; Lawler, 1986; 1992; Huselid, 1994) have strongly supported the role of employee-centered management in achieving improved organizational performance.

Lawler (1986, 1992) contends that the key to organizational effectiveness lies in completely changing the way organizations are managed. In order to be competitive, organizations will require highly skilled, knowledgeable workers and a relatively stable workforce. Traditional hierarchies must be transformed into organizations in which individuals know more, do more, and contribute more. This high-involvement, or employee-centered, management model is based on the belief that people can be trusted to make important decisions about the management of their work. This approach puts knowledge, power, rewards and a communications network in place at every level in an

organization. It encourages employees to care about the work they do, to know how to do it, and to do it as well as it can possibly be done. It is important to note, according to Lawler (1992), that the real basis for competitive advantage lies in the management systems that create and sustain this environment.

Kotter and Heskett (1992) studied the relationship between culture and long-term economic performance across more than 200 organizations. In addition to being one of the largest and most rigorous research efforts to date on this subject, the study has made three important contributions. First, the relationship between culture and performance demonstrated in their studies is compelling. Second, the authors provide an important synthesis of theoretical viewpoints about the nature of culture. Third, they draw strong connections between management practices, culture and performance.

The studies cited uniformly conclude that an indispensable ingredient for sustained competitive advantage is a management system that creates and maintains a high-involvement, employee-centered environment. The central proposition which emerges from all of these studies is that conscious interventions to move an organization toward emphasizing high levels of employee involvement and enhanced emphasis on meeting employee needs can produce higher motivation and commitment which lead to improved organizational performance.

As a result of mounting research evidence and the positive experience of pathfinder firms, more and more organizations are turning to employee-centered management - to enhance productivity and quality, and to gain the competitive advantage of a workforce fully committed to the organization's goals. Organizations are increasingly recognizing that efforts to improve productivity and quality must include attention to the human organization - its motivation, commitment, and morale.

Increased attention is therefore being paid to developing tools for analysis and strategic management of the human organization. These tools may be used for measuring the condition of the human organization, evaluating its performance, and initiating corrective action when needed to bring performance in line with organizational objectives. A number of leading firms including General Electric, IBM, Texas Instruments, and Motorola have pioneered the development of survey systems which facilitate such measurement.

SURVEY INSTRUMENT USED IN THIS STUDY: THE HUMAN RESOURCES INDEX

One such system is the HUMAN RESOURCES INDEX (HRI). The HRI is a standardized employee survey instrument that measures employee perceptions of 15 key variables identified with organizational performance. The HRI is thus a gauge of organizational effectiveness. It is useful in identifying

opportunities for improvement of the human organization and in implementing changes to enhance competitiveness.

The HUMAN RESOURCES INDEX (HRI) contains 64 positive statements about the organization, for which each employee is asked to indicate her/his level of agreement using a five-point scale. The last two items in the instrument provide an open-ended opportunity to indicate things that are "most liked" about the organization and things the employee would "most like to change." There is also an opportunity for each firm to add custom items to the standardized instrument in order to assess issues or conditions that are particular to the firm.

The 64 items are scored and reported individually; more importantly, they are also used to determine a composite score on each of the following 15 factors:

- 1) Reward system
- 2) Communication
- 3) Organization effectiveness
- 4) Concern for people
- 5) Organizational objectives
- 6) Cooperation
- 7) Intrinsic satisfaction
- 8) Structure
- 9) Relationships
- 10) Climate

- 11) Participation
- 12) Work group
- 13) Intergroup competence
- 14) First level supervision
- 15) Quality of Management

The scores on the 15 factors become the initial focus in analyzing and comparing results from one organization with another or in comparing changes over time within a single organization. Once critical factors are identified, the scores on individual items become very important in pinpointing the cause of a particular attitude and in understanding its significance.

The HRI has been used in firms representing a wide range of industries and sizes. Norms have been developed which are proving remarkably stable, although considerable variation is seen in comparing individual organizations.

A primary focus of further research with the instrument at this point is on investigating separate norms for different national cultures, separate industry norms, the correlation between changes in the HRI and changes in operating data, and the lag time between significant changes in HRI data and significant changes in operating data.

Perhaps the most important conclusion which can be reached from the work that has been done is that this approach is quite practical as a means for benchmarking the strategic management of an organization's human resources. Moreover, the survey data have proved highly useful in diagnosing specific problems requiring concentrated attention and in initiating organization development by opening up two-way communication about matters of practical significance to the organization.

Derivation of Factors and Psychometric Qualities of the HRI

Both the factors and the individual items were initially generated a priori. Subsequently, individual items and factors were refined through a process of review by a panel of experts in survey design and a panel of personnel managers participating in a pilot study of the instrument.

The current factors were determined by factor analysis of the data from over 5000 respondents representing a broad cross-section of organizations. More than 50 private and public sector organizations are represented in the current norm pool which includes electronics manufacturing, retail, banking, professional, research and development, agricultural, hospitality, health care, consumer goods manufacturing, resort operations, and governmental organizations. The size of the groups included range from 50 to 4000.

The reliability of the overall instrument and of the individual factors was determined using Cronbach's Alpha, a statistic widely accepted as a general purpose measure of reliability. The alpha coefficients calculated for the total instrument and for the individual factors are shown in Table 1. The reliabilities ranging from .757 to .929 were judged to be more than satisfactory to justify further use of the instrument.

Insert Table 1 about here

The validity of the instrument was determined through a process of content validation. Since no equivalent instrument with previously validated factors was known to exist, it was not possible to determine predictive validity through correlation with a criterion measure. Moreover, content validation seems the more reasonable approach for an instrument consisting of items directly reporting individuals' perceptions and attitudes. There are two expert judgments involved in the process of content validation: (a) the extent to which each item in a trait or factor scale pertains to the factor as it is defined, and (b) the extent to which the entire set of items represents all aspects of the factor. Each of the factors of the HRI was judged to be "highly valid" by a panel of personnel managers.

METHODOLOGY/RESEARCH DESIGN

Using the HUMAN RESOURCES INDEX, the longitudinal cross-cultural study of the relationship of management practice, organization culture, and performance tests two hypotheses:

1) Hypothesis 1: There is a statistically significant causal relationship among management practices, organization culture, and organization performance, as measured by objective criteria. That is, it is hypothesized that management practices influence organization culture in a measurable way; and that management practices and organization culture then jointly are significant determinants of organization performance.

2) Hypothesis 2: The pattern of this relationship will vary among national cultures. That is, although a statistically significant causal relationship among the variables is hypothesized in all national cultures, it is also hypothesized that the nature of the relationship will be unique in each culture.

The scope of the longitudinal study is planned to encompass U.S., Canadian, Chinese, Japanese, European, Russian, and Turkish firms. This will provide numerous opportunities for comparative studies of management practices and organization cultures. It will also facilitate the investigation of similarities and differences in the linkages among management

practice, organization culture, and financial performance.

The methodology involves:

1) Collection of data from firms concerning their management practices and organization culture/climate. This portion of the study utilizes the HUMAN RESOURCES INDEX.

- There is a data base of normative data for this instrument representing a cross-section of over 50 organizations in the U.S. and Canada, and a separate data base of normative data representing several organizations in China.

- Versions of the instrument have been developed in French and Chinese as well as English. For the next phases of the research, it is hoped that translations will be made into Japanese, German, Dutch, Danish, Russian, and Turkish.

2) Collection of performance data from the same firms, including standard measures of financial performance as well as firm-specific internal measures of performance:

- profitability
- productivity/quality

3) Correlation of both the management practice data and culture/climate data with the performance measures, to determine which practices and which dimensions of culture

are most critical to organizational performance.

Participants

Dr. Shuming Zhao of Nanjing University is participating in the study to extend the research to include Chinese firms. Dr. Zhao has translated the HUMAN RESOURCES INDEX instrument into Chinese, identified a sample of Chinese firms willing to participate in the study, and initiated the collection of data. Two data sets of Chinese data, representing 284 managers from a cross-section of firms in the Nanjing area, have now been collected and analyzed.

The primary purpose of this paper is to invite colleagues to participate in the study by extending the research to include firms in other countries.

PILOT STUDY

The pilot firms for the Longitudinal Cross-Cultural Study are Ault Foods Ltd. of Canada and Jiangsu Garments Import and Export Corporation of China.

Ault Foods Ltd.

Ault Foods Ltd. of Canada is a diversified dairy products processing and marketing firm of about 3000 employees widely dispersed in several major regions of Canada. Data collection has been on-going at Ault Foods since 1988; annual measures of organization culture representing all employees (using the HUMAN

RESOURCES INDEX) now exist for six data points. The data have been collected with breakdowns by division, plant or department, function, level, and gender.

Ault Foods Limited, with Corporate Offices in Toronto, is recognized as one of the leading dairy processors and distributors in North America with annual sales in excess of \$1.4 billion and over 3000 employees. In 1992, Ault was recognized as Dairy Processor of the Year for North America, the first time that a Canadian organization was recognized as the recipient of this prestigious award. Significant technological process and product breakthroughs have occurred following the introduction of a new participative management system.

In 1987 a corporate strategy was initiated to develop and sustain competitive advantage to better compete in the global marketplace; a key element in that strategy was the recognition by executive management that sustainable competitive advantage could only be achieved through the participation and contribution of all Ault employees. The new participative management system introduced into the organization encompassed:

1. involving all employees to ensure maximum input and impact on the five critical business success factors (quality, customer service, cost effectiveness, innovation, and managing the environment)
2. changing the way in which the business is managed by making every Ault employee an individual manager of his/her job

3. establishing an environment which will encourage employees to express ideas freely and resolve workplace problems quickly and fairly
4. utilizing the input of employees who are closest to issues/problems in their identification and resolution
5. empowering employees through sharing of decision-making authority.

A key element in implementing employee-centered management at Ault Foods has been use of the HUMAN RESOURCES INDEX (HRI) to track progress of the change process. The HRI has provided benchmarks on key performance indicators, measured the effectiveness of human resource interventions, identified improvement opportunities, and facilitated the process to involve employees in improving organizational performance. This process is consistent with the principles of the new employee-centered management strategy for developing and sustaining competitive advantage.

Jiangsu Garments Import and Export Corporation

Using the HUMAN RESOURCES INDEX (HRI), data were collected from two groups of Chinese managers. In June, 1994, a sample of 198 managers from a cross-section of several major industries in Jiangsu Province completed the HRI. This representative cross-section of managers is judged to constitute the de facto Chinese manager norms for the instrument.

The Chinese norm data is significantly lower than the U.S. norm data on each of the 15 factors of the HRI in addition to being significantly lower on the overall index which is the composite of all 64 items in the HRI.

The second set of Chinese data on the HRI was collected in May, 1995, from 86 managers at Jiangsu Garments Import & Export (Group) Corporation. The data sample from Jiangsu Garments Import & Export is made up of a mix of general managers, middle managers, and supervisors. Data reflecting performance objectives at Jiangsu Garments Corp. in 1994 were also collected and compared with the HRI data.

Jiangsu Garments Import & Export (Group) Corporation, located in Nanjing, P.R. China, has about 2000 employees. It exports its products to more than 50 countries and regions, including the U.S., Canada, Japan, Western Europe, Eastern Europe, Australia, Middle East, Hong Kong, and Macau, and has developed excellent trade relations with hundreds of customers all over the world. The company is well known for its manufacturing facilities and advanced technology and for introducing advanced management techniques from abroad. It has a reputation for doing international business in adherence to the principle of "quality and reputation first; sincere cooperation, and excellent service."

The HRI data for Jiangsu Garments Import & Export managers is significantly **higher** than the U.S. norms (and thus also significantly higher than the Chinese manager norms) on **each** of the 15 factors (with the single exception of the Relationships factor) of the HRI, as well as significantly higher on the overall index which is the composite of all 64 items in the HRI.

Data reflecting objective measures of performance at Jiangsu Garments in 1994 were also collected and compared with the HRI data.

RESULTS

Ault Foods, Limited

The experience of Ault Foods, Ltd., in implementing a process of employee-centered management over a five-year period using the HUMAN RESOURCES INDEX is summarized in Figure 1. The left side of the graph shows the trend line reflecting financial performance of the firm (operating income before non-recurring expenses) over the five-year period 1983-1987 which immediately preceded the intervention to implement employee-centered management. The right side of the graph tracks progress from 1988-1992 in the overall HRI score for the total organization and also shows the trend of operating income over the five-year period 1988-1992 following the intervention.

Insert Figure 1 about here

The graph indicates that the trend of operating income has shifted upward following the implementation of employee-centered management. Operating income of \$66.9 million in 1992 represents a 66% increase over the average operating income of \$40.38 million for the five-year period which preceded the intervention.

Moreover, the correlation between yearly HRI scores and financial performance over the period 1988-1992 is .866, as indicated in Table 2.

Insert Table 2 about here

While it is impossible to prove causality with absolute certainty, the data strongly support the conclusion that improvement in the motivation, morale, and commitment of the human organization has lead to significantly improved organizational performance, rather than vice-versa. Certainly this is the widely held conviction of individuals throughout all echelons of the Ault organization from top management to the level of operating employees. The fact that the HRI scores were typically obtained early in each year and the financial results reflect performance over the entire year adds substantial support to this conclusion regarding the direction of causality. This time sequence of events virtually rules out the possibility of

backward causality (ie, improved performance leads to improved attitudes) in this particular situation.

By squaring the obtained correlation coefficient between HRI scores and operating income ($r=.866$) we can obtain a statistic called the coefficient of determination, which turns out to be .75. This statistic tells us that change in the condition of the human organization accounts for or explains 75% of the variation in financial performance (operating income). Though this finding may not be particularly surprising to experienced executives, it is the first time such a clear relationship has actually been documented. Certainly one clear implication of this finding is that interventions to implement employee-centered management have the potential to create dramatic improvement in organization performance.

In addition to overall corporate results, the HRI scores are broken down each year by specific location, organizational level, job function, gender, and divisional groupings. Customized questions have also been developed for measurement of productivity, equity, communications, and self management. The HRI has been used to evaluate the effectiveness of benefit and incentive compensation improvements, the implementation of the participative management process, employee perceptions of changes within the organization, the integration of new business acquisitions, and the effect of environmental initiatives.

Additional insight into how the HRI is being used at Ault Foods to implement and monitor organization change can perhaps be provided best with an excerpt from the Summary Report of our most recent administration of the HRI:

"Perhaps the most significant finding is that 12 locations have shown a steadily upward trend over the period 1988-1993. For the total Ault organization it is particularly gratifying that the individual factors which have shown the most improvement are Participation and Communication - both factors which are directly the focus of Employee Centered Management. Moreover, of equal importance is the fact that each of the 15 factors shows an increase over the period 1988-1993, and also from last year to this year. As would be expected and has occurred each year, there is substantial variation among the different locations within the Company."

A paper reporting the findings of the pilot study at Ault Foods Ltd. was presented at the 1995 National Meeting of the Academy of Management in Vancouver, Canada. An article reporting the Ault Foods study, including extensive statistical analysis of the performance improvement data, was published in the June, 1997, issue of the Journal of Applied Behavioral Science. The Editor of that journal, Clayton Alderfer, wrote in the Editors Introduction section of the Journal, "I know of no study ... in the more than five decades of OD practice that has produced similarly strong and favorable results with the degree of rigor

... present in this one."

Jiangsu Garments Import & Export (Group) Corporation

Jiangsu Garments significantly outperformed all other major firms in Jiangsu Province in 1994, as objectively measured by the value of imports and exports (which was the primary performance criterion for all firms compared). In 1994 it ranked second nationally among all garment import and export companies in China.

The data indicate that Jiangsu Garments Import and Export (Group) Corporation has a unique organizational culture, as documented by the significantly higher HRI score of Jiangsu managers compared both to U.S. norms and Chinese norms on the instrument. This suggests that Jiangsu Garments has implemented employee-centered management. The data support the hypothesis that this unique management culture supported by the practices of employee-centered management has been an important determinant of the highly effective performance of Jiangsu Garments.

IMPLICATIONS

The results of the pilot study indicate that in China and in the Canadian/U.S. context employee-centered management is at least compatible with high performance. There is also evidence that in some instances high performance can **best** be achieved

through the participation and contribution of employees in the problem solving and decision making processes.

Participative approaches will not, however, fit the circumstances of all organizations. Because the active, wholehearted support of top management is absolutely essential to the successful implementation of employee-centered management, the approach described here should not be implemented unless top management is truly convinced that it represents the best opportunity to achieve sustainable competitive advantage.

The results of the longitudinal, cross-cultural study will demonstrate whether similar employee-centered management systems or entirely different management systems work best in the other national cultures examined by the research.

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TABLE 1
Coefficient Alpha Reliabilities

Scale	Alpha Coefficient
Total Instrument	.978
Factors:	
Reward System	.774
Communication	.894
Organization Effectiveness	.901
Concern for People	.828
Organization Objectives	.874
Cooperation	.852
Intrinsic Satisfaction	.888
Structure	.757
Relationships	.765
Climate	.929
Participation	.852
Work Group	.766
Intergroup Competence	.799
Quality of Management	.866

TABLE 2
Ault Foods: HRI Scores and Operating Income

Year	<u>HRI</u> Score	Operating Income (\$Canadian)
1983		\$36.3M
1984		36.4M
1985		47.8M
1986		45.8M
1987		35.6M
1988	3.08	40.7M
1989	3.18	52.5M
1990	3.18	45.8M
1991	3.19	55.0M
1992	3.23	66.9M

r= .866
