An examination of the relationship of employee involvement with job satisfaction, employee cooperation, and intention to quit in U.S. invested enterprise in China

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AN EXAMINATION OF THE RELATIONSHIP OF
EMPLOYEE INVOLVEMENT WITH JOB
SATISFACTION, EMPLOYEE COOPERATION, AND
INTENTION TO QUIT IN U.S. INVESTED
ENTERPRISE IN CHINA

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In a U.S. invested enterprise in China, the receptivity of Chinese employees to a participative work environment was examined. Structural equation analysis indicated support for a model in which job satisfaction mediates the relationships between elements of a participative work environment (i.e., tasks performed, the relationships individuals had with their work groups, and the nature of the decision making processes) and employee willingness to cooperate with co-workers and intention to quit. Task interdependence also had a direct relationship with willingness to cooperate.

KEYWORDS: Involvement, China, Participation, Cooperation, Job Satisfaction and Intention to Quit

The use of participative work designs (i.e., quality circles, self-directed work teams, joint management—labor taskforces and employee ownership) has become a popular strategy for increasing productivity, worker flexibility, and job satisfaction in the United States. For example, a 1995 study found approximately 69% of firms in the Fortune 1000 were using teams and 69% planned to further increase the use of teams in the future (Lawler, Ledford, & Mohrman, 1995). Today it is difficult to find a major company that has not implemented some form of employee involvement program (Cotton, 1993; Joinson, 1999; Sundstrom, De Meuse, & Futrell, 1999). U.S. companies that have imple-
mented employee involvement programs have reported numerous benefits including increased individual and team performance, better quality, less absenteeism, reduced employee turnover, a reduction in work-in-process inventory, leaner plant structures, and substantial improvements in production cycle time (e.g., Manz & Sims, 1987; Versteeg, 1990; Harris, 1992). Although experience and research indicate considerable support for the positive benefits of creating more participative work environments in the U.S., empirical examination of participative management and employee involvement in other cultures is limited.

In China, two parallel and mutually reinforcing processes are underway that have the potential to change how business is managed. On one hand, state-owned enterprises have undergone a series of significant reforms that included the increase of managerial autonomy and accountability, the weakening of party and political influence, and the elimination of guaranteed employment. On the other hand, growing numbers of state-owned enterprises have been internationalized as they formed joint ventures with or became wholly owned by Western companies (People's Daily, 1998). Depending on their equity stakes in foreign-invested enterprises, U.S. partners enjoy varying degrees of managerial control, and thus, differ on how aggressively they implement U.S. management strategies and practices among the local work force. The blend of Chinese and Western national and organizational cultures in foreign-invested enterprises raises the crucial question of how well Chinese employees perform under Western management principles and practices.

The People's Republic of China holds a huge economic stake for U.S. companies. There are more than 20,000 U.S.-invested enterprises in China today with roughly $46 billion in contracted investment and $21 billion in realized investment (People's Daily, 1998). Almost all of the largest U.S. multinational companies on the Fortune 500 list, including GM, Ford, GE, IBM, DuPont, Xerox, and Motorola, have set up major manufacturing and distribution facilities in China. These companies have hired thousands local Chinese employees. Given the success of employee involvement in the United States, U.S. investors and managers should be interested in knowing whether and to what extent Chinese workplace conditions facilitate or impede the implementation of successful U.S. organizational principles and practices. Yet, there is little evidence of how employees in China will respond to a more open and westernized work environment given its very different cultural, political, and work traditions.

To address this issue, we conducted a field study in the Peoples Republic of China. In this paper we first present a conceptual model of how major components of U.S. participative practices and related constructs are associated with certain employee and organizationally valued outcomes. Second, we test the hypothesized relationships with data from a U.S. invested enterprise. We conclude by discussing the results of the study and its implications for employee involvement programs in China.

A PARTICIPATIVE WORK MODEL

The leaders of U.S. companies have found that a work environment that supports employee involvement, allows employee participation, and features interdependent tasks can increase productivity, worker flexibility, and job satisfaction (e.g., Cohen, Ledford, & Spreitzer, 1996; Corder, Mueller, & Smith, 1991; Manz & Sims, 1987; Versteeg, 1990; Harris, 1992). However, we cannot assume that participative management approaches will be effective in China. For instance, traditional Chinese culture may well have conflicting influences on the success of programs that involve employees. On the one hand, the collectivist orientation of Chinese culture may promote certain aspects of

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participative decision-making, task interdependence, and group orientation. The importance of relationships in this collectivist society would also suppress individual interests for the good of work groups or teams.

On the other hand, traditional Chinese culture and society feature strong vertical relationships of filial piety, paternalism, and hierarchy, along with strong pressures for conformity, maintenance of face, and social control (Redding, 1990). Such vertical relationships promote a top-down hierarchy featuring work situations that are highly structured wherein employees are told what to do. This type of work environment may feel more comfortable for people raised within the traditional Chinese culture.

Thus, the rigid social hierarchy emphasized by Confucianist principles could create and sustain group attachment and group conformity but also maintain top-down control, which contravenes the principle and practice of a true participative work environment. During Maoist China, these Confucian cultural and social traditions were reinforced by the Communist ideology and politicized system of workplace control. It also made workers politically, economically, and socially dependent on the state-owned enterprise (Walder, 1986). These conditions led to risk aversion, factionalization of the workforce, mistrust for co-workers, and personalized favoritism, conditions which contradict Western norms of shared decision-making, risk-taking, and responsibility. Therefore, if these Confucianist and Communist ideologies persist, they may create strong barriers to participative work environments.

As a result, the reaction of Chinese employees to conditions that foster attitudes conducive to employee involvement and participation may or may not be consistent with those generally found among U.S. employees. To understand how Chinese employees may react, we examined components that underlie participative management efforts in the U.S. which include the nature of the tasks individuals perform, the relationship individuals have with their work groups, and the nature of the decision making process. We operationalized these components as perceived task interdependence, perceived group support, and participation in decision-making, respectively.

In order for participative management efforts to be effective, employees must be willing to be involved and furthermore, they must be committed to the organization. Therefore, we choose willingness to cooperate with others and intention to quit as dependent variables. We chose job satisfaction as another dependent variable which plays a mediating role between the components of employee participation and our other dependent variables. We included job satisfaction in our model because (1) it has been associated with employee participation (Spector, 1997) and (2) we believe it has an important relationship with our other dependent variables. The proposed relationships among these variables are shown in Figure 1.

**PARTICIPATION IN DECISION-MAKING**

Locke and Schweiger (1979) define participation in decision-making as involvement in the process of reaching decisions. Various types and forms of participation have been linked with job satisfaction, including job participation (Griffeth, 1985), job enrichment (Maher & Overbagh, 1971; Orpen, 1979; Wall, Corbett, Martin, Clegg, & Jackson, 1990), and various participative management approaches (e.g., Fried, 1991; Fried & Farris, 1987; Hackman & Oldham, 1980; Kopelman, 1985; Loher, Noe, Moeller, & Fitzgerald, 1985; Spector, 1997). Participation in various group related job activities, such as quality circles (Griffith, 1988; Marks, Mirvis, Hackett, & Grady, 1986; Rafaeli, 1985) gainsharing committees (Bullock & Perlow, 1986), and work teams (Cordery, Mueller, &
Figure 1

Hypothesized Structural Model

Note: To simplify the presentation of the model, correlations among the exogenous variables are not shown.
Smith, 1991; Denison, 1982; Pasmor, 1978; Wall, Kemp, Jackson, & Clegg, 1986) have also been associated with job satisfaction.

The rational suggested by the above research for an association between participation and job satisfaction include:

1. employees inherently enjoy offering suggestions or input about their work,
2. participation enhances feelings of ownership and commitment,
3. having a voice or say in what affects employees personally enhances positive feelings about the job,
4. people like to feel they have control over their work, and
5. employees enjoy the opportunity to interact with others during the course of their jobs.

Hence, we predict that

\textit{Hypothesis 1:} Participation in decision-making will be positively related to job satisfaction. ($\lambda_{12}$ will be significant.)

\section*{PERCEIVED GROUP SUPPORT}

Employee involvement, by necessity, is entwined with the relationships employees have with one another. Bishop, Scott, and Burroughs (2000) found perceptions of team support, the degree to which employees perceive that their work groups value their contribution and care about their well-being, is related to team commitment, and indirectly related to job performance and organizational citizenship behaviors. Research has identified numerous causes of job dissatisfaction that include role ambiguity (Jackson & Schuler, 1985), conflicts between job demands and family responsibility (e.g., Lewis & Cooper, 1987; Rice, Frone, & McFarlin, 1992), and perceived job control (Spector, 1986). One might expect that a supportive work group would reduce each of these causes of job dissatisfaction. A supportive work group could help clarify job roles, provide support when there are conflicting demands between the job and family, and give a person more a sense of control over their work. Moreover, we reason that if employees perceive that co-workers whom they have regular interaction care about them and see them as valuable contributing members of the group, this will then contribute to them having positive experiences at work. Hence,

\textit{Hypothesis 2:} Perceived group support will be positively related to job satisfaction. ($\lambda_{11}$ will be significant.)

\section*{PERCEIVED TASK INTERDEPENDENCE}

Perceived task interdependence is the degree to which individuals perceive that they interact with and depend upon others to accomplish their work (Pearce & Gregersen, 1991). Interdependent tasks are defining characteristics of work teams (Wall, Kemp, Jackson, & Clegg, 1986) and, in most cases, are the reason teams are formed (Campion, Medsker, & Higgs, 1993). Different individuals, however, may have different perceptions of the degree to which tasks are interdependent (Bishop & Scott, 2000). Task interdependence is a highly proximal component of the work environment and is experienced by workers in a "comparatively direct and operationally meaningful way" (Morris &
When workers perceive that their tasks are interdependent with those of others, they are likely to consider their jobs more meaningful (Hackman & Oldham, 1980) and, since others depend upon them, they will view themselves and their jobs as having greater significance and value. Such feelings should enhance the affective experience at work and hence,

**Hypothesis 3:** Perceived task interdependence will be positively related to job satisfaction. \( \lambda_{13} \) will be significant.

For interdependent tasks to be performed efficiently, workers must cooperate among themselves. Willingness to cooperate with others is the degree to which employees are willing to share information and work together with others in their work group to accomplish tasks (Campion, Medsker, & Higgs, 1993). We reason that workers who perceive that they must interact with and depend upon others in their work group will be more willing to share information and cooperate with others since doing so results in tasks being accomplished more easily and efficaciously. Hence,

**Hypothesis 4:** Perceived task interdependence will be positively related to the willingness to cooperate with others. \( \lambda_{33} \) will be significant.

**JOB SATISFACTION**

Research indicates that job satisfaction is positively related to the decision to help others as operationalized by organizational citizenship behavior (OCB) (Bateman & Organ, 1983; Becker & Billings, 1993; Farh, Podsakoff & Organ, 1990; McNeely & Meglino, 1994; Motowidlo, 1984; Organ & Ryan, 1995; Scholl, Cooper, & McKenna, 1987). Berkowitz (1972) explained this relationship by suggesting that people who were in a good mood are more likely to engage in prosocial behavior. Subsequent research has supported this contention (Puffer, 1987; Smith, Organ, & Near, 1983). Another explanation for this relationship is social exchange theory (Blau, 1964), which predicts that individuals will attempt to reciprocate those who benefit them. Thus, it would seem that more satisfied employees will be more likely to be supportive of other employees than less satisfied employees. By similar reasoning, we believe that those who are more satisfied with their jobs would be more willing to cooperate with others in performing their jobs, and hence:

**Hypothesis 5:** Job satisfaction will be positively related to willingness to cooperate with others. \( \beta_{31} \) will be significant.

Both theory and empirical results indicate that job satisfaction is a central factor in explaining employee turnover (e.g., Bluedorn, 1982; Crampton & Wagner, 1994 and Hulin, Roznowski, & Hachiya, 1985) and intention to quit (Blau, 1993; Shore, Newton, & Thornton, 1990). Employing meta-analysis, Tett and Meyer (1993) found a mean correlation of -.58 between job satisfaction and intention to quit. Although few studies exist, Spector (1997) reports that determinants of job satisfaction may differ between cultures and countries. However, the expectations in the culture or differences in work situations that could cause these differences are not known. Given the complexity of the cultural influences in China, described earlier, it is difficult to predict if a relationship between job satisfaction and intention to quit will be found. Even so, we believe that the desire to avoid unpleasant situations and remain in pleasant ones holds in China as well as in the U.S. Therefore, we propose.
Hypothesis 6: Job satisfaction will be negatively related to intention to quit. (β_{21} will be significant.)

**MEDIATING ROLE OF JOB SATISFACTION**

We hypothesized earlier that perceived group support, participation in decision-making and perceived task interdependence predict job satisfaction. We also propose that employees with higher levels of job satisfaction are less likely to quit and are more willing to cooperate than employees with lower levels of job satisfaction. Assuming that job satisfaction has the same central role in employee attitudes and perceptions of work in China, we believe that the indirect effects of the exogenous variables on the outcome variables will be significant. Hence,

Hypothesis 7: Job satisfaction will mediate the effects of the exogenous variables (perceived group support, participation in decision making, perceived task interdependence) and the final outcome variables (intention to quit and willingness to cooperate). That is the indirect effects of the exogenous variables and the final outcome variables will be significant. (In other words, λ_{11}β_{21}, λ_{12}β_{21}, λ_{13}β_{21}, and λ_{13}β_{31} will be significant.)

**METHODS**

**Research Site, Survey Procedure, and Participants**

Survey data were collected in a U.S.-Invested Enterprises in Guangdong Province of the People's Republic of China. The production facility was modern and utilized sophisticated technology to produce a popular consumer product. The work place was clean and the job did not require physically taxing work.

The manufacturing employees were most often involved in monitoring the production processes, solving problems when manufacturing problems occurred, and performing changeovers when product changes were required. The workforce was composed of full-time employees who were trained to perform one or two production jobs. Questionnaires were distributed to all of these employees who were present on the day the survey was administered. Management reported no unusual absence patterns during the time of the survey. Participation was voluntary but no one refused to participate and the surveys were completed on company time. Members of the research team were present to ensure that all questionnaires were collected, to answer questions, and to ensure respondents completed the survey independently. Respondents were assured that their individual responses to the survey were confidential. A total of 277 questionnaires were distributed, and nine were returned incomplete and subsequently discarded. A total of 268 usable surveys were analyzed.

The sample was composed of more men than women (72.9% male), relatively young (75.9% were under the age of 30), and relatively well educated (84% had completed high school or beyond). About half (49.87%) were born in Guangzhou (the capital city of Guangdong province), 27.8% were born elsewhere in Guangdong province, and the remaining 22.4% were born elsewhere in China.
Measures and Scale Development

Six 5-point Likert scales were used to measure attitudinal variables for this study. Response options ranged from “strongly disagree” to “strongly agree” except for the job satisfaction scale where response options ranged from “extremely dissatisfied” to “extremely satisfied” and the participation in decision-making scale where response options ranged from “a great extent” to “a little extent”.

Scale development was a five-step process. First, existing scales measuring constructs of interest were examined. Second, approximately 40 interviews were conducted at both facilities with plant employees and managers in order to understand the nature of the organization and the work being performed. These interviews were conducted several months before administration of the survey to reduce the likelihood that the interviews would affect survey results.

Third, based on the literature review and interview results, an instrument was developed. Since most of the existing scales that were used had been developed and published in English, care had to be taken to ensure that the items were translated correctly. Preparing survey scales for use in a different culture with a different language requires special considerations. Even if an English-to-Chinese translation followed by a Chinese-to-English achieves linguistic equivalence, it does not mean the translated items have cultural and psychometric equivalence (Hulin & Mayer, 1986).

Cross-cultural or within-foreign-culture research involving the translation of measurement scales requires sensitivity to the emic-etic distinction. Etic refers to a phenomenon that has a common (core) meaning across the cultures under study, while emic aspects are different between the cultures (Brislin, 1986, p. 140). This could present a problem even if a well-translated instrument is administered to monolinguals (Hulin & Mayer, 1986). Since most of the rank-and-file Chinese employees in the studied U.S. Invested Enterprises spoke very little English, we attached top priority to developing linguistically, culturally, and psychometrically equivalent scales.

We started with modifying and developing items in translatable English by following some of Brislin’s (1986) guidelines such as using short simple sentences, avoiding metaphors and colloquialisms, and adding sentences to provide contexts and illustrations. The initial translated instrument was administered in a pilot survey to 30 MBA students from China newly arrived in the U.S. Members of the pilot sample were able to speak English however they had not been in the U.S. so long that their understanding of subtleties and nuances that might compromise their ability to “see the items as a native Chinese would see them.”

Fourth, following the pilot test administration, participants were debriefed and asked to comment on the readability and clarity of survey items and instructions, item wording, translation issues, and layout and attractiveness of the instrument. Results of the pilot survey were analyzed for internal reliability. Finally, based on our analyses and suggestions from our pilot sample, several items were reworded or dropped from use in the final survey.

Exogenous variables. Perceived group support was measured by seven items (λ = .83) selected from the Survey of Perceived Organizational Support (SPOS) that loaded among the highest in Eisenberger, Huntington, Hutchinson, & Sowa’s (1986) factor analysis. Short forms of the SPOS have been used in previous research (Bishop, Scott, & Burroughs, 2000; Eisenberger, et al., 1986; Wayne, Shore, & Liden, 1997). The short form was modified to refer to the work group rather than the organization. Similar modifications have been successfully used in previous research and have been shown to measure support constructs distinct from organizational support, including perceived team support (Bishop, Scott, & Burroughs, 2000) and perceived supervisory support (Kottke

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Participation in decision-making was measured with five items ($\lambda = .84$) from Ruh, White, and Wood (1975). Perceived task interdependence was measured by three-items ($\lambda = .67$) from Pearce and Gregersen (1991). The items used for all scales are listed in Table 1.

Endogenous variables. Job satisfaction was measured by seven items ($\lambda = .80$) adapted from the Minnesota Satisfaction Questionnaire. Intent-to-turnover was measured with a three-item scale ($\lambda = .75$). Items for this scale were adapted from the portion of the Organizational Commitment Questionnaire (OCQ) that measures an employee’s desire to remain with the current employer. Willingness to cooperate was measured by five items ($\lambda = .83$), three from Campion, et al. (1993) and two developed for this study: “I am willing to cooperate with other employees to get the work done” and “Cooperation is the key to company success”.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Exploratory Factor Analysis of the 31 Survey Items (Combined Sample)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Items</strong></td>
<td><strong>Factors</strong></td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Perceived Group Support</td>
<td></td>
</tr>
<tr>
<td>1. My work group values my contribution to it.</td>
<td>0.07</td>
</tr>
<tr>
<td>2. My work group cares about my general satisfaction at work.</td>
<td>0.11</td>
</tr>
<tr>
<td>3. My work group really cares about my well-being.</td>
<td>-0.13</td>
</tr>
<tr>
<td>4. My work group strongly considers my goals and values.</td>
<td>0.08</td>
</tr>
<tr>
<td>5. My work group cares about my opinions.</td>
<td>0.02</td>
</tr>
<tr>
<td>6. My work group takes pride in my accomplishments at work.</td>
<td>-0.07</td>
</tr>
<tr>
<td>7. Help is available from my work group when I have a problem.</td>
<td>0.22</td>
</tr>
</tbody>
</table>

Job Satisfaction

How satisfied are you with:

1. Your job in general. | -0.19 | 0.12 | 0.04 | 0.07 | **0.63** | -0.03 |
2. Your working conditions. | -0.05 | 0.05 | 0.08 | 0.03 | **0.67** | -0.10 |
3. The opportunity you have to use your skills and abilities. | 0.01 | -0.01 | 0.00 | 0.01 | **0.78** | 0.05 |
4. The importance placed on your job. | 0.25 | -0.04 | -0.07 | 0.04 | **0.48** | -0.14 |
5. The sense of accomplishment you get from your job. | 0.27 | -0.02 | -0.26 | 0.02 | **0.30** | -0.09 |
6. The amount of variety you experience on your job. | -0.06 | 0.11 | 0.00 | 0.20 | **0.51** | 0.10 |
7. The kind of work you do. | 0.15 | -0.04 | -0.11 | -0.10 | **0.66** | 0.11 |
8. The challenge you receive from your job. | 0.20 | -0.08 | -0.10 | -0.21 | **0.56** | -0.07 |

Participation in Decision Making

1. In general how much say or influence do you have on how you perform your job? | **0.72** | -0.04 | 0.10 | 0.05 | 0.13 | -0.05 |
2. To what extent are you able to decide how to do your job? | **0.68** | 0.05 | -0.01 | -0.04 | -0.07 | -0.10 |
3. In general how much say or influence do you have on what does on in your work group? | **0.79** | 0.06 | 0.01 | 0.02 | 0.03 | 0.02 |
4. In general how much say or influence do you have on decisions which affect your job? | **0.80** | -0.02 | 0.07 | 0.07 | -0.04 | 0.10 |
5. My supervisors are receptive and listen to my ideas and suggestions. | **0.65** | 0.06 | 0.07 | 0.19 | 0.07 | 0.16 |
Table 1
Continued

<table>
<thead>
<tr>
<th>Willingness to Cooperate</th>
<th>Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am willing to share information with other employees about work.</td>
<td>0.09</td>
</tr>
<tr>
<td>2. I am willing to enhance communication among other employees working on the same project.</td>
<td>0.09</td>
</tr>
<tr>
<td>3. I am willing to cooperate with other employees to get the work done.</td>
<td>0.01</td>
</tr>
<tr>
<td>4. Cooperative problem solving is more effective than individual problem solving.</td>
<td>-0.11</td>
</tr>
<tr>
<td>5. Cooperation as the key to the company success.</td>
<td>0.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Intention to Quit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. It is very possible for me to leave for another company next year. [R]</td>
<td>0.10</td>
</tr>
<tr>
<td>2. I often think of quitting my current job. [reversed scored]</td>
<td>-0.03</td>
</tr>
<tr>
<td>3. I plan to stay with this company for a long time to advance my career.</td>
<td>0.10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Task Interdependence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I work closely with others in doing my work.</td>
<td>-0.01</td>
</tr>
<tr>
<td>2. I frequently must coordinate my efforts with others.</td>
<td>0.07</td>
</tr>
<tr>
<td>3. My work requires me to consult with others fairly frequently.</td>
<td>-0.12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Eigenvalues</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.43 3.04 2.06 1.78 1.42 1.25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>% of Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>23.96 9.81 6.65 5.75 4.57 4.02</td>
</tr>
</tbody>
</table>

**Analysis**

Structural equation modeling (SEM) was used to test our model since it allows for the explanatory power of each variable to be considered in conjunction with that of other variables in the model. Our use of SEM also allows us to examine the degree to which job satisfaction mediates the relationships among perceptions of a participative work environment and intent to turnover and willingness to cooperate.

**RESULTS**

Prior to testing our hypotheses, an exploratory factor analysis (EFA) (shown in Table 1) was performed on the 31 items that made up our scales. Six factors explained 54.75% of the variance. There
Table 2

Confirmatory Factor Analysis

<table>
<thead>
<tr>
<th>Models</th>
<th>2</th>
<th>df</th>
<th>RMSEA</th>
<th>Comparative Fit Index</th>
<th>Tucker-Lewis Fit Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measurement</td>
<td>642.905</td>
<td>419</td>
<td>.045</td>
<td>.89</td>
<td>.90</td>
</tr>
</tbody>
</table>

were no cross loadings (the largest loading of an item on an unintended factor was 0.30) and all of the items, with the exception of one, had loadings of greater than .48 on their intended factors. One job satisfaction item, "The sense of accomplishment you get from your job" failed to load significantly on any factor. We also conducted a confirmatory factor analysis (CFA) on our items. The fit indices of the measurement model indicate that the model fit the data well (Medsker, Williams, & Holahan, 1994). The results of the CFA appear in Table 2. We report the EFA results in addition to the CFA because with correlated factors, which is the case here, CFA will tend to attribute cross-loadings to factor intercorrelations. Therefore, EFA results are important to demonstrate how well items discriminate among the hypothesized constructs. We used principle axis factoring to allow for measurement error with oblique rotation since we expected the factors to be correlated. Table 3 reports means, standard deviations, correlations, error variances, and coefficient alphas among the scale scores.

In order to test the hypothesized model (see Figure 1), we created manifest indicators for each latent construct by averaging the items for each scale. An item measurement model has 62 paths estimated with 419 degrees of freedom. The addition of the structural portion would result in the estimation of only 7 more paths, with 424 degrees of freedom. Hence, with the item approach, our ability to determine how well the structural portion of the model holds up with our sample would be reduced. Creating single indicators from the scales allows a more rigorous test of the structural portion of our model. Because, a covariance matrix was used as input, we set the error variance for each manifest indicator to the product of the variance of the scale times the quantity one minus the reliability of the scale. The exogenous variables were assumed to correlate. Figure 2 displays the com-

Table 3

Means, Standard Deviations, Correlations, and Measures of Reliability among the Variables (N = 268)

<table>
<thead>
<tr>
<th>Construct</th>
<th>Mean</th>
<th>SD</th>
<th>Error Var.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived group support</td>
<td>3.28</td>
<td>.66</td>
<td>.079</td>
<td>(.83)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Participation in decision making</td>
<td>3.04</td>
<td>.69</td>
<td>.080</td>
<td>.45***</td>
<td>(.84)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived task interdependence</td>
<td>3.75</td>
<td>.69</td>
<td>.161</td>
<td>.26***</td>
<td>.16*</td>
<td>(.67)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Job satisfaction</td>
<td>3.66</td>
<td>.49</td>
<td>.048</td>
<td>.47***</td>
<td>.47***</td>
<td>.36***</td>
<td>(.80)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Willingness to cooperate</td>
<td>3.99</td>
<td>.59</td>
<td>.055</td>
<td>.14*</td>
<td>.20***</td>
<td>.40***</td>
<td>.37***</td>
<td>(.75)</td>
<td></td>
</tr>
<tr>
<td>6. Intention to quit</td>
<td>2.08</td>
<td>.71</td>
<td>.152</td>
<td>-27***</td>
<td>-13*</td>
<td>-12*</td>
<td>-37***</td>
<td>-.17**</td>
<td>(.83)</td>
</tr>
</tbody>
</table>

*p < .05. ** p < .01. *** p < .001. Coefficient Alphas are on the diagonal.
pletely standardized path coefficients for the relationships in the model. Completely standardized path coefficients are reported because of their suitability in comparing relative contributions to explained variance (Bagozzi, 1980). Fit indices for the hypothesized structural model (See Table 4) indicate that the data fit the model well (Medsker, Williams, & Holahan, 1994).

**Direct Relationships**

Supporting hypotheses one through six, perceived group support and participation in decision-making were positively related to job satisfaction and perceived task interdependence was positively related to both job satisfaction and willingness to cooperate. Furthermore, job satisfaction was negatively related to intention to quit and positively related willingness to cooperate as predicted.

**Indirect Relationships**

Prior to calculating the indirect effects and their standard errors, we estimated a model in which all direct paths from the exogenous variables to intention to quit and willingness to cooperate

### Table 4

<table>
<thead>
<tr>
<th>Models</th>
<th>2</th>
<th>df</th>
<th>RMSEA</th>
<th>Comparative Fit Index</th>
<th>Tucker-Lewis Fit Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesized</td>
<td>12.75</td>
<td>6</td>
<td>.042</td>
<td>.94</td>
<td>.98</td>
</tr>
</tbody>
</table>

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Table 5

<table>
<thead>
<tr>
<th>Exogenous Variables</th>
<th>Dependent Variables</th>
<th>Indirect Effects</th>
<th>Standard Error</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived group support</td>
<td>Willingness to cooperate</td>
<td>0.087</td>
<td>0.041</td>
<td>0.007</td>
<td>0.168</td>
</tr>
<tr>
<td>Perceived group support</td>
<td>Intention to quit</td>
<td>-0.163</td>
<td>0.062</td>
<td>-0.2845</td>
<td>-0.0414</td>
</tr>
<tr>
<td>Participation in decision</td>
<td>Willingness to cooperate</td>
<td>0.115</td>
<td>0.048</td>
<td>0.0207</td>
<td>0.2096</td>
</tr>
<tr>
<td>Making</td>
<td>Intention to quit</td>
<td>-0.216</td>
<td>0.067</td>
<td>-0.3477</td>
<td>-0.0833</td>
</tr>
<tr>
<td>Perceived task interdependence</td>
<td>Willingness to cooperate</td>
<td>0.104</td>
<td>0.044</td>
<td>0.0176</td>
<td>0.1904</td>
</tr>
<tr>
<td>Perceived task interdependence</td>
<td>Intention to quit</td>
<td>-0.195</td>
<td>0.062</td>
<td>-0.3166</td>
<td>-0.0727</td>
</tr>
</tbody>
</table>

were freed. We allowed these direct paths to be estimated so that the results of indirect effects calculations would not be artificially enhanced due to the direct path being constrained to zero. That is, we calculated the indirect effects after all direct effects had been accounted for.

We then calculated the indirect effects of the exogenous variables on the two outcome variables through job satisfaction using the maximum likelihood (ML) estimates and the standard errors of the appropriate paths (Sobel, 1987). Again using the ML path estimates and their standard errors, we calculated a 95% confidence interval around each indirect effect estimate. None of the confidence intervals contained zero, supporting Hypothesis 7. The indirect effects, their standard errors, and the 95% confidence intervals are reported in Table 5.

DISCUSSION AND CONCLUSIONS

Support for the hypothesized model suggests that Chinese workers react to Western organizational characteristics of peer support, participation in decision-making, and interdependent tasks in a similar manner as their U.S. counterparts. We view this result as particularly encouraging since it demonstrates that the nature of the tasks is related not only to employees’ happiness at work (job satisfaction) but also to their willingness to do what is required in a participative environment (cooperate with others). The empirical results of our study also support the hypotheses that Chinese employees had higher levels of job satisfaction, had lower intention-to-quit and are more willing to cooperate with their peers. Support for the indirect effects hypothesized in Hypothesis 7 demonstrated the importance of job satisfaction in U.S. Invested Enterprise in China and mirrored the role it has in the U.S.

Though our research design does not permit causal inferences, several tentative conclusions can be considered. First, if Chinese employers wish to increase job satisfaction, creating a participative environment could have this effect. In turn, job satisfaction is positively related to increased willingness of employees to cooperate and lower intention to quit. Second, where there is competition for Chinese employees or where employers wish to increase employee involvement, they would

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be advised to create policies and practices that allow and encourage employees to support each other on the job, involve them in decision-making and, where possible, design jobs that are interdependent with each other. Therefore, it may be advantageous to train managers to help employees recognize the way their tasks are related to others, and employ team building techniques to encourage employees to support each other. Finally, the results of this study indicate that Chinese employees have a positive reaction to team-like work environments and are likely to be receptive to team-related interventions.

Limitations

This study has the limitations associated with most field research. First, the research design was nonexperimental. Regardless of the sophistication of the statistical techniques, causal inferences must be treated with extreme caution when using nonexperimental designs.

Second, common method variance, or mono-method bias, is a concern with studies of this type. In his review of the role of self-reports in behavioral research, Spector concluded, “the reasonableness of using self-reports depends upon the purpose of the study” (1994, p. 387). He also noted self-reports can be quite useful for deriving insights about how people feel about and react to their jobs, and relationships among various feelings and perceptions (Spector, 1994; Spector & Brannick, 1995). Spector further concluded, “properly developed instruments are resistant to the method variance problem” (1984, p. 438). To enhance this resistance, we followed the recommendation of Podsakoff and Organ (1986) to eliminate obvious overlap in items across measures. The objective of this study required measuring individuals’ attitudes toward their job, co-workers, and organization. Thus, use of self-reports was indicated, however, the possibility of common method variance must be acknowledged.

Finally, this model was tested in a Chinese province that may have some subtle cultural differences from other parts of China. This point is expanded in the next section of future research.

Future Research

With regards to future research, this model should be tested in a variety of cultural settings. As “American style” teamwork is exported across the globe, its veracity in other countries and cultures is of vital importance to both researchers and business leaders. Second, this model should also be tested in other parts of China. Guangzhou is one of China’s wealthiest and most open cities. It is relatively close to Hong Kong and has been highly exposed to Western influence. For this reason these results may not be representative of other parts of China.

Third, outcomes of job satisfaction should be expanded and examined in more detail. Previous research in the United States links high levels of job satisfaction to desirable organizational outcomes such as organizational citizenship (OCB) and intention to remain with the organization (Becker, 1992). The strength of these relationships could be quite different in China and other contexts. Similarly, other determinants of job satisfaction should be examined. Circumstances and conditions the workers value on the job may differ from those that are valued in China.

Finally, this paper emphasizes to the importance of examining whether and how emerging styles of management may relate to performance and other organizational outcomes. As the economy in China becomes more open and more competitive globally, knowledge of how culture interacts with management style and practices should be very valuable.

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REFERENCES


*People's Daily*, January 26, 1998


