# Production and people values: their impact on relationships and leader effectiveness in China

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**Abstract**
Productivity and people maintenance values have traditionally been considered to contribute to leader effectiveness but the dynamics by which they have their effects have not been clarified. This study proposes that cooperative and competitive goal interdependence mediates the relationship between these values and outcomes. Working in organizations in Shanghai, China, 103 managers indicated their productivity and people values and 206 employees indicated their goal interdependence, leader effectiveness, and their commitment. Structural equation analysis suggested that productivity and people maintenance values affect goal interdependence which in turn results in leader effectiveness and employee commitment. Findings refine the theorizing by suggesting that leader values reduce competitive and independent goals but may not themselves strengthen cooperative goals. Results also suggest that leader values may directly induce employee commitment. The study's findings and previous research were interpreted as suggesting that productivity and people values coupled with cooperative goals provide a foundation for effective leadership.

## Introduction

Leadership research has traditionally distinguished managers by their orientation toward production and people maintenance (Bass, 1990; Matsui *et al.*, 1978; Misumi and Peterson, 1985; Stogdill and Coons, 1957). Findings overall suggest that leaders can be more effective when they integrate these orientations so that they value both production and people (Bass, 1990; Casimir and Keats, 1997). But research is needed to investigate the dynamics by which these values affect employees and leadership effectiveness. This study proposes that values have their impact by affecting the nature of the relationship between managers and employees (Tjosvold and Tsao, 1989). It uses the theory of cooperation and competition to examine the effects of leader values (Deutsch, 1973). It hypotheses that leader production and maintenance values develop cooperative, rather than competitive or independent, goals between managers and employees and that cooperative goals result in effective leadership and employee commitment.

Researchers have questioned whether values have much impact on actual leader behavior. Argyris and Schon (1978, 1996) have vigorously argued that leader espoused values have little effect on how managers actually work with employees. Managers typically espouse openness and mutual success but their actions indicate that they are committed to impersonality and trying to win. The wide discrepancy between espoused values and actual interaction results not only in ineffective leadership, but undermines feedback and learning. This study argues that leader values contribute to leader effectiveness to the extent they are supplemented with quality interpersonal relationships with employees.

### Leader production and maintenance

Researchers have argued that leaders can be distinguished according to their orientation and values (Bass, 1990; Kerr and Schrieshiem, 1974; Matsui *et al.*, 1978; Misumi and Peterson, 1985; Stogdill and Coons, 1957). A productivity orientation shows that the leader wants employees to follow procedures and instructions so that they work productively. A people maintenance orientation demonstrates that the leader is supportive and concerned about employees as people. These dimensions can be independent so that leaders can be high or low on both orientations. Overall, research indicates that maintenance may be particularly useful for such outcomes as satisfaction and productivity for task accomplishment. However, it is often suggested that leaders should strive to be high on both people and production values to maximize constructive outcomes.

Characteristics of this research suggest qualifications to these implications. Studies have typically measured production and maintenance values through questionnaires administered to employees who indicate how they experience their managers. Employees though are not simply objective observers but use their own implicit theories to interpret and report on their leaders (Engle and Lord, 1996; Lord, 1985; Lord and Emrich, 2000). Employee responses reflect their experience and framework as well as their leader's values and behavior. Employees may not accurately perceive leader values or find them credible (Argyris and Schon, 1978, 1996).

Indeed, recent leadership research has largely ignored these values despite their long history (Hunt and Dodge, 2000). However, research on the effects of leader

production and maintenance values on the leader relationship may help to make production and maintenance leadership research more current and useful (Brower *et al.*, 2000). This study argues that production and maintenance values can affect the nature of the relationship between manager and employee, which in turn affects leader effectiveness and employee commitment. This study then can contribute to the research on mediators between the values and styles of leaders and their effects on employees (Congor *et al.*, 2000; Dormann and Zapf, 1999; Foels *et al.*, 2000; Jung and Avolio, 2000; Kirkpatrick and Locke, 1996; Pillai *et al.*, 1999).

### Leader relationship
Recent research has emphasized that managers can develop many different relationships with their employees and that the quality of these relationships can very much impact on leader success (Boyd and Taylor, 1998; Brower *et al.*, 2000; Delugua, 1998; Gerstner and Day, 1997; Graen and Uhl-Bien, 1995; Howell and Hall-Merenda, 1999). When they develop high quality relationships, employees have been found to be more productive on the task and more willing to engage in organizationally useful activities.

This study uses the theory of cooperation and competition to examine the leader relationship. The basic premise of the theory of cooperation and competition is that the way goals are structured determines how individuals interact and their interaction pattern determines outcomes (Deutsch, 1949, 1973; Johnson and Johnson, 1989). Goals may be structured so that individuals promote the success of others or obstruct the success of others. When a situation is structured cooperatively, individuals' goal achievements are positively correlated; they perceive that they can reach their goals if, and only if, the others also reach their goals. When a situation is structured competitively, goal achievements are negatively correlated; each individual perceives that when one person achieves his or her goal, all others with whom he or she is competitively linked fail to achieve their goals.

Whether people understand the relationship among their individual goals is related cooperatively or competitively critically affects their expectations, interaction, and outcomes. In cooperation, people believe that as one person moves toward goal attainment, others move toward reaching their goals. They understand that others' goal attainment helps them; they can be successful together. With cooperative

goals, people want each other to perform effectively, for such competence helps each person be successful. They interact in ways that promote mutual goals and resolve issues for mutual benefit.

In competition, people, believing that one's successful goal attainment makes others less likely to reach their goals, conclude that they are better off when others act ineffectively. When others are productive, they are less likely to succeed themselves. They pursue their interests at the expense of others. They want to "win" and have the other "lose".

By developing promotive interaction and open-minded discussion of views, cooperative goals have been found to facilitate quality solutions to problems, productivity, especially on complex tasks, and confidence in working together in the future (Alper *et al.*, 1998; Johnson and Johnson, 1989;). Competitive goals have been found to frustrate interaction and result in fragmented relationships and low performance except on some simple tasks (Stanne *et al.*, 1999). Independent goals have been found to have similar, though not as strong, effects as competitive goals.

This study empirically links leadership research with the theory of cooperation and competition. Cooperative goals are useful to characterize high quality leader relationships, whereas competitive and independent goals characterize low quality ones.

### Values, relationships, and outcomes
Traditional research on leadership on production and maintenance and recent research on the leader relationship can be integrated. Leader values may be useful for they contribute to cooperative relationships. Valuing and working toward maintenance and production may help to convince employees and managers that they have cooperative goals.

Maintenance values can strengthen cooperative goals by demonstrating personal concern for employees. Deutsch (1973) argued that personal relationships and feeling of belonging develop cooperative goals, whereas impersonality and interpersonal distance foster competition. People see that their destinies are positively linked with those they know and regard positively whereas they are apt to believe that their goals are incompatible with those with whom they feel distant and removed (Gruenfeld *et al.*, 1996; Lau and Murnighan, 1998). Similarly, feeling justly treated also is a powerful antecedent to cooperative goals (Deutsch, 1985). This argument suggests that maintenance values with their emphasis on sensitive, personal, and fair approaches to employees as

individuals would strengthen employee
beliefs that they had cooperative goals with
their leader. Low levels of maintenance
communicate impersonality that fosters
competitive and independent goals.

Leader productivity values can result in
cooperative goals by emphasizing that the
manager and employee have common,
challenging tasks that they will work
together to complete. Employees recognize
that these leaders will provide the direction
and structure so that their collaborative
effort will be successful (Tjosvold *et al.*, 1985).
As they are optimistic that they can achieve
and be successful together, they become
committed to cooperative goals. Leaders with
low levels of productivity emphasis may
discourage employees by communicating
that individual efforts will be unrewarded
and poorly coordinated. Employees feel
frustrated and develop competitive and
independent goals with leaders who fail to
focus on task completion.

### Hypotheses
The overall model tested in this study
emphasizes that leader values have their
effects through the leader relationship
(Figure 1). Leader values of productivity and
maintenance affect the goal interdependence
between manager and employees, which in
turn affects outcomes. Based on the
reasoning and research outlined above, it is
hypothesized that:

*H1.* To the extent that leaders have
productivity values, employees
believe their goals with their leader
are cooperative, but not competitive
or independent.

*H2.* To the extent that leaders have
maintenance values, employees

believe their goals with their leader
are cooperative, but not competitive
or independent.

*H3a.* To the extent that employees and
managers have cooperative goals,
leaders are effective and employees
are committed to their work.

*H3b.* To the extent that employees and
managers have competitive and
independent goals, leaders are
ineffective and employees are
uncommitted.

This study tests these hypotheses in
organizations in China. Although research
has focused on differences between the West
and the East, it is useful to test theories
developed in one culture to another (Bass,
1997; Morris *et al.*, 1999). This study tests the
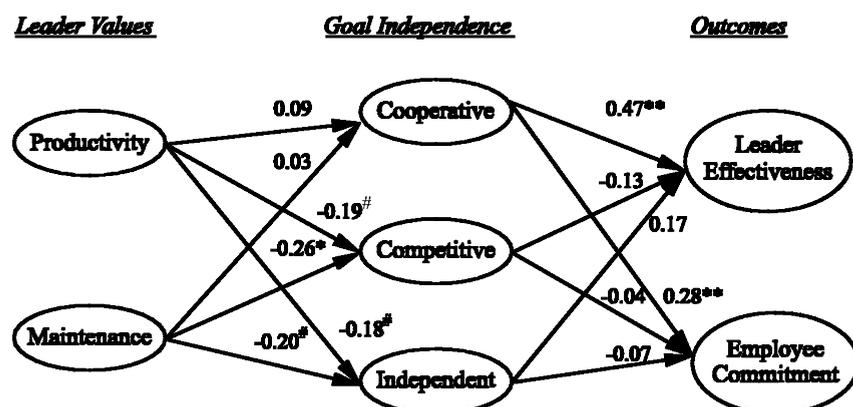universal aspirations of the theory of
cooperation and competition.

This study also makes methodological
contributions by having managers assess
their values and employees indicate their
goal interdependence and leader outcomes,
making common method variance a less
likely explanation of the results. This method
was also thought to allow managers and
employees to provide data that they were in a
good position to report, that is, leaders
reported on their values and employees
reported on their interdependence and their
leader's impact on them (Hooijberg and Choi,
2000).

## Method

### Participants
A sample of firms was recruited that is
approximately representative of the

**Figure 1**
Hypothesized models



Note: **p<.01; *p<.05; #p<.10

industries in Shanghai, China: 47 firms are state-owned enterprises, 23 joint-stock companies, 24 China foreign joint venture, and nine private enterprises. A total of 22 firms are in manufacturing, three in construction, 18 in transportation, storage, postal and telecommunications, 12 in wholesale, retail and catering, 32 in banking and insurance, four in real estate, five in social services, four in education, culture, art, broadcasting, film and television, and one in government institutions, party and social organizations, and two in others.

Teams responsible for various tasks in these industries were recruited to participate in the study. In addition to the support of top and middle management for the study, confidentiality of responses was provided. To be included in the final sample, two employees who were part of the work group had to complete a survey and their manager had to complete a second survey. A total of 173 sets of questionnaires were distributed but 32 sets were not completed because of lack of time or interest in the study so 141 sets were collected. However, 21 sets were not complete because they lacked either the manager or one employee and seven more were rejected because questions were not completed. Thus, 103 sets of questionnaires were included in the data analysis. Average age of the team members was 31 and 60 per cent of the team members were males. Nearly all respondents had been in their teams for over six months.

### Leader production and maintenance
Scales for leader production and maintenance were taken from Misumi and Peterson (1985) and modified so that they reflected the values of the leader rather than the perceptions of employees. The six items about leadership style of a productivity orientation measured the emphasis on whether the employees followed procedures and instructions to work productively. A sample item for the leader production scale is "I want to make sure my employees know my instructions and orders" (see Appendix). Participants were asked to rate on a five-point scale (1 = strongly agree, 5 = strongly disagree) their degree of agreement to the six statements.

The leader maintenance, with its emphasis on the leader's support and concern for employees, had seven items with similar anchors. A sample item is "I want my employees to talk freely with me". Both scales demonstrated acceptable reliability. The coefficient alpha for leader production was 0.70 and 0.83 for leader maintenance.

### Goal interdependence
Scales for cooperative and competitive goal interdependence were developed from a previous questionnaire study conducted in North America (Alper *et al.*, 1998). The five cooperative goals measured the emphasis on mutual goals, shared rewards, and common tasks. A sample item for the cooperative goal scale (cooperative) is "My boss and my goals go together". Participants were asked to rate on a five-point scale (1 = strongly agree, 5 = strongly disagree) their degree of agreement to the five statements.

The competitive goal scale (competitive) had five items with similar anchors to measure the emphasis on incompatible goals and rewards. A sample item is "My boss and I have a win-lose relationship". The independent goal scale (independent) had four items with similar anchors to measure the emphasis on incompatible goals and rewards. A sample item is "My boss and I work for our own interests". Coefficient alphas for the cooperative, competitive and independent goal scales were 0.69, 0.85, and 0.73 respectively.

### Leader effectiveness and employee commitment
Scales for expectation for leader effectiveness and employee commitment were developed from previous research. Leader effectiveness measured the extent to which employees believed that their manager was successful as a leader (Delugua, 1998). A sample item for this scale is "I am satisfied with my manager's overall effectiveness as a leader". Participants were asked to rate on a five-point scale (1 = strongly agree, 5 = strongly disagree) their degree of agreement to six statements. The scale had a Cronbach alpha of 0.87.

Employee commitment measured the extent to which employees described themselves as involved and motivated in their own assignments (Tjosvold *et al.*, 1998). A sample item is "I feel highly committed to the goals of my work". Participants were asked to rate on a five-point scale (1 = strongly agree, 7 = strongly disagree) their degree of agreement to four statements. The scale had a Cronbach alpha of 0.80.

The questionnaires originally written in English were translated into Chinese by two members of the research team who are native Chinese. To ensure conceptual consistency, the questionnaires were back translated into English to check for possible deviation (Brislin, 1970). The questionnaires were pre-tested to make sure that respondents clearly understood every

phrase, concept, and question. To prevent
and eliminate potential concern for being
involved in evaluating others, participants
were assured that their responses would be
held totally confidential.

# Analysis

## Data aggregation
We aggregated team members' ratings of
cooperative goal, competitive goal,
independent goal, leader effectiveness, and
employee commitment to the team level in
the analyses. The fundamental reason was
that the hypotheses identified the unit of
analysis as the group.

However, the aggregation required that
the perceptions of team members within a
team were reasonably homogeneous. We
used James *et al.*'s (1984) procedure to
estimate the inter-rater reliability of
members within each team for each of the
five individual-level variables. James *et al.*'s
$r_{WG(J)}$ index was used as an estimate of
inter-rater reliability because each of the
five variables was measured by multiple
items. Two indicators showed that the
ratings among members in each group were
quite homogeneous:
1   The median $r_{WG(J)}$ for the five variables
    across the 103 teams was 0.96, 0.94, 0.94,
    0.90 and 0.97 respectively.
2   George and Bettenhausen (1990) argued
    that $r_{WG(J)}$ which was greater than or
    equal to 0.70 could be considered as
    indicators of good agreement within
    group.

Out of the 103 teams, the percentages of teams
with $r_{WG(J)}$ greater than or equal to 0.70
across the five variables were 0.94, 0.89, 0.90,
0.84 and 0.96 respectively. We therefore
concluded that the within-team ratings were
homogeneous enough to be aggregated to the
team level. Individual team members' ratings
were aggregated to the team level and the
data merged with managerial ratings of team
innovation and recovering. The final sample
size of the merged data file was 103 teams.

## Hypotheses testing
Correlational analyses were used as an
initial test of the hypotheses. Structural
equation analyses were used to test the
proposed model that goal independence
mediates the relationship between
productivity and people maintenance values
and the outcomes of leader effectiveness and
employee commitment.

To more vigorously test the theory,
structural equation analysis with the EQS for
Macintosh program was used to examine the

underlying causal structure between values,
goal independence, and outcomes (Bentler
and Wu, 1995). This analysis involved only
the structural model, not the measurement
model.

Research was used to propose the model
that goal independence mediates the
relationship between productivity and people
maintenance values and outcomes of leader
effectiveness and employees commitment.
The mediating effects model suggested by the
theory implies that there should be no direct
effects between productivity and people
maintenance values and outcomes, that is,
goal independence mediates the relationship
between values and outcomes.

A nested model test commonly adopted in
causal model analysis was used where the
mediating effects model was compared to the
direct effects model. The direct effects model
posited that production and maintenance
values impact on outcomes directly.

# Results

Zero-order correlations provide an initial
examination of the hypotheses linking leader
productivity and maintenance values, goal
interdependence, leader effectiveness, and
employee commitment (Table I). Results
provide partial support for *H1* that
productivity values affect goal
interdependence. Productivity values were
negatively correlated with competitive goals
(−0.31, $p < 0.01$) and with independent
goals (−0.28, $p < 0.01$). However, productivity
was not significantly related to cooperative
goals (0.10).

Similarly, results provide partial support
for *H2* that maintenance values affect goal
interdependence Maintenance was
negatively correlated with competitive goals
(−0.35, $p < 0.01$) and with independent
goals (−0.29, $p < 0.01$), but was not
significantly related to cooperative goals (0.08).

The correlational results also provide
partial support for *H3* that employees who
believe their goals with leaders are
cooperative and not competitive or
independent conclude that their leader is
effective and are committed to their work.
Consistent with *H3a*, employees with
cooperative goals indicated that their leader
was effective (0.47, $p < 0.01$) and that they
were committed (0.31, $p < 0.01$). However,
results do not support *H3b* that employees
with competitive goals would conclude that
their leader is ineffective (−0.11, ns) and feel
uncommitted (−0.16, ns) or that employees
with independent goals would believe their

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leader is ineffective (−0.03, ns) and be uncommitted (−0.16, ns).

Structural equation analyses through EQS were used to explore the relationship between values, goals, and outcomes. Table II shows the path estimates for the model tested in this study. The mediating effects and the direct effects models were compared. The $\chi^2$ of the mediating effects model was $\chi^2 = 10.26$ (d.f. = 4, $p < 0.01$) and the $\chi^2$ of the direct effects model was 157.37 (d.f. = 15, $p < 0.01$). The difference of $\chi^2$ between the mediating model and the direct effects model was significant ($\chi^2$ difference = 147.11), indicating that omission of the mediating effects of goal independence significantly deteriorated the mediating model. Results of the causal model

comparison suggest that the mediating effects model be accepted.

The path coefficients of the accepted model help to explore the findings more specifically (Figure 1). Results indicate that productivity values have marginally significant negative effects on competitive goals ($\beta = -0.19$, $p < 0.10$) and independent goals ($\beta = -0.18$, $p < 0.10$), and maintenance values also have significant negative effects on competitive goals ($\beta = -0.26$, $p < 0.01$) and marginally significant negative effects on independent goals ($\beta = -0.20$, $p < 0.10$).

Cooperative goals had a significant positive effect on leader effectiveness ($\beta = 0.47$, $p < 0.01$) and job

**Table I**
Correlations among variables at the team level

| | Mean | Std deviation | Productivity | Maintenance | Cooperative | Competitive | Independent | Leader effectiveness | Employee commitment |
|---|---|---|---|---|---|---|---|---|---|
| **Productivity** | 1.78 | 0.50 | (0.70) | | | | | | |
| **Maintenance** | 1.70 | 0.56 | 0.48** | (0.83) | | | | | |
| **Cooperative** | 2.23 | 0.56 | 0.10 | 0.08 | (0.69) | | | | |
| **Competitive** | 3.44 | 0.72 | −0.31** | −0.35** | −0.25* | (0.85) | | | |
| **Independent** | 3.30 | 0.63 | −0.28** | −0.29** | −0.20* | 0.80** | (0.73) | | |
| **Leader effectiveness** | 2.50 | 0.69 | 0.12 | 0.06 | 0.47** | −0.11 | −0.03 | (0.87) | |
| **Employee commitment** | 2.01 | 0.50 | 0.33** | 0.22* | 0.31** | −0.16 | −0.16 | 0.44** | (0.80) |

Notes:
$n = 103$
Values in parentheses are reliability (coefficient alpha) estimates
**$p < 0.01$; *$p < 0.05$.

**Table II**
Parameter estimates for structural model

| | Mediating effects model | | | Direct effects model | |
|---|---|---|---|---|---|
| Path from | Path to | Path coefficient | Path from | Path to | Path coefficient |
| **Productivity** | Cooperative | 0.09 | Productivity | Leader effectiveness | 0.12 |
| **Productivity** | Competitive | −0.19* | Productivity | Employee commitment | 0.29*** |
| **Productivity** | Independent | −0.18* | Maintenance | Leader effectiveness | 0.01 |
| **Maintenance** | Cooperative | 0.03 | Maintenance | Employee commitment | 0.07 |
| **Maintenance** | Competitive | −0.26** | | | |
| **Maintenance** | Independent | −0.20* | | | |
| **Cooperative** | Leader effectiveness | 0.47*** | | | |
| **Cooperative** | Employee commitment | 0.28*** | | | |
| **Competitive** | Leader effectiveness | −0.13 | | | |
| **Competitive** | Employee commitment | −0.04 | | | |
| **Independent** | Leader effectiveness | 0.17 | | | |
| **Independent** | Employee commitment | −0.07 | | | |
| **Model $\chi^2$** | Model $\chi^2$ | 10.26 | Model $\chi^2$ | Model $\chi^2$ | 152.37 |
| **d.f.** | d.f. | 4 | d.f. | d.f. | 15 |
| **BBNFI** | BBNFI | 0.95 | BBNFI | BBNFI | 0.29 |
| **CFI** | CFI | 0.97 | CFI | CFI | 0.29 |

Notes:
***$p < 0.01$; **$p < 0.05$; *$p < 0.10$

commitment ($\beta = 0.28$, $p < 0.01$). Competitive
goals had a negative effect on leader
effectiveness ($\beta = -0.13$) and job commitment
($\beta = -0.04$), and independent goals also had a
negative effect on job commitment
($\beta = -0.07$), but these relationships were not
statistically significant.

With regard to model fit, the mediating
effects model had a model chi-square of 10.26
and four degrees of freedom. The CFI and TLI
for the model were 0.95 and 0.97 respectively.
Both fit indices were considered as
indicating good model fit, given the usually
accepted critical value of 0.90 (Bentler and
Bonnett, 1980).

## Discussion

Results support the overall logic that
production and people values impact on
leadership effectiveness through their effects
on the manager-employee relationships.
Leaders's own descriptions of their
commitment to productivity and people were
found to be related to employee reports of
their goal interdependence with their
leaders. These goal interdependences in turn
were found to be related to:
- leader effectiveness; and
- employee commitment.

However, the links between values, goal
interdependence, and outcomes were more
complex than hypothesized. Productivity
and maintenance values appear to have
their effects by reducing competitive and
independent goals, not by building
cooperative ones. These values did not have
statistically significant relationships with
cooperative goal interdependence, but
were, as hypothesized, found to have
significant negative relationships with
competitive and independent goals. As
hypothesized, cooperative goals did predict
to leader effectiveness and employee
commitment but, contrary to the
hypotheses, competitive and independent
goals were not significantly negatively
related to these outcomes.

Employees appear to have considered
leader values on productivity and people
reasons to reduce their concerns that their
leaders were trying to outdo and win
interpersonally. They were less suspicious
of leaders who espoused productivity and
people values. However, this reduced
suspicion was not enough to strengthen
cooperative goals significantly.

Employees may often be skeptical of the
espoused values of their managers (Argyris
and Schon, 1978, 1996; Hogan *et al.*, 1994).
Perhaps employees want more tangible

evidence that they had cooperative goals
than leaders' own commitment to
productivity and people values. They may
want to experience leaders' team building
actions, such as developing common goals
and sharing rewards for joint success, in
order to conclude that they have strong
cooperative goals with the leader. Rather
than relying on leaders' espousing
maintenance, employees may want to
experience a personal relationship with
their manager before they conclude their
goals are highly cooperative. Future
research is needed to investigate this
speculation.

Evidence also suggests that values may
have a different route to affecting employee
commitment than leader effectiveness.
Whereas values were not related directly to
leader effectiveness, leader values were
significantly correlated with employee
commitment. It may be that the espoused
values of leaders themselves can be directly
useful for developing employee
commitment. Employees whose leaders are
committed to productivity and to people
may be able to find their work more
meaningful and develop commitment to it.
However, these values do not by themselves
result in their manager leading effectively.
Research is needed to explore this
reasoning.

Recent research has emphasized that
quality relationships are a foundation for
leader effectiveness (Boyd and Taylor, 1998;
Brower *et al.*, 2000; Delugua, 1998; Gerstner
and Day, 1997; Graen and Uhl-Bien, 1995;
Howell and Hall-Merenda, 1999). Results
support this theorizing and suggest that
cooperative goals are a useful way of
understanding these quality relationships.
When employees in this study believed they
had cooperative goals with their leaders,
they were likely to conclude that their
leader is effective and to feel committed to
their work.

The theory of cooperation and
competition, although developed in the
West, proved useful for understanding
values and leadership dynamics in China
(Deutsch, 1973). Leader values were found
to be related to goal interdependence and
goal interdependence in turn to leader
effectiveness and outcomes. The research
approach of identifying conditions that
impact on organizational dynamics and
outcomes in China with a theory with
universal aspirations may be a viable
addition to the traditional alternatives of
comparing samples from different cultures
and exploring a cultural variable with an
indigenous theory (Bass, 1997; Leung, 1997).

The research approach used in this study can both probe general theories and improve understanding of organizational dynamics in non-Western cultures.

## Limitations
The sample and operations, of course, limit the results of this study. The data are self-reported and subject to biases, and may not accurately describe the relationships, although recent research suggests that self-reported data are not as limited as commonly expected (Spector, 1992). These data are also correlational and do not provide direct evidence of causal links between values, goal interdependence, and outcomes. However, managers completed measures of values and their employees completed measures of goal interdependence, leader effectiveness, and employee commitment. Developing different sources for the independent and dependent measures should reduce the possibilities of the same source method as an alternative explanation of the results.

Spector and Brannick (1995) have argued that the most effective way to overcome recall and other methodological weaknesses is to test ideas with different methods. It would be desirable to provide direct experimental verification of the role of productivity and people values on leadership effectiveness in East Asian organizational settings.

## Practical implications
In addition to developing theoretical understanding, the hypotheses, if they can continue to be supported, have important practical implications for developing leadership, especially in China and perhaps other collectivist cultures. Results further document that leader values on productivity and people values can be useful for building employee commitment. However, values need to be supplemented with cooperative goals between managers and leaders if they are to result in effective leadership. Managers and employees can together develop common tasks, integrated roles, and shared reward distributions that build cooperative goals (Hanlon *et al.*, 1994; Tjosvold and Tjosvold, 1995).

This study contributes to growing recognition of the importance of examining mediators between the values and styles of leaders and their effects on employees (Congor *et al.*, 2000; Dormann and Zapf, 1999; Foels *et al.*, 2000; Jung and Avolio, 2000; Kirkpatrick and Locke, 1996; Pillai *et al.*, 1999). Specifically, it provides an empirical examination of the relationship dynamics by which leader values affect leader effectiveness and employee commitment. Leader commitment to productivity and people values was found to predict directly to employee commitment. However, leader values appear to have their effects on leader effectiveness to the extent that they can affect the relationship between manager and employee.

Results suggest that productivity and people values, though they reduce competitive and independent goals, are insufficient to develop cooperative goals between managers and employees. Production and people values along with cooperative goals appear to be important bases for developing effective leadership in China.

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## Appendix

### Leadership values

1 *Productivity*:
- It is important that my employees follow regulations.
- I want to make sure my employees know my instructions and orders.
- It is important that employees know the deadlines I have set for their work.
- I want employees to work at their maximum capacity.
- My employees are to give me reports on the progress of their work.
- I want to give my employees specific instructions for how to achieve their goals.

2 *Maintenance*:
- I want my employees to talk freely with me.
- I believe it is important for me to communicate support to my employees.
- I want to show concern for my employees' personal concerns.
- It is important that my employees trust me.
- I want to recognize publicly the accomplishments of my employees.
- I want my employees to know that I am concerned about their future promotions, pay raises, and other benefits.
- My treating my employees fairly is very important to me.

### Goal interdependence

1 *Cooperation*:
- My boss and my goals go together.
- When my boss and I work together, we usually have common goals.
- My boss shows as much concern for what he wants to accomplish as to what I want to accomplish.
- My boss and I help each other to achieve our objectives.
- My boss and I want each other to succeed.

2 *Competition*:
- What helps me, gets in my boss's way.
- My boss and I have a win-lose relationship.
- My goals are incompatible with my boss's goals.

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- I structure things in ways that favor my goals rather than my boss's.

3 *Independence*:
- I give high priority to things I want to accomplish, and low priority to things my boss wants to accomplish. (I care about mine, but not my boss's accomplishment.)
- My boss and I each "do his own thing".
- My boss likes to be successful through his own work.
- My boss and I work for our own interests.
- My success is unrelated to my boss.

**Leader effectiveness:**
- My manager performs the roles as supervisor the way I would like it to be.
- My manager meets my expectations in his responsibilities as a supervisor.
- If I had my way, I think I would change the manner in which my manager performs as a supervisor (reverse).
- I am satisfied with my manager's overall effectiveness as a leader.

**Employee commitment**
- Generally speaking, I am very satisfied with my work.
- I feel a strong commitment to my work.
- I feel highly committed to the goals of my work.
- All things considered, I am highly pleased with my job.