

# The Effect Of Leadership Style Perception On Auditors' Communication Behavior: A LISREL Analysis<sup>x</sup>

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## **Abstract**

*The purpose of the study was to determine whether the leadership style perception is associated with auditors' communication behavior for information gathering activities. Questionnaire data were collected from 195 Taiwanese auditors with at least one year of audit experience. As proposed, the study indicates that CPA firms' leadership style would have a significant effect on auditors' communication behavior for exchanging and gathering information. According to the LISREL analysis, leaders in the participating Taiwan CPA firms tend to adopt initiating leadership style that concurs with the perception that CPA firms are formalized and structured. This initiating leadership style helps auditors' communication behavior in information accuracy and satisfaction with supervisors. However, initiating leadership style has a negative effect on boundary spanning. It is the suggestion of the study that leaders in the CPA firms might want to encourage their auditors to engage more in boundary spanning activities for a better decision quality.*

## **Introduction**

*A*udits are conducted in the social context of a hierarchical team, wherein authority for audit assignments is distributed down to organizational levels where specific tasks can be performed effectively and economically (Chang et al., 2001). Thus, the quality of team output, the audit opinion, depends on teamwork and the team's ability to synthesize the evidence and assessments of individual auditors who perform the work. Communication among team members represents a fundamental and critical activity from which auditors exchange and gather information necessary for deriving the audit opinion of an audit assignment (Rudolph & Welker, 1998). Communication among team members, thus, is highly correlated to the quality of the audit judgment (Gregson, 1990; Clampitt & Downs, 1993).

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While auditing is conducted within a “team” framework, only a few auditing studies (e.g., Watson 1975; Trotman & Yetton, 1985; Rudolph & Welker, 1998) have investigated whether audit performance is affected by the way teams organize to conduct an audit. One important factor that may have a bearing on auditors’ behavior for information is their leaders’ style. Numerous research suggests that leader behavior may influence leadership effectiveness and employee behavior (e.g., House and Mitchell, 1974; Matthew, 1987; Lin, 1990; Shoemaker, 1999). A wide variety of leader behavior has been empirically summarized as two variables: consideration and initiation (Howell, 1976). Despite its importance, there is little evidence of how leadership style impacts auditors’ communication behavior in the auditing literature.

The purpose of the study is twofold: (1) to determine if leaders in the CPA firms tend to adopt initiation leadership style, and (2) to determine whether the leadership style is associated with three criterion variables that reflect the communication behavior. The three criterion variables are accuracy of information, satisfaction with supervisors, and boundary spanning. These variables represent the activities that auditors would engage in gathering information for an audit judgment. They also represent the quantity and quality of information exchanged among auditors (Rudolph & Welker, 1998). Since leaders play an important role in the audit teams, their leadership style and behavior should have an impact on auditors’ communication behavior.

The remainder of the paper is organized as follows: Section 2 discusses the theoretical background and, thus, develops the hypothesis. Section 3 describes how the study is conducted. Data analysis and findings are provided in Section 4. Section 5 provides a conclusion.

### **Literature Review and Hypothesis Development**

Blake and Mouton (1964) proposed their managerial grid for leadership style by dividing leadership style into “concern for production” and “concern for people.” The leadership style of concern for production is similar to leadership style of “initiation,” while concern for people is similar to “consideration.” For the high initiation-low consideration style, leaders focus on the accomplishment of the organization’s goal and ignore individuals’ feelings. Thus, role differentials are defined through managerial functions. On the contrast, for the low initiation-high consideration style, leaders place more merit harmonious relations with employees and would try to satisfy employees’ needs as much as possible even if this sometimes would impair the organization’s goal. However, Blake and Mouton (1982) also suggested that these two extreme styles are not proper and proposed a leadership style of high initiation-high consideration. They believe that for the same leadership style of consideration, it would have a different result with differing initiations. In a low initiation-high consideration style, leaders try to maintain a harmonious relation with employees even at the expense of the entity’s goal. However, in a high initiation-high consideration style, leaders would adopt a different format of consideration. This leadership style would engage everyone in a team work which would search for the same goal and require everyone to resolve problems or differences together.

Howell (1976) has reduced the wide variety of leader behavior into two dimensions: consideration and initiating structure. According to Fleishman and Peters (1962), consideration refers to “the extent to which an individual is likely to have job relationships characterized by mutual trust, respect for subordinates’ ideas, and consideration of their feelings” and initiating structure “the extent to which an individual is likely to define and structure his own role and those of his subordinates towards goal attainment” (p. 130).

Research has shown that public accounting firms apply different levels of structure to their decision-making processes as a means to improve audit efficiency and to reach consensus of audit judgments (e.g., Cushing and Loebbecke, 1986; McDaniel, 1990). A general way to increase structuredness of the firm, and, in which the firm can coordinate and control the efforts of the audit team, is through formal programs (e.g., systemized audit approaches) that specify how teams are to carry out audit tasks (cf., Cushing and Loebbecke, 1986; Chang et al., 2001). The constraints placed on behavior may restrict the freedom of auditors to make discretionary choices concerning the collection, analysis, and interpretation of information (cf., Robbins, 1983). Numerous research has indicated that CPA firms tend to be more structured (e.g., Bamber and Bylinski, 1982; Cushing and Loebbecke, 1986; Solomon, 1987;

Abdolmohammadi , 1991; Danos et al., 1991; Rudolph and Welker, 1998; Chang et al., 2001). Therefore, the following hypothesis is proposed:

*H1: The leaders of CPA firms tend to adopt initiation style of leadership.*

As mentioned previously, initiation refers to “the extent to which an individual is likely to define and structure his own role and those of his subordinates towards goal attainment” (Fleishman and Peters, 1962 p.130). Therefore, if leaders adopt the initiation style, they generally will give specific and precise instructions to their subordinates for audit tasks and assignments. These specific and precise instructions may help auditors understand what their superiors want and what is needed for the task. Staff auditors in the audit team can then follow the instructions to conduct any necessary audit jobs prescribed in the instructions. In such cases, the accuracy of information exchanged between the superior and subordinates should be high. Also, subordinate auditors are expected and need only to follow their superior’s instructions. These instructions not only work as guidelines for task assignments but also as excuses to deflect any criticism if there are any inadequate consequences. Auditors would find it enjoyable to simply follow instructions and wish their superiors would give adequate instructions for their task assignments. Thus, the satisfaction with supervisors should be relatively high when their superiors adopt the initiation leadership style.

On the other hand, Bacharach and Aiken (1977) suggest that work dimension is relatively more certain and employees’ behavior proceeds in a more fixed pattern in a mechanistic organization. This helps create a “mechanistic mindset” (Cushing and Loebbecke, 1986) and limits auditors’ activities for information exchange. Cushing and Loebbecke (1986) further speculate that standardized and programmed activities (e.g., Dirsmith and McAllister, 1982), such as structured audit approaches (e.g., Cushing and Loebbecke, 1986), may mechanize thinking and desensitize auditors to the need to collect and process information that resides outside the bounds of the structure (cf. Hall, 1996, p.70). Rudolph and Welker (1998) found that auditors of mechanistic audit teams tend to enter fewer boundary-spanning activities for the collection of audit information. Therefore, I expect initiation leadership style is negatively related to boundary spanning. Because leaders of the CPA firms are expected to tend to adopt initiation leadership style, only initiation is tested here. Therefore, the following hypothesis is proposed:

*H2: If leaders adopt the initiation style of leadership, auditors would have more accuracy of information, more satisfaction with supervisors, but less boundary spanning.*

**Research Method**

*Sample and Procedure*

The survey instrument consisted of a 23-item questionnaire. A pilot-test was performed using five auditors of one large accounting firm in Taiwan. Some revisions were made based on the pilot-test. A total of 500 questionnaires were sent to the five largest CPA firms in Taiwan. They were evenly divided among the five firms, with 20 surveys to the largest five offices of each firm.

Approximately one week after the survey packets were sent, phone calls were made to ensure that the accounting firms had received the packets. Reminder letters were mailed to the accounting firms after packets were received. Usable questionnaires were returned by 195 auditors. The response rate was 39%. A demographic profile of the participants is presented in Table 1.

**Table 1 Demographic Profile of Participating Auditors**

<b>Attribute</b>	<b>Item</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Gender</b>	Male	81	41.5
	Female	114	58.5
<b>Age</b>	Below 20	2	1.0
	20-25	48	24.6
	26-30	118	60.5

	31-40	27	13.8
<b>Education</b>	High School	1	0.5
	College	5	2.6
	Bachelor	167	85.6
	Master	22	11.3
<b>Audit Experience</b>	1-3 years	142	72.8
	4-6 years	41	21.0
	7-10 years	9	4.6
	11-15 years	3	1.5
<b>Position</b>	Auditors	163	83.6
	Ass. Manager	26	13.3
	Manager	5	2.6
	CPA	1	0.5
<b>CPA License</b>	No	164	84.1
	Yes	31	15.9

Using the technique advocated by Armstrong and Overton (1977), non-response bias was evaluated by comparing the subject responses received before the follow-up reminder (114) with the responses received after the follow-up reminder (81). No significant differences were found between these two groups regarding the independent, criterion variables or the demographic data.

#### *Variable measurements*

1. Perception of leadership style The items used to measure the independent variable, leadership style perception, were obtained from the Leadership Behavior Description Questionnaire (LBDQ) developed by Halpin (1966). Subjects were told specifically to refer the leaders to the ones in their individual audit teams. The nine questionnaire items were measured by a five-point Likert-type scale, with higher scores indicating greater degrees of initiation and consideration. The average score of the factor-analyzed items represents the value of initiation and consideration.
- 2.
3. *Communication behavior* Three criterion variables (accuracy of information, satisfaction with supervisor, and boundary spanning) were adopted to represent communication behavior. Accuracy of information was measured with a two-item scale, satisfaction with supervisors was measured in terms of two items, and boundary-spanning scale contained four items. All the items were adapted from Rudolph and Welker (1998). Subjects were told specifically to refer the criterion variables to their communication behavior in the audit teams. The items were measured by a five-point Likert-type scale and the average score of the factor-analyzed items represents the value of each latent variable. Higher scores represent more accuracy of information, satisfaction with supervisor, and boundary spanning.

## **Results**

### *Descriptive Statistics, Validity, and Reliability*

We used content validity and construct validity to test the validity of the scales. First, the test variables were based on a literature review and a pilot-test was performed using purposefully chosen practicing auditors. So, content validity of the questionnaire should be acceptable. Second, we used discriminant validity to measure construct validity. A factor analytical technique, with a varimax rotation, was performed to assess the discriminant validity<sup>1</sup> of the multiple-item scales. Eigenvalue was set to be greater than 1 and factor loadings greater than .6. The results are presented in Table 2. Thus, the validity of the study should be reasonable.

Cronbach's  $\alpha$  was used to test the internal consistency of variables. They are also listed in Table 2. The

<sup>1</sup> Discriminant validity is indicated when items have high loadings on their *a priori* determined variable and low loadings on other variables (Kerlinger, 1986).

Cronbach’s  $\alpha$  for all the multiple-item scales (except for the satisfaction with supervisors)<sup>2</sup> were above the commonly applied standard of .70 (Nunnally, 1978), suggesting reasonable item convergence. Therefore, the reliability<sup>3</sup> of the scales is acceptable.

Table 2 (Panel A) also presents means, maximums, minimums, and standard deviations for each variable.

*Hypothesis Testing*

According to Table 2 (Panel A), we learn that the participating subjects’ perception of their supervisor’s leadership style shows that they are more toward initiation. A t-test of the two variables also indicated a significant result ( $p < .01$ ). Therefore, H1 is supported. This may concur with what we generally think of the CPA firms as being formalized and structured.

**Table 2 Descriptive Statistics , Factor Loadings, Cronbach’s Alphas**

**A: Descriptive Statistics**

Variable	Mean	Max.	Min.	S.D.
Initiating Leadership Style	3.94	5.0	1.8	0.69
Consideration Leadership Style	3.32	4.8	1.0	0.70
Accuracy of Information	2.69	4.6	2.0	0.71
Satisfaction with Supervisors	3.24	4.5	1.0	0.67
Boundary Spanning	2.69	5.0	2.0	0.75

**B: Factor Loadings, Cronbach’s Alphas**

Variables	Item	Loadings	Cronbach’s $\alpha$
<b>Initiating Leadership Style</b>	1	0.814	0.8352
	2	0.776	
	3	0.812	
	4	0.772	
<b>Consideration Leadership Style</b>	1	0.807	0.8535
	2	0.748	
	3	0.847	
	4	0.812	
	5	0.765	
<b>Accuracy of Information</b>	1	0.808	0.7242
	2	0.798	
<b>Satisfaction with Supervisors</b>	1	0.841	0.6835
	2	0.841	
<b>Boundary Spanning</b>	1	0.829	0.7635
	2	0.731	
	3	0.706	
	4	0.797	

The second hypothesis of the study was tested by examining the direction and significance of LISREL-estimated correlation coefficients between the independent variable (initiating leadership) and the three criterion variables (accuracy of information, satisfaction with supervisors, and boundary spanning). Rudolph and Welker (1998) suggest that one major advantage of LISREL-generated correlations over OLS-calculated correlations is that the effects of measurement errors in the observed variables are eliminated from the estimates.

<sup>2</sup> The relatively low Cronbach’s  $\alpha$  of “satisfaction with supervisors” may be attributed to the low numbers of items in the scale.

<sup>3</sup> Yang et al. (1993) suggested that reliability refers to trustworthiness, which means the consistency or stability of the test results. It also means that questions can refer to the same meanings among themselves and, test scores can be consistent between two tests (test and re-test).

*Fit of the overall model and fit of the internal structure of the model*

The indicators of the overall fit of the estimated model are presented in Table 3 and the estimated correlations are reported in Table 4.

Five indicators of fit were calculated. First, the Chi-square fit statistic is significant (99.86, df = 51, p<.05), which indicates unsatisfactory fit of the overall model to the data. However, the Chi-square statistic can fluctuate according to sample size (Marsh et al., 1988) and it is not unusual to have a significant result even when the model fits reasonably (Bentler and Bonett, 1980). Next, the goodness-of-fit index (GFI) and the adjusted goodness-of-fit index (AGFI) are another measures of fit for the model. The general rule is .9 for both to indicate reasonable fit (Joreskog and Sorbom, 1993). The estimated value for GFI is .92 and for AGFI is .88. The value for GFI is good and for AGFI is very close to the suggested level.

Third, The Steiger’s (1990) root mean square error of approximation (RMSEA) is less than the suggested guideline of .05 (Joreskog and Sorbom, 1993), which indicates reasonable fit of the model. Fourth, because Chi-square statistic may change according to sample size, one way to examine the fit of the model is to divide the Chi-square by the degree of freedom (NCI). The estimated value of NCI (1.958) falls within the threshold of 3 (Joreskog and Sorbom, 1993), which also indicates reasonable fit. Finally, NFI (Normed Fit Index), IFI (Incremental Fit Index), and NNFI (Nonnormed Fit Index) all represent the incremental fit of the model and the general rule for reasonable fit is above .9 (Bentler and Bonett, 1980; Joreskog and Sorbom, 1993). The estimated values for the three indicators are either close to or above the guideline. Thus, the study concludes that the model has a reasonable overall fit and the external quality of the estimated model is good.

**Table 3 Goodness-of-Fit Statistics for the LISREL Model**

$\chi^2$	99.86(df =51), P=0.00
GFI	0.92
AGFI	0.88
RMSEA	0.049
NCI( $\chi^2$ /df)	1.958(99.86/51)
NFI	0.86
IFI	0.92
NNFI	0.90

**Table 4 Squared Multiple Correlations of the LISREL-estimated Model**

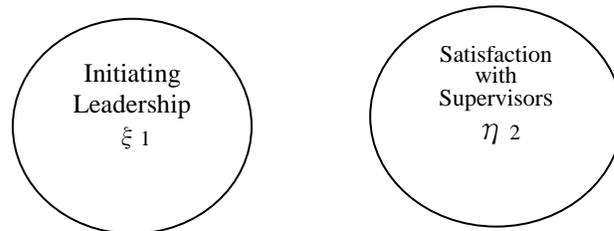
Latent variables	Indicators	Correlation coefficients	T-Value	Squared Multiple Correlations	Composite relia. Of the latent
<b>Initiating Leadership Lamda X</b>	1	1.00		0.53	0.751
	2	0.75	7.12	0.32	
	3	0.76	7.11	0.32	
	4	0.87	7.79	0.42	
<b>Accuracy of Information Lamda Y</b>	1	1.00		0.59	0.712
	2	0.86	6.97	0.44	
<b>Satisfaction with supervisors Lamda Y</b>	3	1.00		0.29	0.732
	4	1.62	2.84	0.75	
<b>Boundary spanning Lamda Y</b>	5	1.00		0.79	0.820
	6	0.75	7.51	0.43	
	7	0.50	5.46	0.19	
	8	0.53	5.76	0.21	

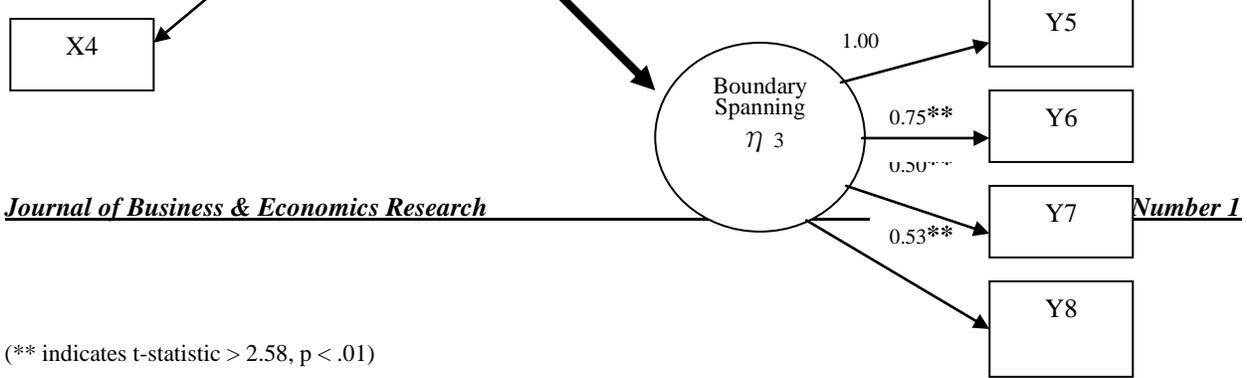
Latent variables	Indicators	Correlation coefficients	T-Value	Squared Multiple Correlations	Composite relia. Of the latent
Initiating Leadership Accuracy of Information Gamma $\Rightarrow$		0.82	7.46	0.61	
Initiating Leadership Satisfaction with Supervisors Gamma $\Rightarrow$		0.28	2.54	0.14	
Initiating Leadership Boundary Spanning Gamma $\Rightarrow$		-0.56	-5.15	0.22	

The next check tested the internal quality of the model. Table 4 presents the squared multiple correlations (SMC) of the model which can be used to measure the strength of the relationship between the variables (Joreskog and Sorbom, 1993). SMC works as an individual item reliability test and the higher the SMC value the better. From Table 4, we see that the model has good SMC values on most of the variables except task feedback and task cooperation. On the other hand, the composite reliabilities of the latent variables are all above the generally suggested standard of .6 (Bagozzi and Yi, 1988). The composite reliability of the latent variables is equivalent to the Cronbach's  $\alpha$  of the latent variables. In addition, t-values of the parameters are greater than 1.96, an indication of significance. The study concludes that the fit of the internal structure of the model is good. Therefore, the internal quality of the estimated model is good. Since both the external and internal quality of the model are good, this warrants an examination of the estimated correlation for testing the hypothesis.

*LISREL Correlation Coefficients*

**Figure 1 LISREL Results**





The correlations between initiating leadership style and the criterion variables are significant for accuracy of information (.82), satisfaction with supervisors (.280), and boundary spanning (-.56). The results indicate that the initiating leadership style of the CPA firms has significant effects on auditors' communication behavior. Accuracy of information and satisfaction with supervisors tend to be greater when leaders of CPA firms adopt initiating structure of leadership style. On the other hand, boundary spanning tends to be less when initiating leadership style is adopted by the leaders of the firms. Thus, these results support the second hypothesis of the study.

### Conclusion

The verity of an audit opinion depends heavily on the suitability of the professional judgments made by every auditor on the audit team. In turn, the suitability of professional judgments is dependent on the adequacy of the information set that each auditor assimilates when making audit judgments. The dependency of auditing on information gathering and assimilation highlights the importance of understanding the situational variables that may create differences in the amount of information auditors evaluate in the course of task performance. The present study proposes that the initiating leadership style is a situational variable that will create differences in auditors' communication behavior for information gathering activities. As proposed, the study indicates that CPA firms' leadership style would have a significant effect on auditors' communication behavior for exchanging and gathering information. According to the results, leaders in the participating Taiwan CPA firms tend to adopt initiating leadership style that concurs with the perception that CPA firms are formalized and structured (e.g., Bamber and Bylinski, 1982; Cushing and Loebbecke, 1986; Solomon, 1987; Rudolph and Welker, 1998). They tend to set the guidelines and dictate what approaches auditors should take to obtain information for the audit assignment. Auditors are told and trained to do what they are ordered. And they are evaluated on this, too. According to the results of the study, this initiating leadership style helps in accuracy of information and satisfaction with supervisors. However, initiating leadership style has a negative effect on boundary spanning which means superiors' initiating structure may deter auditors from going out of their teams or firms for more information. They may want to ask their superiors' opinion first to deflect any responsibility if bad judgments are made. This may prove to have a deleterious effect on decision-making quality. Thus, it is the suggestion of the study that leaders in the CPA firms ought to encourage their auditors to engage more in boundary spanning activities for more information and for a better decision quality. Because the study examined only the effects of initiation leadership style, the more robust variable of leadership style, on auditors' communication behavior, future research may want to examine the effects of the other leadership style (consideration) on auditors' communication behavior

This study contributes to the auditing literature in two important ways. First, it examined the effects of leadership style perception on auditors' communication. Despite its importance, there has been little evidence in the auditing literature. Second, it specifically examined the initiation leadership style on auditors' communication behavior in three important dimensions: accuracy of information, satisfaction with supervisors, and boundary spanning. As such, suggestions can be gleaned from the empirical results based on the responses of the practicing auditors. These results could have important implications to CPA firms that have been suffering from high turnover rates and frequently criticized audit quality.

However, there are several limitations, which may need to be taken into consideration when we try to derive any implications from the study. The use of a self-reporting methodology makes it possible that the results are biased, due to the use of respondents' perceptions and common method variance. Another limitation is that the researcher was not present to observe sample selection and subject participation, and this diminished our control over the administration of sample criteria. Finally, subjects were auditors employed in Taiwan, which has a national culture low in individualism (e.g., Hofstede, 1980). The results may not generalize to national cultures with a different set of cultural characteristics.

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#### Notes