The Role of Trust in Supervisor in Budgeting System

Feng-Yu Ni\textsuperscript{a,}*,
Chin-Chun Su\textsuperscript{b},
Shao-Hsi Chung\textsuperscript{c},
Kuo-Chih Cheng\textsuperscript{d}

\textsuperscript{a} Department of Business Administration, National Sun Yat-Sen University, Kaohsiung, Taiwan
\textsuperscript{b} Department of Finance, Kao-Yuan University, Kaohsiung County, Taiwan
\textsuperscript{c} Department of Public Finance, Mei-ho Institution of Technology, Pingtung, Taiwan
\textsuperscript{d} Department of Accounting, Kun-Shan University of Technology, Tainan, Taiwan

The 17\textsuperscript{th} Asia-Pacific Conference on International Accounting Issues
Wellington, New Zealand
Nov. 22, 2005

* Corresponding author. Tel: 886-7-5252000-4630; fax: 886-7-5254698
E-mail address: fyni@mail.cm.nsysu.edu.tw
Abstract

The study examined the relationship between budget participation and managerial performance by the mediating role of trust in supervisor and explored the moderating role of budget goal difficulty among budget participation, trust in supervisor and managerial performance. The useful 155 responses were randomly drawn from subordinate managers of the listing manufacturing companies in Taiwan Stock Exchange. The mediating effect of trust in supervisor is examined by path analysis and subgroup analysis was used to examine the contingency effect of budget goal difficulty on the role of trust in supervisor between budget participation and performance. The findings support our hypotheses and demonstrate the mediating effect of trust in supervisor and the moderating effect of budget goal difficulty.

1. Introduction

The importance of budget participation as a means of improving performance has been intensively discussed by behavioral scientists for decades (e.g. Milani’s, 1975; Brownell, 1982, 1983; Chenhall and Brownell, 1988; Dunk, 1989; Kren, 1992; Nouri, and Parker, 1998). Some studies indicate that the direct influence of budget participation on managerial attitudes and performance is inconsistent. Hence, factors which may influence the relationship between participation and performance need further investigation.

Numerous researchers from various disciplines seem to agree that trust has much important benefits for organizations and managers. Previous studies suggest managers’ trust in supervisor will directly influence managerial performance (e.g. Earley, 1986; McAllister, 1995; Dirks & Ferrin, 2001; Atuahene-Gima & Li, 2002). In management accounting studies, trust is also regarded as an important factor in budgeting system (Otley, 1978; Ross, 1994) and trust is influenced by the participation in budgeting context (Magner, Welker & Campbell, 1995). Therefore, the first purpose of the study is to explore the relationships among budget participation, trust and managerial performance.

Goal setting theory indicates that different goal difficulties have different motivational effects (Hofstede, 1968; Locke, 1968). However, this study suggests that, at different goal difficulties, participative budgeting system has different motivational effects on managers. The study views budget goal difficulty as a contingency variable
and classifies goal difficulty as high, medium and low levels to examine the role of trust in supervisor between budget participation and managerial performance.

The rest of this paper proceeds as follows. The next section contains a review of the related literature, the model used, and the hypotheses tested. The research method is then described, followed by the results. The final section presents a discussion of the major findings, the limitations, and the implications for future research and practice.

2. Literature Review and Hypotheses

2.1 Budget Participation and Managerial Performance

Previous empirical results indicate the relationship between budget participation and performance is inconsistent. While some findings report a significantly positive relationship between budget participation and performance (e.g. Merchant, 1981; Brownell, 1982), others show insignificantly positive (e.g. Milani, 1975; Brownell and Hirst, 1986; Dunk, 1989) or even negative associations (e.g. Stedry, 1960; Cherrington & Cherrington, 1973). Hence, for interpreting this conflict, some researchers suggest the contingency views (e.g. Brownell, 1983; Brownell, 1985; Mia, 1988; Mia, 1989) and others use intervening variables to reconcile this inconsistency (e.g. Chenhall & Brownell, 1988; Kren, 1992; Nouri & Parker, 1998; Shields, Deng & Kato, 2000). In this study, we employ intervening approach to reconcile the inconsistency.

In budgeting process, previous studies suggest the role of participation provides several functions. Kren (1992) suggests managers with the job related information taken from participation in budgeting process may improve their performance. Chenhall & Brownell (1988) argue that participation decrease manager’s role ambiguity for promoting performance. In addition, Nouri and Parker (1998) propose that budget participation enhances managers’ organizational commitment and then improves performance. In this study, we argue that budget participation provides communication opportunity to enhance subordinate managers’ positive attitude, and thus facilitate managerial performance. Hence, we propose that there is a positive relationship between budget participation and managerial performance as following hypothesis.

H1: Budget participation and managerial performance have a positive relationship.
2.2 The Mediating Effect of Trust in Supervisor

2.2.1 Trust in Supervisor

Trust is regarded as the belief that individual would like to depend on another party with positive confident expectations (Das & Teng, 1998; Lewicki, McAllister & Bies, 1998), which is introduced as affect-based trust by Lewis & Weigert (1985). Furthermore, McAllister (1995) indicates that affect-based trust is individual’s belief of caring and considerations in others and is considered to be significantly associated with individual’s performance. Thus, the study specifies trust in supervisor as subordinates’ belief of caring and considerations in their supervisor, which is an affect-based trust.

2.2.2 Budget Participation vs. Trust in Supervisor

The study suggests, in budgetary setting, budget participation will positively influence trust in supervisor. Because budget participation provides the opportunities to express subordinates’ opinions and views (Chenhall and Brownell 1988; Magner et al., 1995), subordinates managers’ voice in participative budget context will promotes their perceptions of a fair procedure (Magner et al., 1995). Subordinates’ perception of procedural fairness will enhance trust in supervisor (Kim & Mauborgne, 1993; Konovsky & Pugh, 1994). Thus, the process of budget participation will promote the perceptions of fairness and then enhance trust in supervisor. Accordingly, we propose the following hypothesis.

H2: Budget participation and trust in supervisor have a positive relationship

2.2.3 Trust in Supervisor vs. Managerial Performance

Higher level of trust leads to higher performance (Earley, 1986; McAllister, 1995; Dirks & Ferrin, 2001; Atuahene-Gima & Li, 2002). Since managers who possess high level of trust in supervisor will emotionally believe that they will receive fair treatment and reasonable reward if they achieve the required objectives, trust will improve managerial performance (Atuahene-Gima & Li, 2002). Consequently, managers who possess higher level of trust in supervisor will make more effort to
facilitate performance. The following hypothesis is proposed.

\[ H_3: \text{Trust in supervisor and managerial performance have a positive relationship.} \]

2.2.4 Trust in Supervisor as an Intervening Variable

As we discussed above, the relationships between budget participation, trust in supervisor and managerial performance are undoubtedly proposed. First, budget participation improves managerial performance. In addition, subordinate managers’ participation in budgetary setting enhances their trust in supervisor and the trust facilitates managerial performance. Therefore, we infer that trust in supervisor plays a mediating role between budget participation and managerial performance. The hypothesis is proposed below and the full theoretical model presents in Figure 1.

\[ H_4: \text{Trust in supervisor has a mediating effect on the relationship between budget participation and managerial performance.} \]

2.3 The Contingency Effect of Budget Goal Difficulty

Budget goal difficulty is specified as the degree of difficulty for manager to attain their budget goals. The study suggests that the theoretical model we proposed in figure 1 will be moderated by budget goal difficulty. The theoretical model will be untenable at both low and high levels of budget goal difficulty and will only be enhanced at medium level of budget goal difficulty.

Because low level of goal difficulty shows a goal can be achieved easily with less challenge, managers do not cost much effort, time, skills and knowledge to achieve the goal. Since the goal is effortless to attain, the positive effect of participation will not exist. The relationship that budget participation improves performance through trust is not palpable.

High level of budget goal difficulty is specified as a goal which is very difficult and unattainable even managers involve time and effort. High level of budget goal difficulty will result that managers will not willingly accept the goal and then reject it in their minds. While managers reject the unattainable goal in their minds, the positive effect of budget participation will not also exist. The association between budget participation and managerial performance through trust is also trivial.

The study suggests that, at medium level of budget goal difficulty, the positive association between budget participation and managerial performance through trust in
supervisor is obvious. Medium level of goal difficulty refers to a goal that is difficult but attainable if managers involve efforts, time, skills and knowledge. At medium level of goal difficulty, for achieving their goals, subordinate managers will be more necessary to express their opinions and views through the budget participation opportunity. The participation provides managers communication opportunity with their supervisor. The communication process will improve managers’ perceptions of fairness and thus enhances their trust in supervisor (Magner et al., 1995). When managers with high level of trust in supervisor believe they will receive fair treatment and reward (Atuahene-Gima & Li, 2002), they will make more effort and time to improve their performance at this challenging and attainable level of goal difficulty. Thus, trust in supervisor will improve managerial performance. Additionally, at this level of goal difficulty, budget participation with communication effect will also facilitate managerial performance. As the discussed relationships between the variables above, the indirect effect of budget participation on managerial performance through trust in supervisor will be noticeable at medium level of goal difficulty. From the discussions of this section, the study proposes the following hypotheses:

H₅: At medium level of budget goal difficulty, the relationships among budget participation, trust in supervisor and managerial performance will be stronger than at either low or high levels of budget goal difficulty.

H₆: At medium level of budget goal difficulty, the indirect effect of budget participation on managerial performance through trust in supervisor will be stronger than at either low or high levels of budget goal difficulty.

3. Method

3.1 Sample and data collection

This study employed a cross-sectional questionnaire survey to collect empirical data from a sample of 300 companies that were randomly selected manufacturing companies listing in the Taiwan Stock Exchange. A mail questionnaire with a cover letter and a self-addressed prepaid envelope was forwarded to a sample of 900 subordinate managers who were chosen from three different functional departments
including marketing, accounting and production operations in each company. The subordinate managers had a role in the budgeting process and the accountability for budget results.

Questionnaires were received from 177 respondents, in which 22 responses were removed for incomplete responses, yielding an effective response rate of 17.2%. Therefore, 155 responses were available in data analysis. The average age of the respondents was 41.35 years, and the average time spent in their present organization and current position were 12.57 years and 4.55 years, respectively. The main functional areas in which respondents were employed include accounting (39.35 %), production (31.61 %), marketing (21.94 %), and others (7.10 %). 76.40% of the respondents were male.

3.2 Measures

Four variables were measured in the questionnaire which shown in the appendix including budget participation, trust in supervisor, budget goal difficulty, and managerial performance. The measurements were primarily taken from previous studies. However, validity and reliability of each variable were discussed in this study.

3.2.1 Trust in Supervisor

McAllister’s (1995) affect-based trust was employed to measure emotional trust held by subordinates in their supervisors. The five-item instrument is a seven point Likert-type scale ranging from one (strongly disagree) to seven (strongly agree). McAllister (1995) provided evidence for the convergent and discriminate validity of this measure. The Cronbach (1951) alpha coefficient in this study was 0.919, which was judged acceptable using Nunnally’s (1978) criteria of a minimum value of 0.6.

3.2.2 Budget Participation

This study used Milani’s (1975) six-item scale which was frequently employed by prior studies. The instrument assesses the respondent’s involvement in and influence on the budget process. The scale is a seven point Likert-type scale ranging from one (very little) to seven (very much). Previous studies report satisfactory validity and reliability for the scale (e.g., Brownell, 1982; Mia, 1988; Dunk, 1989; Dunk, 1993; Nouri & Parker, 1998). The Cronbach alpha coefficient was 0.836 in the study.

3.2.3 Budget Goal Difficulty

Budget goal difficulty was modified by Kenis(1979) from Steers(1976) and
adopted in this study, which is a five-item and seven point Likert-type scale ranging from one(too loose) to seven(too tight). This instrument assesses the degree of managers’ effort, skill and know-how to attain their budget goal. The Cronbach alpha coefficient was 0.771 in this study.

3.2.4 Managerial Performance

Managerial performance which was measured by a modified nine-item scale from Mahoney, Jerdee & Carroll (1963, 1965) is a manager’s self-rating instrument and consists of eight performance facets and one overall effectiveness facet. Subordinate managers were asked to evaluate their managerial performance from these items. According to Mahoney et al. (1965), the overall effectiveness dimension was regressed on the eight performance dimensions. In the study, the eight dimension model was significant and explained 62% of the variance in the overall effectiveness dimension. In addition, the overall effectiveness dimension was frequently used in previous studies (e.g., Mia, 1988; Dunk, 1989; Dunk, 1993; Nouri & Parker, 1998). Thus, as Mahoney et al. (1965) suggested, the study employed the overall effectiveness dimension as an indicator for managerial performance evaluation.

4. Results

Descriptive statistics and correlation matrix for the variables examined in this study appear in Tables 1 and 2. In Table 2, the positive relationship between budget participation and trust is observed. In addition, it also shows that budget participation and trust are positively related to performance, respectively. These results correspond to the theoretical model in Figure 1 and support our hypotheses one, two and three.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard deviation</th>
<th>Theoretical range</th>
<th>Observed range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Budget Participation</td>
<td>30.19</td>
<td>4.24</td>
<td>6-42</td>
<td>19-42</td>
</tr>
<tr>
<td>Trust in Supervisor</td>
<td>24.36</td>
<td>3.89</td>
<td>5-35</td>
<td>14-35</td>
</tr>
<tr>
<td>Budget Goal Difficulty</td>
<td>21.50</td>
<td>3.43</td>
<td>5-35</td>
<td>14-31</td>
</tr>
<tr>
<td>Managerial Performance</td>
<td>5.17</td>
<td>0.71</td>
<td>1-7</td>
<td>3-7</td>
</tr>
</tbody>
</table>

n=155
TABLE 2. Matrix of inter-correlations

<table>
<thead>
<tr>
<th></th>
<th>MP</th>
<th>BP</th>
<th>Trust</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td>0.248**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.349**</td>
<td>0.223**</td>
<td></td>
</tr>
<tr>
<td>BGD</td>
<td>-0.025</td>
<td>0.029</td>
<td>0.224**</td>
</tr>
</tbody>
</table>

n=155; two tailed significance; **p < 0.01.

MP, Managerial Performance; BP, Budget Participation; Trust, Trust in Supervisor; BGD, Budget Goal difficulty.

4.1 The Mediating Effect of Trust in Supervisor

This study uses path analysis to evaluate the mediating effect of trust in supervisor. The path coefficients were estimated using regression and correlation analysis. Hypotheses one, two and three and their corresponding path coefficients appear in Table 3. Hypotheses two and three have related path coefficient with p-value of less than 0.01. In addition, the path coefficient between BP and MP is also significant (p=0.021), which shows budget participation promotes managerial performance directly while the relationship maybe mediated via trust.

TABLE 3. Path analysis results

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variables</th>
<th>Associated hypothesis</th>
<th>Path coefficient</th>
<th>t-value</th>
<th>p-value</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>BP</td>
<td>H2</td>
<td>0.223**</td>
<td>2.833</td>
<td>0.005</td>
<td>8.023**</td>
</tr>
<tr>
<td>MP</td>
<td>BP</td>
<td>H1</td>
<td>0.179*</td>
<td>2.341</td>
<td>0.021</td>
<td>13.652**</td>
</tr>
<tr>
<td>Trust</td>
<td>H3</td>
<td></td>
<td>0.309**</td>
<td>4.032</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

n=155; **p<0.01; *p<0.05

Decomposition of the observed correlation is employed and results are listed in Table 4. With regard to the total relationship between BP and MP, the zero order correlation is 0.248 (p<0.01, Table2). The results in Table 4 show that the correlation consists of a direct effect (0.179) and indirect effect (0.069).

TABLE 4. Decomposition of observed correlations

<table>
<thead>
<tr>
<th>Combination of variables</th>
<th>Observed correlation</th>
<th>Direct effect +</th>
<th>Indirect effect +</th>
<th>Spurious effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP/Trust</td>
<td>0.223</td>
<td>0.223</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Trust/MP</td>
<td>0.349</td>
<td>0.309</td>
<td>-</td>
<td>0.040</td>
</tr>
<tr>
<td>BP/MP</td>
<td>0.248</td>
<td>0.179</td>
<td>0.069</td>
<td>-</td>
</tr>
</tbody>
</table>

According to Baron and Kenny (1986), this result suggests that trust functions as
a mediator and there exists a partial mediating effect between BP and MP. First, BP is significantly related to Trust (Table 2, $p<0.01$). Second, Trust is significant related to MP (Table 2, $p<0.01$). Third, the relationship between BP and MP decreases after controlling for Trust but remains significant (Table 3, path coefficient of $0.179$). Furthermore, as Baron and Kenny (1986) indicated, full mediation occurs when the relationship between independent variable and dependent variable is no longer significant after controlling for the mediator variable. Thus, we suggest Trust has partial mediation effect on the relationship between BP and MP, which support hypothesis four.

4.2 The Moderating Effect of Budget Goal Difficulty

For testing the moderating effect of BGD on the links among BP, Trust and MP, we categorized the BGD variable into three subgroups. The responses were sorted in ascending order by BGD score. The bottom one-third of responses were classified as the “low level of BGD” group (mean of BGD = 3.625; range from 14 to 20), while the top one-third of responses were classified as the “high level of BGD” group (mean of BGD =5.090; range from 24 to 31). The remainder of the responses was classified as the “medium level of BGD” group (mean of BGD =4.390; range from 21 to 23). Since we hypothesized that all links among BP, Trust and MP are stronger at medium BGD, the correlations and path coefficients under three different levels of BGD were calculated and appeared in Tables 5 and 6.

<table>
<thead>
<tr>
<th>BGD</th>
<th>High ($n_1=49$)</th>
<th>Medium ($n_2=43$)</th>
<th>Low ($n_3=63$)</th>
<th>$z_1$ (High vs. Medium)</th>
<th>$z_2$ (Medium vs. Low)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trust</td>
<td>0.106</td>
<td>0.452**</td>
<td>0.171</td>
<td>-1.761*</td>
<td>1.541</td>
</tr>
<tr>
<td>MP</td>
<td>0.092</td>
<td>0.183</td>
<td>0.567**</td>
<td>0.162</td>
<td>0.464**</td>
</tr>
</tbody>
</table>

Two-tailed significance of $t$: ** $p<0.01$; * $p<0.05$. Two-tailed significance of $z$: ** $p<0.05$ * $p<0.1$. |
TABLE 6. Path analysis results at different level of budget goal difficulty

<table>
<thead>
<tr>
<th>BGD</th>
<th>Dependent variable</th>
<th>Independent variables</th>
<th>Path coefficient</th>
<th>t-value</th>
<th>p-value</th>
<th>F-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Trust</td>
<td>BP</td>
<td>0.106</td>
<td>0.731</td>
<td>0.469</td>
<td>0.534</td>
</tr>
<tr>
<td></td>
<td>MP</td>
<td>BP</td>
<td>0.073</td>
<td>0.504</td>
<td>0.617</td>
<td>0.927</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trust</td>
<td>0.175</td>
<td>1.204</td>
<td>0.235</td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>Trust</td>
<td>BP</td>
<td>0.452**</td>
<td>3.242**</td>
<td>0.002</td>
<td>10.514**</td>
</tr>
<tr>
<td></td>
<td>MP</td>
<td>BP</td>
<td>0.427**</td>
<td>3.103*</td>
<td>0.004</td>
<td>13.190**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trust</td>
<td>0.310*</td>
<td>2.250</td>
<td>0.030</td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>Trust</td>
<td>BP</td>
<td>0.171</td>
<td>1.355</td>
<td>0.180</td>
<td>1.837</td>
</tr>
<tr>
<td></td>
<td>MP</td>
<td>BP</td>
<td>0.085</td>
<td>0.736</td>
<td>0.465</td>
<td>8.568**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trust</td>
<td>0.449**</td>
<td>3.888**</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

** p<0.01; * p<0.05

Hartmann & Moers (1999) suggested that subgroup analysis is appropriate for the strength of moderation. They indicated that the strength of moderation is supported when statistically significant differences exist in the value of correlation coefficients between variables across groups. In the study, Table 5 shows that all correlation coefficients between BP, Trust and MP are statistically significant at medium BGD, while the correlations between PB and Trust and between PB and MP do not show significant relationships under the other two levels of BGD. However, the study does not expect the significant relationship between Trust and MP, which might be an interesting topic for future research.

In addition, we demonstrated the significance of z’s between two subgroups correlation coefficient (subgroup “high” vs. “medium”; subgroup “medium” vs. “low”). The $z_1$ values, comparing the correlation coefficients of high with medium BGD, show that the relationships between BP, Trust and MP are stronger at medium level than at high level. However, the $z_2$ values, comparing the correlation coefficients of medium with low BGD, show that the relationships at medium BGD is not stronger than at low BGD except the relationship between BP and MP. Accordingly, the results partially support the hypothesis five.

Through the path analyses at different levels of BGD, we found that the hypothesis six was supported in Table 6 and the results were shown as Figure 2. The path coefficients between BP and Trust, and between BP and MP are not significant other than at medium BGD. Again, we employ Baron and Kenny’s (1986) perspective.
Indeed, only at medium BGD, the partial mediating effect of Trust exists. The relationship between BP and Trust is significant (Table 5, p< 0.01). Additionally, Trust is significant related to MP (Table 5, p<0.01). Third, the relationship between BP and MP decreases after controlling for Trust but remains significant (Table 6, path coefficient of 0.427). The decomposition of observed correlations at different levels of BGD appears in Table 7. Thus, the results show that the mediating effect of Trust does not exist excluding at medium BGD and support the hypothesis six.

**TABLE 7. Decomposition of observed correlations at different level of budget goal difficulty**

<table>
<thead>
<tr>
<th>BGD</th>
<th>Combination of variables</th>
<th>Observed correlations =</th>
<th>Direct effect +</th>
<th>Indirect effect +</th>
<th>Spurious effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>BP/Trust</td>
<td>0.106</td>
<td>0.106</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(n₁=49)</td>
<td>Trust/MP</td>
<td>0.183</td>
<td>0.175</td>
<td>-</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>BP/MP</td>
<td>0.092</td>
<td>0.073</td>
<td>0.019</td>
<td>-</td>
</tr>
<tr>
<td>Medium</td>
<td>BP/Trust</td>
<td>0.452</td>
<td>0.452</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(n₂=43)</td>
<td>Trust/MP</td>
<td>0.502</td>
<td>0.310</td>
<td>-</td>
<td>0.192</td>
</tr>
<tr>
<td></td>
<td>BP/MP</td>
<td>0.567</td>
<td>0.427</td>
<td>0.140</td>
<td>-</td>
</tr>
<tr>
<td>Low</td>
<td>BP/Trust</td>
<td>0.171</td>
<td>0.171</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>(n₃=63)</td>
<td>Trust/MP</td>
<td>0.464</td>
<td>0.449</td>
<td>-</td>
<td>0.015</td>
</tr>
<tr>
<td></td>
<td>BP/MP</td>
<td>0.162</td>
<td>0.085</td>
<td>0.077</td>
<td>-</td>
</tr>
</tbody>
</table>

Figure 2. Path Analysis by subgroups of Budget Goal Difficulty

**p< 0.01; *p< 0.05 (two-tailed tests); ( ) is t value.**
5. Conclusion

The first purpose of this study is examining the role of trust in supervisor between budget participation and managerial performance. The empirical results indicate a directly positive association between budget participation and performance and an indirect effect of trust in supervisor. Additionally, the relationships between budget participation and trust and between trust and managerial performance are also validated. The results suggest that participation could improve the communication and interaction between subordinate managers and their supervisor to enhance their trust. Thus, we confirm that the critical role of budget participation for enhancing subordinate managers’ trust in supervisor and managerial performance. Besides, managers’ trust is important for improving performance.

Furthermore, we examined the moderating effect of budget goal difficulty at different levels. The study validated stronger relationships among budget participation, trust and managerial performance at medium goal difficulty. The results support that medium goal difficulty is optimal (Kenis, 1979) and may imply a nonlinear relationship between goal difficulty and performance or attitude as suggested by prior studies (Stedry & Kay, 1966; Hofstede, 1968; Erez & Ziden, 1984). Besides, the results also implicate that a supervisor should set a challenging and attainable goal difficulty rather than too tight difficulty to generate the best participation effect on trust and performance.

We suggest some future research directions. Independent variables related to budgeting system such as budget emphasis and budget favorability could play different roles in the model. Thus, we suggest other potential models and possible analytic methodology to examine the role of trust in budget control system in the future research.

However, the findings are subject to several limitations. Previous literature suggests some potential variable in trust-related studies, such as culture which has been regarded as an important contextual variable (e.g., Atuahene-Gima & Li, 2002; Luo, 2002). Due to the empirical data of this study being drawn from Taiwan, the results might not be generalized to other countries. In addition, the survey approach also has limitations, such as the self-rating measure of managerial performance. Despite these limitations, the study provides the implication for budgeting system
design and arouses a spotlight on the role of trust in supervisor in budgeting system.
References


