

以組織倫理氣候調節預算寬列 前置變數與預算寬列的關係

Organizational Ethical Climate as Moderators of the Relationships between Budgetary Slack and its Antecedents

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摘要

本研究探討不同型態的組織倫理氣候是否調節預算寬列前置變數(預算強調、環境不確定和資訊不對稱)與預算寬列的關係。本研究以 624 位上市公司經理人為樣本，利用多層次線性模式(HLM)進行分析。研究結果發現利己氣候能強化上述三項預算寬列前置變數對預算寬列的正向影響，亦即組織的利己氣候越明顯，則三項預算寬列前置變數與預算寬列的正向關係皆越顯著。相反的，在高仁慈氣候與高原則氣候下，預算強調與資訊不對稱對預算寬列的正向效果皆不顯著，但在低仁慈氣候與低原則氣候下卻顯著，顯示仁慈氣候和原則氣候能夠弱化預算強調和資訊不對稱對預算寬列的影響。此外，不管高或低仁慈氣候下，環境不確定對預算寬列的正向影響都顯著，顯示仁慈氣候對環境不確定和預算寬列的關係不具調節效果(支持道德脫離理論)。而在高原則氣候下，環境不確定和預算寬列的關係不顯著，但在低原則氣候下，兩者的正向關係卻顯著，顯示原則氣候具有調節環境不確定與預算寬列的關係(不支持道德脫離理論)。

關鍵詞：預算寬列、預算寬列前置變數、組織倫理氣候

Abstract

The authors investigated the impact of different types of organizational ethical climate on the relationships between budgetary slack and three antecedents of the slack (environmental uncertainty, budgetary emphasis and information asymmetry). Using multi-level hierarchical linear modeling (HLM) and a sample of 624 subunit managers from 72 listed companies in Taiwan, they found that the perceived egoistic climate strengthened the positive relationships between the antecedents and budgetary slack. In contrast, the perceived benevolent and principled climates weakened the relationships. However, if the budgetary slack was caused by environmental uncertainty, the perceived benevolent climate had no effect on eliminating budgetary slack (supporting the moral disengagement theory) but the effect of principled climate still exists (not supporting the moral disengagement

theory). The implications of the findings for management accounting research and practices are discussed.

Keywords: Budgetary Slack, Budgetary Slack Antecedents, Ethical Climate

1. Introduction

Subunit managers often create budgetary slack to intentionally underestimate the revenues and productive capabilities or to overestimate the costs and resources required to complete a budgetary task (Chow et al., 1991; Dunk & Nouri, 1998). This results in an unnecessary expropriating of resources by the managers, which is not in the best interest of the organization (Church et al., 2012). Hence, previous researchers have assumed that budgetary slack is dysfunctional or unethical (Douglas & Wier, 2000) and should be avoided as much as possible (Young, 1985; Nouri, 1994; Fisher et al., 2002). Some empirical studies in management accounting have paid more attention to the antecedents, such as budgetary emphasis (Dunk, 1993; Chiou, 2008), information asymmetry (Young, 1985) and environmental uncertainty (Govindarajan, 1986; Lukka, 1988), to explain their prevalence in an organization. However, Young (1985) and Dunk (1993) found results contradicting the prediction of a relationship between antecedents and budgetary slack. Afterward, some studies focused on the tools organizations use to decrease budgetary slack, such as truth-inducing pay schemes (Waller, 1988) and superior authority on budget proposals (Rankin et al., 2008). However, some of these tools are unsuitable in specific circumstances, such as high uncertainty, or are difficult for organizations to adopt in practice, such as truth-inducing pay schemes (Fisher et al., 2002). Hence, the present study was conducted to explore whether the impacts of these antecedents on budgetary slack can be eliminated by the organizational internal magazine (such as organizational climate), especially when they are unavoidable.

Budgetary slack can be viewed as an ethical issue (Douglas & Wier, 2000). Employees often use their superior knowledge to gain an unfair advantage,

especially when they misrepresent their capabilities. Thus, the creation of budgetary slack poses an ethical dilemma (Merchant, 1985; Nouri & Parker, 1998; Douglas & Wier, 2000) and it presents the decision maker with a predicament that has a moral component (Douglas & Wier, 2005; Maiga & Jacobs, 2008). Nohria & Gulati (1996) argued that budgetary slack is a system of principal-agent relationships in which agents create budgetary slack to pursue their own interests rather than those of the organization. Traditional solutions to this moral hazard problem involve financial incentives based on performance. However, these are costly and generate a dead-weight loss (Stevens & Thevaranjan, 2010). Consequently, the moral hazard problem requires a solution that incorporates ethics and moral sensitivity (Stevens & Thevaranjan, 2010) as well as consideration of the reputations of the individuals involved (Stevens, 2002). In light of the recent rise in the number of corporate scandals, studies examining unethical conduct or dysfunctional behavior caused by perceptions of an ethical climate are becoming more frequent (e.g., Treviño et al., 1998; Vardi, 2001; Peterson, 2002; Appelbaum et al., 2005). Lacking, however, is a more comprehensive understanding of how specific types of organizational ethical climate relate to dysfunctional behavior such as budgetary slack in management accounting. The purpose of this study is to explore how different types of organizational ethical climate (benevolent, egoistic and principled) weaken or strengthen the impacts of the above antecedents on budgetary slack.

2. Literature review and hypothesis development

2.1 Antecedents of budgetary slack

The agency theory proposes that an emphasis on budgetary emphasis and information asymmetry provides subunit managers who seek to act in their own self-interest the motivation to create budgetary slack. We can assume that subunit managers have more information than their superiors do about their circumstances, such as costs and production capabilities (Young, 1985; Dunk, 1993). Due to this information asymmetry, subordinates often create budgetary slack to avoid working

hard or to get greater monetary rewards, especially if the organization has a budgetary emphasis (Dunk & Nouri, 1998; Webb, 2002). Budgetary emphasis implies that monetary rewards and career prospects are highly dependent on the degree to which budgetary goals are met (Merchant, 1985; Brownell & Dunk, 1991; Dunk, 1993). The subunit managers benefit from this slack because it creates a low budgetary target, which may result in higher performance-based pay and/or more leisure time for the subordinates. Therefore, a positive relation between budgetary emphasis and budgetary slack, and a positive relation between information asymmetry and budgetary slack, are to be expected (Hopwood, 1972; Waller, 1988; Merchant & Manzoni, 1989). However, Young (1985) found no differences in the level of budgetary slack created by subunit managers with and without information asymmetry. In addition, Dunk (1993) reported that when budgetary participation, information asymmetry and budgetary emphasis were all high, slack was low; this contradicts the prediction that budgetary slack will be high while all the predictors are high. Young (1985) explains the discrepancy by noting that “social pressure” prevents budgetary slack. However, Dunk (1993) found no adequate explanation for his inconsistent findings. Social pressure can arise from intangible factors such as social norms (Young, 1985), the need to maintain one’s reputation, the investigation of performance variability (Webb, 2002) and the sharing of horizontal information (Fisher et al., 2002). We argue that certain kinds of ethical climate in an organization produce social pressure that limits the budgetary slack resulting from information asymmetry and budgetary emphasis.

Subunit managers face environmental uncertainty when the unpredictable behaviour of external actors, such as customers, suppliers, competitors and regulatory groups, creates conditions that influence the performance of an organization both in the present and in the future (cf. Govindarajan, 1986; Lukka, 1988; Andrews, 2008). Dunk (1993) suggested that managers use budgetary slack to control this environmental uncertainty, whereas Nouri (1994) and Dunk & Nouri (1998) suggested that the prevalence of uncertainty is one of the primary motivators for introducing a buffer in the form of budgetary slack. Therefore, environmental uncertainty provides subunit managers who want to prevent an unpredictable outcome with a legitimate excuse to create budgetary slack.

2.2 The moderating effects of an organization's ethical climate

Ethical climate incorporates norms that guide employee behavior and reflect the ethical character of an organization (Cullen et al., 2003). It also encourages practices that have moral consequences (Martin & Cullen, 2006). In addition, the ethical climate creates perceptions of right and wrong conduct in the organization's work environment (Babin et al., 2000) and establishes norms for acceptable and unacceptable employee behavior (Treviño et al., 1998). When an organization develops and communicates formal ethical guidelines, its employees are more likely to comply with the organization's ethical expectations (Mulki et al., 2008; Chen et al., 2013). It is also to be expected that an organization's ethical climate will influence the actions of subunit managers in the direction of avoiding or creating budgetary slack, especially when there are antecedents in place that encourage the slack.

Victor & Cullen (1988) distinguished three ethical climates (egoistic, benevolent and principled) and three reference-group levels (individual, local and cosmopolitan). A cross-classification of these two conglomerates yields nine ethical climate styles. Victor & Cullen (1988) asserted that even though these nine categories make sense in theory, they may not actually exist in organizations. No single organization in a given study is expected to have all nine types (Cullen et al., 2003). Previous studies utilizing the Ethical Climate Questionnaire have found between five and seven factors in an organization, but never all nine (Wimbush et al., 1997; Cullen et al., 2003). Therefore, we hypothesized only the three major ethical climates of egoism, benevolence and principle as the factors influencing moral judgments.

2.2.1 Egoistic climate

In an egoistic climate, individuals' self-interest becomes their most important source for moral reasoning when they are making decisions (Victor & Cullen, 1988; Ferrell & Fraedrich, 1997; Barnett & Vaicys, 2000; Cullen et al., 2003). In strong egoistic climates, perceptions predominate, and concern for the overall well-being of the firm and its members can be downplayed and diminished (Cullen et al., 2003). The egoistic climate is highly related to workplace deviance, as well as to

ethically questionable and ambiguous behavior (Wimbush & Shepard, 1994). This is because it springs from self-interested decision-making -- people acting to promote their exclusive self-interest, regardless of laws, rules, or the impact of their actions on others (Wimbush & Shepard, 1994; Cullen et al., 2003). We expect that an egoistic climate encourages people to create more budgetary slack to earn more rewards (pecuniary or non-pecuniary) with a budgetary emphasis, to avoid excessive effort under information asymmetry, and to avoid unpredictable risks to one's wealth resulting from environmental uncertainty. These expectations can be explained by trait-activation theory (Tett & Guterman, 2000). We argue that an egoistic climate offers cues for the expression of budgetary slack, in turn facilitating greater impacts of budgetary emphasis, information asymmetry and environmental uncertainty on budgetary slack to advance egoistic interest.

Hypothesis 1: The stronger the perceived egoistic climate within an organization, the stronger the positive relationship between budgetary emphasis and budgetary slack.

Hypothesis 2: The stronger the perceived egoistic climate within an organization, the stronger the positive relationship between information asymmetry and budgetary slack.

Hypothesis 3: The stronger the perceived egoistic climate within an organization, the stronger the positive relationship between environmental uncertainty and budgetary slack.

2.2.2 Benevolent climate

A benevolent climate is characterized by a concern for the interests and well-being of others in the organization both internally (from firm members) and externally (from stakeholders) (Victor & Cullen, 1988; Cullen et al., 2003). In a benevolent ethical climate, individuals make ethical decisions by considering the positive or negative consequences of their actions on relatives (Ferrell & Fraedrich, 1997; Barnett & Vaicys, 2000). This applies even if it means fewer fulfillments of the member's own needs (Wimbush & Shepard, 1994). A benevolent climate produces greater cohesiveness among the organization's members (Hackman, 1992), leads to greater involvement of members in the organization (Welsch &

LaVan, 1981), and increases members' commitment to the organization (Podsakoff et al., 1996). These intrinsic pressures cause members to refrain from unethical behavior. Therefore, we expect a benevolent climate to weaken the positive relationships of budgetary slack with both budgetary emphasis and information asymmetry.

Hypothesis 4: The stronger the perceived benevolent climate within an organization, the weaker the positive relationship between budgetary emphasis and budgetary slack.

Hypothesis 5: The stronger the perceived benevolent climate within an organization, the weaker the positive relationship between information asymmetry and budgetary slack.

Merchant & Manzoni (1989) and Cyert & March (1992) suggested that budgetary slack can be used to absorb fluctuations in an uncertain operating environment, especially in the research and development department (Davila & Wouters, 2005; Yang et al., 2009). Therefore, there is justification for creating budgetary slack in the face of increasing environmental uncertainty. The moral disengagement theory (Bandura, 1990, 2002) suggests that an important precondition for managers to act opportunistically their ability to disengage moral responsibilities from their actions by self-justifying these actions so as to make them compatible with moral standards (Chen et al., 2013). Drawing on the moral disengagement theory, we argue that creating budgetary slack may be incompatible with benevolent climate traits. However, environmental uncertainty provides a legitimate self-justification for budgetary slack that also provides an excuse for using budgetary slack as a buffer against the impact of environmental uncertainty on performance.

Hypothesis 6: A perceived benevolent climate does not moderate the relationship between environmental uncertainty and budgetary slack.

2.2.3 Principled climate

In a principled climate, individuals make ethical decisions after considering

their actions in light of the supposedly universal and unchanging principles of right and wrong (Ferrell & Fraedrich, 1997; Barnett & Vaicys, 2000). Because a principled climate encourages one to evaluate one's behavior in light of invariant principles, intentions to engage in behavior that is ethically questionable or ambiguous are minimized. Therefore, we expect a principled climate to eliminate the budgetary slack resulting from budgetary emphasis and information asymmetry. However, we don't expect a principled climate to weaken the positive relationship between environmental uncertainty and budgetary slack. Based on the moral disengagement theory, we expect environmental uncertainty to provide a legitimate self-justification for budgetary slack. It also provides an excuse for using budgetary slack as a buffer against the impact of environmental uncertainty on performance.

Hypothesis 7: The stronger the perceived principled climate within an organization, the weaker the positive relationship between budgetary emphasis and budgetary slack.

Hypothesis 8: The stronger the perceived principled climate within an organization, the weaker the positive relationship between information asymmetry and budgetary slack.

Hypothesis 9: A perceived principled climate does not moderate the relationship between environmental uncertainty and budgetary slack.

3. Research method and measures

3.1 Data collection

To test the above hypotheses, data were gathered using a survey questionnaire distributed to 862 managers from 72 listed companies in Taiwan. The companies varied by industry and size. The average size of the firms was 9.4 billion NTD and the average net profit margin in 2013 was 11%. Thirty-five percent of the firms were electronics firms and 43% were other manufacturers; 13% were service companies and 9% were construction companies. We first obtained permission and

support from the firms' personnel directors for our data collection. The questionnaire was then passed out to business-unit general managers with a direct reporting line. The respondents were provided with stamped envelopes for the return of the questionnaires. To protect their anonymity, they were asked to provide only identifying information that was not recognizable by other members of their organization. In total, 624 usable responses were received, which equates to a response rate of 73%. The number of respondents from each organization range from 7 to 12 with an average of 8.7 (SD=2.65). The mean age of the respondents was 46 years, their average work experience was 18.2 years, and they had held their current positions an average 6.2 years (which we refer to as "tenure.")

An ethical climate is considered a type of organizational climate that reflects the employees' perception of the organization (Treviño et al., 1998; Vardi, 2001; Martin & Cullen, 2006). It is by definition a macro-level construct; the perception of an ethical climate is relevant to ethical decision making at the micro level (Wyld & Jones, 1997). Only when individuals agree on their perceptions of their work environment can the measures be meaningfully aggregated to represent a group-level (organizational) perception of the climate (James, 1982; Wang & Hsieh, 2012). To demonstrate the group's perception of an ethical climate within each organization, we had to demonstrate a level of agreement among the observers. The multi-level data in the present study were obtained by using measures of the organization's perceived climate at the group level (Level 2) as well as measures of the antecedents of budgetary slack and budgetary slack itself at the individual level (Level 1). An appropriate analytic method needs to account for the multi-level structure of the data. The hierarchical linear model (HLM) enables researchers to progressively explore questions that span multiple levels of analysis with empirical clarity (Hofmann, 1997; Raudenbush & Bryk, 2002; Wang & Hsieh, 2012; Chen et al., 2013). Thus, we conducted HLM analyses with the restricted maximum likelihood (RML) estimation method to test our hypotheses. To avoid multicollinearity in our model, we centered the variables in accordance with the guidelines suggested by Enders & Tofighi (2007). For Level 1, we used group-mean centering for all the predictive variables, because variation in the individual-level variables among the employees was the focus of concern. For Level 2, we

used grand-mean centering for all the predictive variables, because variation in the perceived organization-level ethical climate across all organizations was the focus of concern.

3.2 Measures

The measures of all the variables were taken from the literature. Two bilingual experts evaluated the accuracy and semantic equivalence of the initial translations of the items on all the scales from English to Chinese. Specifically, they gave feedback on those items that should be modified and then reached a consensus with each other on the modification of these items.

3.2.1 Organizational ethical climate

We used a 26-item scale based on Victor & Cullen's (1988) scales to measure perceptions of the three types of ethical climate. The subscale measuring a perceived egoistic climate was comprised of 9 items, the subscale measuring a perceived benevolent climate in 5 items, and the subscale measuring a perceived principled climate in 12 items. The instrument placed respondents in the role of observers reporting on, but not evaluating, the ethical climate, rather than focusing on whether respondents perceived the climate to be good or bad (Victor & Cullen, 1988; Barnett & Vaicys, 2000; Cullen et al., 2003). This scale has been shown to have acceptable reliability and validity (Schwepker et al., 1997). Martin & Cullen (2006) recently conducted a meta-analysis on the original formulation of the ethical climate typology and questionnaire, finding the typology to be applicable to real organizations.

By giving our climate scale to multiple employees of the same organization, we assured that our results would accurately reflect the true perceived climate of the organization (Wang & Hsieh, 2012) by counter-balancing the idiosyncratic perceptions of individual employees. A within-group agreement statistic such as the rwg index (James et al., 1993) is needed to verify that the aggregation is adequate. James et al. (1993) argued that only when there is satisfactory within-group agreement (i.e., $\text{rwg} > 0.70$) is the aggregation justifiable. For the 72 organizations, the mean rwg was 0.87 for the egoistic climate subscale (range from 0.85 to 0.94),

0.89 for the benevolent climate subscale (range from 0.85 to 0.92) and 0.88 for the principled climate subscale (range from 0.86 to 0.93). In addition, we calculated two intraclass correlation coefficients (ICCs). ICC(1) represents the proportion of the variance in the ratings at the individual level that is attributable to group membership. ICC(2) represents the reliability of the group-level means (Bliese, 2000). ICC(1) was 0.24 for the egoistic climate subscale, 0.31 for the benevolent climate subscale and 0.19 for the principle climate subscale. The ICC(2)s were 0.84, 0.81, and 0.79 for the egoistic, benevolent and principled climate subscales respectively. Taken together, these results show that there was not only an acceptable level of within-group agreement (rwg and ICC(1)) but also a reliable mean score (ICC(2)). Thus, our aggregation of the individual ethical climate scores to form our organizational measure of organizational ethical climate is justifiable and adequate.

3.2.2 Budgetary emphasis

Hopwood (1972) was the first to provide a measure of budgetary emphasis. He used an eight-item scale measuring superiors' evaluation styles. Hopwood categorized the styles based on whether respondents chose "meeting the budget" and "concern with costs" as two of their top three criteria for the performance evaluation. However, Brownell (1982) found that many of the respondents failed to complete the ranking properly. Dunk (1993) used only one item, "meeting the budget," as the indicator of budgetary emphasis. Because ranking a set of criteria is not an easy task for subjects, using just one item can create reliability and validity problems. The alternative instrument we used to measure budgetary emphasis was developed by Van der Stede (2000). Its six items have scores that can range from 1 to 7 ("definitely false" to "definitely true"); the higher the score, the greater the budgetary emphasis.

3.2.3 Information asymmetry

The information asymmetry instrument adopted in the present study was developed by Dunk (1993). It is based on the definition of information asymmetry as well as suggestions by Waller & Chow (1985). It includes six items answered on

7-point Likert scales ranging from (1) “the superior had much better information;” to (7) “the subordinate had more information than the superior.” The midpoint (4) was “the subordinate and superior have the same quality of information.” These items give information about the activities subordinates undertake in their area of responsibility, their familiarity with the input-output relationships, their performance potential, the technology they use in their work and the impact of external factors on their performance. Scores can range from 6 to 42. A score greater than 24 indicates the presence of information asymmetry and a score less than or equal to 24 indicates the absence of information asymmetry (Dunk, 1993). The 11 subunit managers whose scores were less than or equal to 24 were excluded from the analysis, leaving us with a final sample of 624 respondents.

3.2.4 Environment uncertainty

We measured environmental uncertainty by obtaining the subjective interpretations of the decision makers, following the approaches of Downey & Slocum (1975) and Gordon & Narayanan (1984). The scale was designed to determine the managers’ perceptions of the predictability and stability of their organization’s industrial, economic, technological, competitive and customer environments. It includes six items arranged on a 7-point Likert scale from 1 (“very little”) to 7 (“very much”).

3.2.5 Budgetary slack

As described previously, budgetary slack occurs when business-unit managers set their budget target lower than their best forecast about the future, as a way to make their budgetary goal easier to achieve (Lukka, 1988; Merchant & Manzoni, 1989). Our measure of budgetary slack, developed by Van der Stede (2000) and refined based on studies by Onsi (1973) and Lukka (1988), consists of five items answered on 7-point Likert scales. These questions ask subunit managers (1) whether the budgetary target is easy to attain, (2) whether it must be carefully managed within the business unit, (3) whether it promotes high productivity (reverse coded), (4) whether it causes managers to be concerned with improving efficiency in the workplace, and (5) what is the probability of attaining the goal.

3.2.6 Control variables

Because budgetary slack is a moral issue, social desirability factors might undermine the likelihood of obtaining accurate reports. Thus, we measured the extent to which respondents endorse culturally sanctioned and approved norms by including the 13-items short version of the Marlowe-Crowne Social Desirability Scale (Marlowe & Crowne, 1961) as revised by Reynolds (1982). In addition, we included three demographic items: age, gender and tenure.

4. Results

Table 1 presents the results of the confirmatory factor analyses using LISREL. Chi-square difference tests indicate that the hypothesized 8-factor model (budgetary slack, three budgetary-slack antecedents, three types of ethical climate, and social desirability) provide a better fit for (1) one-factor models ($\Delta\chi^2=2644.12$, $df=28$ $p<0.01$), (2) six-factor model 1 ($\Delta\chi^2=471.28$ $df=13$, $p<0.01$), (3) six-factor model 2 ($\Delta\chi^2=611.29$ $df=13$, $p<0.01$). These results suggest that the present study's constructs contains sufficient validity.

Table 1 Results of confirmatory factor analysis of study variables.

Model	χ^2	df	CFI	GFI	RMSEA	NNFI	SRMR
One-factor model ^a	4412.85	2016	0.92	0.75	0.06	0.92	0.05
Six-factor model 1 ^b	2240.01	2001	0.96	0.85	0.06	0.95	0.05
Six-factor model 2 ^c	2380.02	2001	0.97	0.81	0.05	0.95	0.03
Eight-factor model	1768.73	1988	0.98	0.86	0.04	0.96	0.03

a: All eight variables are combined.

b: The three antecedents of budgetary slack are combined.

c: The three types of ethical climate are combined.

Data source: this research

Table 2 shows the correlations and descriptive statistics for both the individual and group variables. As expected, budgetary slack is significantly positively correlated with environmental uncertainty and significantly negatively correlated with social desirability. However, the correlations of budgetary slack with budgetary emphasis and information asymmetry are both non-significant. In addition, Table 1 shows that the correlations among the three types of organizational ethical climate are all non-significant.

Table 2 Descriptive statistics and correlations

Variables	M	SD	1	2	3	4	5	6	7	8
Level 1										
1.Gender ^a	-	-	-							
2.Age	45.16	7.86	0.08	-						
3.Tenure	6.98	3.12	0.11	0.56***	-					
4.Social desirability	3.11	0.59	0.08	0.14	0.16*	(0.87)				
5.Budgetary emphasis	3.70	0.68	-0.05	0.08	0.08	0.10	(0.83)			
6.Information asymmetry	3.66	0.85	-0.04	-0.11*	0.21**	-0.09	0.12	(0.82)		
7.Environmental uncertainty	3.35	0.45	0.01	0.15*	-0.12*	0.11	-0.07	0.16**	(0.86)	
8.Budgetary slack	2.76	0.49	0.02	-0.10	0.13*	-0.23***	0.11	0.12	0.21**	(0.88)
Level 2										
1.Egotistic climate	3.02	0.28	-							
2.Benevolent climate	3.75	0.29	-0.11	-						
3.Principled climate	3.63	0.22	-0.19	0.18	-					

Cronbach's alpha is in parentheses. *p < 0.1; **p < 0.05; ***p < 0.01

^a dummy variable: 0=female, 1=male

Data source: this research

Because of the nested nature of the data (Levels 1 and 2), we tested a series of hierarchical linear models (HLMs) to assess the moderating effects of the three types of organizational ethical climate on the relationship between antecedents and budgetary slack. We followed Hofmann et al. (2000) suggestions by calculating the between-organizations variation before testing the hierarchical models. The null model result indicates that the between-organizations variance for budgetary slack (τ_{00}) is 0.06 ($\chi^2(71)=187.52$, $p<0.01$) and ICC(1) is 0.14. These results suggest that hierarchical modeling of these data is appropriate and that there is substantial within-organizations variability in need of explanation.

As shown in Table 3, we performed a series of HLM analyses. The four control variables (gender, age, tenure and social desirability) and the antecedents of budgetary slack (budgetary emphasis, information asymmetry and environmental uncertainty) were entered into Model 1. In model 3, in order to mitigate the possibility of a spurious moderating effect (interaction involving the level 2 moderators and group means), we followed Enders & Tofighi's (2007) suggestion to include the means of all the level 1 variables, the moderating variables (three types of organizational ethical climate) and the interaction between groups means (of budgetary emphasis, informational asymmetry and environmental uncertainty) and organizational ethical climates as the level 2 control variables. In Models 4, we considered the cross-level interactions among the antecedents of budgetary slack and the three types of organizational ethical climate.

Table 3 Hierarchical linear model results for budgetary slack

Predictor variables	Model 1	Model 2	Model 3	Model 4
Level 1				
Intercept	2.75**	2.75**	2.74*	2.73*
Gender ^a	0.13	0.13	0.09	0.07
Age	0.12	0.11	0.06	0.07
Tenure	0.05	0.05	0.03	0.07
Social desirability	-0.31**	-0.30**	-0.25*	-0.11
Budgetary emphasis (BE) (-) ^a	0.14	0.13	0.11	0.06
Information asymmetry (IA) (+)	0.17	0.17	0.14	0.12
Environmental uncertainty (EU) (+)	0.24**	0.23*	0.19*	0.21*
Level 2				

Mean Gender		0.09	0.11	0.15
Mean Age		0.19	0.12	0.14
Mean Tenure		0.05	0.05	0.08
Mean Social desirability		-0.11	-0.12	-0.09
Mean BE		-0.06	0.04	0.09
Mean IA		0.14	0.11	-0.13
Mean EU		-0.15*	0.14	0.11
Egotistic climate (EC)		0.11	0.09	-0.07
Benevolent climate (BC)		-0.10	-0.08	-0.12
Principled climate (PC)		-0.08	-0.11	0.06
Mean BE×EC			0.04	0.06
Mean BE×BC			-0.06	-0.07
Mean BE×PC			-0.09	-0.03
Mean IA×EC			0.07	-0.09
Mean IA×BC			0.15*	-0.11
Mean IA×PC			-0.16*	-0.08
Mean EU×EC			0.11	0.13
Mean EU×BC			0.11	-0.12
Mean EU×PC			-0.10	0.11
Cross-level interactions				
BE×EC (+)				0.29**
BE×BC	(-)			-0.21**
BE×PC	(-)			-0.28**
IA×EC	(+)			0.28***
IA×BC	(-)			-0.22**
IA×PC	(-)			-0.21**
EU×EC	(+)			0.42***
EU×BC	(-)			0.02
EU×PC	(-)			-0.31***
Within-organizations variance		0.28	0.28	0.27
Between-organizations variance		0.05	0.02	0.02
R ² _{within group}		0.17	0.19	0.21
R ² _{between group}			0.65	0.68
Deviance			819.58	776.52
				745.68

^aThe anticipated direction of relationship between dependent variable and independent variable.

*p < 0.1; **p < 0.05; ***p < 0.01. To ensure meaningful interpretations of the parameter estimates and to avoid specific organization effects, we group-centered the Level-1 predictor variables and centered the Level-2 predictor variables on the grand mean. Entries are estimations of the fixed effects with robust standard errors.

Data source: this research

As shown in Table 3, Model 1 (Level 1 predictors only), social desirability is significantly negatively related to budgetary slack, and environmental uncertainty is significantly positively related to budgetary slack. Both results are consistent with previous research (e.g., Govindarajan, 1986) and our expectations. However, the direct relationship between budgetary slack and budgetary emphasis, and the relationship between budgetary slack and information asymmetry, are not significant. These results imply that the above relationships are not monotonous. Thus more research is needed exploring the nature of these two relationships. Furthermore, Model 2 shows that the direct relationship between the different types of organizational ethical climate and budgetary slack are not significant. These results imply that different types of organizational ethical climate have other roles (such as moderating) besides the role of antecedent in predicting budgetary slack.

To test the moderating role of the different types of organizational ethical climate, we examined the cross-level interactions of the three antecedent variables with the three organizational ethical climates ($3 \times 3 = 9$ terms). As shown in Table 3, in Model 4 the interactions of budgetary emphasis and perceived egoistic climate ($\gamma = 0.29, p < 0.01$), information asymmetry and perceived egoistic climate ($\gamma = 0.28, p < 0.01$) and environmental uncertainty and perceived egoistic climate ($\gamma = 0.42, p < 0.01$) are all significantly positive. The interactions of budgetary emphasis with perceived benevolent climate ($\gamma = -0.21, p < 0.05$) and information asymmetry with perceived benevolent climate ($\gamma = -0.22, p < 0.05$) are significantly negative. Only the interaction of environmental uncertainty with perceived benevolent climate ($\gamma = 0.02, p > 0.1$) is not significant. The interactions of budgetary emphasis with perceived principled climate ($\gamma = -0.28, p < 0.01$), information asymmetry with perceived principled climate ($\gamma = -0.21, p < 0.01$) and environmental uncertainty with perceived principled climate ($\gamma = -0.31, p < 0.01$) are all significantly negative. From the above results, we can conclude that the moderating effects of all three kinds of organizational ethical climate on the relationships between the antecedents and budgetary slack are significant, except for the effect of a perceived benevolent climate on environmental uncertainty.

To further clarify the nature of the moderating effects, we performed a simple slope analysis (Aiken & West, 1991; Chen et al., 2013). As depicted in Table 4, if

the organizational climate was perceived to be relatively egoistic, the slopes of budgetary emphasis on budgetary slack (simple slope $\beta=0.38$), information asymmetry on budgetary slack ($\beta=0.34$) and environmental uncertainty on budgetary slack ($\beta=0.56$) are steeper than if the climate was perceived to be less egoistic ($\beta=0.1, 0.12, 0.18$ respectively). These slopes imply that when the organizational climate was perceived to be relatively egoistic, the positive relationships between budgetary emphasis and budgetary slack, between information asymmetry and budgetary slack and between environmental uncertainty and budgetary slack are strengthened. Therefore, Hypotheses 1, 2 and 3 are supported.

Hypotheses 4 and 5 state that a benevolent climate weakens the relationship between the antecedents and budgetary slack. Based on the moral disengagement theory, Hypothesis 6 states that a perceived benevolent climate does not moderate the relationship between environmental uncertainty and budgetary slack. Table 4 shows that there is a positive relationship between budgetary emphasis and budgetary slack ($\beta=0.31$) as well a positive relationship between information asymmetry and budgetary slack ($\beta=0.37$); these relationships are weaker if the climate was perceived to be strongly benevolent ($\beta=0.14$ and -0.08 respectively). These results reveal that perception of a benevolent climate weakens the positive relationship between budgetary emphasis and budgetary slack, as well as that between information asymmetry and budgetary slack. Consequently, Hypotheses 4 and 5 are supported. Furthermore, the positive relationships between environmental uncertainty and budgetary slack do not differ ($t=1.11$) between strong ($\beta=0.28, p<0.01$) and weak perceived benevolent climates ($\beta=0.31, p<0.01$). Therefore, Hypothesis 6 is supported, implying that a benevolent climate does not moderate the relationship between environmental uncertainty and budgetary slack.

Hypotheses 7 and 8 state that a principled climate weakens the positive relationship between budgetary emphasis and budgetary slack, as well as that between information asymmetry and budgetary slack. As shown in Table 4, if the organizational climate was perceived to be strongly principled, the slopes of budgetary emphasis on budgetary slack ($\beta=0.09$) and of information asymmetry on budgetary slack ($\beta=-0.1$) are less significant than if the perceived climate was less

principled ($\beta = 0.42$ and 0.33 respectively). These results imply that if the organizational climate was perceived to be relatively principled, the positive relationships between budgetary emphasis and budgetary slack, and between information asymmetry and budgetary slack, are weakened. Hence, the results support Hypotheses 7 and 8.

Based on the moral disengagement theory, Hypothesis 9 states that there is no moderating effect of a perceived principled climate on the relationship between environmental uncertainty and budgetary slack. To the contrary, as shown in Table 4, when the organizational climate was perceived to be relatively principled, the relationship between environmental uncertainty and budgetary slack ($\beta = -0.08$) is non-significant. In contrast, when the organizational climate was perceived as less principled, the relationship between environmental uncertainty and budgetary slack ($\beta = 0.37$, $p < 0.01$) is significant. These results reveal that a perceived principled climate weakens the positive relationship between environmental uncertainty and budgetary slack. Thus, Hypothesis 9 is not supported.

Table 4 Simple regression slope analyses between the high and low levels of the organizational ethical climates.

Criterion variable: budgetary slack

Predictor variables	Egoistic climate			Benevolent climate			Principled climate		
	High ^a	Low	Difference t-value ^a	High	Low	Difference t-value	High	Low	Difference t-value
BE	0.38 ^{***}	0.10	-4.11 ^{***}	0.14	0.31 ^{**}	3.41 ^{***}	0.09	0.42 ^{***}	3.11 ^{***}
IA	0.34 ^{***}	0.12	-3.79 ^{***}	-0.08	0.37 ^{***}	4.14 ^{***}	-0.10	0.33 ^{***}	3.21 ^{***}
EU	0.56 ^{***}	0.18 [*]	-4.49 ^{***}	0.28 ^{**}	0.31 ^{**}	1.11	-0.08	0.37 ^{***}	4.98 ^{***}

* $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$

Data source: this research

- We separated the total sample into high and low levels of each organizational ethical climate based on the sample means.
- The null hypothesis is that there is no difference between the regression coefficients (b_1) of the predictor variable on budgetary slack under the low and high levels of organizational ethical climate.

$$t = \frac{b_L - b_H}{\sqrt{S_p^2 \left(\frac{1}{SS_{xL}} + \frac{1}{SS_{xH}} \right)}}, \quad S_p^2 = \frac{SSE_L + SSE_H}{(n_L - 2) + (n_H - 2)}, \quad SS_{xL} = \sum (X_{iL} - \bar{X}_L)^2,$$

$$SS_{xH} = \sum (X_{iH} - \bar{X}_H)^2, \quad \text{Where SSE is the sum of squared error.}$$

5. Discussion and conclusions

The main purpose of this study was to explore the moderating effects of an organization's ethical climate on the relationships between antecedent variables and budgetary slack. By a series of HLM analyses, we found that different types of organizational ethical climate in an organization strengthen or weaken the positive relationships between budgetary slack and its antecedents. The stronger the egoistic climate is perceived to be, the stronger are the positive relationships between budgetary slack and budgetary emphasis, budgetary slack and information asymmetry, and budgetary slack and environmental uncertainty. When the organizational ethical climate is perceived to be relatively benevolent, the positive relationship between budgetary slack and budgetary emphasis, and that between budgetary slack and information asymmetry, are weakened. However, if budgetary slack is caused by environmental uncertainty, a perceived benevolent climate had no effect, an outcome consistent with the moral disengagement theory. Finally, we found that a perceived principled climate can eliminate the level of budgetary slack driven by information asymmetry and budgetary emphasis as well as by environmental uncertainty.

Our results show that a positive relationship between environmental uncertainty and budgetary slack is weakened by a perceived principled climate (not supporting the moral disengagement theory) but not by a perceived benevolent climate (supporting the moral disengagement theory). A possible explanation is that a principled climate is more moral than the other climates. In a principled climate, when decision makers are faced with an ethical dilemma, they generally resort to principles based on adherence to the rules and codes of conduct dictated by social

or group norms (Cullen et al., 2003; VanSandt et al., 2006; DeConinck, 2011), which, in turn, are derived from higher-order moral principles of which they may or may not be aware (VanSandt et al., 2006). Drawing on the elastic justification theory, Church et al. (2012) found that managers are less able to self-justify misreporting if other employees have a higher-order preference for truth. Therefore, managers operating in a strongly principled climate would be expected to create less budgetary slack even if environmental uncertainty provides a more legitimate self-justification for misreporting.

This study contributes to the literature on budgetary slack in the following ways. First, previous studies have demonstrated that motivation to act in one's self-interest and the taking of steps to prevent uncertainty help explain the prevalence of budgetary slack in an organization. Because of this self-interested motivation, managers create budgetary slack to garner as many rewards as possible and avoid expending effort toward budgetary goals while ensuring that the organization adopts a budgetary emphasis. The latter is most likely to occur when employees have more privileged information than their superiors. However, previous studies (Young, 1985; Dunk, 1993) provide empirical data that are inconsistent with the hypothesis of a positive relationship between budgetary emphasis, information asymmetry and budgetary slack. We used the organizational ethical climate as a moderator to reconcile this contradictory evidence. Second, Barnett & Vaicys (2000) found that individuals' perceptions of the ethical climate of their organization are not likely to directly affect their intentions to engage in unethically questionable activity. This study supports this vision and found that the perception of different ethical climates has a clear moderating effect on the relationships between antecedents and budgetary slack. Third, past research has shown that the organizational ethical climate is significantly associated with a number of work outcomes such as job satisfaction (Elci & Alpkan, 2009), commitment to the organization (Tsai & Huang, 2008), and turnover intention (Mulki et al., 2008). However, few studies have explored the relationship between organizational ethical climate and dysfunctional behavior, especially in the budgetary process. Our study adds to the understanding of how different types of organizational ethical climate impact the relationship between the antecedents of budgetary slack and the slack

itself, thereby contributing to the growing body of knowledge regarding an organization's ethical climate and budgetary slack in management accounting research.

A firm can use a rigid control system to detect its employees' opportunistic behavior (Van der Stede, 2000) and it can use truth-inducing contract schemes to financially penalize budgetary slack (Young, 1985; Salterio & Webb, 2006). However, these control methods are costly to firms. In contrast, instilling an ethical orientation in employees is often an effective and low-cost way to control budgetary slack (Church et al., 2012). Our results imply that if there is an external situation characterized by high environmental uncertainty, high information asymmetry and a budgetary emphasis that is not easy to change, the organization should attempt to develop a benevolent or principled ethical climate to encourage subordinates to eliminate budgetary slack.

The results of this study apply specifically to companies in Taiwan, especially those in high-tech industries that often rely on financial incentives to promote the attainment of budgetary goals and improve the organization's performance (Chiu & Tsai, 2007; Wang & Hsieh, 2012). The results imply that even though budgetary emphasis and information asymmetry may not be sufficient to create budgetary slack, if an egoistic climate predominates over a benevolent climate or a principled climate in an organization, the result will be greater budgetary slack caused by the strong budgetary emphasis and high information asymmetry. To keep subunit managers from engaging in budgetary slack, an organization should either (1) establish and promote the appropriate rules, codes of conduct, professional standards and procedures associated with a principled ethical climate and insist that employees follow them, (2) establish the norms associated with a benevolent climate by engaging employees' concerns for the well-being of the organization's stakeholders, or (3) establish ethical codes that diminish self-centered concerns to prevent the development of an egoistic climate. Due to the internationalization of global companies and the increasingly aggressive competition among corporations, subunit managers will encounter increasing environmental uncertainty. Our results suggest that to eliminate budgetary slack derived from environmental uncertainty, an organization should communicate clear rules and procedures to its employees

aimed at establishing a principled employment environment, and create a fair-employment atmosphere to prevent the development of an egoistic ethical climate.

There are some limitations in this study. Our use of a self-report measure of budgetary slack may raise concerns about the possibility of inaccurate reports due to the sensitive nature of budgetary slack. We addressed this problem statistically by controlling for social desirability. However, if participants really under-reported their budgetary slack, the effect of such a restriction of range on budgetary slack would be to weaken the observed relationships between antecedents and budgetary slack. Other limitations are that the sample was restricted to the 72 companies in Taiwan. Ethical standards and perceptions may not cross organizational boundaries and thus the cross-organizational generality of our findings may be limited.

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