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The Relationship between Organizational Commitment and Quality of Public Budget Preparation

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Abstract: The study explores the relationship between organizational commitment of workers in public sectors and the quality of budget preparation. Through questionnaire survey, the study is conducted on people working on budget planning and preparation. The multi-layer regression analysis method implemented on empirical evidence finds that organizational commitment and task uncertainly each have significantly positive and negative effect on the quality of budget preparation, respectively, while under a high task uncertainty, the retrospective effects of independent variables have significant effect on quality of budget preparation. Based on the above findings, the study proposes that an enhancement on organizational commitment of budget preparers will help to increase the quality of budget preparation.

Key words: *public budget, budget quality, organizational commitment, task uncertainty*

1. Introduction

The government in Taiwan has aims of "small and beautiful" and "commercialization" transformation and reforming focus on improving administrative effectiveness and enhancing international competitiveness. Thus, governmental department has paid much attention to the realization of administrative planned budget and issues on quality of budget plans and preparation. In comparing to business sectors, quality management application has a late start in public administrative domain (Huang, 2000). Academically there is no clear concept and extensive empirical study on quality of budget planning and preparation (Hsu, 1996), thus initiating a motive for this study.

Through parliamentary politics, although the public has no apparent and subjective feeling on the quality of budget planning and preparation, the major objective of budget system reforms in past few decades has been conducted with the hope to increase quality of budget planning and preparation in public sectors so that people can understand governmental administration and become supportive for the smooth process of administrative works. Indeed governmental effectiveness is determined on the quality of budgets. At first, the study defines major components that measure quality of budget planning and preparation by exploring public budget theories proposed by domestic and foreign scholars. Because past researches on issues of factors that affect quality are mostly from environmental and organizational factors and rarely explores

from personal characteristics, participation in decision-making is positively related to trust/organizational commitment (Mizrahi *et al.* 2010). Therefore, in the process of exploring budgeting in public sectors, if organizational commitment property of workers is overlooked, a huge gap in explanatory factors may be resulted. Thus, the study uses agency theory to explain that workers with high organizational commitment can reduce governmental supervising cost and determine a better budget quality.

Moreover, the operation and performance of business organizations cannot avoid uncertainty, so are the public sectors. Galbraith (1977) proposes that task uncertainty determines the size of information gap. The reduction on uncertainty and correct handling of decisional information can promote rationalization of budget, also affecting quality of budget planning and preparation. Through discussion on resource basis perspective, the study learns that as the resource and capability of public sectors increase, task uncertainty would be reduced. The aim of the study is to present analyzed result of empirical data as reference to public sectors in raising quality of budget planning and preparation, exploring: (1) Apply public budget theory to extend the definition and contents of quality of budget planning and preparation in public sector, (2) Analyze the influencing effect of organizational commitment property of workers in public sector and task uncertainty in quality of budget planning and preparation, (3) Through an analysis on empirical data to explore and, under task uncertainty, provide managerial strategy and direction of reform in quality of budget planning and preparation to the government.

2. Literature Review

Initially in this study, the theoretical researches of domestic and foreign scholars on public budgeting, or government budgeting, are used to extend the most suitable definition for budget quality. Further study involves an exploration on participants' budgeting behavior during private or business budgeting process, thus describing factors that affect budget quality.

Budget quality: To define quality, Juran (1986) points out that quality is fit to use. Shetty and Ross (1985) suggest that quality is the ability that goods or services can satisfy customers' demand. As for perspective of Deming (1982), quality is anything that can increase customers' satisfaction. However, the most representative definition of quality is the one proposed by American Society of Quality Control (ASQC) and European Organization of Quality Control (EOQC), which is "the overall characteristic and specification of goods or services that can satisfy designated demand" (Dai, 1995). In the public budgeting domain, there is not yet a consistent perspective proposed by any relative research or credential organizations on the definition of budget quality. In the decision process of governmental budget, it includes budget preparation, budget approval, budget execution and examination stages, among which budget preparation is the most important one, concerning the effect and quality of entire budgeting process. Thus, the budget quality explored in this study is the quality of budget preparation, the degree of satisfying specific needs.

Budget decision theory: Classical budget theory tried to keep uncertainties within bounds through insistence on annual budgets (Caiden, 1981). Schick (1990) proposes rational budget decision theory, which is also called the norm theory by the budgeting academic circle. The theory argues that during budget decision process, government should follow the prescribed thoughts calculation to consider the effects and efficiency of every administrative project and makes rational decision, allocating limited resources most effectively. However, Wildavsky (1964) and Fenno (1966), etc. contend that rational budget decision theory is not feasible, nor applicable, because decision makers' "limited brain power" and resources (such as time and power) are also limited. Rarely is there any decision maker possessing the ability of collecting all and absolute information to make rational choices. Therefore, decision makers usually would apply simplified strategy, using current budget as basis to make marginal modification and finish budget preparation within legal time limit. In opposite to the low effectiveness of rational budget system in the real world, the gradual increasing budget theory provides a more realistically feasible method in practice.

Another empirical theory is role theory, in which advocates argue that during budget decision process, participants have specific roles and expected behaviors. Decision process is made through negotiation, bargaining and compromising among many participants. Therefore, wrestling is also an important part of governmental budget decision process. Budget decision makers usually apply information selectively to help playing the roles they are supposed to. Schick (1988) proposes perspective of macro and micro budgetary adaptations, emphasizing that public budget is an adaptation process to comply with changes in political and economic conditions. Rubin (1992) believes that budgeting process has tilted toward top-down budgeting phenomena and becomes more centralized, with budget policy and macro objectives pre-determined before preparing budget as demanded by every organization. It is no longer bottom-up budgeting, in which total budget is the summation of budgets from every organization.

Niskanen (1971) argues that bureaucratic budget decision behavior tends to "budget maximizing", which means that under a certain budget system rules, bureaucracy intends to pursue organizational budget maximizing. Capital providers are in the passive side, the reason mainly comes from "agency problem". Under the political system of parliamentary democracy, most bureaucrats only need to satisfy the political capital providers (such as congressmen), not the end consumers. (The voters) Capital providers, through profit exchanges, obtain goodies from increased budget. Thus, there is not much incentive for capital providers to intentionally stop bureaucrats increasing budgets so that bureaucrats can easily achieve an expansion on budget scales. Summing the above theory, the study finds that in order to explore an index of measuring budget quality, it is necessary to examine whether organizations, when preparing budget, prepare budget in compliance with the direction and spirit of budget theory and present overall standards in the budget. The study proposes that content of budget cannot specifically present plan objectives, but put more weights on the difference from comparison with last year's figures, which is more difficult to reveal the administrative focus of yearly budget. Such emphasis on the perspective of volume increasing

doctrine is a bad quality in budget preparation.

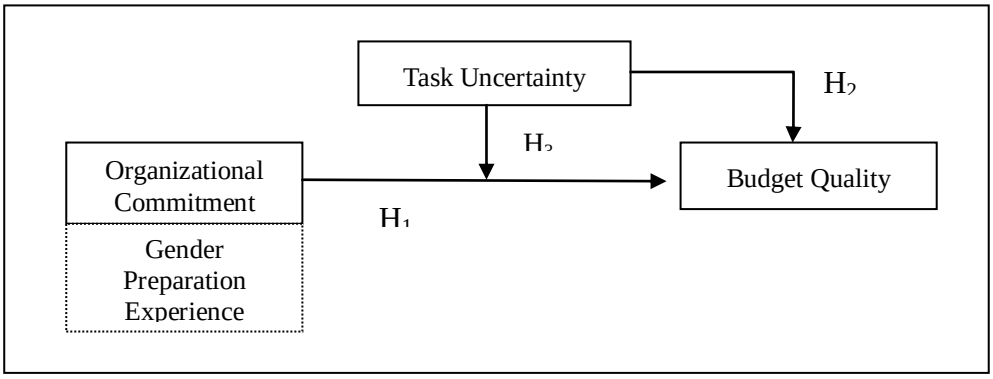
Organizational commitment: The earliest that the concept is proposed is Whyte (1956). In addition to scholars' exploration, the business world also pays close attention, hoping to find a method to increase employees' work performance and loyalty through an understanding on organizational commitment. The study of Huang (1992) shows that when the extent that employees care for organizational value is more consistent with the company's, the employees would identify with and involve in the company more, with lower intention to quit. Cheng (1992) categories organizational value to interior integration and exterior adaptation to explore the consistency in both values and relationship between two factors: willingness to stay and organizational identification. The empirical test results find that in interior integration when the employees' perceived actual and expected value differs more, their willingness to stay and organizational identification will be lower. Porter, Steers, Mowday and Boulian (1974) argue that organizational commitment is the extent that an individual identify with and involve in a certain organization, including three factors: (1) the strong belief and acceptance on organizational objectives and values, (2) willingness to work for organizational benefit, and (3) clearly hope to continue being a member of the organization. A more concise view is that organizational commitment is a behavioral tendency that a member does not want to leave an organization due to salary, job position, freedom in professional creation and colleagues' friendship (Hrebinak and Alutto, 1973). The study refers to the perspective of Mowday, Steers and Porter: Organizational commitment is a representation of an individual's loyalty and contribution to his or her organization, not only affecting ones' involvement in an organization, but also the attitude and tendency a person connects to the organization. Such connection is not only important to individual, but also has value to an organization, even the entire society.

Task uncertainty: Shaw (1981) and Hiltz, et al. (1986) suggests that the effect communication has on organizational performance can be fully reflected by the task type performed by the organization. Type of task influences organizational demand on information process. Thus, when studying on the relationship between task uncertainty and organizational performance, the type of task must be discussed first. The type of task directly affects task's level of difficulty, which also closely relates to the complexity of task (Kwon and Zmud, 1987). A task with higher level of difficulty requires support of many people's skill and knowledge within the organization, and also needs collection of more information inside and outside the organization to process more communication, coordination and analysis. Task uncertainty can be presented by frequency of task analyzability and exceptional events (Perrow, 1967). Task analyzability is the extent that during input and output process work can be simplified to mechanical steps. Task variability is measured by the frequency of encountering exceptional events when performing task, meaning the extent that subordinates cannot follow existing rules and procedures of the organization when performing tasks. The study applies perspectives of Van de Ben and Delbecq (1974). Task uncertainty includes dimensions of task difficulty and task variability. Task difficulty means the extent that a job can be clearly described the relationship between input and output. Task variability is the numbers of

exceptional events that one must handle by applying different methods or procedures when encountering during work.

Research Structure: The study assigns "budget preparer's organizational commitment" and "task uncertainty" as independent variables and "budget quality" as dependent variable. At the first, the effect of "budget preparer's organizational commitment" on "budget quality" is explored, followed by the effect of "task uncertainty" on "budget quality", and lastly, whether "organizational commitment" and "budget quality" is moderated by task uncertainty is explored. In addition, because there are many factors that affect quality of budget preparation, the study would input some individual's basic characteristics, variables such as gender and preparing experience, etc. as control variable. Research structure is shown in Figure 1:

Figure 1: Research Structure



Research hypotheses: Although there has not been study, whether domestic and foreign, about the relationship between organizational commitment and quality of budget preparation, there are few managerial literatures pointing out that there is a close relationship between "organizational commitment" and "work performance" (such as Nouri and Parker, 1998; Porter, et al., 1974; Lin, 2005). Chang and Wei (2005) also find in their study that as the perspectives of organization and employees on the importance of various dimensions in performance measuring system tend to be consistent, it helps the performance of quality management activity and enhancement of organizational performance. Therefore, organizational commitment represents employees' attitude and behavior on willingness to input extra effort basing on their loyalty to the organization, which helps to increase work performance. The effect of organizational commitment on quality culture also helps the performance of quality management activity. Through the practical questions in budget preparation, the study finds that if budget preparers have no organizational commitment tendency, their attitude will result in irrational process in the operation, thus affecting quality of budget preparation. Thus, the study tries to establish opposing hypothesis H1, to understand whether preparers with high budget commitment can generate better budget preparation quality. The hypothesis is as follows:

H1: There is a significantly positive relationship between budget preparer's organizational commitment and budget preparation quality.

Hackerman (1968) argues that: The more difficult tasks require more time to finish. The extent of difficulty

or complexity can directly affect the executing quality of solutions proposed to organizational problems. Thus, task type in task uncertainty presents a relatively large effect on organizational decision process and is a major factor affecting organizational performance and problem solving propositions. Moreover, the hastiness of work time reduces space of rational thinking, further affecting preparation quality of rational budget. Task uncertainty determines size of information variation. With complete information, the rationalization of budget can be heightened through coordination. Therefore, the study attempts to establish opposing hypothesis H2 as follows:

H2: Task uncertainty has negative effect on the quality of budget preparation.

Employees with high organizational commitment, in addition to complete their responsible task attached to their roles assigned by the organization, they will generate behavior beyond their roles and put extra effort for the organization's overall benefit (Chiang, et al., 2006). Based on the perspective, if there is no task uncertainty, execution of work only needs to follow a predetermined policy and standard and objective of work can be reached satisfactorily. There is no need for employees with high organizational commitment to bring about high responsibility and sacrificing activity. The usefulness of organizational commitment will be lowered, which in the opposite, under the scenario of task uncertainty will be raised greatly. Therefore, task uncertainty has an adjusting effect between organizational commitment and budget quality.

The definition on quality of budget preparation in this study shows that if member of the organization uses budget preparation method that is biased toward rationalism, the quality would be higher. Olsen (1965) in the hypothesis prerequisite points out that: when a decision maker, under the information he or she owns, selects the most efficient method to achieve his or her objective, it is the definition of "rational" behavior. Under environment of uncertainty, activists cannot know the definite results of their behavior, so they must make hypothesis for the future and estimate expected effectiveness for all kind of possible choices under the hypothesis and then selects one that can maximize the expected effectiveness (Elster, 1986; Harsanyi, 1969). Therefore, under the scenario of task uncertainty, a chance of personal choice is added. If an individual with high organizational commitment tends to choose proposition beneficial to the organization, the budget quality would be raised. On the other hand, individual with lower organizational commitment may tend to choose the budget proposition in favor of personal benefit. Results of such irrational budget decision would lower budget preparation quality. Thus, task uncertainty cannot be certain to expand influencing effects on organizational commitment and budget quality. The study then induces that task uncertainty has adjusting effect on the relationship between organizational commitment and quality of budget preparation. Hypothesis is as follows: *H3: under scenario of task uncertainty, the effect of budget preparers' organizational commitment on quality of budget preparation is more significant.*

3. Methodology

The study uses data collected from questionnaire surveys and STATITICA 7.0 statistical software as

analyzing tool for data processing. The statistical methods used consist of descriptive statistical analysis, reliability analysis (Illustrated in Table 1, the Cronbach' α of three dimensions, "organizational commitment"", task uncertainty" and "quality of budget preparation" all achieve 0.7 and above), Pierson relativity analysis, and multi-layer regression analysis.

Table 1: Reliability of Questionnaire Dimensions

Coefficient Dimension	Cronbach' α	Standardizedα	Average inter-item corr.
Organizational commitment	0.936348	0.936427	0.626639
Task uncertainty	0.710421	0.700147	0.154959
Quality of budget preparation	0.704046	0.706959	0.206797

4. Findings

In data collection, among total of 460 questionnaire surveys issued, there are 187 returned. After subtracting 17 ineffective ones, there are 170 effective questionnaires (effective ratio of 36.96%). The study applies Kolmogorov-Smirnov test, in which the test results of responding variable "quality of budget preparation" shows that K-S d value is 0.06255, under 10% level of significance, proving data of this study to be normally distributed and in good fitness ratio. Moreover, the study uses two technical index, tolerance level and variation inflation factor, to examine collinear problem and the result shows tolerance level of 0.68 (>.1), which indicates insignificant linear correlation. In addition, the variation inflation factor computed among independent variables is 1.47, which is smaller than 10, showing that there is no significant collinear problem among independent variables in this study.

Table 2: Regression analysis of quality of budget preparation

Independent variable	Model 1	Model 2	Model 3
	Regression coefficient	Regression coefficient	Regression coefficient
	3.101***	5.504***	2.791***
Constant	0.281***		0.298***
Organizational commitment		-0.265***	0.058
Task uncertainty	0.513	0.254	0.515
r (standardized coefficient)	0.263	0.065	0.265
R^2			0.002
ΔR^2			0.200
F	60.019***	11.588***	30.154***
t (independent variable)	7.747	-3.404	6.756***
			0.690

*p≦.05 **p≦.01 ***p≦.001

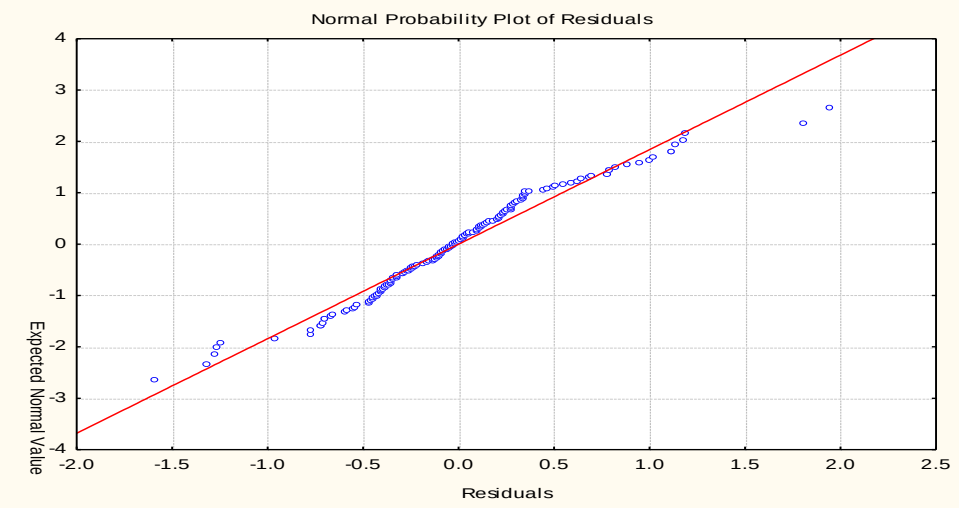
Regression analysis on variables affecting major effects

In Model 1, the F value of 60.019 and p value of 0.0000 (<.001) indicate that the effect of regression formula fitness is very ideal, while r=.513 reveals high degree of positive linear relationship between two variables, showing that the model is suitable for predicting and analyzing effect of organizational commitment on quality of budget preparation. The independent variable, "organizational commitment", has t test value of regression coefficient to be 7.747, which under double tale test the p value is approximately 0, representing significance and showing that organizational commitment is a very powerful predicting variable of quality of budget preparation. Based on the test result, 26.322% variation in quality of budget preparation can be explained by organizational commitment, showing that explanatory power of organizational commitment to qualify of budget preparation is very good. Therefore, Hypothesis 1 of the study, "There is a significantly positive relationship between budgets preparer's organizational commitment and budget preparation quality", is supported.

In Model 2, the effect of regression formula fitness is also ideal and according to the test result, 6.453% variation in quality of budget preparation can be explained by task uncertainty, meaning that task uncertainty has a certain level of explanatory power on quality of budget preparation. Thus, task uncertainty is a rather powerful prediction variable of quality of budget preparation, in compliance with Hypothesis 2 of the study, that "Task uncertainty has negative effect on the quality of budget preparation" is supported. In Model 3, the F value of entire model is 30.154 while p value equal to 0.00000, meaning that the regression model is very significant, of which independent variable has significant effect on depend variable. On the other hand, the two independent variables, "organizational commitment" and "task uncertainty", has p value from t test of 0.000000 and 0.491088, respectively, showing that when another independent variable is added to the model, "organizational commitment" still has significant effect on the dependent variable. However, "task uncertainty" becomes insignificant when other independent variable (organizational commitment) is added to the model, (the original p value if 0.000830, <.001) with regression coefficient dropping from the original -0.265 to 0.058. Such evidence reveals that when both independent variables, "organizational commitment" and "task uncertainty" are added to the model at the same time, the explanatory effectiveness of "task uncertainty" becomes unobvious, but also finds that after the addition of "task uncertainty" the regression coefficient of "organizational commitment" increases from 0.281 to 0.298, a slice increase of explanatory effectiveness to dependent variable "quality of budget preparation".

After the establishment of regression model, there is a need to examine its appropriateness, to be tested on the problem of whether residual complies with hypothesis of normal distribution, independence and variation equality, to ascertain model quality. The result is shown in figure 2.

Figure 2: Normal distribution probability of residuals



Because the residuals shown on those graph are not seriously deviating from straight line, the hypothesis of normal distribution is founded. Lastly, after outlier analysis, there are 12 data out of the 17 samples to be possible outliers. After reexamining original data and no reason can be found, it is necessary to keep the 12 outliers intact for further analysis to avoid distortion of result in this study.

Multi-layer regression analysis of variable moderation: In regression analysis control variables (gender, preparation experience), independent variable (organizational commitment), moderating variable (task uncertainty) are first added in orders, while interactive items of independent variable (organizational commitment) and moderating variable (task uncertainty) are added at last to be observed on whether there is a significant increase in explanatory level of the interaction on dependent variable, to examine the moderating effect of moderating variable. The result is shown in Table 3, in which result of Model 1 shows that the effect of both control variables on quality of budget preparation are not supported. ($p<.05$); and after adding major effect variables, the critical coefficient of the model is significantly raised.

After input inter-multiplying items, the regression coefficient is not significant and the changing volume does not increase obviously. The above result initially proves that: Hypothesis 3 of the study, "Under scenario of task uncertainty, the effect of budget preparers' organizational commitment on quality of budget preparation is more significant", is not supported. Although there is no significant evident proving that task uncertainty has moderating effect, in Table 2 it is found that in regression coefficient of Model 2 and Model 3, organizational commitment transforms from very significant to insignificant while task uncertainty turns from positive to negative direction (the same direction as simple regression of Model 2 in Table 2). The slice increase can be moderated by the input of inter-multiplying items. From the perspective of theory, most scholars admit that task uncertainty indeed can generate moderating effect (Kohli and Jaworski, 1990), because environmental uncertainty, including task uncertainty, is especially obvious in non-profit organizations.

Table 3: Multi-layer regression analysis of the effect of organizational commitment, task uncertainty and their interaction on quality of budget preparation

variables	Model 1	Model 2	Model 3
Step 1: control variables			
Gender	0.203	0.068	0.075
Preparation experience	0.058	0.061*	0.063*
Step 2: major effect variables			
Organizational commitment		0.290***	0.148
Task uncertainty		0.038	-0.105
Step 3: interactive items of independent variable			
Organizational commitment x task uncertainty			0.035
R^2	0.037	0.289	0.292
$\triangle R^2$		0.252***	0.003
F	3.238*	16.817***	13.538***

*p≦.05 **p≦.01 ***p≦.001

Lastly, the study classifies task uncertainty to high and low group based on average score. The sample of high and low task uncertainty is 71 and 99, respectively. A correlation graph (as Figure 3) and multi-layer regression analysis of interactive effects are drawn (as Table 4). Figure 3 shows that for people with high task uncertainty, the positive effect of their organizational commitment on quality of budget preparation is obviously lower than people with low task uncertainty (induced by regression slop 0.328>0.280). In Table 4, under scenario of high task uncertainty, the effect of interactive effect among independent variables is significant to quality of budget preparation.

Figure 3: The moderating effect of task uncertainty on relationship between organizational commitment and quality of budget preparation

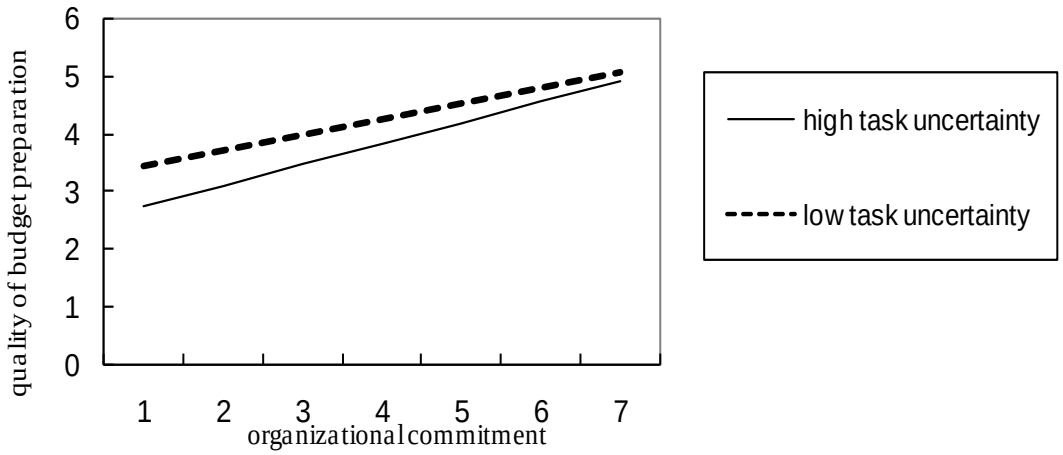


Table 4: Under high and low task uncertainty, the multi-layer regression analysis of the effect of interacting

variables	high task uncertainty				low task uncertainty			
	Model 1	Model 2	Model 3	Model 4	Model 1	Model 2	Model 3	Model 4
step1:control variables								
gender	-0.022	-0.247	-0.285	-0.328	0.256	0.202	0.185	0.184
Preparation experience	0.035	0.096*	0.086	0.06	0.067	0.055	0.057	0.057
step2: major effect variables								
organizational commitment		0.328***	0.362***	-0.883*		0.280***	0.272***	0.547
task uncertainty			0.130	-0.747			-0.102	0.309
step3:interactive items of IV								
Org. commitment x task uncertainty				0.280***				-0.077
R^2	0.007	0.372	0.382	0.458	0.059	0.230	0.232	0.234
$\triangle R^2$		0.365***	0.010*	0.076**		0.171**	0.002	0.002
F	0.226	13.252***	10.213***	10.971***	3.006	9.442***	7.105***	5.671***

5. Conclusion

After exploring the content of quality of budget preparation, the study defines good quality of budget preparation as an overall level of budget prepared in the spirit toward "rational budget" and further finds that "organizational commitment" and "task uncertainty" are important variables that affect quality of budget preparation. Result of the study points out that the personal characteristic variable of "organizational commitment" has positive relationship with "quality of budget preparation". In another word, employees with higher sense of belonging and loyalty to a unit are more likely to prepare budget with rationalism spirit, proceeding in accordance with planned budget principle and activity procedures, thus the quality level of budget presented is higher. The result implies that when a unit assigns task, it should consider employees' attributes to select appropriate people for budget preparation and enhance the upgrading of workers' work environment quality so employees can identify with the unit and will work hard for the organization.

The environmental variable "task uncertainty" also has significantly negative relationship with "quality of budget preparation". The study finds that the difference in task type directly lowers quality level of budget preparation because larger task variations would raise difficulty, in which employees work hard to increase the rationality level of budget and the effectiveness cannot easily show, implying that the main factor affecting quality of budget preparation should belong to the systemization of unit tasks. In strategic

management domain, resource-based view (RBV), suggests that an organization's persistent competitive advantage originates from her own valuable, scarce, unable to be imitated, and irreplaceable, resource and ability (Barney, 1986; Grant, 1996). The RBV stresses on transforming task uncertainty to task analyzability and measurability, making it becoming valuable experience assets and resource of the unit, and lower its negative effect and increase positive effect on quality of budget preparation. Therefore, in the future resources should be input in this area to improve and effectively raise quality of budget preparation.

The study also finds that "preparation experience" in the model has positive effect on quality, meaning that in order to raise quality of budget preparation, the assigning of people with high organizational commitment and preparation experience would help to achieve positive effect. Liao *et al*. (2007) also proposes similar point of view: accumulating rich international affairs experience will strengthen managers' decision-making ability and quality.

Discussion and Suggestions: Although there is no significant evident proving moderating effect of task uncertainty, further empirical examination finds that, under high task uncertainty, the positive effect of organizational commitment on quality of budget preparation is more obvious than the one of lower task uncertainty. "The effect of interaction among independent variables on quality of budget preparation is significant" is also supported. From managerial view, such result means that during the process of budget preparation and execution, if people with high organizational commitment encounter harsh task and environmental testing, they will show better execution and influential power. Therefore, if a unit gives generous compensation to raise employees' organizational commitment, it should take task characteristic of the organization into consideration.

The empirical research of managerial aspect of public budgeting behavior needs more intellectuals to participate in the future. Thus, the study proposes suggestions for future research directions: (1) Focus on the index of quality of budget preparation to make it more complete and a more reliable measurement. As for other affecting factors, one can consider personal characteristic, cultural difference, organizational climate and other possible influential dimensions to make overall regression model more explanatory. (2) For "quality", the definition has put much weight on "customers". The study objects of this study only limit to employees in public units. In future study it is suggested to extend to general public and delegates so the concept of the quality of budget preparation can be expanded further to let information gatherers obtaining information that is more complete. (3) In data analysis, the study uses multi-layer regression model for theory testing. If future scholars can obtain cross-sectional and longitudinal data, they can try other methods (such as LISREL) to be more certain on cause effect relationship among variables to reveal managerial meanings. (4) Because the study finds that "system" is a rather important factor that affects quality of budget preparation, system is seen as an important key variable. Study can be conducted from system to analyze interaction between system and individual, not only from individual to analyze budget behavior and decision. Therefore, relative organizations can focus on reviewing and examining budget

related measure, for enhancing the promotion of budget preparation quality.

Reference

Barney, J. B. (1986). Strategic Factor Markets: Expectations, Luck, and Business Strategy. *Management Science*, 42, 1231-41.

Caiden, N. (1981). Public Budgeting Amidst Uncertainty and Instability. *Public Budgeting and Finance*, 1(1), 6-19.

Chang, Y. & Wei, R. (2005). The Effect of Recognizing Importance of Performance Measurement System on Overall Quality Management and Business Performance. The 17th Accounting Theory and Practice Conference (in Taipei).

Cheng, B. (1992). Exploration on Effective Organizational Culture: the Relationship between Consistency in Organizational Value Perspective and Members' Effectiveness. National Science Council Project Report.

Chiang, Y., Shih, H. & Teng, K. (2006). The Relationship between High Performance Work System and Organizational Performance Mediated by Perceived Organizational Support, Organizational Commitment and Job Satisfaction. National Science Council Project Report.

Dai, Y. (1995). Business Reformation and Improvement. *Quality Management Control Monthly*, 1(1), 25-32.

Deming, W. & Edward, A. (1982). Quality Productivity and Competitive Position, Cambridge, MA, MIT Center, 50-61.

Elster, J. (1986). Rational Choice, NY: New York University Press, 8-15.

Fenno, R. M. (1966). The Power of the Purse: Appropriations Politics in Congress, Boston, Little, Brown and Company, 69-74.

Galbraith, J. R. (1977). Organization Design, Massachusetts, Addison-Wesley, 39-41.

Grant, R. M. (1996). Prospering in Dynamically Competitive Environments: Organizational Capability as Knowledge Integration. *Organization Science,* 7(4), 375-88.

Hackerman, J. R. (1968). Effects of Task Characteristics on Group Interaction Process and Group Performance Effectiveness: A Review and Proposed Integration. *Advances in Experimental Social Psychology*, 8, 1-8.

Harsanyi, J. C. (1969). Rational-Choice Models of Political Behavior vs. Functionalist and Conformist Theories. *World Politics*, 21, 513-38.

Hiltz, S. R., Johnson, K. & Turoff, M. (1986). Experiments in Group Decision-making: Communication Process and Outcome in Face-to-Face Versus Computerized Conference. *Human Communication Research*, 13, 225-52.

Hrebiniak, L. G. & Alutto, J. A. (1973). Personal and Role-Related Factors in the Development of Organizational Commitment. *Administrative Science Quarterly*, 17, 555-73.

Hsu, R. (1996). Research Perspectives and Major Theories of Governmental Budget Theory. *Collections of Public Administrative Papers*, 10, 459-76.

Huang, K. (1992). Information Technology and Value Perspectives. National Science Council Project Report.

Huang, T. (2000). Public Strategy Planning and Performance Budget-Establishing Appropriate Evaluation Structure from Experience in US and Australia. *Theory and Policy*, 14(1), 23-42.

Juran, J. M. (1986). Universal Approach to Managing for Quality. *Quality Progress*, 19, 10-24.

Kohli, A. K. & Jaworski, B. J. (1990). Market Orientation: The Construct, Research Propositions, and Managerial Implications. *Journal of Marketing*, 54, 1-18.

Kwon, T. H. & Zmud, R. W. (1987). Unifying the Fragmented Models of Information Systems Implementation' in Boland and Hirschheim (Eds), Critical Issues in Information Systems Research. Wiley, Chichester, 227-52.

Liao, M., Yu, T. & Stoo, D. (2007). A Study on the Influential Factors of Subsidiary Decision Quality-Using Taiwanese Subsidiaries in China as Example. *Innovation and Management*, 4(1), 165-88.

Lin, S. (2005). The Effect of Budget Participation on Managerial Performance: Using Role Ambiguity and Organizational Commitment as Moderator. *Journal of Business Administration*, 64, 29-52.

Mowday, R. T., Steers, R. M. & Porter, L. W. (1982). Employee organization link ages: the psychology of commitment, absenteeism, and turnover, New York, Academic Press.

McGrath, J. E. (1984). Groups: Interaction and Performance, NJ: Prentice Hall, Englewood Cliffs, 108-17.

Mizrahi, S., Vigoda-Gadot, E. & Cohen, N. (2010). Trust, Participation and Performance: The Case of the Israeli National Insurance Institute, *Public Management Review*, 12(1), 99-126.

Neter, J., Wasserman, W. & Kutner, M. H. (1985). Applied Linear Regression Models, Irwin.

Niskanen, W. A. (1971). Bureaucracy and Representative Government, Chicago: Aldine Atherton.

Nouri, H. & Parker, R. J. (1998). The Relationship between Budget Participation and Job Performance: The Roles of Budget Adequacy and Organizational Commitment. *Accounting, Organizations & Society*, 23(1), 467-83.

Olson, M. (1965). The Logic of Collective Action, Cambridge, Harvard University Press.

Perrow, C. A. (1967). Framework for Comparative Analysis of Organization. *American Sociological Review*, 7, 194-218.

Porter, L. W. & Smith, F. J. (1970). The Etiology of Organizational Commitment, University of California, Trine, 84-99.

Poter, L. W., Steers, R. M., Mowday, R. T. & Boulian, P. V. (1974). Organizational Commitment, Job Satisfaction and Turnover among Psychiatric Technicians. *Journal of Applied Psychology*, 19, 475-79.

Rubin, I. S. (1992). Budget Theory and Budget Practice: How Good the Fit? Public Administration in Action, Cal., Brooks/Cole, 29-41.

Shaw, M. E. (1981). Group Dynamics: The Psychology of Small Group Behavior in A.

Schick (1990 Eds), the Capacity to Budget. Washington D.C.: The Urban Institute Press, 77-80.

Schick, A. (1986). Macro-Budgetary Adaptations to Fiscal Stress in Industrialized Democracies. *Public Administration Review*, 46, 124-34.

Schick, A. (1988). Micro-Budgetary Adaptations to Fiscal Stress in Industrialized Democracies. *Public*

Administration Review, 48, 523-33.

Shetty, Y. K. & Ross, J. E. (1985). Quality and Its Management in Service Business. Industrial Management, Nov.-Dec, 10-12.

Van de Ven, A. H. & Delbecq, A. L. (1974). A Task Contingent Model of Work-Unit Structure. *Administrative Science Quarterly*, 19, 183-197.

Whyte, W. (1956). The Organization Man, New York: Doubleday Anchor Books.

Wildavsky, A. (1964). The Politics of the Budgetary Process, Boston: Little, Brown and Company, 37.