

# THE IMPACT OF BUDGET PARTICIPATION ON MANAGERIAL PERFORMANCE VIA ORGANIZATIONAL COMMITMENT: A STUDY ON THE TOP 500 FIRMS IN TURKEY

Dr. Melek Eker  
Uludağ Üniversitesi  
İktisadi ve İdari Bilimler Fakültesi



## *Örgütsel Bağlılık Yoluyla Bütçe Katılımının Yönetmel Performans Üzerine Etkisi: Türkiye'de İlk 500 Büyük İşletme Üzerine Bir Çalışma*

### Özet

Bu çalışmada örgütsel bağlılık aracılığıyla bütçe katılımının yönetmel performansı nasıl etkilediği incelenmektedir. Bu ilişkiyi test etmek için veriler, 2006 yılında Türkiye'de ilk beşyüz büyük işletme içerisinde yer alan 150 firmanın muhasebe-fınansman yöneticilerinden, anket formu kullanılarak elde edilmiştir. Verilerin analizinde tanımlayıcı istatistik (ortalama ve standart sapma), korelasyon analizi, faktör analizi, regresyon analizi ve t-test analizi kullanılmıştır. Çalışmanın sonuçları, yüksek performanslı orta kademe yöneticilerin düşük performanslı yöneticilerden daha katılımcı ve daha yüksek örgütsel bağlılık duygusuna sahip oldukları önermesiyle tutarlıdır. Bununla birlikte, çalışma yönetmel performans üzerine bütçe katılımı ve örgütsel bağlılık arasında önerildiği gibi önemli bir etkileşim olduğunu ortaya koymaktadır.

**Anahtar Kelimeler:** Bütçe katılımı, örgütsel bağlılık, yönetmel performans, faktör analizi, adımsal regresyon analizi.

### Abstract

In this paper we try to examine how budget participation via organizational commitment can affect managerial performance in business. To test this association, the data is obtained via survey from 150 managers working in accounting and finance sub-departments among the top 500 businesses in Turkey in 2006. In the analysis of data, descriptive statistics (mean and standard deviation), correlation analysis, factor analysis, multiple regression analysis and t-test analysis were used. The results of survey are consistent with the proposition that subordinates with high performance are more participative and have higher organizational commitment feelings than subordinates with low performance. However, our study revealed that there is significant interaction between budget participation and organizational commitment on managerial performance as proposed.

**Keywords:** Organizational commitment, budget participation, managerial performance, factor analysis, stepwise regression analysis.

## The Impact of Budget Participation on Managerial Performance Via Organizational Commitment: A Study on the Top 500 Firms in Turkey

### 1. Introduction

Budget participation (BP) that means participation of top managers and subordinates to determination process of resources using in their own activities and operations, has been interested in the literature of accounting for a long time as an important subject. Indeed, the basic significance of the subject stems from increasing importance of determining dimensions of BP's effects on subordinates' performance in the present competitive conditions for firms.

From psychological and cognitive perspectives, there are two basic benefits of subordinates' participation in budget setting. First, owing to identification and ego-involvement with budget goals, participation is related to performance and so, leads to enhanced motivation and commitment to the budget (Murray, 1990: 104-123; Chow/Cooper/Waller, 1988; 111; Lau/Buckland, 2001;374). Second, because of improving flow of information between superiors and subordinates, BP leads to higher quality decisions. From this perspective, participation leads to higher motivation, higher commitment, higher quality decisions and hence higher performance.

As known, the generally stated thesis is that BP effects subordinates' managerial performance positively. However, according to the literature on the subject, this effect cannot be ruled out, but there is a possibility whether the way of linkage is negative or positive. Accordingly, while some studies have supported the argument that BP positively and significantly associated with performance (Kenis, 1979: 707-721), other studies have found either only a weak positive association between BP and performance (Milani, 1975, 274-

285) or a negative association between two variables (Bryan/Locke, 1967: 274-277). In sum, from some empirical researches, the relationship between BP and performance is less clear.

This situation proposes that whether or not there are extra factors affecting the linkage between participation and performance on the agenda. In this context, more detailed examinations and analyses revealed the presence of a series effective independent or contingent variables that should be considered diligently.

This paper aims to inquire aspect of linkage between BP and performance from organizational commitment as an important variable affecting this linkage.<sup>1</sup> In this context, our basic hypothesis is that BP improves the organizational commitment feeling of subordinates and as a result of this, increases their managerial performance. Many studies support this hypothesis pointing the linear linkage between BP and performance increase via organizational commitment.

This paper, setting out from theoretical and practical results of former specific studies, can be described as a result of wonder that what sort of profile the subject show in Turkish condition. In this respect, the survey study is made in top five hundred firms in Turkey and the data of this survey is analysed according to the determined theoretical frame.

The remainder of this paper is organized as follows. The next two sections examine the literature related to the subject and discuss the role of organizational commitment as an intervening variable between BP and managerial performance. The following section presents the methodology, including the sample definition, data collection and measurement of constructs. The final section presents the results of correlation, multi regression, t-test analysis and a discussion of the results of this study.

## 2. Literature Review

After realizing the possibility of non linear and non positive relationship between BP and performance, there are many analytic studies based on the hypothesis that there may be many different factors which affect the way of this relationship. The study which is the most comprehensive and effective on the other many studies belongs to Brownell.

---

<sup>1</sup> From management scientific perspective, organizational commitment means that organizational goals and rules are adopted and internalized by employees.

Brownell identifies some variables, which are effective on the relationship between participation and performance, namely moderator variables by using contingency approach and categorize them into the four groups. These moderators included: 1) the cultural variables of nationality, legislative systems, race, and religion; 2) the organizational variables of environmental stability, technology, task uncertainty, and organizational structure; 3) the interpersonal variables of task stress, group size, intrinsic satisfaction of task, and congruence between task and individual, and 4) the individual variables of locus of control, authoritarianism, external reference points, and perceived emphasis placed on accounting information (Brownell, 1982: 124-153; Riahi-Belkaoui, 2002: 188).

There are two important studies examining national culture variable that categorized in the first category by Brownell. Norway culture based study of Lau and Buckland (2000: 54) accepts this culture as a natural chance for managerial performance, and by setting out from the hypothesis that low diversity within the Norwegian culture suggests that Norwegian managers' participation is expected to range from medium to high rather than from low to high, and since high participation situations are common in Norway, prior studies' finding pertaining to high participation situations are expected to be supported in Norway. Tsui's study (2001: 125-146) based on China and Caucasian cultures points that the interaction effects of management accounting systems and BP on managerial performance were different, because of the cultural background of managers. More specifically, he put forward the observation that the relationship between management accounting system information and managerial performance of Chinese managers is negative for high level participation but positive for Caucasian managers.

First studies consider organizational culture as an element of organizational structure as in Brownell terminology. In this context, Goddard (1997: 111) found a correlation between organizational culture and budget-related behaviour, particularly with respect to BP and the usefulness of budgets to support the managerial role. In the same manner, O'Connor (1995: 383-404) argued that power distance moderates the usefulness of participation in budget setting and performance evaluation at the organizational culture level in terms of decreased role ambiguity and enhanced superior/subordinate relationship. On the other hand, Subramaniam and Ashkanasy (2001: 35-54) found that the positive relationship between BP and managerial performance was not affected by managers' perceptions of organizational culture.

Govindarajan (1986: 496-516) who chose environmental uncertainty as another factor effecting the relationship between participation and performance argued that the greater the environmental uncertainty, the greater the positive

impact of participation on managerial performance or attitudes. In the same way, Gul (1991: 57-61) confirmed that the effects of management accounting system on performance were dependent on environmental uncertainty. Under high level uncertainty, sophisticated management accounting system had a positive effect on performance, but under low level, it had a negative effect. In addition, Kren (1992: 512) found that participation affects performance, not directly, but through jobs-relevant information (JRI). In addition to this, positive performance effect of participation persists and is more pronounced when environmental volatility is high, although the results do not provide unambiguous evidence. Lastly, Dunk and Lysons (1997: 11) suggest that participation does not influence performance in low complexity. In contrast, the results show that participation positively affects performance in high complexity.

In Brownell's categorization, just another important variable is market competition. Chong, Eggleton and Leong (2005: 115-133) revealed that the higher the intensity of market competition, the more positive the relationship between the involvement dimension of budgetary and performance and job satisfaction. However, their study suggested that budgetary participation and intensity of market competition do not interact to affect performance and job satisfaction.

Another variable affecting the relationship between performance and participation is an existence of free condition for voice and explanation and whether or not flow of information shows a symmetric characteristic. Libby (1999: 125-137) argued that compared with only voice; voice and explanation generate higher significant performance improvements. On the other hand, Dunk (1993: 400-410) and Chow, Cooper and Waller (1988: 111-122) attract attention on information asymmetry. In sum, they found that when participation, budget emphasis, and information asymmetry are high (low), slack will be high (low). Also these variables affect performance.

There is a series of important studies examining the effect of difficulty degree of undertaken tasks within organization. Brownell and Hirst (1986: 241-249) and Brownell and Dunk (1991: 693-703) Lau and Tan (1998: 180) shortly found that a significant three-way interaction between budget emphasis, budgetary participation and task characteristics (uncertainty/difficulty) affecting managerial performance of manufacturing and financial institution managers. Also, Christopher Orpen (1991: 695-696) found that budgetary participation is more likely to improve performance and raise motivation among employees in relatively difficult jobs (e.g., marketing manager) than among those in relatively easy jobs (e.g., assembly line worker).

In another study, Lau and Buckland (2001: 369-386) make possible to inspect the relationship between participation and performance from a different point of view. In this study, which they prefer to examine the effect of budget on the employees' confident feeling, they indicated that high budget emphasis is associated with high budgetary participation and high trust, in turn, high trust is associated with reduced subordinates' job-related tension. On the other hand, Hopwood (1972: 156-182 ) argued that a heavy reliance on emphasis on meeting budget target as a criterion for evaluating subordinates performance (high budget emphasis) may be associated with high job-related tension.

Motivation, pointed by Brownell as one of third group variables, is another important factor affecting performance increasing via participative budget process. As related to this subject, while Becker and Gren (1962: 352-402) and Chenhall and Brownell (1988: 225-233) argued that participative budgeting provided information that reduced managers' role ambiguity, which in turn enhances managerial performance by positively affecting motivation, Brownell and McInnes (1986: 587-603) point that participation and performance are found to be positive significantly; however, the study failed to confirm that budgetary participation, through its effect on motivation, enhances managerial performance. Cherrington and Cherrington, (1973: 225-253) who prefer to examine price as a motivation factor, found that the strong intervening effect of reward on the relationship between participative budgeting and performance.

Personality, taking part in the last section of Brownell's categorization, is examined in the axis of sub parameters such as evaluating style of top management and organization managers' locus of control in the literature. Brownell (1981: 844-860) and Brownell (1982: 766-777) point a statistically significant interaction between participation and internal-external locus of control affecting performance. In his study, budgetary participation was found positively effective on individuals who have feeling a large degree of control over their destiny ("internals" on the locus of control scale) while having a negative effect on those individuals who feel that their destinies are controlled by luck, chance or fate ("externals" on the locus of control scale). In a different study, Brownell (1982: 12-27), Otley (1978: 122-149), Brownell and Hirst, (1986: 241-249) and Brownell and Dunk (1991: 693-703) indicate that the impact of supervisory evaluative style on performance is moderated by budgetary participation, which, in turn, exerts a substantial positive influence on performance.

The another important variable, which rarely take part in the literature but seriously effect the relationship between participation and performance, is organizational commitment which is the subject we prefer to examine. Nouri

and Parker (1998: 467-483) realized the study dealing with the effects of this variable. They found that BP affects job performance by means of these two intervene variables: budget adequacy and organizational commitment.

This study which examine the subject in the context of Turkey as one of developing countries, intends to provide some contribution to the literature by setting out from the hypothesis that BP affects managerial performance via organizational commitment.

### 3. Theoretical Framework

The studies on “organizational commitment” started in the 1980’s, but especially increased in the 1990’s as a result of changing business and production environment. Hence, several different conceptualizations of organizational commitment have appeared in the literature.

Buchanan (1974: 533), defining organizational commitment as “a partisan, affective attachment to the goals and values, and to the organization for its own sake, apart from its purely instrumental worth”, reviews the concept under three dimensions, such as identification, involvement and loyalty. According to this, identification refers to adoption of organizational goals and values by a person and acception of them as his/her own goals and values; involvement refers to a person’s participation in organizational activities and attachment to these psychologically while fulfilling his/her role related to his/her job; and loyalty refers to sympathy and affective commitment a person’s feels toward his/her organization.

Steers (1977: 46) defines organizational commitment as “relative strength of an individual’s identification with and involvement in a particular organization”. As to this definition, organizational commitment has two dimensions, namely attitudinal and behavioral. According to this, as attitudinal dimension refers to the individual’s identification with the organization he/she is working in and in this direction individual’s strong attachment to goals and expectations of organization, behavioral dimension refers to desire to spend remarkable effort on behalf of organization, and eventually feeling of a strong desire to continue organizational membership (Porter/Steers/Mowday/Boulian, 1974: 609).

Steers’ identification related to organizational commitment attracts attention to that improving this sensation largely depends on both individual’s psychologic process and organizational structural properties. Mowday, Steers and Porter’s (1979: 224-247) study can be seen as one of the best examples in the literature. The study indicated that organizational commitment states

something more than a person's passive obedience to organization, because relationship between organization and individuals is active and individuals may accept to make some sacrifices about themselves for their organization to be better (Mowday/ Porter/Steers, 1982: 27).

This approach, which is drawing attention to relationship between organizational commitment and psychological processes of individual, were supported by the findings of the study executed by Meyer and Allen as well. According to this, organizational commitment has a psychological dimension and this relationship appears in the form of behaviours shaped as a result of relationships of workers with the organization and assuring their making-decision in the way of remaining continuous members of the organization (Meyer/Allen, 1991: 61-89).

The dimensions of psychological process urging an individual to attach to organization can be formulated by a model formed under three headings, namely affective, continuance and normative (Meyer/Becker/Vandenberghe, 2004: 991-1007). In the stated model, affective commitment refers to individuals' desire to remain a part of organization because of their emotional attachment to organization, continuance commitment refers to individuals' commitment to organization because of their taking high costs of losing organizational membership, that is negative consequences, into account and their remaining members as an obligation, and normative commitment refers to workers' feeling obliged to stay with organization because of their having an ethical duty responsibility (Meyer/Allen, 1997: 11).

Many studies on the sense of organizational commitment assert that democratic and participatory processes, in general, are quite significant for development of this sense. Accordingly, employees are positively affected and develop a deep sense of organizational commitment in an organizational environment which employees have a chance to participate in decisions; executives share their powers and knowledge with their subordinates and charge them with some organizational responsibilities; and the level of formalization is low but decentralized autonomy is high. (Cohen, 1992: 539-554; Guzley, 1992: 379-402; Brief and Aldag, 1980: 210-221; Welsch/Lavan, 1981: 1079-1089; Zeffane, 1994: 977, 1010; Sneed/Herman, 1990: 1072-1076; Lambert, 2004: 208-227; Curry, Wakefield/Price/Mueller, 1986: 847-858; Marsden/Kalleberg/Cook, 1993: 384).

As realized from identifications and determinations, organizational commitment feeling is an important factor affecting both personel performance and firms' performance increasing and, so it is supported by organizational structural properties and organizational culture and also by individual's



psychological dynamics. Thus, organizational commitment concept which can be identified as a multidimensional and complex fact, is discussed in the administrative science literature for along time and especially examined its linkage with performance (Randall, 1990: 361-378).

As known, the basic idea of participative decision making is that personnel must be adopt exactly the decision made by a participative method and try to apply the decision for being succesful. In this way, participation serves to integrate employees in organization and commit them to organizational decision (Lincoln and Kalleberg, 1985, 754). So, as the participation of personel to decision-making all over organizational level is improving the feeling of organizational commitment, this creates an effect to increase of their performance. Participatory budget, as one of these participation channels, has an important role in revealing these positive effects. As a matter of fact, according to Hofstede, BP is a variable which has the strongest effect on all motivation variables (Milani, 1975: 275; Frucot/Shearon, 1991: 80-99).

This paper which intends to inquire the relationship between participatory budget, organizational commitment and job performance, is based on three basic hypothesis related with each other. According to this, in the first hypothesis, it's argued that there is a linear linkage between BP and managerial performance. In the second hypothesis, it's contending that also there is a linear relationship between organizational commitment and managerial performance. Finally, in the third hypothesis, it's stated that there is a linear relationship between interaction of BP with organizational commitment and managerial performance.

## 4. Methodology

### 4.1. The Nature of the Research and Sampling

The population of the study comprised subordinates working in accounting and finance department in the top 500 firms in Turkey. The data forms were sent to subordinates of top 500 firms between the dates of 01 June-30 December 2007 by mail and electronic mail. A total of 150 completed survey forms were received back, giving a response rate of 28.3%. The activity areas of the firms are depicted in Table 1.

*Table 1: Profile of Respondents According to Activity Areas.*

Activity Areas	Frequency	Percent	Valid Percent	Cumulative Percent
1 Textile, clothing and footwear	38	25.2	25.7	25.7
2 Food and allied products	18	11.9	12.2	37.8
3 Construction	17	11.3	11.5	49.3
4 Petroleum and chemicals	7	4.6	4.7	54.1
5 Plastic products	8	5.3	5.4	59.5
6 Metal wares	7	4.6	4.7	64.2
7 Machinery	12	7.9	8.1	72.3
8 Wood and paper products	8	5.3	5.4	77.7
9 Automotive and spare part	21	13.9	14.2	91.9
10 Electronic products	10	6.6	6.8	98.6
11 Others	2	1.3	1.4	100.0
Total	148	98.0	100.0	
Missing	3	2.0		
Total	151	100.0		

As seen from the table, activity distribution was realised in the following order, 25.7% textile, clothing and footwear, 14.2% automotive and spare parts, 12.2% food and allied products and 11.5% construction.

#### 4.2. Data Collection Tools

The survey form, which was developed to collect research data, consisted of three parts. In the first part, BP was evaluated by the six items, five-point Likert-type scale developed by Milani's (1975). All respondents were asked to respond by circling a number from 1 to 5 on the scale for each of the items. The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was 0.898. A factor analysis of the six items was subjected to principal component analysis and "none" as a rotation technique. At the end of the analysis, one factor has been determined to have an eigenvalue above 1. This factor explained 65.225 % of the total variance. The results of the factor analysis are shown in Table 1. The use of the measure yielded a Cronbach alpha coefficient of 0.892, which indicates very high internal reliability for the scale. An overall measure of BP was constructed by averaging the responses of the six individual items.

*Table 2: Factor Analysis of Budget Participation Scale*

<b>Item No.</b>	<b>Questions</b>	<b>Factor Loading</b>
1.	Which category below describes your extent of involvement when the budget is being set?	.811
2.	Which category below describes the reasoning provided by your superior for budget revisions? The reasoning is	.596
3.	How often do you state your opinions and suggestions about the budget to your superior without being asked?	.787
4.	How much influence do you think you have on the final budget?	.880
5.	How do you view your contribution to the budget?	.865
6.	How often does your superior ask your opinions and suggestions when the budget is being set?	.871

In the second part, organizational commitment was measured using nine items developed by Mowday et al., and used by Nouri and Parker (1996, 1998). All respondents were asked, on a five-point scale ranging from 1 (strongly disagree) to 5 (strongly agree), to indicate their organizational commitment level. The KMO measure of sampling adequacy was 0.871. A factor analysis of the three items was used principal component analysis and “none” as rotation technique. At the end of the analysis, one factor has been determined to have an eigenvalue above 1. This factor explained 50.123% of the total variance. The results of the factor analysis are indicated in Table 2. The use of the measure yielded a Cronbach alpha coefficient of 0.86, which indicated satisfactory internal reliability for the scale. An overall measure of organizational commitment was constructed by averaging the responses of the nine individual items.

*Table 3: Factor Analysis of Organizational Commitment Scale.*

<b>Item No.</b>	<b>Questions</b>	<b>Factor Loading</b>
1.	I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.	.463
2.	I talk up this organization to my friends as a great organization to work for.	.698
3.	I would accept almost any type of job assignment in order to keep working for this organization.	.639

4.	I found that my values and the organization's values are very similar.	.713
5.	I am proud to tell others that I am part of this firm.	.776
6.	This organization really inspires the very best in me in the way of job performance.	.774
7.	I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.	.864
8.	For me this is the best of all possible organizations for which to work.	.673
9.	I really care about the fate of this organization.	.702

In the last part, managerial performance was measured by the eight items, nine point Likert-type scale developed by Mahoney et al.(1965) These items are: planning, investigating, coordinating, evaluating, supervising, staffing, negotiating and representing. The KMO measure of sampling adequacy was 0.861. A factor analysis of the three items was used principal component analysis and “none” as rotation technique. At the end of the analysis, one factor has been determined to have an eigenvalue above 1. This factor explained 52.679% of the total variance. The results of the factor analysis are indicated in Table 3. The use of the measure yielded a Cronbach alpha coefficient of 0.867, which indicated satisfactory internal reliability for the scale. An overall measure of managerial performance was constructed by averaging the responses of the eight individual items.

*Table 4: Factor Analysis of Managerial Performance Scale*

<b>Item No.</b>	<b>Questions</b>	<b>Factor Loading</b>
1.	Performance in Planning	.693
2.	Performance in Investigating	.765
3.	Performance in Coordinating	.765
4.	Performance in Evaluating	.763
5.	Performance in Supervising	.715
6.	Performance in Staffing	.693
7.	Performance in Negotiating	.711
8.	Performance in Representing	.698

### 4.3. Data Analysis

In this study, the data was entered into SPSS 13 for data analysis. Multi-correlation, multi regression and t-test analysis were performed.

#### 4.3.1. Descriptive Statistics and Correlation Analysis for All Variables

Table 4 presents the descriptive statistics and Pearson correlation matrix for the independent and dependent variables of this study.

*Table 5. Descriptive Statistics and Correlation Matrix for All Measured Variables.*

Variables	N	Min.	Max.	Mean	Standard Deviation	(1)	(2)	(3)
Budget participation (1)	148	1.17	5.00	3.6552	.80101	1	.353(**)	.419(**)
Organizational Commitment (2)	148	2.44	5.00	4.1239	.53564	.353(**)	1	.399(**)
Managerial performance(3)	149	4.13	9.00	7.1679	.97206	.419(**)	.399(**)	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

BP is positively and significantly correlated with organizational commitment and managerial performance and the correlations were 0.353 ( $p < 0.01$ ) and 0.419 ( $p < 0.01$ ), respectively. Also, Table 6 displays that organizational commitment are positively and significantly associated with the managerial performance, as proposed and the correlation was 0.399 ( $p < 0.01$ ).

#### 4.3.2. Multiple Regression Analysis

The multiple regression analysis was utilized to test the effect of BP and organizational commitment on performance of subordinate. The models are presented below in equation form:

$$Y = b_0 + b_1X_1 + b_2X_2 + b_3X_1 * X_2 + e$$

$$Y = b_0 + b_1X_1 + b_2X_2 + e$$

Where:

Y = Managerial Performance;

X1 = Budget Participation

X2 = Organizational Commitment;

X1 X2 Interaction term

$e$  = Error term.

In the model, the interaction term is calculated by multiplying the average scores of BP and organizational commitment. It is believed acceptable way of testing for interaction in the multiple regression models (GUL et al., 1995: 110). In according to this, regressions result of interaction term is presented in Table 6.

*Table 6: Regressions Results of Budget Participation and Organizational Commitment on Managerial Performance.*

Predictor Variables	Non standard beta	Standard beta	T value	P
(Constant)	5.452		20.712	.000
Interaction term X1 X3	.114	.495	6.836	.000
F=46.734; p=.000; R=0.495; R <sup>2</sup> = 0.245				
(Constant)	3.537		6.242	.000
Budget Participation (X1)	.388	.320	4.152	.000
Organizational Commitment (X2)	.540	.295	3.824	.000
F=24.615; p=.000; R=0.506; R <sup>2</sup> = 0.256				

*Dependent Variable: Managerial Performance*

The result presented in table 6 show that the standardised beta coefficient for the interaction ( $\beta_3$ ) between BP and organizational commitment is positive and significant ( $\beta_3=.495$ ;  $t=6.836$ ,  $p=.000$ ), as proposed. Mentioned interaction explained 24.5% of the variance of the managerial performance score. Accordingly, hypothesis H3 is accepted.

Also, the results indicate that, the direct effects of BP and organizational commitment level on managerial performance are positive and significant and the beta values are 0.320 ( $t=4.152$ ,  $p=.000$ ) and 0.295 ( $t=3.824$ ,  $p=.000$ ), respectively. As to these results, both H1 hypothesis and H2 hypothesis are supported. Mentioned model explained 25.6% of the variance of the managerial performance score. In sum, in parallel with predicted hypotheses, the managerial performance scores were found increase when the interaction score between BP and organizational commitment increase, on the other hand, the

managerial performance scores were found increase, when the BP and organizational commitment scores increase.

#### 4.3.3. Results of t-test Analysis

In this section, we explore whether the two-way interaction between BP and organizational commitment varies between low and high managerial performance. With this aim, t-test analysis was performed and results of the analysis were presented in Table 7.

*Table 7: Mean (SD) and t-test For Budget Participation, Organizational Commitment and Interaction Term between High vs. Low Managerial Performance.*

<b>Variables</b>	<b>Managers having low performance Mean(SD)</b>	<b>Managers having high performance Mean(SD)</b>	<b>t-value(p)</b>
Budget Participation (X1)	3.1510 (.79146) N=17	3.7206 (.78158) n=131	-2.823 (.005)
Organizational Commitment (X2)	3.7461 (.71059) N=18	4.1853 (.47823) n=129	-3.416 (.001)
Interaction term X1 X2	11.9630 (4.54579) N= 17	15.6768 (4.00916) n=129	-3.535 (.001)

According to the mean scores on BP, t-test indicates that subordinates with high performance have BP greater extent than subordinates with low performance. In other words, the results of t-test refer to significant variations ( $p < 0.01$ , two-tailed test) between groups in terms of their BP levels. However, the mean scores on organizational commitment indicated that subordinates with high performance appear to have organizational commitment level more than subordinates with low performance. Similarly, as expected, the two-way interaction between BP and organizational commitment was found significant differences between subordinates with high and low performance. In other words, these findings show that high interaction between BP and organizational commitment is associated with high performance.

## 5. Conclusion

The impacts of BP and organizational commitment on subordinate's performance were investigated in this study. The population for this study comprised of subordinates working in accounting and finance departments of top 500 firms in Turkey. According to aim of the study, three questionnaires were performed (budget participation, organizational commitment and managerial performance scales) and these questionnaires were sent to 500 subordinates via mail and electronic mail. 150 subordinates responded the questionnaires. The response rate was 30%. In the analysis of data, descriptive statistic (mean and standard deviation), correlation analysis, factor analysis, multiple regression analysis and t-test analysis were used.

The results of this study provide a number of contributions to management accounting literature by improving our understanding of BP and organizational commitment affecting managerial performance phenomenon. First, according to regression analysis' results, this study suggests that the effects of BP and organizational commitment by itself on managerial performance are positive and significant. Second, this study's results suggest that the managerial performance scores were found increase when the interaction score between BP and organizational commitment increase. That is to say, high interaction between BP and organizational commitment provides appropriate conditions for high managerial performance. As to these results, H1 hypothesis, H2 hypothesis and H3 hypothesis are supported.

According to t-test, our results suggest that subordinates with high performance have BP more than subordinates with low performance. However, our results indicate that while improving high organizational commitment feeling of subordinates in firm can lead to increase in their performance, low organizational commitment feeling of subordinates can lead to decreasing in their performance. Similarly, our results support the hypothesis that interaction score between BP and organizational commitment varies according to low and high managerial performance. As to this, while high interaction between BP and organizational commitment is associated with high managerial performance, low interaction score between BP and organizational commitment is associated with low managerial performance.

Several limitations can be noted in this study. First, the sample was composed of only accounting and finance managers of top 500 firms in Turkey. Therefore, more comprehensive sample may be useful for future studies. Also, this study is used BP and organizational commitment as factors affecting managerial performance. Future researches may include variables such as environmental uncertainty, market competition, job-relevant information, task



characteristics (uncertainty/diffuculty), organizational structure, and culture. Also, future researches may test these variables affecting managerial performance using different research methods. Future researches may compare the findings in this study with findings that relate to companies in other countries.

## References

- BECKER, S. W./GREN, D. (1962), "Budgeting and Employee Behavior," *Journal of Business*, 35: 352-402.
- BRIEF, Arthur P./ALDAG, Ramon J. (1980), "Antecedents of Organizational Commitment Among Hospital Nurses," *Sociology of Work and Occupations*, 7/2: 210-221.
- BROWNELL, Peter (1981), "Participation in Budgeting, Locus of Control and Organizational Effectiveness," *The Accounting Review*, 56: 844-860.
- BROWNELL, Peter (1982), "A Field Study Examination of Budgetary Participation and Locus of Control," *The Accounting Review*, 57: 766-777.
- BROWNELL, Peter (1982), "Participation in The Budgeting Process: When It Works and When It Doesn't," *Journal of Accounting Literature*, 1: 124-153.
- BROWNELL, Peter (1982), "The Role of Accounting Data in Performance Evaluation, Budgetary Participation, and Organizational Effectiveness," *Journal of Accounting Research*, 20/1: 12-27.
- BROWNELL, Peter/ Dunk, A. (1991), "Task Uncertainty and Its Interaction with Budgetary Participation and Budget Emphasis: Some Methodological Issues and Empirical Investigation," *Accounting, Organizations and Society*, 16: 693-703.
- BROWNELL, Peter/HIRST, Mark (1986), "Reliance on Accounting Information, Budgetary Participation, and Task Uncertainty: Tests of A Three-Way Interaction," *Journal Of Accounting Research*, 24: 241-249.
- BROWNELL, Peter/MCINNES, Morris (1986), "Budgetary Participation, Motivation, and Managerial Performance," *The Accounting Review*, 52/4: 587-603.
- BRYAN, J./LOCKE, E. A. (1967), "Goal Setting As A Means of Increasing Motivation," *Journal of Applied Psychology*: 274-277.
- BUCHANAN II, Bruce (1974), "Building Organizational Commitment: The Socializaion of Managers in Work Organizations," *Administrative Science Quarterly*, 19/4: 533.
- CHENHALL, R.H./BROWNELL, P. (1988), "The Effects Of Participative Budgeting On Job Satisfaction and Performance: Role Ambiguity As An Intervening Variable," *Accounting, Organizations and Society*, 13/3: 225-233.
- CHERRINGTON, D.J./CHERRINGTON, J. O. (1973), "Appropriate Reinforcement Contingencies in the Budgeting Process," *Journal Of Accounting Research Supplement*, 11: 225-253.
- CHONG, Vincent K./EGGLETON, Lan R.C./LEONG, Michele K.C. (2005), "The Impact of Market Competition and Budgetary Participation on Performance and Job Satisfaction: A Research Note," *The British Accounting Review*, 37: 115-133.
- CHOW, Chee W./COOPER, Jean C./WALLER, William S. (1988), "Participative Budgeting: Effects Of A Truth-Inducing Pay Scheme and Information Asymetry On Slack And Performance," *The Accounting Review*, Vol. LXIII, No.1, January, 111-122.
- COHEN, Aaron (1992), "Antecedents of Organizational Commitment Across Occupational Groups: A Meta-Analysis," *Journal Of Organizational Behavior*, 13: 539-554.

- CURRY, James P./WAKEFIELD, Douglas S./PRICE, James L./MUELLER, Charles W. (1986), "On the Causal Ordering of Job Satisfaction and Organizational Commitment," *The Academy of Management Journal*, 29/4: 847-858.
- DUNK, Alan S. (1993), "The Effect of Budget Emphasis and Information Asymmetry on the Relation Between Budgetary Participation and Slack," *The Accounting Review*, 68: 400-410.
- DUNK, Alan S./LYSONS, Arthur F.(1997), "An Analysis of Departmental Effectiveness, Participative Budgetary Control Processes and Environmental Dimensionality Within the Competing Values Framework: A Public Sector Study," *Financial Accountability and Management*, 13/1: 1-15.
- FRUCOT, Veronique/SHEARON, Winston T. (1991), "Budgetary Participation, Locus of Control, and Mexican Managerial Performance and Job Satisfaction," *The Accounting Review*, 66/1: 80-99.
- HOPWOOD, A.G. (1972), "An Empirical Study of the Role of Accounting Data in Performance Evaluation," *Journal of Accounting Research*, 10: 156-182.
- GODDARD, Andrew (1997), "Organisational Culture and Budgetary Control in a UK Local Government Organisation," *Accounting and Business Research*, 27/2: 111-123.
- GOVINDARAJAN, V. (1986), "Impact of Participation in the Budgetary Process on Managerial Attitudes and Performance: Universalistic and Contingency Perspectives," *Decision Sciences*: 496-516.
- GUL, Ferdinand A. (1991), "The Effects of Management Accounting Systems and Environmental Uncertainty on Small Business Managers' Performance," *Accounting and Business Research*, 22: 57-61.
- GUL, F.A./ TSUI, J.S.L./ FONG, S.C.C./ KWOK, H.Y.L. (1995), "Decentralization As a Moderating Factor in The Budgetary Participation-Performance Relationship," Some Hong Kong Evidence," *Accounting and Business Research*, 25: 107-113.
- GUZLEY, Ruth M. (1992), "Organizational Climate and Communication Climate Predictors of Commitment to the Organization," *Management Communication Quarterly*, 5/4: 379-402.
- KENIS, I. (1979), "Effects of Budgetary Goal Characteristics on Managerial Attitudes and Performance," *The Accounting Review*: 707-721.
- KREN, Leslie (1992), "Budgetary Participation and Managerial Performance: The Impact of Information and Environmental Volatility," *The Accounting Review*, 67/3: 511-526.
- LAMBERT, Eric G. (2004), "The Impact of Job Characteristics on Correctional Staff Members," *The Prison Journal*, 84/2: 208-227.
- LAU, Chong M./BUCKLAND, Christen (2000), "Budget Emphasis, Task Difficulty and Performance: The Effect of Diversity Within Culture," *Accounting and Business Research*, 31: 37-55.
- LAU, Chong M./ BUCKLAND, Christen (2001), "Budgeting- The Role of Trust and Participation: A Research Note," *Abacus*, 37/3: 369-386.
- LAU, Chong M./ TAN, Jeng J. (1998), "The Impact of Budget Emphasis, Participation and Task Difficulty on Managerial Performance: A Cross-Cultural Study of The Financial Services Sector," *Management Accounting Research*, 9: 163-183.
- LIBBY, Theresa (1999), "The Influence of Voice and Explanation on Performance in A Participative Budgeting Setting," *Accounting, Organizations and Society*, 24: 125-137.
- LINCOLN, J.R./KALLEBERG, A. L. (1985), "Work Organization and Workplace Commitment: A Study Of Plants and Employees in the U.S. and Japan," *American Sociological Review*: 738-760.
- MAHONEY, T.A./JERDEE, T.H./ Carroll, S.J. (1965), "The Jobs of Management," *Industrial Relation*: 97-110.

- MARSDEN, Peter V./KALLEBERG, Arne L./ COOK, Cynthia R. (1993), "Gender Differences in Organizational Commitment: Influences of Work Positions and Family Roles," *Work and Occupations*, 20/3: 368-390.
- MATHIEU, J.E./ZAJAC, D.M. (1990), "A Review and Meta-Analysis of the Antecedents, Correlates, and Consequences of Organizational Commitment," *Psychological Bulletin*, 108: 171-194.
- MEYER, John P./BECKER, Thomas E./VANDENBERGHE, Christian (2004) "Employee Commitment and Motivation: A Conceptual Analysis and Integrative Model," *Journal of Applied Psychology*, 89/6: 991-1007.
- MEYER, J. P./ ALLEN, N.J. (1991), "A Three-Component Conceptualization of Organizational Commitment," *Human Resource Management Review*, 1, 61-89.
- MEYER, J. P. /ALLEN, N. J. (1997), *Commitment in the workplace: Theory, Research, and Application* (Thousand Oaks, CA: Sage Publications, 11).
- MILANI, Ken W. (1975), "The Relationship of Participation in Budget-Setting to Industrial Supervisor Performance and Attitudes: A Field Study," *The Accounting Review*,: 274-285.
- MOWDAY, R.T./PORTER, L.W./STEERS, R.M. (1982), *Employee Organization Linkages: The Psychology of Commitment, Absenteeism, and Turnover* (New York: Academic Press, 27).
- MOWDAY, R.T./ STEERS, R.M./ PORTER, L.W.(1979), "The Measurement of Organizational Commitment," *Journal of Vocational Behavior*, 14: 224-247.
- MURRAY, D. (1990), "The Performance Effects of Participative Budgeting: An Integration of Intervening and Moderating Variables," *Behavioral Research in Accounting*, 2/2: 104-123.
- NOURI, H./PARKER, R. J. (1996), "The Effect Of Organizational Commitment on the Relation Between Budgetary Participation and Budgetary Slack," *Behavioral Research in Accounting*, 8: 74-90.
- NOURI, H./ PARKER, R .J. (1998), "The Relationship Between Budget Participation and Job Performance: The Roles of Budget Adequacy and Organizational Commitment," *Accounting, Organizations and Society*, 23-5/6: 467-483.
- O'CONNOR, N. (1995) "The Influence of Organizational Culture on the Usefulness of Budget Participation By Singaporean-Chinese Managers," *Accounting, Organizations and Society*, 20: 383-404.
- ORPEN, Christopher (1991), "Job Difficulty as a Moderate of the Effect of Budgetary Participation on Employee Performance," *The Journal of Social Psychology*, 132/5: 695-696.
- OTLEY, David T. (1978), "Budget Use and Managerial Performance," *Journal of Accounting Research*, Vol.16, No.1, Spring, 122- 149.
- PORTER, 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*, 59: 609.
- RANDALL, D. M. (1990), "The Consequences of Organizational Commitment: Methodological Investigation," *Journal of Organizational Behavior*, 11: 361-378.
- RIAHI-BELKAOUI, Ahmed (2002), *Behavioral Management Accounting* (Westport, London: Quorum Books).
- SNEED, J./HERMAN, C.M. (1990), "Influence of Job Characteristics and Organizational Commitment on Job Satisfaction of Hospital Foodservice Employees," *J Am Diet Assoc.*,8: 1072-1076.
- STEERS, Richard M. (1977), "Antecedents and Outcomes of Organizational Commitment," *Administrative Science Quarterly*, 22: 46-56.

- SUBRAMANIAM, Nava/ ASHKANASY, Neal M. (2001), "The Effect of Organizational Culture Perceptions on the Relationship Between Budgetary Participation and Managerial Job-Related Outcomes," *Australian Journal of Management*, 26/1: 35-54.
- TSUI, Judy S.L. (2001), "The Impact of Culture on The Relationship Between Budgetary Participation, Management Accounting Systems, and Managerial Performance: An Analysis of Chinese and Western Managers," *The International Journal of Accounting*, 36: 125-146.
- WELSCH, Harold P./LAVAN, Helen (1981), "Inter-Relationships Between Organizational Commitment and Job Characteristics, Job Satisfaction, Professional Behavior, and Organizational Climate," *Human Relations*, 34/12: 1079-1089.
- ZEFFANE, Rachid (1994), "Patterns of Organizational Commitment and Perceived Management Style: A Comparison of Public and Private Sector Employees," *Human Relations*, 47/8: 977-1010.