

ARTICLE

FEASIBILITY OF IMPLEMENTATION OF PERFORMANCE-BASED BUDGETING IN FARS GAS COMPANY

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ABSTRACT

The present study evaluates the feasibility of implementation of performance -based budgeting in Gas Company of Fars province. For feasibility of performance-based budget execution, a questionnaire and a model are presented. The study population is all top managers, budget experts, planning experts, project control experts, financial managers and financial experts (presenting documents, wage, plans, sale, property and goods) and various deputies of Gas Company of Fars province as 95 people and they are involved in various stages of budget (providing, regulation, approving, execution and supervision). The validity of measure is supported via content validity and its reliability is supported via Cronbach's alpha. This study has 4 main hypotheses and 9 sub-hypotheses. To support or reject hypotheses, Median, Kolmogorov-Smirnov test (K-S test) and t-test are applied. The results of study based on Shah model (2004) and three ability dimensions (performance evaluation, personnel and technical abilities) showed that respondents supported the performance evaluation ability in Gas Company of Fars province and they didn't support two other abilities as personnel and technical abilities. In addition, according to them, except organizational authority, regarding legal and procedural authorities, there were appropriate authorities in Gas Company of Fars province. Also, regarding political and managerial acceptance, there were suitable conditions but inIncentive compatibility, there was no good motivation for implementation. The results showed that implementation of performance-based budgeting were economical in Gas Company of Fars province.

INTRODUCTION

Budget is one of the most important decision making and managerial control tools as one of the main goals of organization management is allocation of limited resources to required plans and operation in the framework of macro managerial policies [1]. Performance budgeting system is one of the most efficient methods as applied in the past decades in developed and developing countries. In this system, budgeting is based on performance of organizational units and despite traditional budgeting, in performance-based budgeting system, instead of inputs, outputs and results are considered and there is a clear relationship between organizational outputs and its inputs. The change of budgeting system of country from current traditional method (as inefficient form the view of all experts) to performance-based budgeting has been on priority for government and parliament in the past years. Thus, relevant rules are designed and executed. Section 2, part (b) of Note 4 of budget rules in 2003, 2004, articles 138 and 144 of fourth development plan and its regulations, section 7 of budget executive codes in 2008, article 16 of management law of local services approved on September 30, 2007, section 32 of fifth development plan policies and article 219 of fifth development plan are the regulations as notified to create legal ground for this change.

Provincial Gas companies are distributed in the country and various activities are delegated to them. Like government, Gas Company performs all its financial activities including income, expenditures for various plans and duties in the framework of budget law. Thus, budgeting method is of great importance in fulfillment of goals of provincial Gas companies. Despite the benefits of performance-based budgeting, traditional budgeting is used in Gas Company. One of the basic problems of current budgeting system is that it is not performance-based and clear and this imposes great costs on countries including annual budget deficiency as thousands of billions Toman [2].

The final goal of performance-based budgeting is taking reasonable decisions about allocation and commitment of government resources based on measured outcomes as reflecting the expected results (performance) over time. By informing decision makers regarding better information about the results of each plan and set of plans to achieve common goals, performance-based budgeting increases the ability of decision makers to evaluate budget requests of executive systems and leads to better responsiveness of management for better performance and improvement of allocation of resources. The success of performance-based budgeting refers to the relationship between performance indices and resources allocation but most of the relations have not stable link (Kumarsi, 2008). The managers of provincial Gas companies should perceive the costs and processes of company exactly to achieve their

KEY WORDS

Performance-based budgeting, Programmed budgeting, Performance evaluation, Shah model, Gas Company of Fars province.

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goals well. The improvement of conditions and financial profitability of provincial Gas companies is dependent on the fact that how Gas is presented with the lowest cost as performance efficiency is increased. Now, the calculation of gas cost in Gas Company of Fars province is not suitable and required information is not provided for decision making. Thus, it is necessary to conduct a study on a system eliminating the problems and presenting the suitable information.

As it was said regarding the weaknesses of traditional budgeting method and advantages of performance-based budgeting, the present study evaluates the feasibility of implementation of performance-based budgeting for gradual reform of budgeting process and design of the model of implementation of performance-based budgeting system.

Theoretical basic

Performance-based budgeting (PBB)

In PBB, besides separation of credits to duties, plans, activities, operation volume and costs of execution of government performance and state systems in accordance to scientific methods as cost accounting and work evaluation methods can be measured. In programmed budget, budget classification is performed based on national goals, plans and different activities. If we use exact methods and criteria in estimation of cost of each activity, as allocated credit indicates the volume and amount of the activity and labor and performance are considered in control stage, we can achieve exact concept of programmed budget as called performance-based budget [3]. PBB is the budget regulated based on duties, performance and projects as the state organizations are responsible to execute it. In PBB, instead of considering the requirements of activities, we consider the activities and its expenditures (Mac gill, 2007). PBB is not a new phenomenon and it is organized and composed of useful aspects of other experienced budgeting in the past [4].

PBB (performance-based budgeting) attempts to establish a clear relationship between inputs and results (outputs and outcomes) and allocation of budget credits based on performance information with the aim of increasing effectiveness and efficiency in organizations [5].

Explanation of effective factors on successful execution of PBB by Shah model (2004)

The justifications regarding PBB execution have created some beliefs regarding effective factors on successful execution of this system. Such complex of the views was presented in SHAH governmental department model (2004). This model emphasizes on three effective factors in PBB execution: Ability, Authority and Acceptance. The studies show that interaction of these three factors determines reforms in execution of PBB [6]. Each factor is explained as followings:

Ability of PBB execution

One of the common assumptions regarding unsuccessful execution of PBB is low capacity or human inability of organization. The reports regarding PBB show that three dimensions of organizational ability are important to take performance-based budgeting: Performance evaluation ability, personnel ability and technical ability. Performance evaluation ability affects all stages of PBB execution [7]. If the governments cannot assess performance well, performance budgeting is failed. Most governments have found that assessment of result and output is time-consuming and difficult and most of them try to define the results and outputs. Sometimes, it is possible the existing problems in performance evaluation eliminate the potential execution of performance-based budget. Based on the development of performance evaluation industry and formation of required abilities in governments, these problems are reduced. For significant execution of PBB, the information of performance evaluation should be used in management, decision making, allocation of resources and design of encouraging plans. Another important point is that the information of performance evaluation should be reliable.

The studies emphasize on the importance of reliability of empowerment of human resources for performance-based budgeting. The required empowerments are different and are associated to all stages of PBB execution. The experience of governments regarding the PBB shows the importance of technical abilities. The specific technical requirements should be provided to collect data of performance and databases should be provided by which immediate performance information is presented as suitable for various range of uses. Databases should be consistent with wide range of other systems providing a basis for accounting, supervision and reporting in government.

If performance information is separated technically from other accounting and budgeting operation, PBB doesn't perceive decision making processes of other performances. If accounting system is based on input data, the performance-based information is not facilitated [8]. It seems that many governments are in evaluation of required technologies for execution of PBB and most of financial management systems are encountered with problem and it is important in decision making. Some people believe that shortage of required financial resources to develop new financial systems is one of the most important problems in PBB execution.

Authority in PBB execution

The second factor as effective to execute PBB is associated to the authority mechanisms of governments. If the budgeting experts don't have required authority in PBB execution, the execution is problematic. There are three important dimensions of authority: Legal authority, procedural authority and organizational authority.

As budget is regulated on inputs in some governments, using performance information in budget is different. The minimum use of performance information in budget is justified on the fact that budget is approved without performance information [6].

Performance evaluation and potential use of performance information is ignored mostly in budget procedures. The feature of existing processes is formal procedures as obliging budgeting behavior as a rule. Successful execution of reforms requires adaptation of reforms model with the rules and procedures.

In some governments, budget rules and procedures emphasize on inputs and exact explanation of chapters of costs and this reduces the potential role of information of performance evaluation. The managers and law makers are obliged to emphasize on inputs and they don't have required authority for measurements by other forms. For example, in California, limited use of performance information by law makers is based on existing procedures of former budgeting system.

There are many traditional budgeting procedures despite the obligation of decision makers to use the information of performance-based budgeting [8]. If budget processes and procedures reduce the role of information of performance evaluation in decision making, creating a performance-based budget system is difficult.

Organizational authority is effective on performance-based budgeting execution namely if performance information is used. PBB is executed effectively if required authorities are delegated and managers are allowed to decide regarding employment, reporting and etc. and required authorities should provide such decision making power.

In US, most of state authorities think how they can delegate required authorities to managers to apply the performance information in their decisions effectively but political limitations remain and are not considered mostly. The political authorities and managers are not free regarding the use of results-based information and this restricts using the information.

Acceptance in execution of PBB

Resistance to reforms by some of state authorities, chiefs of sectors and employees is the greatest barrier for execution and using performance evaluation [9]. If PBB is accepted by these groups, it is executed mostly. If it is expressed, for successful execution of PBB, state authorities, administrative managers and employees should be convinced PBB is based on reduction and achieving short and long-term benefits of state and society. Three aspects of acceptance are required: Political acceptance, managerial acceptance and Incentive compatibility.

Political authorities acceptance is of great importance in support and funding for execution of PBB. The evaluation and using performance information has some outcomes for selective and attributing authorities. Some authorities emphasize that policy makers resist against using performance information in allocation decisions as such information increases their vulnerability against people. Namely regarding long-term plans that can not be executed well in short-term. The performance information for political authorities in budget decisions is a threat as this question is raised that what is the authority of political authorities in using the information of performance evaluation? In political decisions, short-term goals are considered instead of long-term goals.

The investigations show that acceptance of PBB by managers namely regarding the performance information in managerial decisions and creating incentive plans is necessary. A basic challenge in PBB is convincing managers regarding the value of strategic plans and performance evaluation[8].

The experts in PBB believe in incentive strategy to use performance-based information and they consider that motivations should be a part of PBB. It is believed that budgeting systems and process-based systems create incentives vs. result-based approach.

The role of economic aspects

Another factor important in implementation of PBB is the thought of law makers, political authorities, managers and all employees of organization of PBB. For example, management is suitable for income resources and organization cost, reduction of processing cost of information to be applied by managers or facilitation of relationship of system users with relevant software or improvement of human resources. Generally, if PBB experts don't consider the economic benefits of PBB, they will be failed and this disturbs successful execution of this system.

Review of Literature

Local studies

Pourzamani and Naderi [10] evaluated the effect of acceptance, ability and authority on PBB in free commercial-industrial zones in Iran. The study findings showed that the mean of rank of evaluation of women and men had not significant difference. Also, the results showed that the mean of evaluation rank if age groups and organizational position and education of variables had not significant difference.

Sheikholeslami Nasab [11] identified effective internal and external factors on PBB execution in Khuzestan governor office by SWOT method. This model considered six factors (management, planning, cost management, performance management, change management, responsiveness and incentive) as necessary in the change of budgeting system to performance-based budgeting. The results of study showed that PBB in studied organization was an unrealistic PBB as at first credit is given to organization, then plans were written in details. Another problem among the employees was lack of motivation for implementation of PBB and it was an impossible issue. Also, low authority of managers of organization and executive systems to promote this goal and lack of uniform databases in organization were some barriers in this regard.

Moradi et al., [2012] evaluated the possibility of implementation of PBB in municipality of Shiraz. Based on SHAH model the study findings concerning the subjects were negative in relation to three authority dimensions namely the authority to assess the performance and human and technical abilities and there was not the authority necessary to execute PBB and the subjects believed there was appropriate authority in Shiraz municipality in relation to three power dimensions namely legal, procedural and organizational authority. Also there were good conditions in relation to dimension namely political and Managerial acceptance, but there was not appropriate motive for the performance in another dimension of acceptance, that was, incentive compatibility. Also the findings showed that PBB had decreased the expense in Shiraz municipality.

Mahdavi and Golmohammadi [12] evaluated the familiarity of top financial managers of executive systems of Fars province by new budgeting methods. The study findings showed that PBB was a good alternative for traditional methods in Iran compared to other new methods of budgeting. Familiarity of top financial managers, executive systems of Fars province with new budgeting methods like zero-based

budgeting method, programmed budgeting method and planning, budget systems were low (lower than average). However, their familiarity with PBB was an exception. Also, top managers of executive systems of Fars province, didn't consider the applied budgeting method in executive system and were agree mostly with the changes of budgeting method and their familiarity with alternative budgeting methods was low.

International researches

Andrew (6) showed that PBB execution possibility is in the states in which there adequate professional abilities for such changes and authorities have high power to apply such reforms. He referred to SHAH model and presented three effective factors on execution of PBB as ability, authority and acceptance.

Burner and Lee [2004] found that by effectiveness indices of performance, productivity rates in state budgets were reduced during 1990-2000. They also found that during the time periods in which financial resources are changed, these indices are improved mostly.

Blumentritt, T. [13] in the study of “Integrating Strategic Management and budgeting” showed that managers faced great challenges as moving toward budgeting and strategic planning and budgets had no association with commercial and performance strategies and a budget couldn’t be efficient unless the organization had strategic decisions. Strategic management and budgeting were separated but they had dependent activities. If they were applied well, both of them could improve performance better.

Yahaya, Ahmad NNN, Fatima, A.H.[14] in the study “Budgetary participation and performance: some Malaysian evidence evaluated the budgetary participation and performance in ministry of defense of Malaysia. The results of study showed that budgetary behavior in state organizations in developed countries was different from what was observed in developing countries. G. Eyonga [15] in the study “PBB, increasing productivity and change in budget (case study of ministry of trade in US) found that although some studies were reported that PBB increased state productivity in improvement plans, one issue was raised about successful execution of PBB: Allocated productivity.

Study hypotheses

Hypothesis 1: Performance-based budgeting implementation ability is observed in Gas Company of Fars province.

- Sub-hypothesis 1: There is performance evaluation ability based on PBB goals.
 - Sub-hypothesis 2: There is performance evaluation ability in terms of personnel.
 - Sub-hypothesis 3: There is performance evaluation ability in terms of technical ability.
- Hypothesis 2: There are appropriate authorities to implement PBB in Gas Company of Fars province.
- Fourth sub-hypothesis: Legal authority is given to Gas Company of Fars province to implement PBB.
 - Fifth sub-hypothesis: Procedural authority is given to Gas Company of Fars province to implement PBB.
 - Sixth sub-hypothesis: Organizational authority is given to Gas company of Fars province to implement PBB.
- Hypothesis 3: There is appropriate acceptance to implement PBB in Gas Company of Fars province.
- Sub-hypothesis 7: There is appropriate political acceptance to implement PBB in Gas Company of Fars province.
 - Sub-hypothesis 8: There is appropriate managerial acceptance to implement PBB in Gas Company of Fars province.
 - Sub-hypothesis 9: There is appropriate incentive compatibility to implement PBB in Gas Company of Fars province.

Hypothesis 4: Implementation of PBB is economical in Gas Company of Fars province.

MATERIALS AND METHODS

Study method

Conceptual model and study variables

In this study, Shah Model is used in which three effective factors on PBB are presented: Ability, authority and acceptance. Each of the dimensions is divided into small dimensions. The study model is shown in [Table 1].

Table 1: Effective factors on implementation of PBB



Data collection methods

Research plans are divided into empirical and quasi-empirical. Based on the features of each of plans, this study is in quasi-empirical studies. For data collection to test the hypotheses, survey research method is used. For data collection, a questionnaire with 7 general questions and 65 specialized questions are used. In theoretical section, for data collection, library method is applied. In this study, to be sure of content validity, questions of questionnaire are corrected and finalized by experts in some stages. To evaluate the reliability of questionnaire, Cronbach's alpha is applied. At first, 25 questionnaires are distributed randomly among the samples. The results of Cronbach's alpha for relevant questions of study hypotheses are shown in [Table 3].

Study population and sample

The study population is all top managers, budget experts, planning experts, project control experts, financial managers and financial experts (providing documents, wage and plans, etc.) and different deputies of Gas Company of Fars province in 2014 and they are presented in [Table 2]. Also, they are involved in different stages of budget (providing, approving, execution and supervision).

To reduce first type error (false rejection) and second type error (false support) and increasing test power, no sampling was performed and total population was investigated. Other purposes of study regarding total test of study population is avoiding the errors of sampling as mistaking in sampling is an important factor affecting statistical significance. In this study, sample size is equal to total study population. Thus, sampling method is not applicable in this study.

Table 2: Study population

NO.	Explanation	Samples number	Distributed	Received	Return rate
1	Financial experts	30	30	27	90%
2	Financial authorities	30	30	25	83%
3	Planning and education experts	20	20	14	70%
4	Management and deputies and top authorities	15	15	12	80%
Total		95	95	78	82%

Data analysis method and results test

To analyze the data of questionnaire, descriptive and inferential methods are used. For qualitative analysis of general data of respondents, descriptive statistics as classification and organizing information, relative and absolute frequency distribution is used. In this study, to test normality of data, K-S test is used. Based on normality or non-normality of data distribution, by “single t-test” and “Median test” at confidence interval 95%, study hypotheses are tested. To test the hypotheses, the required data are analyzed after collection, processing by SPSS, Excel software as followings:

- a. Descriptive: For qualitative analysis of general information of questions of first section of questionnaire (general), descriptive statistics (mean, median, mode and SD) are used.
- b. Inferential: By t-parametric test (single sample) and Q_p non-parametric test (median test) is tested at confidence interval 95% and error 5%.

In this method, by SPSS software, Cronbach’s alpha is computed for questions of each hypothesis. These tests respond the question whether the questions in questionnaire are based on purpose and study topic? The results of computation of Cronbach’s alpha for relevant questions of study hypotheses are shown in [Table 3].

Table 3: Results of Cronbach’s alpha

Hypothesis	Cronbach’s alpha test	Hypothesis	Cronbach’s alpha test	Hypothesis	Cronbach’s alpha test
First sub-hypothesis	0.91	Fourth sub-hypothesis	0.88	Sevenths subhypothesis	0.96
Second hypothesis sub-	0.89	Fifth sub-hypothesis	0.90	Eighths subhypothesis	0.94
Third hypothesis sub-	0.92	Sixth sub-hypothesis	0.93	Ninth subhypothesis	0.89
First main hypothesis	0.92	Main second hypothesis	0.91	Main third hypothesis	0.94

RESULTS

Results analysis

Descriptive statistics

The results of descriptive statistics showed that among 78 respondents, 55 people were 83.3% men and the rest women. Based on the age of respondents, 2.6% of them were at age range 20-30 years and 34.6% between 30 to 40 years and 53.8% above 40 years. The results of analysis of education showed that 74.4% of respondents had above BA degree. The education of respondents showed that 46.2% of respondents were in accounting, 21.8% in industrial management, 3.8% in business management, 1.3% in financial management, 5.1% in industry engineering and the rest in other fields. Work experience showed that 65.4% had more than 10 years of experience. The evaluation of participation of respondents in PBB showed that only 6.4% of respondents participated in this period and the rest of respondents had no participation in this period.

Table 4: Descriptive statistics and the results of normality of hypotheses

Hypothesis	N	Mean	Median	Mode	K-S test	Significance
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						level
First main hypothesis	78	2.96806	2.89524	2.752	1.383	0.044
First subhypothesis	78	3.56068	3.40000	3.400	1.734	0.005
Third sub-hypothesis	78	2.62920	2.57143	2.286	1.719	0.005
Fourth sub-hypothesis	78	3.99231	4	4	1.982	0.001
Fifth sub-hypothesis	78	3.70513	4	4	2.374	0.000
Sixth sub-hypothesis	78	2.67521	2.66667	2	1.643	0.009
Seventh sub-hypothesis	78	3.75214	3.66667	4	1.694	0.006
Eighths subhypothesis	78	3.76923	3.75000	3.750	1.906	0.001
Main fourth hypothesis	78	3.81624	3.66667	3.667	1.781	0.004

Table 5: Descriptive statistics and results of normality test of hypotheses

Hypothesis	N	Mean	SD	K-S test	Significance level
Second sub-hypothesis	78	2.71429	0.609097	1.246	0.090
Main second hypothesis	78	3.45755	0.393313	0.880	0.420
Third main hypothesis	78	3.35969	0.341849	0.838	0.484
Ninth sub-hypothesis	78	2.55769	0.707018	1.328	0.059

Inferential statistics

[Table 5-1] shows the results of statistical test of main first and fourth hypotheses and first, third, fourth, fifth, sixth, seventh and eighth sub-hypotheses of study. As the results of normality test showed that frequency distribution of these hypotheses are not normal, the hypotheses were evaluated by median test. The results of this test based on each hypothesis are shown in the following [Table 6].

Table 6: The results of statistical test of hypotheses by Median test

Hypothesis	Level	N	Observed percent	Test ratio	Probability value	Result
Main first hypothesis	Smaller or	50	0.64	0.5	0.017	Supported

	equal to median					H0
	Bigger than median	28	0.36			
	Total	78	1.00			
First subhypothesis	Smaller or equal to median	1	0.01	0.5	0.000	rejectedH ₀
	Bigger than median	77	0.99			
	Total	78	1.00			
Third sub-hypothesis	Smaller or equal to median	68	0.87	0.5	0.000	Supported H ₀
	Bigger than median	10	0.13			
	Total	78	1.00			
Fourth sub-hypothesis	Smaller or equal to median	4	0.05	0.5	0.000	rejected H ₀
	Bigger than median	74	0.95			
	Total	78	1.00			
Fifth sub-hypothesis	Smaller or equal to median	19	0.24	0.5	0.000	rejectedH ₀
	Bigger than median	59	0.76			
	Total	78	1.00			
Sixth sub-hypothesis	Smaller or equal to median	59	0.76	0.5	0.000	Supported H ₀
	Bigger than median	19	0.24			
	Total	78	1.00			
Seventh sub-hypothesis	Smaller or equal to median	2	0.03	0.5	0.000	rejectedH ₀
	Bigger than median	76	0.97			
	Total	78	1.00			
Eighths	Smaller or	1	0.01	0.5	0.000	rejectedH ₀

subhypothesis	equal to median			0.5	0.000	rejectedH ₀
	Bigger than median	77	0.99			
	Total	78	1.00			
Main fourth hypothesis	Smaller or equal to median	2	0.03	0.5	0.000	rejectedH ₀
	Bigger than median	76	0.97			
	Total	78	1.00			

The results of normality test show that frequency distribution of second subhypothesis, main second hypothesis, third main hypothesis and ninth sub-hypothesis is normal. Thus, hypotheses are evaluated by single t-test. The results in [Table 5] show the support of main second and third hypotheses and rejection of second and ninth sub-hypotheses.

Table 7: The results of statistical test of hypotheses by single t-test

Tested value=3							
Hypothesis	t-statistics	Degree of freedom	Significance probability	Difference of mean	Confidence interval 95% for mean difference		Result
					Lower bound	Upper bound	
Second sub-hypothesis	-4.143	77	0.000	-0.285714	-0.42304	-0.14838	Supported H ₀
Second main hypothesis	10.274	77	0.000	0.457550	0.36887	0.54623	RejectedH ₀
Third main hypothesis	9.293	77	0.000	0.359687	0.28261	0.43676	Rejected H ₀
Ninths sub-hypothesis	-5.525	77	0.000	-0.442308	-0.60172	-0.28290	SupportedH ₀

As it was said, the results of hypotheses test showed that respondents supported performance evaluation ability in Gas Company of Fars province and rejected other two ability dimensions as personnel ability and technical ability. In addition, from the view of mentioned people, except organizational authority, there were appropriate authorities regarding legal and procedural authorities in Gas Company of Fars province. Regarding political and managerial acceptance, there were suitable conditions but in incentive compatibility, there was no suitable motivation for implementation. Also, the results showed that implementation of PBB were economical in Gas Company of Fars province.

CONCLUSION AND RECOMMENDATIONS

The budget of executive systems is one of the most important policy making tools, decision making and planning to execute development strategy and can reflect all plans and activities of government. Also, it plays important role in national economy development as financial policy tool and stabilizing economic fluctuations and cost criterion and efficiency evaluation of executive systems. In the present study, some recommendations are presented and based on new topic of PBB and its effect on performance of various sectors of society as:

- 1- Based on the result of second sub-hypothesis and inability of personnel in implemented of PBB, the followings are necessary:
 - Formulation of educational plans and execution of short-term courses increasing the intellectual capabilities of human resources and they play important role in their empowerment.
 - It is required that all financial experts and planning of or organization take required training in PBB.
 - If the management divides its power via delegating authority to the subordinates, according to communication approach in management, empowerment of employees is increased. By increasing internal motivation of employees for performing duties via positive experiences achieved by employees directly, empowerment of employees is increased according to cognitive approach.
 - Experts are provided regarding evaluation and improvement of performance from quantitative and qualitative aspects.
 - Required financial experts for reforms in accounting system and costs of goods and services can be provided from quantitative and qualitative aspects.
 - Various sessions to establish norms to implement this system and its establishing.
- 2- Based on the result of third sub-hypothesis and technical inability in implementation of PBB, the following measurements are necessary:
 - Improvement of ability requires improvement of information systems as required databases are created by which immediate performance information is provided as suitable for wide range of users.
 - The coordination between existing systems is the most important principle in improving technical ability as the required information is from a unite system and it provides a basis for accounting, supervision and reporting in Gas company.
 - The required budget for execution of PBB and performance evaluation should be considered.
- 3- Based on the result of sixth subhypothesis and lack of appropriate organizational authority to implement PBB, the followings are performed.
 - Organizational authorities to top and middle managers to promote PBB goals.
 - Explanation of the duties of managers and authorities as involved directly in budgeting process of company should be reviewed and defined based on PBB goals.
- 4- Based on ninth sub-hypothesis and lack of incentive compatibility to implement PBB, the followings should be done:
 - By using qualified employees in terms of education, experience and specialization in budgeting and creating suitable qualification system and good punishment and benefits system and establishing appropriate wage, PBB execution is successful.
 - Some incentives can be defined for performance management based on continuous improvement.
 - The managers of organization can apply the information of performance evaluation in their decisions and design and execute macro policies in this field.

For preparation of implementation of PBB, the followings should be considered:

- Regarding the formulation of required rules and execution of PBB, in case of any contrast, the contradictions can be eliminated.
- In financial and budget rules of state, freedom is presented for organizations regarding budget request and costing.
- Required authorities to execute PBB are delegated by top organizations.
- Via training and holding justification sessions, managers of organization can be aware of PBB and this is useful in acceptance of PBB.

Limitations of study

There are some limitations in each study and these limitations are the barriers of generalizing the results of study. There are some limitations in this study affecting the results and findings of study. Some limitations of various stages of theoretical structure, measurement and collection of data are presented as:

- 1- Lack of adequate motivation for active participation in scientific study among the selected population is one of the limitations of this study.
- 2- Gas Company is one of the state organizations; respondents are concerned of presenting information to high authorities.
- 3- This study is encountered with inherent limitations of questionnaire for data collection. For example, the questionnaire cannot measure the subjects views completely.

Recommendations for further studies

The changes process in “budgeting system” and “accounting system and financial reporting” requires proper perception of the role and importance of these two systems in general responsiveness. We should clarify the role of annual budget as the financial responsiveness of government and unique role of accounting and financial reporting as one of the main tools of fulfilling and improving these two responsibilities for authorities, policy makers and relevant institutions and financial and budgetary affairs and they should be turned into public opinion of these authorities.

According to section 32 of general policies of fifth development plan and article 219 of fifth development plan and required regulations to create legal ground to establish PBB and reformation of budgeting structure as services costs, the research regarding the evaluation of effective factors in successful execution of this system besides recognizing existing condition can be useful in evaluation of solutions of good ground to executive units. Some recommendations in this regard are as followings:

- 1- As PBB is implemented in our country, based on this implementation, the complementary tool of performance of this system, PBB should be implemented as well as state budgeting system and finally state financial system can achieve its great goals and be responsive as a strong tool and also plays important role for economic progress of country.
- 2- Based on the importance of cost accounting and the benefits of costing system based on mechanism , using costing system in Gas Companies can be on priority.
- 3- Review of financial rules in Gas companies and presenting suitable solution of formulating rules and improvement of performance along establishing PBB.
- 4- Conducting this study in Gas Company of other provinces.
- 5- Evaluation of feasibility of PBB in other state organizations.

CONFLICT OF INTEREST

There is no conflict of interest

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