Investigate the factors affecting the effectiveness of operational budgeting system in government organizations in Tehran

Seyed Hadi Ashraf Talesh
PhD student in Accounting, Islamic Azad University, Electronics Branch, Iran

*Batool Zarei
Shahr.e. gods branch Islamic Azad University shahr.e.gods, Iran
*Corresponding Author

Abstract

This study investigates the factors affecting the effectiveness of operational budgeting system in government organizations in Tehran. The study population comprised of experts in planned budget in government organizations. Cochran formula was used to obtain the research sample size. According to Cochran formula and in 95% confidence interval, the sample size determined equal to 121 persons that the samples were selected by simple random sampling and then were evaluated using a questionnaire. Research objectives include: investigate the ability of the organization to implement operational budgeting system, on the effectiveness of operational budgeting, enabling organizations in the implementation of operational budgeting system, on the effectiveness of operational budgeting, review acceptance of operational budgeting system, on the effectiveness of operational budgeting, check the quality of communication across the organization on the effectiveness of operational budgeting system, check the quality of staff on the effectiveness of operational budgeting system, identify strategic priorities of the organization, on the effectiveness of operational budgeting system and performance-based resource allocation, on the effectiveness of operational budgeting system. The obtained data were analyzed using SPSS software. The results of the analysis showed that ability, capability, implementation of operational budgeting and acceptance are the factors affecting the effectiveness before its implementing and The quality of communication in the organization, identify priorities and performance-based resource allocation are the factors affecting the effectiveness of the operational budget during its implementing.

Keywords: operational budgeting, abilities, powers, acceptance, communication quality, staff quality, priorities.
Problem statement

Budget represents all the programs and activities of the government and plays a critically important role in the development of the national economy. With the rapid development of the state's responsibilities and increasing government spending and its link with the general state of the economy, expenditure control was no longer important and there was a need to improve the system of planning, control and management of resources, so that the decision makers are able to achieve a wider vision to gain more information about the results of operations and the cost of implementing activities. This contributed to the government's attention to efficiency and effectiveness of government resources, which is, in other words, financial management.

Establishing these conditions need to improve the current budgeting techniques. Meanwhile, performance and programmatic budgeting system can be introduced in order to review and assess the management of government activities. What distinguishes this budget system with a common budget system is that to what end the government revenues are spent. Tendency to performance budgeting around the world is increasing day after day. Iran, like other countries, has accepted performance budget to improve budget planning and financial management.

Since the research and experiences of leading countries in implementing Performance Budgeting shows that they have not achieved all the intended targets in establishing performance budgeting system, the aim of this study was to investigate factors affecting the effectiveness of performance budgeting system in Tehran's governmental organizations.

Definition of budget and budgeting (in the general sense)

In Persian language, the word "budget" was adopted from French language and in French, this work had been adopted from English language as well; because budgeting practices and approve it in Parliament started initially from England. In fact, the word "budget" existed old French language and referred to a leather bag in which the cash was kept. In the UK, a leather bag containing expenditure needed for the King was presented to Parliament by the Treasurer in order to approve the funds required. That bag was called "budget" and gradually, the name of the bag was used to refer to its contents. In other words, the bills, gradually, were included in one bill and were used under the name of "budget" in Britain, France and other countries (Ansari, 2005: 21).

This word did not exist in Persian language prior to Constitutional Revolution and afterwards, since the constitution of Iran was a translation and adaptation of the constitution of Belgium and France, the word was also translated into finance law and entered in the public accounting law of Iran and Persian language. Oxford dictionary defines the budget as such: the amount of money that a person or organization consumes in an organization at a certain time period and pattern. Possible income and expenses for a year, which is determined by the Chief Financial Officer and planned and presented to parliament by the ministry, which sometimes be written to the national capital and defined by official organizations (Oxford, 2003).
Budgeting definition (special meaning)

The budget is statements and forecasts revenues and expenses for a period in the future of an organization and is a management tool that helps managers control the financial health of their organization. In the specialized organizations, the budget defines as such: Budgeting identifies, assigns, monitors, improves and supervises the organization's financial fund management, which is one of two important factors in the management and creativity in management. Talbot defined the budget as an ideal monetary position for organizations that have concerns about the organizational priorities (mckay, 2003: 5). Definition and nature of Performance Budgeting

Performance Budgeting has numerous definitions and some of them are mentioned below:

Performance Budgeting is an annual program, along with an annual budget that demonstrate the relationship between the amount of funds allocated to each program (derived from strategic objectives) and the results obtained from the implementation of that program (Mercer, 2002).

Definition of International Monetary Fund regarding Performance Budgeting is as follows: Performance Budgeting is a procedure or mechanism that want to strengthen the relationship between the spent budget and the results - the resulting output through the use of performance information in making decisions about the resource allocation (Robinson and Brumby, 2003). Performance Budgeting indicates the purposes and results of investments required, including governmental and private spending programs proposed for achieving the objectives and quantitative information to measure the performance of each operation (Saeidi and Mazidi, 2006).

Performance budgeting concepts

Although there are many definitions for the performance budget, their common point is associated with "relationship between budget and results" and "relationship between performance indicators and evaluation", so it can be said:

1. Performance Budgeting is an annual program along with an annual budget which shows the relationship between the amount of allocated budget to each program and the results obtained from the program. This means that any spending done in any program must provide a defined set of purposes.

2. Performance Budgeting is a kind of budgeting which systematically use the performance indicators in the scarce public resource allocation process (Talebnia, 2006).

Benefits of Performance Budgeting

In summary, the benefits of Performance Budgeting are as follows:

1. Increased accountability based on the results: Although many states allow access to information regarding their performance, but beyond the political debates, information derived from operational planning can become public in many ways, including budget documents, strategic plans and performance reports.

2. Improve performance management: performance data is mostly used by managers who want to increase their operational efficiency.

3. How to improve allocation: In Performance Budgeting, resources linked to performance indicators. Relating strategic planning to resource allocation is one of the
requirements of the principle of resource allocation based on the objective (Panahi, the requirements of Performance Budgeting, 2005).

**Origins of Performance Budgeting**

Performance budgeting concept has a long history. Although the elements of the budgeting system had seen before the Second World War in the United States of America, Performance Budgeting returned to the reforms of the 1950s in America. The aim of these reforms was to create performance information for budgeting system and change the state budget process from a focus on inputs to outputs. This approach was promoted by the Hoover Commission in 1949 and its widespread implementation was considered. The law of budget and accounting methods adopted by 1950, heads of executive organizations were required to submit budget proposals with backing of performance information and program costs in organizational units. United States of America Budget for fiscal year 1950-1951 was the first budget to accommodate the effects of this shift in approach. Here it should be noted that, from the beginning, the terms "planning budget" and "performance budgeting" was considered almost synonymous by Hoover Commission (Hassanabadi and Sarraf, 2007).

**Performance Budgeting Objectives**

In a general conclusion, Performance Budgeting Objectives can be stated as follows:
- Provide a suitable basis for decisions about resource allocation.
- Determine measurable and expected results that are achievable by allocating specific budget
  - focusing decision-making process on the most important issues and challenges that an organization is faced with them.
- Create a logical process for deciding on budgets that are directly related to process of planning, implementation, monitoring, evaluation and performance reporting.
  - Improve how to design and application settings.
  - Providing the best possible tools based on the results, to assure that the resources used in its immediate needs.
- Making connection between budgets and program performance results.
  - Provide measurable information for executive and supervisory departments which, with reference to them, the extent of progress and success of programs in against allocation of budget could be controlled.
  - Provide incentives for performance management based on continuous improvement.
  - Provide a basis for greater accountability for the use of resources.
  - Ability to effectively monitor the implementation of the operation.
  - Facilitate and improve the revision of all administrative procedures, especially in the legislation stage
  - Lack of focus on cost estimates.
  - Improve relationships between government and people through the publication of explicit information about public programs.
  - Transparent budgeting process.
  - Improved performance by linking budgets and program performance.
  - Strengthen the sense of responsibility of managers for decisions affecting the budget process (Mahdavi, 2007).
Factors affecting the effectiveness of Performance Budgeting

Review existing research and experience in the field of Performance Budgeting shows that although the purposes of the implementation of Performance Budgeting are very important and valuable, but these purposes can be achieved if the performance budgeting system to be implemented effectively (Diamond, 2002). Research results show that two types of factors can influence the effectiveness of Performance Budgeting and they are factors affecting the effectiveness of Performance Budgeting before implementing it and factors affecting the effectiveness of the performance budgeting during implementing it. Factors affecting the effectiveness of performance budgeting before implementing it include competency in implementing Performance Budgeting, authority in implementing Performance Budgeting and acceptance. Factors affecting the effectiveness of the performance budgeting during implementing include staff quality in public organizations, communication quality, and resource allocation based on performance and identify strategic priorities (Togen, 2008).

Research background

Safdari and others in a research examined the role of organizational factors on performance budgeting to implement Article 195 of the Fifth Development Plan. From early 2001, in Iran, changes in diversity and form of budgeting was carried out which came first in the annual budget and in the following years in the upper law; However, despite accepted terms, the implementation of this method has not achieved efficiently. For this purpose, this study was conducted to investigate the role of organizational factors on executing Performance Budgeting in the upstream rules. Changing the method of performance budgeting in public organizations has faced with the challenges within and outside the organization. The most important external organizational factors are environmental factors and the size of government and the main challenges in internal organizational factors are adaptation among equipment, human resources and financial resources. Performance budgeting can be implemented by focusing on these following factors: 1. Pay attention to culture and leadership, 2. commitment and support of the implementation, 3. Conditions of target groups, 4. Pay attention to cost and develop measurement indicators, 5. Pay attention to tendency of executives and organizational climate.

Ghadimi and others evaluated factors affecting the establishment of performance budgeting in the health sector at Tabriz University of Medical Sciences. His research is analytical-descriptive and based on the diamond model and consists of three main elements including planning, cost analysis and performance management; and three elements of change management empowerment including accountability system, incentive system, and other components of human resource management. Data collection tool is a researcher-made questionnaire in eight areas of expertise and eight questions were developed based on the Likert scale for each field, data analysis was carried out using SPSS version 17 and one-sample t-test and Friedman were used. Results: The effect of management factors in the establishment of a performance budgeting in the treatment area is higher than average (24) and prioritizing them using the Friedman test showed that accountability system with an average rating of 5.70 is the first priority and incentive system with 5.30, planning with 4.89, change management with 4.81, cost analysis with 4.31, performance management with 4.17, human resources management with 3.78 and legal requirements with 3.85 were the last priorities. The results showed that the realization of performance-based budgeting system
depends on the structure of planning, performance management, cost analysis, change management, accountability system, incentive system, legal requirements and human resource management. Benefiting from professionals and the necessary training to managers and staff are amongst the effective organization's objectives.

Bohlouli and others examined the relationship between performance budgeting and improve accountability in East Azerbaijan province's administrative systems. Performance budgeting is a system of planning, budgeting and evaluation that emphasizes the relationship between the spent budgets and the expected results. In the framework of budgeting, there are various departments of administration in accordance with certain standards under the responsive performance indicators and manager have more greater authority to determine the best method of achieving results. The aim of this study was to investigate the relationship between performance budgeting and improve the accountability in East Azerbaijan province's administrative systems. For this reason, performance budgeting based on the diamond model organized on three dimensions of planning, cost analysis (ABC), defined performance management, main hypotheses and three secondary hypotheses. This research is an applied one and the execution method is descriptive- survey; and in order to test the hypothesis, the required information was collected through questionnaires. Given the subject matter and purpose of the study, the statistical population consisted of accountants and financial managers of executive organizations and auditors in different levels of the Supreme Audit Court in East Azarbaijan province who deals with budget. The research data were analyzed using Pearson correlation analysis and regression analysis. The results of this study indicate that there is a significant relationship between performance budgeting and improve the accountability in East Azerbaijan province's administrative systems. In addition, the relationship between each of the elements of performance-based budgeting was confirmed by improving accountability.

Melkers and Willoughby (1998) in a study entitled "Study of performance-based budgeting" have made the conclusion that the most important requirements in performance-based budgeting is commitment to the ongoing development of performance measures and willingness to reconsider the performance-based budgeting system according to strategic planning and heuristic activities.

King et al (2010) in a study entitled "Evaluating the budgeting practices in the medical small businesses" have reached the conclusion that codified budgeting is related to the size and structure; businesses should have the ability to use this codified budgeting and expand it. For this purpose, they should consider the relationship between this concept and structure, strategy and environmental uncertainty perceived. Further improvement of test fit between contingency business and the use of performance budgeting.

Ferro et al (2010) in a study entitled "compliance between flexibility of budget and budgetary control" examined the role of budgeting at conditions of uncertainty and management flexibility. In this study, they examined the tension between the need to meet financial purposes and the need for management flexibility, which is caused by increased instability in market and the rapid growth of technological changes. Results showed that the integrated budgeting should be employed to describe the ways in which an organization strives to comply with conflicting purposes.
Research Hypothesis

First hypothesis: the ability of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting

Second hypothesis: the authority of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.

Third hypothesis: acceptance of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.

Fourth hypothesis: communication quality of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.

Fifth hypothesis: staff quality of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.

Sixth hypothesis: identify the strategic priorities of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.

Seventh hypothesis: performance-based resource allocation is effective on the effectiveness of the performance budgeting.

Research Methodology

In terms of purpose, this is an applied research and the methodology is sectional and casual, because it has been conducted in the period of 2016. In terms of data gathering, this is survey due to the use of a questionnaire. The study population consists of experts in planned budget at government organizations. Cochran formula was used to obtain the research sample size. According to Cochran formula and in 95% confidence interval, the sample size determined equal to 121 persons that the samples were selected by simple random sampling and then were evaluated using a questionnaire.

Data analysis

First hypothesis: the ability of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting

Table 1. Pearson correlation test

<table>
<thead>
<tr>
<th>Ability of organization</th>
<th>Effectiveness of budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson correlation</td>
<td>1</td>
</tr>
<tr>
<td>Significant level.</td>
<td>.000</td>
</tr>
<tr>
<td>Number</td>
<td>121</td>
</tr>
</tbody>
</table>

Pearson correlation test was used to examine the relationship between the ability of organization to implement performance budgeting and the effectiveness of the performance budgeting. Since the significance level of the test is equal to 0 and less than 1 percent. As a
result, there is a significant relationship between these two variables to the probability of 99 percent. Since the correlation value is equal to $0.826$ and positive indicating a direct relationship between these two variables. As a result, the hypothesis is confirmed.

**Second hypothesis: the authority of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.**

Table 2. Pearson correlation test

<table>
<thead>
<tr>
<th>Authority of organization</th>
<th>Pearson correlation</th>
<th>Effectiveness of budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authority of organization</td>
<td>1</td>
<td>.623**</td>
</tr>
<tr>
<td>Significant level.</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Number</td>
<td>121</td>
<td>121</td>
</tr>
</tbody>
</table>

Pearson correlation test was used to examine relationship between the authority of organization to implement performance budgeting and the effectiveness of the performance budgeting. Since the significance level of the test is equal to 0 and less than 1 percent. As a result, there is a significant relationship between these two variables to the probability of 99 percent. Since the correlation value is equal to $0.623$ and positive indicating a direct relationship between these two variables. As a result, the hypothesis is confirmed.

**Third hypothesis: acceptance of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.**

Table 3. Pearson correlation test

<table>
<thead>
<tr>
<th>acceptance of budgeting system</th>
<th>Pearson correlation</th>
<th>Effectiveness of budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>acceptance of budgeting system</td>
<td>1</td>
<td>.654**</td>
</tr>
<tr>
<td>Significant level.</td>
<td>.000</td>
<td></td>
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<tr>
<td>Number</td>
<td>121</td>
<td>121</td>
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</tbody>
</table>

Pearson correlation test was used to examine the acceptance of performance budgeting system and the effectiveness of the performance budgeting. Since the significance level of the test is equal to 0 and less than 1 percent. As a result, there is a significant relationship between these two variables to the probability of 99 percent. Since the correlation value is equal to $0.654$ and positive indicating a direct relationship between these two variables. As a result, the hypothesis is confirmed.
Fourth hypothesis: communication quality of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.

Table 4. Pearson correlation test

<table>
<thead>
<tr>
<th>communication quality</th>
<th>Pearson correlation</th>
<th>Effectiveness of budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>communication quality</td>
<td>1</td>
<td>.725**</td>
</tr>
<tr>
<td>Significant level.</td>
<td>.000</td>
<td>121</td>
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<tr>
<td>Number</td>
<td>121</td>
<td>121</td>
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</tbody>
</table>

Pearson correlation test was used to examine the relationship between the communication quality in organization and the effectiveness of the performance budgeting. Since the significance level of the test is equal to 0 and less than 1 percent. As a result, there is a significant relationship between these two variables to the probability of 99 percent. Since the correlation value is equal to (0.725) and positive indicating a direct relationship between these two variables. As a result, the hypothesis is confirmed.

Fifth hypothesis: staff quality of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.

Table 5. Pearson correlation test

<table>
<thead>
<tr>
<th>staff quality</th>
<th>Pearson correlation</th>
<th>Effectiveness of budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff quality</td>
<td>1</td>
<td>.474**</td>
</tr>
<tr>
<td>Significant level.</td>
<td>.056</td>
<td>121</td>
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<tr>
<td>Number</td>
<td>121</td>
<td>121</td>
</tr>
</tbody>
</table>

Pearson correlation test was used to examine the relationship between the staff quality in organization and the effectiveness of the performance budgeting. Since the significance level of the test is equal to 0.056 and more than 1 percent. As a result, there isn't any significant relationship between these two variables. As a result, the hypothesis is rejected.

Sixth hypothesis: identify the strategic priorities of organization to implement performance budgeting system which is effective on the effectiveness of the performance budgeting.
Table 6. Pearson correlation test

<table>
<thead>
<tr>
<th>Strategic priorities</th>
<th>Strategic priorities</th>
<th>Effectiveness of budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson correlation</td>
<td>1</td>
<td>.817**</td>
</tr>
<tr>
<td>Significant level.</td>
<td>.000</td>
<td></td>
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<tr>
<td>Number</td>
<td>121</td>
<td>121</td>
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</table>

Pearson correlation test was used to examine the relationship between the strategic priorities in organization and the effectiveness of the performance budgeting. Since the significance level of the test is equal to 0 and less than 1 percent. As a result, there is a significant relationship between these two variables to the probability of 99 percent. Since the correlation value is equal to (0.817) and positive indicating a direct relationship between these two variables. As a result, the hypothesis is confirmed.

Seventh hypothesis: performance-based resource allocation is effective on the effectiveness of the performance budgeting.

Table 7. Pearson correlation test

<table>
<thead>
<tr>
<th>Resource allocation</th>
<th>Resource allocation</th>
<th>Effectiveness of budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson correlation</td>
<td>1</td>
<td>**833.</td>
</tr>
<tr>
<td>Significant level.</td>
<td>.000</td>
<td></td>
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<tr>
<td>Number</td>
<td>121</td>
<td>121</td>
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</table>

Pearson correlation test was used to examine the relationship between the Resource allocation in organization and the effectiveness of the performance budgeting. Since the significance level of the test is equal to 0 and less than 1 percent. As a result, there is a significant relationship between these two variables to the probability of 99 percent. Since the correlation value is equal to (0.833) and positive indicating a direct relationship between these two variables. As a result, the hypothesis is confirmed.

Conclusion

This study examines the factors affecting the effectiveness of Performance Budgeting in Tehran's government organizations. The executive organizations budget is the most important policy tools, decision-making and planning in order to implement the development strategy and reflects all of the governmental programs and activities which plays an important role in the development of the national economy as an instrument of fiscal policy, stabilization of economic fluctuations and cost and performance criteria for executive organizations. The
results showed that the ability of the organization to implement performance budgeting is effective on the effectiveness of the performance budget. Authority of organizations to implement the performance budgeting is effective on the effectiveness of performance budgeting. Acceptance of performance budgeting is effective on the effectiveness of the performance budget. Communication quality is effective on the effectiveness of the performance budget. Staff quality is not effective on the effectiveness of the performance budget. Identify strategic priorities is effective on the effectiveness of the performance budgeting and performance-based resource allocation is effective on the effectiveness of the performance budgeting. However, due to the complexity and magnitude of these budgeting system, many factors affect the effectiveness of performance budgeting system, but in this study, a small number of factors were studied due to lack of time and sufficient funding.
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