

# **INVESTIGATION ON THE PROBLEMS OF APPLYING ACCRUAL ACCOUNTING BASIS INSTEAD OF CASH BASIS WITH RESPECT TO THE APPLICATION OF THE OPERATIONAL BUDGET IN PUBLIC DEPARTMENTS**

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## **Abstract**

To investigate the problems implementing accrual accounting basis instead of cash basis with respect to the use of budgeting in the public sector (municipalities of the province of Ardabil). The population of the study consisted of employees of the municipality in Ardabil province which was a total of 200 people. In this study, considering that the target population is limit and its volume is specified, so to determine the sample size in this part, of the Cochran sampling formula and random selection is made. In this study, to analyze the data was used descriptive and inferential statistics using SPSS software. So that, for demographic data analysis was used descriptive statistics including frequency, relative frequency, draw charts and graphs. Then, to test hypotheses were used chi-square test and correlation coefficients. Findings show that there is a significant and meaningful relationship between accrual accounting basis and managers' decision making capability and responding.

*Keywords: accrual accounting, operational budget, public departments*

## **INTRODUCTION**

According to the prominent role of accounting basis in promoting accountability of public large institutions, including municipalities, concurrent with the emergence of setting institutions of public departments accounting standards in the 1930s, attempts to apply different forms of accrual accounting was began in developed countries, however, until the 1970s and 1980s, most countries was used the cash basis for the identification and reporting of revenues and expenses. After that in the 1970s, Chile decided to delineate the pattern of accrual accounting in the public departments, developed countries such as New Zealand, America, Canada, and Australia have moved towards establishing a modified accrual accounting. These countries have attempted to pass from the cash basis to modified commitment and provide the field of revolution in accounting and financial reporting of public department institutions.

Municipalities as the most influential institution of the city are responsible for wide range of functions and services. Municipal also, like government all their financial activities including

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revenue and payment of fees which take place for carrying out various tasks, do within the framework of budget law. Therefore, the budgeting method plays important role in realizing the objectives of municipalities. Failure to fundamental reforms in municipalities' laws and regulations that were enacted in 1964 brought several problems as well as its accounting structure in municipal financial management system (Abrisham, 2009; Rasuliyani, Abrisham, 2007). The budget is a plan approved in terms of numbers and figures that provides means of projects implementation and organization activities in assigned time. Budget is one of the most important tools of financial management in municipalities because of its importance according to article 26 of the financial regulations of municipalities, its responsibility has granted to the mayor and financial affairs.

Considering the prominent role of the accounting basis and accountability promotion level of public large institutions, including municipalities, using the accrual basis instead of cash is important for the implementation of the operational budget. According to the definition of the budget we can say that operational budgeting in addition to the separation of funds, functions, programs, activities, projects, volume of operation, costs of government operations, and related systems determine and calculate based on cost prices of accounting methods. Therefore, forecast figures in operating budget is based on a detailed analysis of programs, activities, operation, and their cost price is based on goals and objectives of state in that part of the public spending and depreciation of capital assets is allocated to the operational units, activities, and programs. Operational budget implementation requires the use of accrual accounting to determine the actual cost of programs and activities. So, the process of operational budgeting is the beginning for passing from cash to accrual accounting. In this budgeting coordination of budget classifications, and accounting, and their conformity with the components of an organization and on the other hand, the relationship between planning, budgeting, and state accounting are the necessities of the operational budget to establish sufficient information and management of resources and funds. Operational classification shows that increasing of the cost prices is due to the increasing the volume of operations or increasing of costs for constant volume. For the implementation of the operating budget the functions of each device must be specified. Then using standard patterns and available techniques, may be defined the cost price and allocate them credit (Gord and Karimi, 2011).

***Changing from modified accrual to full accrual of resources was the following:***

A) About recognition of income

B) Based on the current standard of financial resources flow and modified accrual basis, capital assets purchased from the state fund accounts at the time of the study (not in consumption) related to the independent account expenses for this reason, the depreciation of such assets is not identified and calculated as "EXPENSE" of financial period. But with the approach of the 34 statements used in setting government-wide consolidated financial statements at the time of bearing the costs (based on the "CONSUMPTION") refers to the identification and bills of state activities.

C) Statement 34 credit capital assets and long term liabilities in the context of "net assets". Before the statement 34, it was reflected at the combined balance sheet which with the implementation of these two groups account was removed the above mentioned statement.

Under the of Statement 34 criterion, capital assets are credited to real fixed cost or if necessary evaluation expense in net assets statement.

D) According to the statement 34, in the governmental fund statement has added an account as "permanent fund accounts," before Statement 34, these independent accounts worked in the trust fund independent accounts group and under the title of useless trust fund dependent account.

E) State and local governments in accordance with Statement 34 are obliged that in addition to setting the net balance sheet also preparing assets that these bills are adjustable with two approaches:

Net assets = liabilities - assets: The net asset approach

Assets = liabilities + net assets: balance sheet approach

F) Statement of operations

For setting statement of activities at the state level, we should take actions besides using figures included in the income bills and the cost of governmental fund accounts and combination of income rate, and reflect on their costs compared to their adjustment for changing in modified accrual basis to full accrual on the one hand, and criteria for measuring the flow of financial resources into the economic resources on the other hand. To gain this goal we must remove capital expenditure on capital projects fund which is for the expenditure account and instead, the annual depreciation of all depreciable capital assets take into consideration as the period expenses (Barton, 2007).

To investigate the problems implementing accrual accounting basis instead of cash basis with respect to the use of budgeting in the public sector (municipalities of the province of Ardabil)

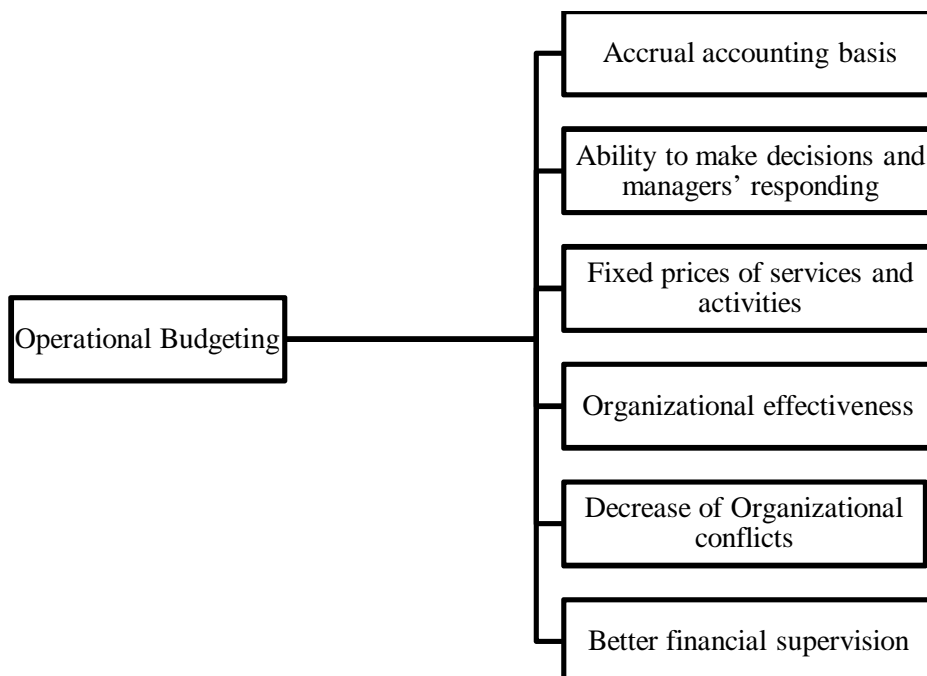
## **THEORETICAL FRAMEWORK**

In fact, the theoretical framework of research is beginning and ending of survey and a leading source just like a projector. Since the theoretical framework of the research should establish coherent and meaningful relationship between concepts and research hypothesis thereby, the researcher achieve to the answers. Hence, to build such a framework the following steps is necessary:

- I) Definition of research question
- II) Statement of research questions
- III) Mentioning the effective variables in each of the research questions
- IV) Formulation of hypotheses for each of the questions
- V) developing a research model (Cohen, Kaimenakis, Venieris, 2010).

In present study the researcher attempted to answer this basic question that to investigate the difficulties in implementing accrual accounting basis instead of cash basis considering the necessity of using operational budgeting in the public sector?

Fig. 1: Research Model



### **RESEARCH HYPOTHESES**

- 1- There is a significant and meaningful relationship between accrual accounting basis and managers' decision making capability and responding.
- 2- There is a significant and meaningful relationship between accrual accounting basis and service cost price and activities.
- 3- There is significant relationship between accrual accounting basis and its effect on organizational effectiveness.
- 4- There is significant relationship between accrual accounting basis and better financial supervision and decrease of organizational conflicts in municipalities.

### **METHODOLOGY**

The population of the study consisted of employees of the municipality in Ardabil province which was a total of 200 people.

In this study, considering that the target population is limit and its volume is specified, so to determine the sample size in this part, of the Cochran sampling formula and random selection is made.

To investigate the hypothesis was used researcher made questionnaire. This questionnaire has four dimensions 1 - ability to make decisions and responding 2- Cost prices of services 3- organizational effectiveness 4- organizational supervision and in general accrual accounting examined with 24 closed questions (Likert).

Table 1: Evaluate the reliability of the questionnaire and its components by Cronbach alpha

Components	Number of questions	Cronbach's alpha values
Ability to make decisions and responding of the managers	6	.883
Fixed cost of Services and Activities	5	.802
Organizational Effectiveness	8	.891
Better financial supervision and decrease of organizational conflicts	5	.840
Total of the questionnaire	24	.947

In this study, to analyze the data was used descriptive and inferential statistics using SPSS software. So that, for demographic data analysis was used descriptive statistics including frequency, relative frequency, draw charts and graphs. Then, to test hypotheses were used chi-square test and correlation coefficients.

## RESULTS

1- There is a significant and meaningful relationship between accrual accounting basis and managers' decision making capability and responding.

To investigate this research hypothesis used chi-square test and to investigate the index of relationship was used the conversion of the chi-square to Contingency Coefficient. Due to the significant level of chi-square test is lower than 0/05 therefore, the null hypothesis is rejected at all levels. This means that attention to the economic resources flow, the existence of an account of depreciation in financial statements reflecting financial assets in the financial statements, presentation of net assets, comparing the revenues and actual expenditures with budget, and long-term liabilities reflecting in the financial statements is effective on decision making and promoting the responsibility of managers. And the amount of its relation is 0/58, 0/52, 0/53, 0/59, 0/65 and 0/54, respectively (Table 4-3-1).

1. To what extent do you agree that attention to the economic resources flow facilitates managements' decision making and promote their responsibility?
2. To what extent do you agree that the existence of depreciation account in the financial statements of municipalities could facilitate management decision making and to improve their responsibility?
3. To what extent do you agree that the reflection of financial assets in the financial statements will facilitate the municipality management decision making?
4. To what extent do you agree that the presentation of net assets in municipalities, promotes responsibility of the managers
5. To what extent do you agree comparison of revenues and actual expenditures budget, facilitates decision-making and enhance responsibility of the municipal managers?
6. To what extent do you agree long-term liabilities reflected in the financial statements, the Municipality will facilitate management decision making?

Table 2: Chi-square test to examine the basis of accrual accounting and the ability to make decisions and managers' respond

		0 to 20%	20 to 40%	40 to 60%	60 to 80 %	80 to 100%	Chi-square value	Contingency Coefficient	Significant level
1.	Number of observation	2	13	19	49	44			

	Expected number	25/4	25/4	25/4	25/4	25/4	64.77	.58	.000
	Remaining	-23/4	-12/4	-6/4	23/6	18/6			
2. -	Number of observation	2	11	38	37	37			
	Expected number	25	25	25	25	25	47.28	.52	.000
	Remaining	-23	-14	13	12	12			
3.	Number of observation	4	16	21	50	35			
	Expected number	25/2	25/2	25/2	25/2	25/2	50.11	.53	.000
	Remaining	-21/2	-9/2	-4/2	24/8	9/8			
4.	Number of observation	2	7	26	45	47			
	Expected number	25/4	25/4	25/4	25/4	25/4	67.39	.59	.000
	Remaining	-23/4	-18/4	0 /6	19/6	21/6			
5.	Number of observation	2	9	14	41	60			
	Expected number	25/2	25/2	25/2	25/2	25/2	94.71	.65	.000
	Remaining	-23/2	-16/2	-11/2	15/8	34/8			
6.	Number of observation	3	17	19	46	41			
	Expected number	25/2	25/2	25/2	25/2	25/2	5.83	0.54	.000
	Remaining	-22/2	-8/2	-6/2	20/8	15/8			

## CONCLUSION

In this section, the results of the hypotheses are reported separately.

***There is a significant and meaningful relationship between accrual accounting basis and managers' decision making capability and responding.***

Obtained results from the first hypothesis test shows attention to the economic resources flow, the existence of an account of depreciation in financial statements reflecting financial assets in the financial statements, presentation of net assets, comparing the revenues and actual expenditures with budget, and long-term liabilities reflecting in the financial statements is effective on decision making and promoting the responsibility of managers. And the amount of its relation is 0/58, 0/52, 0/53, 0/59, 0/65 and 0/54, respectively. The results of this study are consistent with results studies of Kordestani and Iran Shahri (2009), Marco (1996), Gioutry (1998) and Europe Federation of Accountants (2007). The approval of Statement No. 34 Governmental Accounting Standards Board showing that, operational budgeting process has been in line with the accounting reforms in the public sector. After reviewing the budget setting methods based on the degree of growth specificity, we can conclude the operational budget is one of the efficient and appropriate methods in budgeting. Accounting system used in this system of budgeting, accrual accounting is based on flow of economic resources and focus on measurement of function and ultimately financial and operational responsibility.

So using the accrual basis of accounting in the public sector accounting system, can promote the level of responsibility and to facilitate management decision making.

***There is a significant and meaningful relationship between accrual accounting basis and service cost price and activities.***

The results of the second hypothesis show that depreciation of fixed assets, allocation of overhead costs, identifying cost centers, separation of current expenses and civil projects, and the estimating the fixed cost of projects based on the progress of work in each financial period has effect on cost price of services and activities; and the amount of its relation is 0/56, 0/57, 0/67, 0/44 and 0/56. The results of this study are consistent with the results of Abrisham (2007) and Kurdistan, Gholam Reza, Bakhtiari, Masoud, Rahimpour, Muhammad (2010). Establishing the basis of accrual accounting in the public sector to determine fixed cost and the actual cost of the implementation and operation in the form of approved allocations is more efficient than cash accounting basis. Therefore, the application of accrual accounting in the public sector accounting system is effective on the fixed cost calculation of services and activities.

***There is significant relationship between accrual accounting basis and its effect on organizational effectiveness***

The results of the third hypothesis show that accurate identification of the fixed cost of activities and services timely recognition of revenues, timely recognition of costs, avoid interference of the past years income during this year, avoid interference of the past years cost during this year, actual identification of incomes, actual identification of costs, and application of the software in recognizing of revenue is effective on organizational effectiveness. And the amount of its relation is 0/64, 0/59, 0/58, 0/51, 0/41, 0/52, 0/61, is 0/65. The results of this study are consistent with the results of Kurdistan and Iran Shahri (2009) Studies and Kurdistan and others (2010). Accrual accounting system has more power to assess the effectiveness and outcomes of organizational performance, and management can estimate better the costs of an organization activities. In addition, the accrual accounting system reflects better organization long-term commitments and the entire financial position. So, using the accrual basis of accounting instead of the cash in accounting system of the public sector is influential on organizational effectiveness.

***There is significant relationship between accrual accounting basis and better financial supervision and decrease of organizational conflicts in municipalities***

The results of the fourth hypothesis suggests that identifying the cost price of providing municipal services, Strengthen internal control structure in municipalities in order to protect the inventories, registration and maintenance of movable and immovable fixed assets in municipalities, registration of the achieved debts of municipalities to third parties, registration of not received incomes in municipalities in financial year, better financial supervision, and decrease of organizational conflicts in municipalities is effective. And the amount of its relation is 0/57, 0/61, 0/66, 0/54 and 0/60. The results of this study are consistent with the results of Abrisham (2008) and Kurdistan and others (2010). Establishing a system of accrual accounting in the public sector, which cause to preparing and maintaining inventories, fixed assets and revenues accordance with the requirements of the accounting standards, also leads to increase financial oversight by regulatory devices. So, using the accrual basis of accounting instead of the cash in accounting system of the public sector is influential on better financial supervision, and decrease of organizational conflicts in municipalities.

## **SUGGESTIONS**

1. In order to decision-making and accountability of managers' answering in the public sector, including the municipalities against citizens or their elected representatives and judicial authorities must be implemented the basis for accrual accounting.
2. To facilitate operational budgeting in the public sector with respect to the application of the operational budgeting in order to achieve the goals of the Fourth Fifth Development Program Law must be carried out and implemented the accrual accounting system.
3. In order to determine the cost price of municipalities' services and activities must be implemented accrual accounting basis.
4. In order to clarify the cost price of the activities and the transfer of services and activities to the private sector must be implemented accrual accounting system.
5. In order to prioritize the services, activities and programs must be used information arising from the accrual accounting system.

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