



Application of Accrual Basis in the Public Sector and its Role in Providing Useful Information

Exploratory Study of a Sample of Academic Specialists in the Kurdistan Region of Iraq

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ABSTRACT

The goal of this research is to clarify the role of the shift from the applying of cash basis to the accrual basis in the public sector in Kurdistan Region of Iraq. Cash basis provide more useful information to users that help them to make right decisions. To achieve the objectives of the study was developed questionnaire included (12 questions) distributed on 120 academic professionals in the Kurdistan Region Iraq, and collected 96 of them. The researchers reached a number of conclusions after analyzing questionnaire's questions. The most important of these conclusions is that the application of the cash basis in the public sector provides information that has appropriate, credible, more understanding, comparable, and more realistic and meet the decision models. The

two researchers also made a number of recommendations, including the need to transform from cash basis to the accrual basis by the Kurdistan Regional Government of Iraq. This shifting can be gradual, passes through stages such as firstly applying modified cash basis adjusted, secondly applying modified accrual basis and finally apply full accrual basis.

Introduction

The Kurdistan Region- Iraq and its public sector has been through a difficult financial crisis during the last few years. This happened due to changing political and economic conditions which led to the accumulation of government's obligations such as employees', private sector and other entitlements. KRG's problem interrupted of reconstruction projects. Due to the absence of a clear fiscal policy and the lack of a general budget the Kurdistan Regional Government has lost the credibility of the community because it failed in providing basic services and decent living.

Therefore, the government in the Kurdistan Region must restore its credibility through the formulation of a clear and new financial policy, which guarantees the rights of citizens by taking rational decisions based on sound financial information and the preparation of a realistic public budget. The government must adopt new principles in the preparation of both the budget and the accounting procedures in order to be able to rely on a reliable source of information for the decision-making process.

It was the need for these deep changes that inspired this research. The accounting basis used in the public sector until now, a cash basis one, does not provide any realistic financial information relevant to the decision making process. On the contrary, this research shows that the application of the accrual basis has a lot of advantages both for providing useful information for the decision making process and for ensuring citizens' rights.

This research is divided into three parts. The first one is devoted to the theoretical framework for government accounting; the second is a comparative analysis of how accrual basis of accounting has been applied in other countries in the public sector. The third part deals with the practical side of the research.

Research problem

The public sector in the Kurdistan Region in particular and Iraq in general is going through a period of instability period in all fields, especially in the financial one. There is no doubt that the public sector plays a vital role in building a society. Managers in the public sector to plan and monitor effectively needs useful financial information as well as needs for good decisions making.

It is in this difficult context that the Kurdistan Region seeks to achieve economic and political independence; the KRG is still using the cash basis in the recording of its financial operations. This basis is no longer useful for providing useful information in support of the decision-making, planning and controlling processes.

Research Hypothesis

There is no statistically significant relationship at level ($\alpha \leq 0.05$) between the application the accrual basis and the provision of information more useful for the decision making process in the public sector.

Research Aims

The aim of the research is to clarify the role of the shift from the cash basis to the accrual basis in the public sector in the Kurdistan Region of Iraq.

Research Relevance

This research wants to make a contribution to the discussion about an alternative basis to the cash one by proposing a conversion from a cash basis

accounting system to an accrual one in the public sector of the Kurdish Regional Government.

Research Methodology

In order to achieve the objective of this research the researchers have applied the descriptive analytical approach based on the following sources:

1. Primary sources (practical side): through the distribution of an ad hoc questionnaire and the analysis of the answers to test the validity of the hypothesis.
2. Secondary sources (theoretical side): referring to articles, books and studies on the same topic.

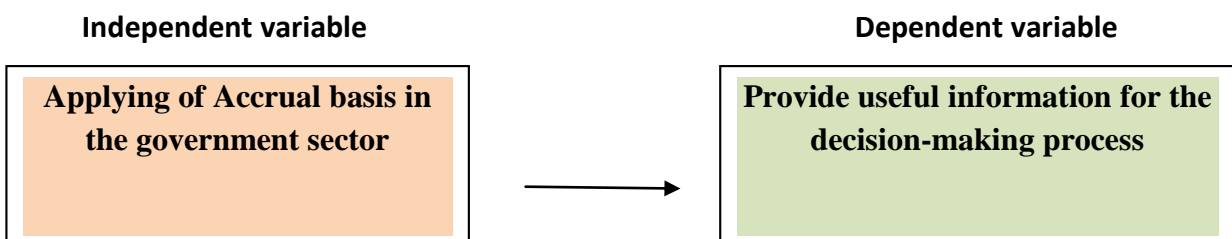
Population's sample

The research population consisted of universities professors in Kurdistan specialists in accounting. Due to the large number of universities professors, they were chosen randomly.

Research Format

In order to carry out the analysis the researchers designed specific model to include all the variables. Figure (1) illustrates the relationships of these variables

Figure (1) Research Format



Source: prepared by the researchers

Part one

Theoretical Framework of Government Accounting

The concept of government accounting

Government accounting is one of the specialized accounting branches that records and measures the activity of public sector units or nonprofit organizations. In accounting literature we can find different definitions of government accounting:

The UN, for example, has defined government accounting as "accounting that measures, processes, communicates, monitors, confirms the validity of revenues, expenditures and associated activities in the public sector" (Mubarak, 2008, p. 5).

Al-Ramahi defines it as "a set of principles, rules and procedures governing the process of collecting, recording and classifying the financial operations carried out by the governmental administrative units which relate to the collection of public revenues, and expenditure on activities and services carried out by the government. presenting them in the periodic reports and financial statements to be submitted to the competent authorities" (Al-Ramahi, 2009, p 25).

In his article "Government accounting is a tool for evaluating government performance and an important source of data that needed for economic and financial planning" (Bergmann, 2012, p. 56)

According to Zuhair Government accounting is "the rules that the administrative authorities commit to implement the general budget of the state as well as the recording and classification of financial operations carried out by the government. Issuing the rules of financial control, systems of internal control, disclosure and analysis results" (Zuhair, 2014, p. 4).

Objectives of government accounting

The objectives of government accounting are to safeguard the public treasury and property to accurately measure and communicate the government's financial condition so as to demonstrate financial accountability, and to facilitate decision making (Chan, 2003).

Government accounting aims at achieving several objectives: (Hijjawi, 2004)

1. Demonstrate the financial operations of government units in purpose to be used in accounting, accountability, evaluation and decision making.
2. The collection of state revenues such as taxes, fees and other revenues.
3. Control of public funds to preserve them from corruption and fraud.
4. Provide necessary data to follow up the implementation of the state budget.
5. Providing data and information needed for financial planning.
6. Provide necessary data and information about public revenues to make appropriate decisions.

Functions of the government accounting system

Gili (2013) argued that the government accounting system performs many functions which help the administration to perform its duties in an integrated manner. These functions are:

1. Processing data of operations that carried out by the governmental institutions to provide necessary information to follow up the implementation of the general budget and to address deviations as they occur.
2. Collect all government-related data into a consolidated summary showing the results of government financial operations and determine their financial status as a single institution.

3. Enforce the control of public funds to prevent any loss, corruption or misuse to detect errors and fraudulence that may occur.
4. Follow up the cash collections of the government, whether are from people or institutions and work to collect them in time and recording them.
5. Record of government activity historically in digital form which show details of financial transactions carried out by government departments.
6. Provide the necessary details on the implementation of programs and services that implemented by government institutions to facilitate their evaluation.

Characteristics of the government accounting system

Government accounting has several characteristics which make it different with other the types of accounting and the most important of those characteristics are: (Bolivah, 2015, p. 5)

1. Government activities are not aimed to make profits. Government aims at providing a range of public services such as security, defense of justice and public health, which the Government provides to people for free or in change of a low contribution..
2. There is no capital for the government units. Those units are dependent on specialized resources allocated to them annually. The government allocates the necessary funds to be spend on its activities which included in its general budget.
3. Unified financial system is applied in government units because financial instructions are issued by the legislature to all government units.
4. Public ownership of government units, where individuals and private institutions are not allowed to own them.

5. The legal personality (artificial personality) is missing in government units, where each unit represents a cell in the administrative apparatus of the state linked to the other cells by administrative and organizational considerations.
6. The causal relationship between revenue and expenditure is non-existent in government's units. Both elements have a different paths in governmental financial policy.

Finally, Muda, et al, (2017) stated that "governmental Accounting System's aim is to increase the accountability and reliability of government or financial manager through the preparation and development of government accounting standards".

Accounting Basis

There are several accounting bases on which accounting systems rely on in recording their financial operations and summarizing their results for the same period. The choices of a specific accounting basis depend on the nature of the data required to meet the needs of management and control. The application of any accounting basis in any country depends on the degree of development of the country and the ability of the accountants who deal with financial and accounting work. The following are the most renowned accounting bases that can be used:

First - Cash Basis

Second - Accrual Basis

Third - Obligation Basis

First - Cash Basis

The cash basis is one of the oldest ones used in recording accounting data and measuring the results of government activity (Tickell, 2010). Cash basis recognizes what actually affects cash from the income or expenses of the accounting or economic unit within a specified period of time. Cash basis does not recognize revenue and expenditure, until the time that expenditure is paid for in cash or until the revenue is received in cash (Frederick, 1983, p. 51). A cash

basis is the statement that shows how should collect revenues and how should be spent for public interest (Budding and Tagesson, 2014, p. 32). Furthermore, accounting under cash basis system, records a transaction when the expenses are paid out of funds or when funds are received in cash regardless of the financial period and excludes non-cash financial transactions (Christiaens, Reyniers and Rolle, 2010, p. 4). Cash basis does not address any rights or obligations arising during the financial year. Under the cash basis, government unit does not recognize debtors, creditors, inventory and receivables or amounts paid or received in advance (Ahmaru, 2003, p. 183).

Salim, (2007, p. 42) defines the cash basis system as follow:

1. Revenue and expenses are recorded in the records when the actual collection of the revenue or the actual payment of the expenses is completed, and not at the date of occurrence of obligations.
2. Revenue and cash expenses are recorded in the records without other financial operations.
3. It does not matter if the revenues or expenses are for the current year or for other time periods, what is important is cash collection or cash payments.
4. Following this basis will cancel expenditures allocated that were not spent during the fiscal year and re-included in the new budget for the next year.
5. The cash basis does not recognize debtors, creditors, prepayments and receivables.

The disadvantages of a government's accounting system based on cash basis

Hammad indicates the following shortcomings of the application of an accounting system based on cash. (Hammad, 2010)

1. The cash basis is unable to measure the actual cost of each financial period and cannot know the outcome of the real work of the

government unit, especially in the absence of the closure of accounts of previous years.

2. The government accounting system based on cash basis does not prepare a final budget and accounts at the end of each financial period.
3. The government accounting system based on the cash basis does not calculate depreciation of fixed assets, although it is considered a real component of the cost.
4. It does not evaluate the fixed assets owned by the government unit either by using historical cost, current cost, or any other measurement method.
5. This basis bears the value of fixed assets purchased during the year on the same fiscal year and it does not care about how many years could have benefit from those assets.
6. Using this basis makes difficult to measure the real costs of each government unit and the cost of each activity of the government unit.
7. The difficulty of preparing planning budgets carried out by different government units those linking the costs and activities together.
8. Some applicable with this basis will take long procedures, especially with the auditing of documents once by the internal audit unit located in the competent Ministry and another by the Controller of the Ministry of Finance.
9. Final accounts do not represent the reality.
10. Frequent amendments to the financial instructions and the unavailability of their follow-up by the employees in the field of government accounts. That leads to the inability to be followed up by the majority of governmental accountants.

11. Using old papers and tools in the process of completing the calculations by the circulation of records of documents, ledgers and financial reports.
12. Absence of a system for keeping completed documents and ledgers.
13. Inaccuracy of the financial information such as estimate of income and expenditure, the large number of errors, difficult to detect them and correct them.
14. Lack of use of electronic technology among government departments as well as the weakness of using computer.
15. Current system (cash basis) will take long time to check numbers and accounts.
16. The system based on cash basis cannot produce sufficient information for decision-makers. The state does not recognize governmental debtors, thus this system cannot provide the relevant authorities with timely information.
17. Cash basis is unable to distinguish between capital expenditure and operating expenditure. It consider expenses incurred in obtaining fixed assets as the same as those paid for a service. This kind of action directly affects the outcomes of the closing accounts by reducing the surplus or increasing the deficit.

Although the cash basis has some advantages such as easy understanding of its application linking the government's administration to public revenues and public expenditures, the disadvantages far out of its advantages. Cash basis is unable to meet the requirements of decision models needed by the government's administration.

Second - Accrual Basis:

Accrual basis depends on the proof of rights and liabilities at the moment of their emergence, regardless of their receipt the revenue or paid

expenses. Accrual basis has a faster impact on accounts than cash basis. It recognizes revenues when they earn and record expenses when are used (Williams, et al., 2005, p. 102). The financial statements prepared under the accounting accrual basis inform users of past transaction data that includes payment and receipt of cash during the reporting period, the obligation to pay cash or sacrifice other assets of the entity in the future. Accrual basis also reports all changes that happened in assets, in liabilities and resources over reports preparation period. The accrual basis is considered to be the best kind of reporting system, measuring performance and disclosing more financial details compared with other bases (Carlin, 2005, p. 314). Therefore, it provides information on past transactions, other events that are more useful to users for accountability purposes and provides more information tools to the process of decision-making than any other basis in accounting. (IFAC, 2013, p. 26).

Advantages of the government accounting system that based on accrual basis

According to Salim (2007, pp. 46-47) accrual basis has the following advantages:

1. Accrual basis shows government expenditure realistically based on the cost of resource consumption and not on the value of its acquisition.
2. It can manage financial projections, financial flows and prepare budgets more effectively.
3. It complies with the most accepted and common accounting practices of IPSAS in the public sector.
4. It responds to financial and accounting standards set by international organizations such as the International Monetary Fund and the World Bank.
5. This basis is consistent with the scientific assets of accounting, which is characterized by accuracy and justice. According to this basis, every fiscal year considered as an independent. Thus, this basis is taken into consideration both accrued income and prepaid expenses.

6. Following this basis helps in determining the cost of the unit, activity or service performed. Easily, it can paper the modern budget systems such as the budget of programs and performance. It helps to control activities and evaluate performance which is one of the most important features.
7. This basis makes it possible to prepare estimates of the resources and uses needed for the next fiscal year.
8. It helps to properly measure results, control activity and facilitate time comparisons at the level of the administrative unit itself or among the different administrative units for the purposes of measuring efficiency. Through the proper applying of the Matching principle which compare revenue with expenses that contributed to revenue achievement within the same period, regardless of the actual cash collection or actual cash payment.
9. Accrual basis provides a comprehensive picture of all government commitments and it helps to formulate realistic fiscal policies. It facilitates the organization of cash according to its obligations. More specifically, it helps fiscal policymakers see what's behind the current fiscal year and how must be the next fiscal year budget.

It can be seen that the majority of the accrual basis advantages is a cure for the disadvantages of the cash basis. However, there are some weaknesses of the accrual basis, such as it needs a large group of highly qualified and experienced accounting staff. It cost more than cash basis, and these marginal defects can be overcome.

Third - Obligation Basis:

The obligation basis is a combination of the previous two methods. The obligation basis system records income and expenditure in two different ways: (Salim, 2007, p. 50).

1. It deals with expenses that must be paid, under obligation basis contracts such as services, materials, furniture and spare parts have been acquired on an accrual basis, irrespective of the time of payment. According to obligation basis, advance payments and receivables are taken into consideration.

2. Obligation basis deals with revenues based on a cash basis, unearned and accrued revenues are not taken into account, but it only recognizes accrued revenues received in cash.

It is known that there are amendments applied on an accrual basis or cash basis for combining the advantages for both bases. If the nature of these amendments is closer to the cash basis, it results in the so-called modified cash basis. The accounting system is based on the cash basis, applying the accrual basis. If the changes are closer to the full accrual basis, they result in the so-called modified accrual basis (Zuhair, 2014, p. 37).

Part two

Supporters the idea of applying the accrual basis of accounting in the public sector

There is a large number of supporters of the application of the accrual basis of accounting in the public sector: the International Federation of Accountants (IFAC), which issues international accounting standards in the public sector based on accrual basis, the World Bank, the Organization for Economic Cooperation and Development, the International Monetary Fund and the European Union. An accrual basis is considered to be the best kind of reporting system, measuring performance and disclosing more financial detail compared with another basis (Carlin, 2005, p. 314).

The International Monetary Fund is a supporter of applying the accrual basis in accounting. The call for the application of accrual basis accounting in the public sector around the world is a clear recognition of the shortcomings of the cash basis. A significant contribution to the dissemination of accrual basis in the public sector is due to the development of international standards for accrual accounting, financial reporting and government's financial statistics. In addition, this is due to the professionalization of public accountants and to the application of the same accounting techniques used in private sector, as well as to the

emergence of computerized financial management information systems which significantly reduce transaction costs. All those points constitute strong arguments against the cash basis system (Gabi, 2017, p. 691). However, Hyndman and Connolly (2011, p. 39) argued that some empirical studies show that the accrual basis faced some problems when used for the first time in the public sector. Those problems are related to accounting performance and changes in accounting basis for the public sector, because the accountants did not have the experience to understand the exact requirements of the changes in government accounting systems.

The International Federation of Accountants (IFAC), through the issuance of the International Public Sector Accounting Standards (IPSAS), explained that the use of the accrual basis is a good accounting practice for the public sector. It indicates that the financial statements prepared under accrual accounting are more useful to the accounting information users because, for example, they provide past transactions involving payments and receipts of cash, or other future resources, and changes in liabilities and assets during the reporting period. This information is more useful to users for accountability and decision-making purposes than information provided on cash basis or other basis in accounting (IFAC, 2013, p. 26). Lapsley, Mussari and Paulsson (2009, p. 720) mentioned that an accrual basis is used in the public sector because of the need for a reform of the public sector and because of the pressure on governments to prove their effectiveness in fulfilling their responsibilities. The Australian National Audit Committee confirmed that the accrual basis is a necessity for structural and cultural changes aimed at making the public sector more efficient and competitive with the private one. It is also necessary to reach the accountability objectives required for government units by parliament, taxpayers, and others (Al-Sakka and Al-Sindi, 2010, p. 145).

Samples of government accounting systems that apply the accrual basis

The criticisms for the use of a cash basis system, and in order to avoid its disadvantages in the public sector encouraged some countries to shift to the basis in use used in the private sector. The accrual accounting basis has been in use in the public sector since the 1980s. Nowadays an accrual basis has become even more common in the public sector and some authors confirmed that the

public sector should use accounting based on an accrual basis in the preparation of financial reports. An accrual basis is considered to be the best kind of reporting system, measuring performance and disclosing more financial detail compared with another basis (Carlin, 2005, p. 314). The first country to use the accrual basis in the public sector was Chile in the nineteen seventies and then New Zealand used in 1990. Some states in USA and the central government in America used an accrual basis in the public sector in 1997; after that it was used in other states as well. Canada and Australia also used an accrual basis in 2000, and then from 2004 to 2006 the United Kingdom followed the same basis in its public sector. Thereafter, some European countries adopted an accrual basis in their public sector, such as Italy, Greece, Germany, Denmark and the Netherlands. Today almost all European countries use the accrual basis in the public sector because it has several advantages in performance measurement and disclosure of financial information is much better than the cash basis (Tudor and Mutiu, 2006). However, according to Pina and Torres (2003, p. 339), some countries such as Australia, the United Kingdom, New Zealand and the United States are using a percentage of principles of accrual basis in their public sectors similar to the private sector. In contrast, some other countries use a kind of accrual basis known as the modified accrual basis; however they still use a cash basis in their budgets, such as Denmark and the Netherlands. The only common use of an accrual basis among all countries which have used it in their public sector is that it used in term of long-term liabilities.

In the Arab world, many voices have been raised asking for the development of government accounting systems: In the Arab Republic of Egypt, the Government is currently adopting the idea of shifting from spending budgets to program and performance budgets, focusing on outputs and results rather than on inputs and regular monitoring of performance to achieve targets. In addition, to study the feasibility of applying the accrual basis in government while deepening the role of cost accounting and accounting information systems. In Tunisia, the Tunisian public accounting system contains several texts related to accounting measurement associated with the application of the accrual basis. Transactions and events are recorded when they occur without focusing on the accounting period in which the receivable or cash is collected (Hammad, 2010, p.12).

Table (1) shows countries that are converted accounting system to accrual basis in their public sector:

Table (1)

countries that are converted their accounting system to accrual basis in their public sector

Countries	Modified accrual basis	Full accrual basis
Australia		×
Cambodia	×	
Canada		×
Colombia		×
Finland	×	
France		×
Iceland	×	
Indonesia	×	
Ireland	×	
Israel	×	
Jordan	×	
Mexico	×	

New Zealand		×
Sweden	×	
United kingdom		×
United State		×

Source: (Abdul Khan & Mayes, 2009, p. 2)

Finally, we (both researchers) argue that applying accrual basis requires substantial reforms that require strong political support that will continue over several years as well as require substantial financial and human investment. It is important for the State to recognize these implications before taking such a radical change in the government accounting system, because shift to full accrual basis requires high accounting skills and experience as well as the need of modern information technologies in government financial management, which should be provided to raise the level of effectiveness of the governmental accounting system.

Part three

Practical side of the research

Description of the study population and the sample

The population studied consists of academic specialist in accounting in the scientific departments of the universities and institutes in the Kurdistan Region of Iraq. One hundred and twenty questionnaires were distributed. The number of respondents was 96 or (80%) and accepted was (94) or (78.3%) as shown in Table (2) below:

Table (2)

Distribution of study sample and percentage of respondents

Function	No. Questionnaires		Percentage of returned	No. Questionnaires		Net percentage of respondents
	Distributed	Returned		Acceptable	Unacceptable	
Academics	120	96	80%	94	2	78.3%

Source: prepared by the researchers

Description of the characteristics of the study sample:

This section deals with the characteristics of the study sample in terms of work place, scientific certificate, scientific title and practical experience. The results reached through tables can be summarized as follows:

Question No (1) Workplace:

Table (3)

Distribution of study sample according to workplace

Degree	Frequent	Percentage
Universities	69	73.4%
Institutes	25	26.6%
Total	94	100%

Source: prepared by the researchers

Question No. (2) The scientific certificate

Table (4)

Distribution of the study sample by scientific certificate

scientific certificate	Frequent	Percentage
Master Degree	78	83%
PhD	16	17%
Total	94	100%

Source: prepared by the researchers

Question No. (3) Scientific title:

Table (5)

Distribution of the study sample by scientific title

Scientific title	Frequent	Percentage
Assistant Teacher	34	36%
Teacher	44	47%
Assistant Professor	15	16%
Professor	1	01%
Total	94	100%

Source: prepared by the research

Question No. (4) Years of experience:

Table (6)

Distribution of study sample by experience

Years of experience	Frequent	Percentage
From 1 year – 5 years	12	12.8%
From 6 years – 10 years	20	21.3%
From 11 years – 15 years	22	23.4%

From 16 years – 20 years	16	17%
21 years and more	24	25.5%
Total	94	100%

Source: prepared by the researchers

The data from Table (6) indicate that the sample of the study was divided in terms of years of experience in five categories. The category of those who have more than 21 years experience ranked first were 24 which is (%25.5) of the study population. The groups that have 11 to 15 years of experience ranked second were 22 and (%23.4). The groups those have 6-10 years of experience ranked third were 20 and (21.3%). The groups that have 16-20 years of experience have been ranked as fourth which were 16 and (%17). Finally, the category of those have experience between (1 - 5 years) ranged as fifth place, were 12 members and covered (%12.8) of the study population.

These results indicate that the majority of the study sample were 82 or (%87.2) with an experience of more than 6 years in this field, which gives the results of the study more credibility.

Indicators and Statistical Methods

A number of appropriate methods and statistical indicators have been used to present and analyze the questionnaires, as well as the Five-Likert scale to categorize the responses of the individuals in question. The methods used were the following:

Weighted Mean

Is one of the measures of central tendency. Vocabulary is measured in weights that represent their importance, and these weights are pre-estimated. In

this study, vocabularies represent the value of the option for each question, while the weights represent the number of people who have been chosen for this option.

Standard Deviation:

Is a positive square root of the variance that measures the dispersion of data group relative to their averages. It is one of the best dispersion measures ever because it has many advantages.

Percentage:

This method is simplified and it can be obtained (relative importance) which can be seen as an initial indicator of the individuals answers in the research sample in a percentage form.

Testing measurements of the questionnaire:

For the purpose of verifying the validity of the scale, a Five Likert scale was used to classify the responses of the questions which ranged from very positive to very negative. The questionnaire contains five choices and this form gives more accurate results than other measures. The following values were given to the answers of the questions mentioned in the questionnaire. Table (7) presents the values and criteria of each weight of the fifth-dimensional weights adopted by the study.

Table (7)

Values and criteria of each weight of the fifth-dimensional weights adopted by the study

Class	Totally agree	Agreed	Not sure	I do not agree	Totally not agree
Relative weight	5	4	3	2	1
Percentage	More than 80%	From 80% to 60%	From 60% to 40%	From 40% to 20%	Lower than 20%
Statistical significance	Degree of effect is very high	Degree of effect is high	Degree of effect is medium	Degree of effect is Low	Degree of effect is very low

Source: prepared by the researchers

Analysis of the questionnaire results

The results of the questionnaire were analyzed and described in order to prove or deny the hypothesis of the research by using the statistical methods previously mentioned.

Measures of relative importance of the arithmetic mean

In order to evaluate and classify the level of importance of the sample for the points an arithmetical mean scale was developed according to the level of importance as follows:

Table (8) shows the values and criteria for each weight of the fifth-dimensional weights adopted by the study

Table (8)

values and criteria for each weight of the fifth-dimensional weights adopted by the study

Arithmetic mean	Relative importance
From (4.2) to (5)	Very high
From (3.4) to (4.2)	High
From (2.6) to (3.4)	Medium
From (1.8) to (2.6)	Low
Lower than (1.8)	Very low

Source: prepared by the researchers

View the results and test the hypothesis of the study

The main hypothesis; there is no statistically significant effect at the level of significance ($\alpha \leq 0.05$) to apply accrual basis in the government sector to provide more useful information for decision-making process.

The hypothesis of this study was analysed in eight questions. Table (9) shows the mean, standard deviation, variance coefficient and order of important sections.

Table (9)

The averages, standard deviations, the relative importance of all points that affected by applying the accrual basis in the governance sector

No	Phrases	Arithmetic mean	standard deviation	Relative importance %	Ranked	Level of importance
1	Applying accrual basis in the public sector provides appropriate information	4.57	0.55	91.4	1	Very high
2	Applying accrual basis in the public sector provides credible information	4.40	0.67	88.0	2	Very high
3	Applying accrual basis in the public sector provides more accurate information	4.34	0.73	86.8	3	Very high
4	Applying accrual basis in the public sector provides more	4.15	0.75	83.0	5	High

	understandable information					
5	Applying accrual basis in the public sector provides comparable information	4.25	0.80	85.0	4 Duplicate	Very high
6	Applying accrual basis in the public sector provides verifiable information	4.07	0.70	81.04	7	High
7	Applying accrual basis in the public sector provides more realistic information	4.25	0.70	85.0	4	Very high
8	Applying accrual basis in the public sector provides information that meets decision models	4.10	0.45	82.0	6	High
General rate of all		4.26	0.65	85.32		High

Source: prepared by the researchers

Table (9) above shows that most of the values for all the questions that measuring the effect of applying the accrual basis in the governance sector to provide useful information for decision making were high and the relative importance of the items exceeded (% 81.04).

The results of the table above indicate the application of the accrual basis in the public sector provides appropriate information. The answers to this clause ranked first in terms of relative importance among all items, reaching relative importance (91.4%), an arithmetic mean (4.57%), the highest arithmetic mean in this field, and a standard deviation of less than one. Thus there is support by the sample members on this sentence.

The second item in terms of relative importance, clause (2), focused on whether the application of accrual basis in the public sector provides reliable information. The item received a high relative importance of (88%) and an arithmetic mean (4.4%). Thence, there is a consensus by the sample members on this clause.

The third place in relevance was occupied by item (3) with relative importance (86.8%) and an arithmetic mean of (4.34%). Thus accepting the clause (applying accrual basis in the public sector provides more accurate information). In terms of relative importance, clauses (7 and 5) on applying accrual basis in the public sector provide more realistic information as well as applying this basis in the public sector providing comparative information were ranked as fourth place. The two clauses have a high relative importance of (85%), an arithmetic mean (4.25%) and acceptable standard deviation.

The fifth ranked was for clause (4) which has relative importance (83%), an arithmetic mean (4.15%) and a standard deviation of less than one. This sentence shows that applying accrual basis in the public sector provides more understandable information.

The sixth rank was for clause (8) that has relative importance (82%), an arithmetic mean (4.1%) and a standard deviation of less than one. Thus accepting the clause (applying accrual basis in the public sector provides information that meets decision models).

The last rank (seventh) was for sentence (6) that has relative importance around (81%), and an arithmetic mean (4.07%). (Applying accrual basis in the public sector provides information that is achievable) was clause 6 accepted by the sample members.

In general, it is possible to say that the views of the sample members were positive for all clauses, and this has been confirmed by a high arithmetic mean of all the answers.

The (T. test) was used to test the hypothesis by simple regression analysis as shown in table (10) below:

Table (10)

Results of the hypothesis test under the test (T. Test)

Variables	Sample size	Arithmetic mean	standard deviation	T	Statistical significance (Sig)
X	94	4.5	0.51	21.43	0.000**
** Significant when Sig. ≤ 0.05					

Source: prepared by the researchers

It can be seen from the table 10 above, that the level of significance associated with the T test of the hypothesis (0,000) is less than the level of significance (0,05), which calls for rejecting (non-acceptance) of the hypothesis (Ho1). In contrast, accepting the alternative hypothesis that indicates the existence of significant statistical effect at the level of significance ($\alpha \leq 0.05$) for the application of accrual basis in the government sector for the provision of more useful information in the decision-making process. This has been estimated by the answers of the sample members.

Conclusions

According to the theoretical and empirical aspects, both researchers reached a number of conclusions:

1. The results of the empirical side confirmed that applying accrual basis in the public sector provides appropriate information, credible, more accurate, more understandable, comparable, more realistic and meets the decision models.

2. The current accounting system in the public sector which relies on the cash basis, is no longer able to meet the needs of accounting information users because it is unable to provide complete financial reports therefore, it cannot evaluate performance, because of its many and varied defects.
3. The majority of international institutions and organizations interested in accounting system that applies accrual basis in the public sector. Accrual basis has a role in developing the efficiency of the government accounting system increasing the efficiency of the accounting information system in government units.
4. The shift to the accrual accounting in the public sector is not a fast process, but this shifting requires a period of time that may extend to many years, add to that it needs cost and cadres with a high level of experience.

Recommendations

1. It is necessary that the Kurdistan Regional Government of Iraq (KRG) shift from the cash basis to the accrual basis accounting system. This shift can be gradual following three main steps: the first is the application of a modified cash basis system, the second sees the use of a modified accrual basis system, and only in the last stage it can fully apply a accrual basis system.
2. The KRG must adopt international accounting standards in the public sector on the accrual basis, because of its positive aspects in providing useful information which can be used at all levels of the decision-making process.
3. The KRG can benefit from the experiences of other countries that already applied an accrual basis in the public sector.
4. There is the need to train accountants through courses and seminars held by professors from local and foreign universities to facilitate this conversion.
5. The KRG must change the quality and form of its general budget if it thinks to apply accrual basis because traditional budget is not fit for purpose. A program and performance-based budget is more effective in this area.

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Appendix(1)
Questioner list

Greetings respect and appreciation.....

This questioner is part of the research completion entitled "**Application of Accrual Basis in the Public Sector and its Role in Providing Useful Information. Exploratory Study of a Sample of Academic Specialists in the Kurdistan Region of Iraq**"

According to your scientific knowledge and experience in accounting fields, please give accurate answer to the questions of this questionnaire. Thank you for your cooperation in advance... Yours sincerely

The first part. General Information: Please kindly put the reference (v) in the designated place for it:			
Workplace:			
	Universities		
	Institutes		
Scientific Certificate:			
	Master Degree		
	PhD		
Scientific Title:			
	Assistant Teacher		
	Teacher		
	Assistant Professor		
	Professor		
Years of Experience:			
	From 1 year – 5 years		
	From 6 years – 10 years		
	From 11 years – 15 years		
	From 16 years – 20 years		

	21 years and more					
The second part: Applying accrual basis in the public sector and its role in providing useful information						
No	Phrases	Totally agree	Agreed	Not sure	I do not agree	Totally not agree
1	Applying accrual basis in the public sector provides appropriate information					
2	Applying accrual basis in the public sector provides credible information					
3	Applying accrual basis in the public sector provides more accurate information					
4	Applying accrual basis in the public sector provides more understandable information					
5	Applying accrual basis in the public sector provides comparable information					
6	Applying accrual basis in the public sector provides verifiable information					
7	Applying accrual basis in the public sector provides more realistic information					
8	Applying accrual basis in the public sector provides information that meets decision models					

پوخته

ئامانجی ئەم توێژینهوه دەرخستکی رۆلی گۆرینی جێبهجێکردنی بنه‌مای نه‌ختی بۆ بنه‌مای دانپێنان له‌ کهرتی کشتی له‌ ههریمی کوردستانی عیراق له‌ به‌ر ئه‌وه‌ی زانیاری به‌سود دا‌بینده‌کات بۆ به‌کارهێنه‌ران له‌کاتی بریاردان، وه‌ بۆ به‌ده‌سته‌ینانی ئامانجی توێژینه‌وه‌که‌ شێوازی راپرسی په‌یره‌و‌کراوه‌ کوا (12) پرسیا‌ری له‌خۆ گرتوو به‌سه‌ر ئه‌کادیمی‌ه‌کانی تاییه‌تمه‌ند له‌ ههریمی کوردستانی عیراق دا‌به‌شکرا که‌وا ژماره‌یان (120) ئه‌کادیمی بو، که‌وا (96) له‌سته‌کانی راپرسی گه‌رایه‌وه‌، وه‌ (94) له‌سته‌کان بۆ شیکردنه‌وه‌ به‌کارهات، وه‌ هه‌ردوو توێژه‌ره‌وه‌که‌ گه‌ویشته‌که‌ کۆمه‌لیک ده‌رئه‌نجام وه‌گرنه‌گرینیان جێبه‌جێکردنی بنه‌مای دانپێنان له‌ کهرتی کشتی ده‌بێته‌ هۆی دا‌بینکردنی زانیاری گونجاو، جێگای متمان‌ه‌، زۆر ورد، وه‌ زیاتر لێگه‌یشته‌وو، وه‌ توانای به‌راوردکردنی هه‌یه‌، وه‌ زۆریش له‌گه‌ڵ واقع ده‌گونجی وه‌ بۆ گشت جو‌ره‌کانی بریاردان زانیاری دا‌بینده‌کات. وه‌ هه‌روه‌ها هه‌ردوو توێژه‌ره‌وه‌که‌ کۆمه‌لیک پێش‌نیاریان پێشکه‌شکرد که‌وا زۆر گرنه‌که‌ حوکومه‌تی ههریمی کوردستانی عیراق بنه‌مای دانپێنان له‌جیاتی بنه‌مای نه‌ختی جێبه‌جێ بکات، به‌لام ئەم گۆرانکاریه‌ پێویسته‌ به‌قۆناغ بێت بۆنومه‌ له‌قۆناغی یه‌که‌م بنه‌مای نه‌ختی دا‌رپژراو جێبه‌جێ بکات پاشان بنه‌مای دانپێنان دا‌رپژراو پاشان به‌شیه‌یه‌کی ته‌واو بنه‌مای دانپێنان جێبه‌جێ بکات

الملخص

هدف هذا البحث الى بيان دور تحول من التطبيق الاساس النقدي الى الاساس الاستحقاق في القطاع العام في الاقليم كوردستان العراق لما توفرها من المعلومات مفيدة للمستخدمين في ترشيد القرارات، ولتحقيق أهداف الدراسة تم تطوير استبانة تضمنت (12) سؤالاً وزعت على الاكاديميين المختصين في اقليم كوردستان العراق والبالغ عددهم (120) الاكاديمي، وقد استرد منها (96) استبانة، خضع منها للتحليل (94) استبانة، وتوصل الباحثان الى مجموعة من الاستنتاجات من اهمها ان تطبيق اساس الاستحقاق في قطاع العام يوفر معلومات ملائمة، ذو مصداقية، اكثر دقة ، قابلة للفهم اكثر، قابلة للمقارنة، اكثر واقعية و يلي نماذج القرارات. كما قدم الباحثان مجموعة من توصيات منها ضرورة



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تحول حكومة اقليم كردستان العراق من تطبيق اساس النقدي الى أساس الإستحقاق، وان هذا الانتقال يمكن ان يكون تدريجي اي ان يمر بمراحل مثل مرحلة الأساس النقدي المعدل و ثم مرحلة الأساس الاستحقاق المعدل الى ان ينتقل الى تطبيق الاساس الاستحقاق بشكل كامل.
الكلمات المفتاحية: الاساس الاستحقاق, الاساس النقدي, قطاع العام