

# Accounting information for performance management in the public sector

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## ABSTRACT

*Performance information indicates how well an institution is meeting its aim and objectives and which policies and processes are working. This article argues that the current system of accounting used by government for the preparation of its accounts has certain limitations in as far as the provision of performance information is concerned. Existing theory points to the fact that performance in the public sector is measured in terms of the economical, efficient and effective use of resources. However, the traditional government accounting system was developed to respond to the accountability requirements of the public and not to promote the economical, efficient and effective use of resources. Based on a case study conducted at the Northern Cape Provincial Legislature, it was determined that the modified cash basis of accounting used by government does not provide management with the information needed to enable performance management. The outcomes point to the fact that the accrual basis of accounting is a more effective basis for accounting and can contribute to more economical, efficient and effective use of resources. This is relevant because other government institutions also make use of the modified cash base of accounting to prepare their financial statements.*

## INTRODUCTION

It is inherently more difficult to measure performance and to make an evaluation of management success in the public sector because the measure of success in the public sector is not profit but rather service delivery. In the public sector, performance is measured



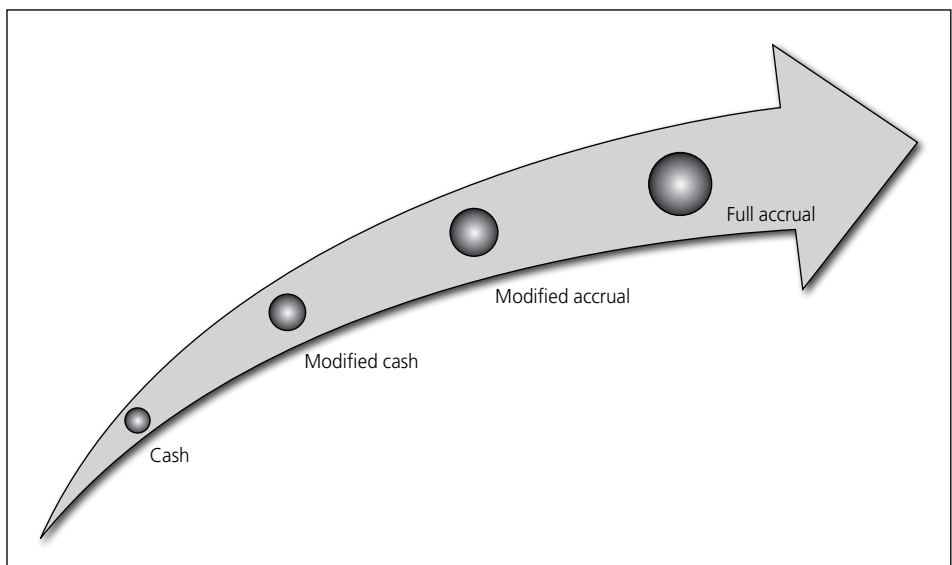
in terms of the economical, efficient and effective use of resources to deliver the necessary services. The public sector in South Africa makes use of the modified cash basis of accounting to report on its financial outcomes and the full cash basis for budget reports. However, measuring performance is difficult when the cash or modified cash basis of accounting is used because this basis of accounting does not provide the necessary information to do so.

The primary reports produced by the modified cash basis of accounting are statements comparing the budgeted income and expenditure with actual income and expenditure. This implies that financial performance is measured in terms of the ability to spend the cash appropriated in the budget. This is problematic because it does not provide institutions with the information required to make an assessment of how economically, efficiently and effectively resources were employed. In view of the shortcomings of the cash basis of accounting, it is necessary to explore whether another basis of accounting, such as accrual accounting, can provide better information to support performance management. The focus of this study is to determine whether performance management will benefit from the implementation of the accrual basis of accounting.

## ACCOUNTING INFORMATION

The South African government employs the modified cash basis of accounting in the national and provincial spheres of government for the preparation of its accounts (Quist, Certan & Dendura 2008:49; Baboojee 2011:1). In the modified cash base of accounting, transactions are recorded primarily on the cash basis, but reported results are supplemented with accrual disclosures. According to Blöndal (2003:44) and Van der Hoek (2005:34), the cash basis and the full accrual accounting basis represent two end points on a spectrum of possible accounting and financial reporting bases, as illustrated in Figure 1.

**Figure 1. Spectrum of accounting bases**



The following paragraphs provide a theoretical explanation of the main differences between the cash basis of accounting and the accrual basis of accounting.

## CASH BASIS OF ACCOUNTING

The cash basis of accounting is an accounting method in which the effects of transactions are recognised when the related cash flow takes place (Monteiro & Gomes 2013:105; Van der Hoek 2005:34; Carnegie & West, 2003:83). Expenses and income are therefore recorded in the accounts when actual payments of cash are made. Pauw *et al.* (2009:183) describe the cash basis of accounting more comprehensively by postulating four distinct characteristics, namely:

- transactions and events are recognised when cash is received or paid;
- cash receipts, disbursements and balances are measured at historical cost;
- financial results are measured as the difference between cash received and cash disbursed: and
- information is provided about the sources of cash that are raised, the use to which those funds are put and cash balances at the reporting date.

Tiron Tudor and Mutiu (1990:2) summarise the advantages of the cash basis of accounting as it being the simplest basis on which to perform transactions and its objectivity. This implies that those who record transactions do not require high levels of skill in order to recognise the events that would constitute an accounting transaction. Cash flows would signal the need to record a transaction and no subjective estimation of transaction valuation is therefore required.

In addition, Champoux (2006:18) argues that the cash basis of accounting is more transparent from the point of view of a user of financial statements. This is because the users might lack clarity in their understanding of the underlying assumptions of any basis other than cash. Pauw *et al.* (2009:183) support this by stating that “the cash basis provides links to budgets and appropriations and might be readily understandable and timely”.

Diamond (2002:4) summarises the advantages of cash accounting as follows:

- easily comprehended by users;
- allows measurement on compliance with budget appropriation;
- simple to implement; and
- costs are low due to the lower level of accounting skills required.

Wynne (2004:26) supports this by stating that cash accounting has the virtues of simplicity and objectivity, which translate into its main strength. From the above, the deduction can be made that the cash base of accounting is easy to understand, transparent, user friendly and uncomplicated to use.

In terms of disadvantages of the cash basis of accounting, Diamond (2002:4) lists its limited scope as a major shortcoming. This arises from the fact that it does not reflect the impact that transactions resulting from cash flows outside the reporting period may have. Van Wyk (2003:131) explains the shortcomings of the cash accounting system in the public sector environment by summarising the main deficiency as the fact that the cash basis of



accounting measures the resources consumed during the period under review. Thus, actual costs are not measured, controlled and reported. In essence, this means that the cash basis measures all cash costs incurred, but does not disclose the consumption of those resources. It could be that stock was procured, but not consumed. The cash basis will record this transaction as if the resource was paid and consumed.

In addition, the International Federation of Accountants (2000:24–25) lists the following as the main limitations of the cash basis of accounting in government institutions:

- Increasingly, users of government financial information expect governments to provide information on assets and liabilities. The cash system does not meet this requirement.
- Full financial position is not reflected.
- There is no control over fixed assets and current assets.
- All expenses incurred are not accounted for.
- No records of debtors and creditors are kept.
- Actual costs of services cannot be calculated.
- It cannot be used as a base for performance measurement.

Baboojee (2011:12) goes further to state that the cash basis of accounting does not distinguish sufficiently between cash spent on operating expenses and cash invested for the future (capital expenditure). It can be concluded that the cash accounting system is incapable of producing information on the return on investment in future accounting periods other than the period during which cash was spent for investment purposes.

In spite of its limitations, cash accounting is still used as the South African provincial and national government's method of choice with some modifications to include accrual disclosures. On the other end of the spectrum of possible bases of accounting is the accrual basis. The following paragraphs will discuss accrual accounting, as well as its advantages and disadvantages with particular reference to its application in the public sector.

## **ACCRUAL BASIS OF ACCOUNTING**

According to Khan & Mayes (2009:3), Diamond (2002:4) and Van Wyk (2003:1X), accrual accounting is an accounting method in which transactions are recognised when underlying economic events occurred, regardless of the timing of the related cash receipts and payment. The Accounting Standards Board (2012:6) supports this by defining accrual accounting as a "... basis of accounting under which transactions, other events and conditions are recognised when they occur". This is in contrast with cash accounting, which recognises the effects of transactions only when cash or its equivalent is received or paid. Transactions and other events are therefore recorded in the accounting records and recognised in the financial statements of the periods to which they relate. According to the Accounting Standards Board (2012:6), the elements recognised under accrual accounting are assets, liabilities, net assets, revenue and expenses.

Pauw *et al.* (2009:183–184) comprehensively describe the accrual basis of accounting as a system under which:

- Transactions and events are recognised when they occur, rather than when cash is paid or received.

- Assets, liabilities, revenues and expenses are recognised.
- Assets, liabilities and revenues are initially recognised on the historical cost basis, but often revalued to their fair value.
- Later, the measurement focus is on economic resources or service potential and changes in these.
- Information is provided about:
  - the resources controlled by the entity;
  - the cost of operations or providing services;
  - the financial position; and
  - changes in the financial position and operational efficiency.

Much scholarly debate exists regarding the benefits of the accrual system in the public sector as well as its disadvantages. For instance, in a study commissioned by the International Federation of Accountants (2000:59), the following benefits of reporting on the accrual basis were identified:

- It indicates how the entity financed its activities and met its cash requirements.
- It allows users to evaluate the entity's ongoing ability to finance its activities.
- It shows the position of an entity and changes in its financial position.
- It provides an opportunity to demonstrate successful management.
- It is useful in evaluating an entity's performance in terms of its cost and efficiency.

Wynne (2004:7) adds to the above-mentioned by stating that the following points are put forward most often in favour of the accrual basis of accounting:

- It is said to provide more comprehensive financial information.
- It allows for better management of assets.
- It provides the full cost of public services.

Another advantage discussed by Wynne (2004:7–8) is that the accrual basis places greater emphasis on outputs than on inputs. Pauw *et al.* (2009:184) further summarise the benefits of the accrual system relative to the cash system as follows:

- It enables an assessment of the stewardship of management.
- The true cost of goods and services can be determined.
- It enables an assessment of the true financial position of government.

From the above discussion it can be concluded that the accrual basis of accounting has strong advantages, yet some authors find the implementation in the public sector to be disappointing. In this regard, Wynne (2004:9) states that one of the major disadvantages of accrual accounting is the costs involved in its implementation. These include costs associated with identifying and valuing existing assets, the development of accounting policies, establishing accounting systems and developing the required skills of both the user and preparer of financial statements.

Another disadvantage is that the system is designed to measure profit (Wynne 2004:9), whilst it is not the purpose of government institutions to make profit, but rather to render a service. The complexity of accrual accounting might also lead to less oversight by legislatures and the requirement of more highly skilled staff and auditors in the public sector (Wynne 2004:11).



## CHALLENGES RELATING TO THE IMPLEMENTATION OF ACCRUAL ACCOUNTING

Heald (2003:2) accepts that the implementation of accrual accounting in the public sector will make a difference to organisational performance, but also concedes that more research is required to make a determination of the extent of that difference. Carnegie and West (2003:83) further argue that accrual accounting will benefit the public sector in terms of optimising outputs; however, modification and augmentation of accrual accounting practices are required for its use and introduction to be successful. Baboojee (2011:44) adds to this by stating that experience from other parts of the world reveals that the adoption of accrual accounting in the public sector, a model that was developed for private sector reporting purposes, has had a limited impact and has been fraught with challenges.

Lessons can be learned from the implementation of accrual accounting in other countries, like the Fijian Public Service, where the following was determined (Tickell 2010:78):

- Government attempted too much change too soon.
- Incorrect software was purchased.
- There was a high reliance on international consultants who did not understand the circumstances in Fiji at the time.
- There was a low-skill base for public service accountants.

It can be concluded that the implementation of accrual accounting is a complicated process and that scholars are not all in agreement with regard to the benefits to the public sector. This may be due to the main differences between government and the private sector where government is aimed at service delivery and the private sector at profit making.

## PUBLIC FINANCIAL PERFORMANCE MANAGEMENT

According to Mwita (2000:22), performance management is “a multi-dimensional construct aimed at defining the outcomes of work so as to create a link to the goals of the institution, customer satisfaction and economic contributors”. Marr (2009:221) defines performance management simply as a process to determine up front what matters, collecting the correct management information to evaluate according to the plans, and gaining insight from the management information to improve performance going forward. In the context of a government institution, these definitions imply that a performance management system should link outcomes to the predetermined objectives (goals), the public benefit (customer satisfaction) and public funds (economic contributors) used to achieve the goals.

A number of models have been developed over years to help organisations assess how well their public financial management (PFM) functions are performing and to improve performance. Two of the most helpful ones are the public financial management Performance Measurement Framework (PMF) and the Logical Framework Model. These two models will briefly be discussed.

The public financial management Performance Measurement Framework (PMF) was developed by the Public Expenditure and Financial Accountability (PEFA) Secretariat of the World Bank. The PMF is an integrated monitoring framework that allows the measurement

of a country's public financial management performance over time and has been developed as a tool that would provide reliable information on the performance of public financial management systems, processes and institutions (World Bank 2005:1).

Pauw *et al.* (2009:130–131) summarise the critical dimensions of the Performance Measurement Framework as follows:

- credibility of the budget, which should be realistic and implemented as intended;
- comprehensiveness and transparency, including oversight and accessibility to the public;
- policy based, which means that the budget and predetermined goals and objectives are developed and prepared in accordance with set policies and regulations;
- predictability and control in the execution processes, which includes arrangements for the exercise of control and stewardship of public funds;
- accounting, recording and reporting, which relate to adequate records and information that is produced, maintained and disseminated to achieve decision making, control, management and reporting purposes (this aspect is also of importance for the purpose of performance evaluation); and
- external scrutiny and audit, including arrangements for the scrutiny of public financial records and follow-up by the responsible executive.

These dimensions are also consistent with the definitions reported by Mwita (2000:22) and Marr (2009:221), and while these six dimensions are all equally important to performance management in general, the dimension relating to accounting, recording and reporting are of particular importance to this study. This dimension will be examined later on.

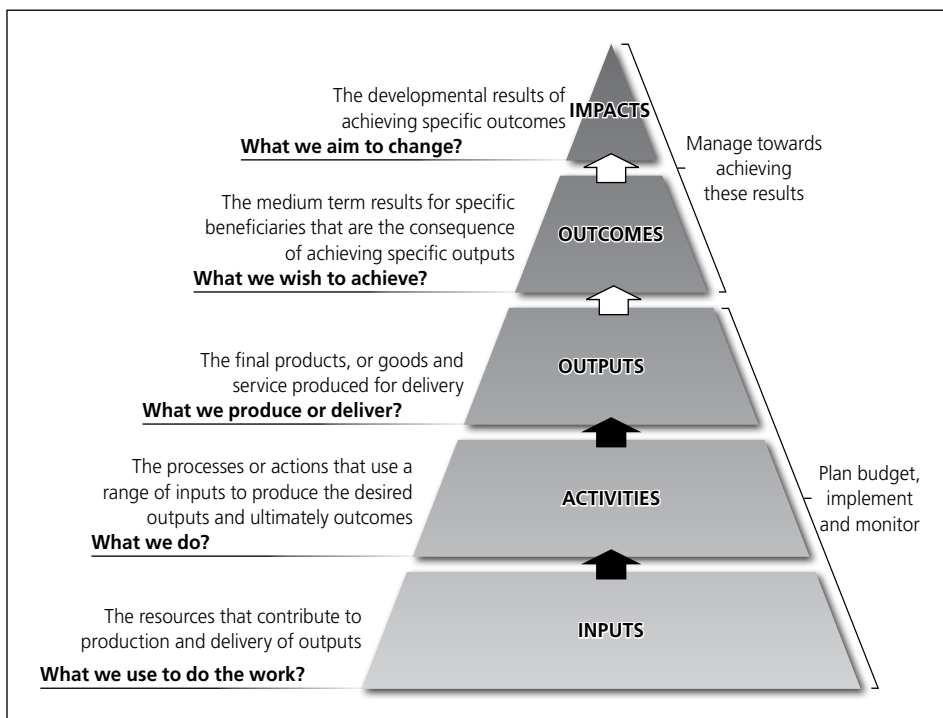
Crawford and Bryce (2003:364) describe the Logical Framework Model as a hierarchy of objectives and assumptions based on cause and effect logic also known as *vertical logic*. The Logical Framework Approach (LFA) was designed to address three basic concerns (Republic of Serbia 2011:7), namely:

- Planning was too vague and without clearly defined objectives that could be used to monitor and evaluate success (or failure).
- Management responsibilities were unclear.
- Evaluation was often an adversarial process, because there was no common agreement as to what the project to be achieved was.

Applied to the public sector, the concept of a Logical Framework Model can be explained as follows (National Treasury 2007:6):

- Inputs are the resources that contribute to the production of service delivery outputs. Inputs also refer to *what we use to do the work* and include finances, personnel, equipment and buildings.
- Activities relate to the processes or actions that use a range of inputs to produce the desired outputs and ultimately outcomes. Activities describe *what we do*.
- Outputs relate to the final product, goods and services produced for delivery. Outputs may be defined as *what we produce or deliver*.
- Outcomes refer to the medium term results for specific beneficiaries that are the consequences of achieving outputs. Outcomes are *what we wish to achieve*.
- Impacts are the results of achieving specific outcomes such as reducing poverty or creating jobs. Impacts are *how have we influenced communities and target groups*.

**Figure 2. The Logical Framework Model applied to performance management**



(National Treasury 2007:6)

Figure 2 illustrates the Logical Framework Model as applied to performance management in the public sector.

Performance in the public sector is measured in terms of the economical, efficient and effective use of resources in order to achieve the necessary outputs (service delivery). It is therefore significant that the National Treasury has issued regulations to ensure that performance information underpins planning, budgeting, implementation management and reporting in order to promote transparency and expenditure control in order to achieve economy, efficiency and effectiveness in the use of public resources (National Treasury 2011:4).

The crucial element is the reporting of performance information to the legislature and other stakeholders that will enable them to determine whether departments are achieving the objectives or outcomes identified in their strategic plans. Holding heads of department accountable for performance, i.e. the efficient, effective, economical and transparent use of resources, is regarded as more important than the traditional accountability for compliance (National Treasury 2007:10).

Public sector financial reporting is intended to provide information to users so that they can assess the achievements (performance) of government and the costs at which this performance was achieved, essentially the economy, efficiency and effectiveness of performance costs (Granof 1998:18). The following section will therefore focus on the accounting basis used to produce this information in order to determine whether resources were used economically, efficiently and effectively.



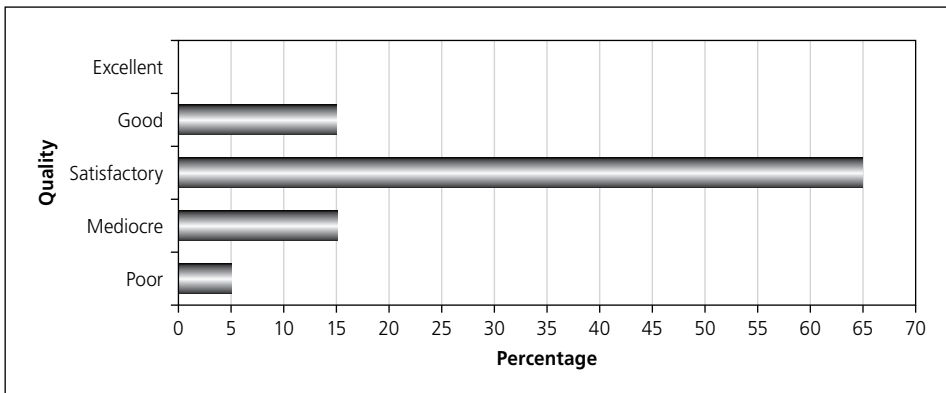
## RESEARCH DESIGN AND METHODS

The research on this topic took the form of a qualitative assessment of the information provided on a modified cash basis in the Northern Cape Provincial Legislature. Data were collected by means of a self-administered questionnaire which was supplemented with data obtained from semi-structured interviews. A questionnaire was compiled, consisting of closed-ended questions focusing on the most relevant aspects of financial information that have an effect on performance management. Respondents were requested to rate specific factors that were identified in the literature study on a Likert scale from one to five, where one represents *not an important factor* and five represents *an important factor*. The Statistical Product and Service Solutions package (SPSS) was used to analyse data and calculate a score for each factor. A mean value as well as a factor value for each question was also calculated. The factor value is a score out of 1 where a score above 0.5 would indicate that respondents agree with the question, and a score below 0.5 would suggest disagreement. The questionnaire was distributed to 23 managers who form the first target group for the study. Of the 23 questionnaires circulated, 20 were received back, which represents a response rate of 80%. In addition to the questionnaires, semi-structured interviews were conducted with the Chief Financial Officers of two provincial legislatures that have already implemented the accrual basis of accounting. The purpose of the interviews was to obtain more in-depth qualitative information. Interviewees were interviewed telephonically and the researcher made use of an interview guide to guide interviewees while the responses were noted in writing. The data were analysed manually and reported in terms of each participant's view.

## ASSESSMENT OF DATA COLLECTED

The questionnaire consisted of questions that relate to financial information as well as performance management. This is in line with the aim of the study, which is to explore the relationship between financial information and performance management in the Northern Cape Provincial Legislature.

Figure 3. Quality of financial information



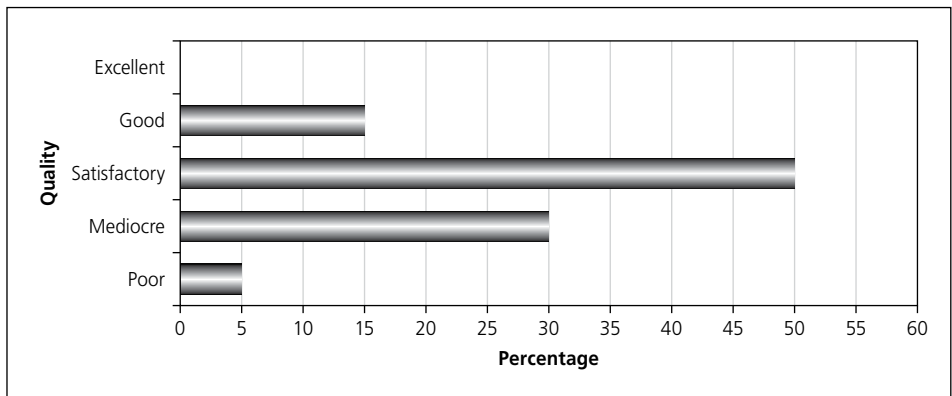
The research indicates that respondents were of the opinion that the quality of both financial and performance information available to enable them to make management decisions is below satisfactory. In addition, the quality of performance information was rated lower than that of financial information. It is worth noting that no respondent rated the quality of either the financial information or the performance information as excellent.

Figure 3 shows the responses with respect to financial information.

An analysis of the responses on the quality of financial information indicates a mean of 2.900 on the Likert scale with a factor value of 0.475, which is below 0.5 and which implies that the majority of the respondents considered the quality of financial information as inadequate.

Figure 4 provides a breakdown of the responses with regard to the quality of performance information.

**Figure 4. Quality of performance information**

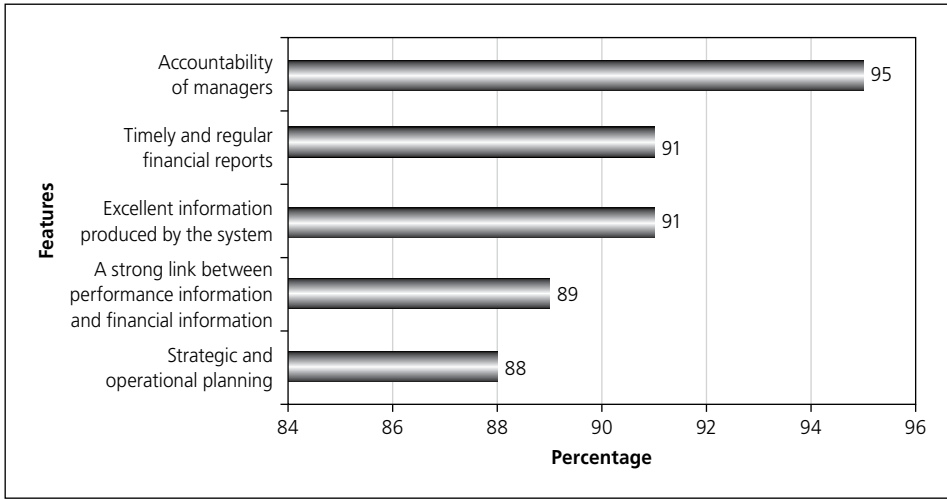


An analysis of the responses on the quality of performance information shows that a mean of 2.750 was calculated with a factor value of 0.438. This implies that the quality of performance information is inadequate for proper management decisions. The responses on the quality of performance information is in line with the responses on the quality of financial information, and although respondents rate the quality of performance information lower, there is a close correlation between the ratings of the two sets of information available. The findings confirm theories on the cash and modified cash bases of accounting by authors such as Granof (1998:18), Dittenhofer (2001:452) and Van der Hoek (2005:35), who state that the cash and modified cash bases of accounting do not provide the necessary information to assess the achievements of government and the costs of these achievements.

In order to determine what the most important features of a financial and performance management system are, respondents were requested to rate five important features identified in the literature on a scale from one to five. The following features, as identified in the literature review, were rated in the questionnaire:

- strategic and operational planning
- timely and regular financial reports
- excellent information produced by the system
- accountability of managers
- a strong link between performance information and financial information.

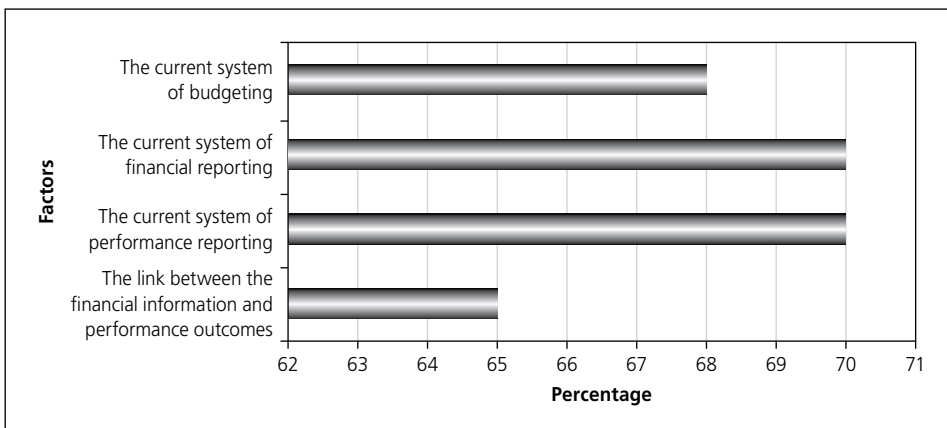
**Figure 5. Features of a financial and performance management system**



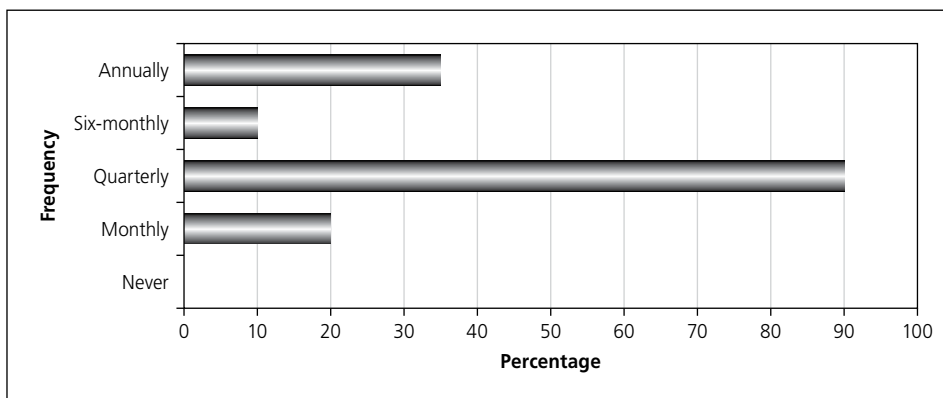
All the features were rated as being of high importance with the mean value above 4.400 and the factor value above 0.850, which indicates that the overwhelming majority of respondents agreed that all these features are of high importance for a credible system of financial and performance reporting. The aspect that was considered most important by the respondents in the study is that of the accountability of managers. This implies that respondents are acutely aware of the fact that systems alone do not produce results, but that the users (managers) of the systems play a critical role, and in the opinion of respondents, the most important role, in ensuring desired performance outcomes.

An important component of the study was to determine which factors contributed to the fact that the NCPG received a qualified audit opinion on performance information for the 2011/12 financial year but an unqualified audit opinion on its financial statements for the same year (The Auditor-General of South Africa 2012:44).

**Figure 6. Factors contributing to a qualified audit opinion on performance information but an unqualified opinion on financial information**



**Figure 7. Reporting frequency**



According to the respondents, the most important contributors to the qualified audit opinion on performance information were the system of financial reporting and performance reporting. This correlates with the findings on the quality of financial information and performance information in figures 3 and 4, where respondents rated the information provided by the system as inadequate.

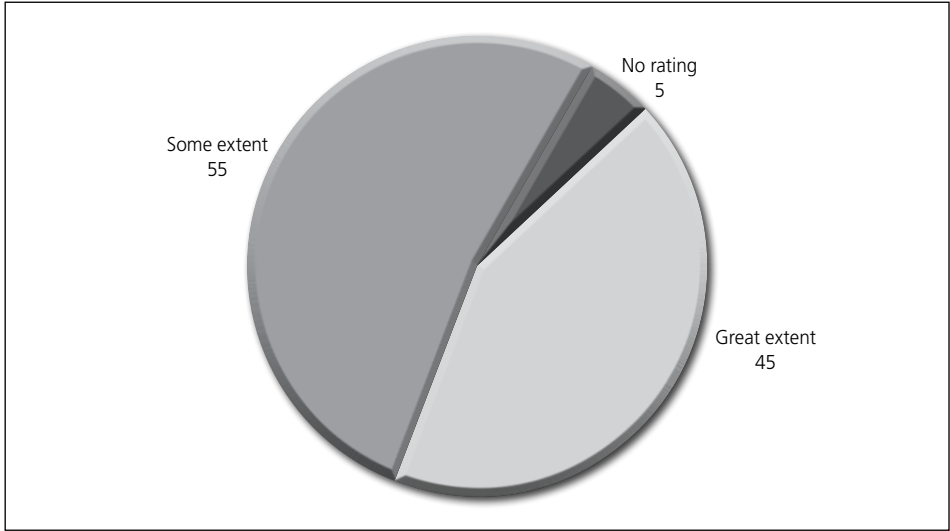
An important requirement of reporting is the provision of timely and quality information to those who may need it, such as management (Hendriks 2012:9). The study therefore measured the existing reporting frequency with which management received critical information that they use to make decisions that affect the performance outcomes. Figure 7 depicts the reporting frequencies in the Northern Cape Provincial Legislature as perceived by respondents. (Respondents could select more than one choice).

A total of 90% of the respondents indicated that formal reporting takes place on a quarterly basis, whilst 35% indicated that it is done annually. Quarterly reporting seems to be the overall standard frequency of reports for both financial and performance information. This means that information needed to take decisions that affect the performance of an institution can already be 3 months old before any decision is taken. Furthermore, the lack of performance reports indicates that management might only see the results of a management decision six months (two quarters) later. The majority of the respondents (65%) were also of the opinion that the reporting frequency should be increased to enable better decision making.

In addition to the findings obtained relating to the modified cash base accounting system, the study also focused on the accrual base of accounting. Figure 6 indicates that the modified cash base of accounting is a main contributor to poor performance information and that it may affect management decisions. The aim, therefore, was to determine if the accrual basis of accounting would benefit the decision making of management. Figure 8 illustrates the responses of respondents to this question.

The majority of the respondents (55%) were of the opinion that accrual accounting will benefit the NCPL to some extent, while 45% were of the opinion that it would benefit the NCPL to a great extent. A mean of 4.200 was calculated with a factor value of 0.800, which implies that the overwhelming majority of participants agreed that the introduction of accrual accounting will benefit them in terms of management's decision making.

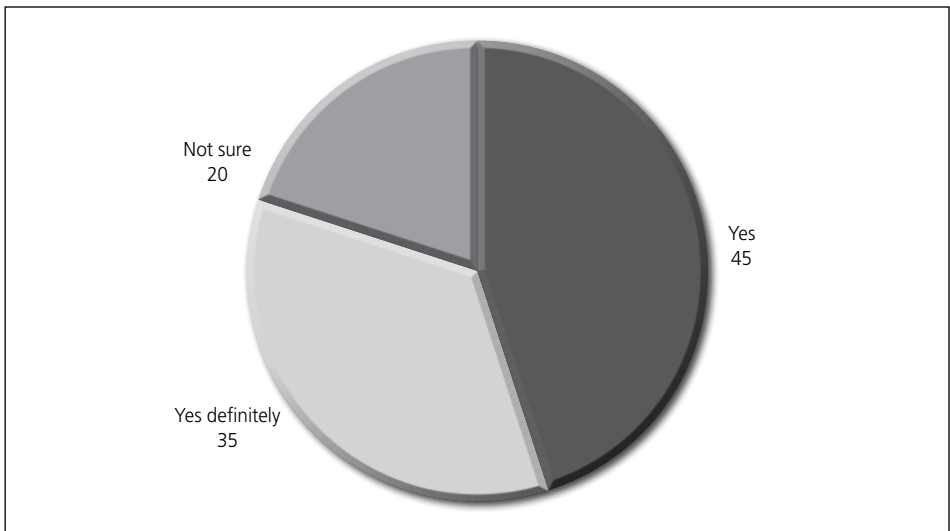
**Figure 8. Extent to which accrual accounting would benefit the Northern Cape Provincial Legislature**



Due to the claimed benefits that an accrual accounting system is said to have, respondents were asked to indicate whether they were of the opinion that an accrual accounting system will lead to an improvement in performance outcomes for the NCPL. Figure 9 depicts the results of the question.

From the responses received, a mean of 4.150 was calculated with a factor value of 0.788. None of the respondents chose a value of less than three. While 20% were not sure, 45% responded with a yes and 35% indicated yes definitely.

**Figure 9. Accrual basis of accounting will lead to an improvement in performance outcomes for the Northern Cape Provincial Legislature**



The participants in the interviews indicated that since the introduction of accrual accounting, there has been an improvement in the management of resources in their respective legislatures. The interviewees in the study could quantify the improvement in the management of resources. It was indicated that by reporting the cost of operations more accurately through accrual accounting, it made decision makers more cost sensitive and able to improve the economic use of resources.

Interviewees indicated that new financial legislation had also been enacted, which places a compliance requirement on their legislatures to implement accrual accounting. This legislation puts more rigorous compliance regulations in place other than accrual accounting. It is therefore difficult to isolate the effect of the implementation of accrual accounting, because it was done as part of other financial reforms at the time.

The interviewees indicated that because government as a whole operates on a cash basis of accounting, all other processes, such as budgeting and planning, are done to support the cash basis. Because the legislature is part of the government system of appropriation, it means that budgets and financial reports must, in any event, be converted to cash in order to be consolidated. The aforementioned scenario creates additional work load which would not be necessary otherwise.

Interviewees were of the opinion that the accrual basis of accounting is superior to the cash basis in that it allows for better planning, because the transactions are on the financial statements immediately and can be taken into account when planning. In terms of the level of investment, interviewees agreed that the information technology software is the largest investment, followed by retraining of staff and costs related to the conversion of historical information.

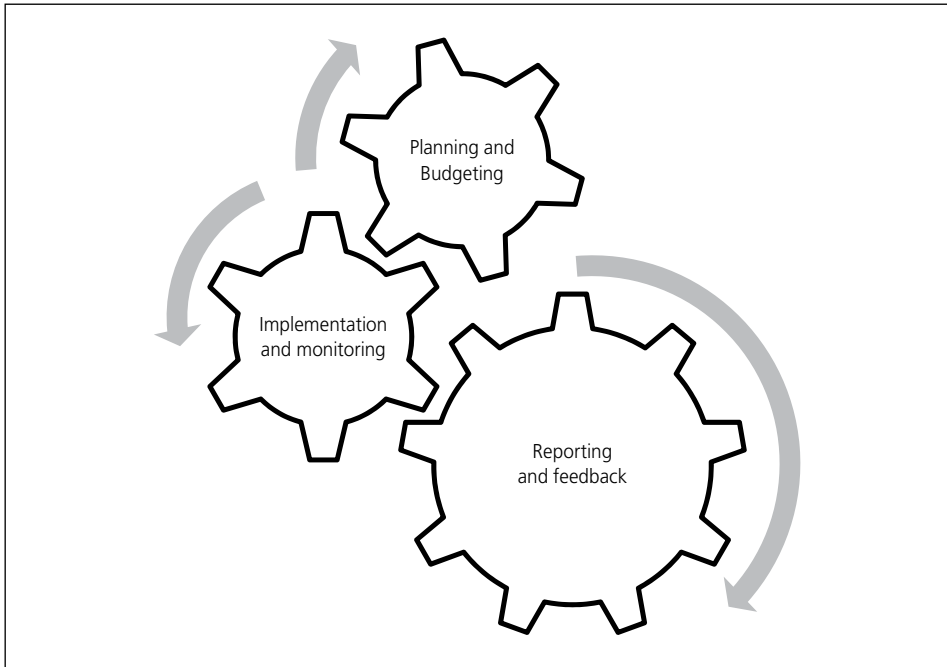
Participants cited the retraining of staff and the valuing of assets as the most challenging aspects in the conversion from cash basis accounting to accrual basis accounting. Other aspects that were regarded as challenging relate to the users of financial statements, who were not accustomed to accrual reporting and were overlooked when the entire process was planned. The acquisition of a new information system that is able to handle the requirements was rated by participants as the most important aspect of the entire process.

It was also recommended that implementing the accrual system parallel to the cash system or whilst the cash system is maintained was advisable for a pilot period to iron out any implementation problems.

Based on the empirical research, it is recommended that the Northern Cape Provincial Legislature implement an integrated accrual based financial and reporting model, consisting out of the following stages:

- **Stage 1** – Simultaneous strategic and operational planning and budgeting (accrual based)  
In this stage, the performance objectives are clearly set and the required financial resources are linked to the objectives (budgeting). This stage requires considering alternatives and the economical, efficient and effective allocation of resources.
- **Stage 2** – Implementation and monitoring  
In this stage, all implementation decisions are based on plans (strategic and operational) and the budget (available resources). Monthly monitoring to track progress is done by means of formal reporting against both financial and performance results.
- **Stage 3**–Report and feedback  
In this stage, the end results are reported upon, based on the original planning, and the formal statement of performance is submitted along with the financial

**Figure 10. Integrated accrual based performance and financial reporting model**



implications. The results are fed back to system stage 1 (strategic and operational planning and budgeting) for the following year.

A three stage planning and reporting cycle consists of one calendar year (12 months) that feeds into a five year strategic planning cycle. Figure 10 illustrates the recommended model.

While the accrual accounting basis of reporting is recommended, it is further recommended that the Northern Cape Provincial Legislature:

- Invests in an integrated management information system, which supports integrated performance and financial management.
- Skills audit to be performed to determine if any skill gaps exist in the implementation and management of accrual accounting systems, and required training be put in place to bridge any identified gaps.
- Strong emphasis be placed on ensuring data is accurately converted from the cash basis of accounting to the accrual basis of accounting. Any new system to be run parallel to the existing system for a period of at least one reporting cycle.

## **CONCLUSION**

This study concludes that there are certain deficiencies in the cash basis of accounting used by the NCPL. The study determined that the accrual basis of accounting is a more effective basis for accounting and can contribute to more economical, efficient and effective use of resources. The findings for the study suggest that an accrual basis of accounting will provide

improved information and therefore enhanced performance management. However, the implementation of a new basis of accounting is not without problems, and aspects such as costs and personnel should be carefully considered before such implementation take place.

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