Factors Influencing Implementation of Accrual Based International Public Sector Accounting Standards in Tanzanian Local Government Authorities

Charles K. Matekele[1*] and Gabriel V. Komba[2]

[1]Local Government Training Institute, Dodoma, Tanzania.
[2]School of Business, Mzumbe University, Tanzania.

Authors' contributions

This work was carried out in collaboration between both authors. Author CKM designed the study, performed the statistical analysis, wrote the protocol and wrote the first draft of the manuscript. Author GVK managed the analyses of the study and literature searches. Both authors read and approved the final manuscript.

Original Research Article

ABSTRACT

This research examined the factors influencing implementation of accrual-based International Public Sector Accounting Standards (IPSAS) in the Tanzanian Local Government Authorities (LGAs). The study adopted a survey design. Based on extant literature, a structured questionnaire was developed. Then a drop-and-pick method was employed to administer the survey instrument to accountants and auditors from the LGAs in Tanzania. We successfully obtained 150 useful responses and applied factor analysis to determine the factors followed by multiple regression analysis. According to factor analysis performed, 15 factors were identified as the factors influencing implementation of accrual-based IPSAS. Such factors include staff experience, understanding, and skills, in-house training necessity, involvement of professional accountants with high ethical conduct and hope for future business opportunities including attraction of development

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Corresponding author: E-mail: charles.matekele@lgti.ac.tz, matekeleck@yahoo.com;

partners. The study also examined how the identified factors affect implementation of accrual-based IPSAS in the LGAs. Our findings show that staff experience, in-house training necessity, understanding and skills, involvement of professional accountants and publication of financial statements with standardized format; significantly influence implementation of accrual based IPSAS in the LGAs. Other factors like sanctions by regulatory authorities, pressure from development partners and adequate implementation policies were also reported to have significant impact. Since this research involved 7 LGAs out of 185 found in Tanzania Mainland, we recommend further studies to take into account the rest of the LGAs in Tanzania and abroad.

1. INTRODUCTION

The introduction of the accrual basis in government accounting systems is one of the initial and determining steps in the reform of public financial management. Under the umbrella of New Public Management, government sectors transformed their financial reports to introduce accrual accounting principles [1,2]. It is believed that this is significant tool to achieve comparability, transparency, and accountability in the public sectors [3,4]. This move led to the adoption and implementation of accrual-based International Public Sector Accounting Standards (IPSAS) in the government jurisdictions. Despite the best-intended objectives of accrual-based IPSAS, still developing countries have not harvested their desired outcome. Past studies have reported that developing countries are implementing them as a mere fashion, accompanied by non-preparedness of accountants and auditors [5,6,7,8]. In addition to that, most of them are adopting and implementing accrual-based IPSAS as a response to pressure from development partners [1,9,10,11,12,13]. This indicates that there are factors that influence the implementation of accrual-based IPSAS, in the Public Authorities, Local Government Authorities (LGAs) and Central Government [14,3].

The LGAs in Tanzania adopted accrual-based IPSASs with effect from 1st July 2009 with a grace period of five years in order to be fully accrual-based IPSASs compliant. Such grace period expired on 30th June 2014 [15]. Prior to the adoption of accrual-based IPSAS, LGAs in Tanzania used cash-based IPSAS while the Central Government and other public sector companies used International Financial Reporting Standards (IFRS). The central government migrated to accrual-based IPSAS in 2013, leading to its first prepared accrual-based IPSAS consolidated financial statements on 30th June 2014 [15]. The cornerstone of reforming financial management in the public sector is the introduction of accrual-based IPSAS at the cost of traditional cash accounting system. This study aims at exploring the factors that influence implementation of accrual-based IPSAS in the LGAs.

The number of studies that focus on accrual-based IPSAS has grown extremely in the past few years. Most empirical researches have been done in the developed countries [see, for example, [16,14,17,18,19,20,2,7,5,13,21,22]. These researches have attempted to focus on the accrual budgeting and accountability, IPSAS and Consolidated Financial Statements, alignment between IPSAS Cash-basis and Accrual-basis, impact of IPSAS implementation, IPSAS Knowledge gap, degree of compliance and adoption, challenges and benefits of IPSAS implementation, transparency and accountability. However, the question of which factors influences implementation of accrual-based IPSAS in the LGAs remains unanswered. Evidence regarding implementation of accrual-based IPSAS from developing countries especially in the LGAs in Tanzania is limited. Only one study has been conducted in United Republic of Tanzania by Mbelwa et al. [1] focusing on the insititutional theory and accrual accounting. Consistently, the researcher's experience in training accrual-based IPSAS in the LGAs in Tanzania shows that LGAs' accountants are not much conversant with implementation of accrual-based IPSAS. Therefore, to the best of researcher's understanding and knowledge, researches on the implementation of accrual-based IPSAS in Tanzania, and in the LGAs, in particular, are inadequate. It is this gap in the research that provided motivation for the current study. The purpose of this study was to examine the factors which influence implementation of accrual-based IPSAS in the LGAs in Tanzania. To achieve the objectives of this paper, the rest of the research is organised as follows. Section two explores the

present literature on accrual-based IPSAS while section three deals with the study methodology. Section four reports findings whereas section five presents conclusion, recommendations and areas for further studies.

2. LITERATURE REVIEW

IPSAS has attracted various researchers in different countries and environments. This study is an attempt to investigate the factors influencing implementation of accrual-based IPSAS in LGAs. There are many studies on adoption of accrual-based IPSAS and this part of the research intends to appraise empirical evidence in implementation of accrual-based IPSAS:

Gomes et al. [17] investigated the benefits and challenges of implementing IPSAS and found that accrual-basis IPSAS improves the quality and use of consolidated financial statements. They insisted that, the interest of stakeholders are met while implemeting accrual-based IPSAS. Supporting this, Mann & Lorson [18] added that adoption of accrual-based IPSAS adds value on transparency and comparability of consolidated financial statements among government entities. On the other hand, Mir et al. [19] evaluated the implementation of cash and accrual-basis of accounting by considering Indonesian LGAs. Their results indicated that transparency and informative reports are produced by LGAs while using accrual-based IPSAS. In line with these, Nakmahachalasint & Narktabtee [3] concluded that accountability and financial transparency have been improved due to the implementation of accrual-based IPSAS.

Oulasvirta [22] studied the reluctance of developed countries to choose IPSAS. The findings revealed that strongly developed and implemented tradition accounting system was the most resisting factor to implement IPSAS. The study also concluded that developed countries did not adopt IPSAS because of lack of coercive pressures like persuasive rules to adopt and implement IPSAS. Likewise, the study by Christiaens et al. [13] had the same findings which showed that still remains a level of reluctance especially in central government of the developed countries to implement IPSAS. This is contributed by a well developed and trusted traditional accounting system compared with accrual-based IPSAS. The study also denoted a significant diversity in the timing and

implementation of accrual-based IPSAS among various government jurisdictions.

Study on accrual accounting in Tanzania by Mbelwa et al. [1] evidenced the existence of coercive and normative pressure from regulatory authorities and donors which affects the administrative model of accrual accounting in developing countries. Their research relied on institutional theory and administrative model of implementing accrual accounting in the public sector particularly in Tanzania. They ignored symbolic, political and experimental models of implementing accrual accounting.

Some of recent studies in developed countries like Italy, German and Spain show that most of the developed countries implement accrual and cash basis accounting [14]. Such implementation is accompanied by low level of compliance with budgeting system and accrual-based IPSAS. This was influenced by absence of accrual accounting culture among implementers [16]. Realising this, Christiaens et al. [5] concluded that governments of developed countries still used cash-based accounting, while only minorities apply accrual-basis IPSAS and the majority of the LGAs apply accrual accounting disregarding IPSAS. On the other hand, a number of jurisdictions including central and local governments do not adopt and implement IPSAS since they fear transfer their own local business accounting rules and systems. In another study on the factors influencing the acceptance of IPSAS by Tanjeh [11], suggested that knowledge and awareness should be well imparted in the executive, decision-makers and lawmaking arms of the government. The study concluded that staff training and recruitment program as well as management information system should be enhanced and given more priority when implementing accrual-based IPSAS. Supporting this, Ahmad [23] stated that, colleague opinion and inadequate information system support were among the factors influencing users' resistance towards accrual-based IPSAS.

Apart from that, PwC Global Survey [24] on accounting and reporting highlighted that lack of trained and qualified accountants on accrual-based IPSAS, inadequate IT system and preparation of budget on cash basis affects the implementation of accrual-based IPSAS. Although the survey focused exclusively on central governments, in accordance with the researcher experience in LGAs the situation seems to be the same in the LGAs in Tanzania.

Furthermore, Babatunde, [25] documented that political support was a significant factor for the slow implementation of IPSAS. Consistently, Adhikari and Mellemvik [26] reported that the involvement of the professional accountants and the considerations of the interests of international organizations is inevitable for the public sector entities to achieve the full benefits of IPSAS. The study also disclosed that the implementation of accrual accounting in the Nepalese Central Government has been an unsuccessful mission leading to the replacement of accrual accounting with the improved version of cash accounting anchored on the cash-based IPSAS. The methodology of this study involved documentary search and informal interviews. Whitefield and Savvas [27] discovered that the majority of the UN agencies have adopted and implemented accrual-based IPSAS because of the resolution and agreement by the UN General Assembly. The encouragement and support of the UN agencies facilitated the adoption and implement accrual-based IPSAS. It was also suggested that the process of implementing accrual-based IPSAS will be improved when IPSAS software developers and funding agencies take into account the cost of preparing IPSAS training materials, and general cost of adopting and implementing accrual-based IPSAS in the concerned public sector entities.

It was noted that since Tanzania adopted and implemented accrual-based IPSAS, the main challenges remaining were such as none identification and reporting of intangible assets, weakness in the information technology system which leads to the use of cash-based IPSAS instead of accrual-based IPSAS, preparation, and presentation of budget under cash system while the financial statements are prepared on accrual-based IPSAS [28].

Ahmad [23] highlighted that factors influencing users' resistance towards accrual-based IPSAS include colleague opinion, technologies and system, inadequate top management support and self-efficacy for change. On the other hand, the works of Azmi and Mohamed [29] and Tanjeh [11] supported the above statement by revealing that it is insufficient in house training, lack of knowledge and skills, absence of external consultant and low support from the senior management in implementing accrual-based IPSAS. Their study further added that accounting employees are ready for accepting and implementing accrual-based IPSAS.

Finally, the study on the actual implementation of accrual-based IPSAS by Connolly [7] acknowledged that there are various effects that have been introduced by implementation of accrual-based IPSAS. Some of them include increase in cost, over-optimistic claims and different timing in implementation process. The study concluded that developing countries like Tanzania still have a long way to go in order to enjoy the benefits of accrual-based IPSAS implementation.

2.1 Study Variables

In the following sub-part, the research presents the description of the variables followed by hypotheses development. In the context of this study, "implementation of accrual based IPSAS' constitutes the dependent variable; which is measured by self efficacy, self assessment and self competence. Our independent variables constitute LGAs accounting-cultural values and practical factors.

2.1.1 Implementation of accrual-based IPSAS

Being our dependent variable for this study, it is measured by three variables namely self-efficacy, self-assessment and self-competence. Each of these dependent variables is discussed hereunder:

A. Self-efficacy

Self efficacy means the individual person's confidence on his or her own ability and capacity to adopt and implement a new system [30]. The personal believes, perception, thinking and motivation affects implementation of accrual based IPSAS in the LGAs. Tayib [31] stated that self-efficacy motivates a person to get the required resources to implement the accrual based IPSAS. The availability of enough resources will motivate accountants and interested parties to understand and implement accrual based IPSAS [23].

B. Self-assessment

As used in psychology, self assessment involves the process of looking at an individual for the purposes of assessing his or her capability regarding a particular aspect [32]. It involves self evaluation, verification and enhancement. For the aim of this study, self assessment has been used in order to make evaluation and assessment of accountants and auditors knowledge regarding implementation of accrual

based IPSAS. It is used as a self evaluative tool for an individual in respect to IPSAS implementation. Specifically, it has been used as accrual based IPSAS knowledge assessment tool.

C. Self-competence

Self competence means the perception of individual's ability in terms of academic arena. It was developed by Harter [33]. It involves the perceived ability of an individual in a particular subject [1]. In our study, self competence as been used as a tool of assessing implementer's competence and ability regarding implementation of accrual based IPSAS.

2.1.2 Accounting-cultural values

Accounting-cultural values refer to the influences of accounting practices [6]. It involves those factors which persuade financial reporting and information disclosures in the financial statements. Generally, it is commonly known that the choice of a particular accounting system is mainly influenced by culture of a certain country [34]. This means that adoption and implementation of a particular system of accounting are mainly inspired by the culture in which such country originates. Gray [35] and Chanchani and Willett [6] collectively concluded that various accounting systems that are developed in one way or another should reflect and reinforce accounting- cultural values. Gray [35] and Edeigba [36] stated that professionalism, statutory control, conservatism, optimism, secrecy, transparency, uniformity, and flexibility determine the implementation of accounting standards. This study adopts the stated factors which are commonly known as accounting-cultural values [37,6,35]. In addition, Borker [37] concluded that these variables are the determining factors for the success or failure of International Financial Reporting Standards (IFRS) implementation.

A. Professionalism

Professionalism is the application of professional judgment to decide what accounting values should be when accounting policies does not exist or meet the circumstance and conditions of a particular organisation [36,35]. Professionalism is the opposite of statutory control which does not allow accountants and auditors to apply professional judgment in determining accounting values. Generally, professionalism refers to the application of professional judgment in

determining what should be the values of various accounting items and necessary disclosure in the financial statements of an organization and not merely compliance with the strict statutory requirements [6]. Specifically, it means a culture among preparers of financial statements which takes into consideration self-professional judgement to determine the values of accounting items; versus a culture that prefers a statutory direction for accounting and financial reporting practice in an entity [38,35].This is the motive of IPSASB in developing IPSAS. To achieve this preparers of financial statement should be able to apply their professional judgement and knowledge in accounting to determine the values of various accounting transactions in their daily activities [39,35]. The application of professionalism positively affects in implementation of accounting standards [1,6]. Basing on these arguments, it is therefore stated that:

> *H1.1: Professionalism positively influences Self efficacy.*
> *H1.2: Professionalism positively influences Self assessment*
> *H1.3: Professionalism positively influences Self competence.*

B. Statutory control

Statutory control is the accounting system in which organisation prefers the accounting profession to be strictly controlled by government and its authorities [40]. This means the system in which accounting practices is strictly controlled by the accounting regulatory authorities [6,35]. This requires professional accountants to make strict compliance with the accounting standards requirements in order to avoid penalties. Such requirement negatively affects the preparers of financial statements [5]. From the application of statutory control in public sector, the relationship between statutory control and implementation of accrual based IPSAS, we propose the following propositions:

> *H2.1: Statutory control negatively influences Self efficacy,*
> *H2.2: Statutory control negatively influences Self assessment*
> *H2.3: Statutory control negatively influences Self competence.*

C. Conservatism

This deals with the cautious behaviour of the preparers of the general and specific purposes

financial statement because of the uncertain and expected future consequences [6]. Generally, in any uncertain environment, in which the future is difficult to predict the process of recognising, measuring and disclosing any accounting event in the financial statements will follow conservatism principle [41,35]. Conservatism is the opposite of optimism [36]. Conservatism shows that the accountants and auditors are indecisive of future consequences or outcome in implementing a certain accounting standards [37]. This makes them to have a negative approach towards implementation of particular accounting practices. Therefore they are either hesitant to implement the accounting standards or reject to adopt them [1,6,35]. Taking into account the connection between conservatism and implementation of accrual based IPSAS in the LGAs, it is therefore hypothesized that:

> *H3.1: Conservatism negatively influences Self efficacy.*
> *H3.2: Conservatism negatively influences Self assessment.*
> *H3.3: Conservatism negatively influences Self competence.*

D. Optimism

Optimism takes place when accountants and auditors are confident and positive about the future outcomes and consequences of adopting and implementing particular accounting standards [6]. This is the opposite of conservatism. Optimist make compliance with a particular accounting standards and regulatory requirements; hoping for the future economic benefits and positive decisions in the future [35,36]. Supporting this, Godfrey et al. [42] concluded that accountants and auditors are certain and positive regarding the implementation of accounting standards. According to this discussion, it is logic to state that, the implementation of accrual based IPSAS in the LGAs will be affected by conservatism and optimism of accountants and auditors. By considering the association between implementation of accrual based and optimism in financial reporting, it is necessary to examine how optimism influence implementation of accrual based IPSAS in the LGAs. Accordingly, it is therefore hypothesized that:

> *H4.1: Optimism positively influences Self efficacy.*
> *H4.2: Optimism positively influences Self assessment.*

> *H4.3: Optimism positively influences Self competence.*

E. Secrecy

Secrecy measures the reluctance of the accountants and auditors to adopt and implement particular accounting standards. This may be due to the fact that, such accounting standards can expose information that is stringently confidential to preparers of financial statements [36,35]. According to the studies of Hofmann and McSwain [43] and Bakre and Lauwo [44] secrecy takes place for a number of reasons such as business competition, political cost, labour union confrontation and corrupt practices. This leads to a negative reaction in implementation of accrual based IPSAS. Generally, Secrecy involves the behaviour of confidentiality among preparers of financial statements in the disclosure of financial information to the outsiders as conflicting to transparency [6]. Considering the level of economic development and political factor, it can be assumed that, the presence of secrecy in a country would hinder investors and development partners from investing in that country [44,45,22]. Patel and Heidhues [46] found that there is limited disclosure in traditional accounting model in the developed countries compared with developing countries. In accordance with the above discussion, it is reasonable to believe that secrecy negatively affects implementation of accrual based IPSAS in the LGAs. This leads to the following hypotheses:

> *H5.1: Secrecy negatively influences Self efficacy.*
> *H5.2: Secrecy negatively influences Self assessment*
> *H5.3: Secrecy negatively influences Self competence*

F. Transparency

Transparency means the system in which financial and non financial information are consistently disclosed to the stakeholders. Under this, no hiding of confidential information [1,35,6]. One of the objectives of introducing accrual based IPSAS is to ensure transparency in the general purposes financial reports from government and therefore give citizens' confidence in the reliability and credibility of the information disclosed in the financial statements of the governments [3,47]. In general term, transparency involves organisation's

expectations that financial information disclosure should consistently be transparent across all entities. This indicates that the financial transactions and events of the entities should be disclosed with evidence that shows the institute's activities [2]. This variable has the possibility of informing users of financial statements about the organisation's reliability and integrity. Relying on the above facts, it is reasonable to believe that transparency would positively influence the implementation of accrual based IPSAS in the LGAs. It is therefore hypothesized that:

H6.1: *Transparency positively influences Self efficacy.*

H6.2: *Transparency positively influences Self assessment.*

H6.3: *Transparency positively influences Self competence.*

G. Uniformity

Uniformity is concerned with the preference for uniform accounting standards between organisation and the application of stated accounting standards over time as opposed to flexibility [6]. It is believed that the implementation of accrual based IPSAS will lead to comparability and uniformity among financial reporting systems [13,5]. Uniformity measures the use of accounting standards uniformly across all entities in terms of recognition, measurement, presentation and disclosure without any variations in the procedures used by different organisation [48]. Basing on the positive relationship between uniformity and accrual based IPSAS implementation; the study expects the following associations:

H7.1: *Uniformity positively influences Self efficacy*

H7.2: *Uniformity positively influences Self assessment*

H7.3: *Uniformity positively influences Self competence*

H. Flexibility

Flexibility refers to the preference for the use of accounting standards on an individual basis by considering only the circumstances concerned accounting transaction in the financial statements [35,49,12]. For example, Kondoa District Council can recognise the land acquired for free from the local village at cost price while Bahi District Council can recognise the same transaction at fair price. Flexibility measures the application and use of different methods of recognition, measurement, presentation and disclosure requirements of the financial transactions, which are not consistent from one entity to another. By considering the above discussions, we expect to test the extent relationship between flexibility and how they affect implementing accrual based IPSAS in the LGAs. The following hypotheses are developed:

H8.1: *Flexibility negatively influences Self efficacy*

H8.2: *Flexibility negatively influences Self assessment*

H8.3: *Flexibility negatively influences Self competence*

2.1.3 Practical factors

Basing on the reviewed literature [1,29,23,36,35,11,34], this study identified the following possible practical factors which might influence implementation of accrual-based IPSAS in the LGAs; staff knowledge and experience, top management support, staff training, implementation cost, and external pressure.

A. Staff knowledge and experience

The literature review has indicated a number of ways in which staff knowledge and experience influences implementation of accounting standards [1,34]. Previous studies have concluded that, awareness and knowledge is very positively related to adoption and implementation of accrual based IPSAS [3,11,36]. Generally, evidence shows that LGAs current staff are not skilled and qualified in implementation of accrual based IPSAS. Without highly qualified and experienced staffs, implementation of accrual based IPSAS will slow down. It is logically known that accounting staff should have knowledge and skills in implementation of accrual based IPSAS. Therefore the study proposes the following hypotheses:

H9.1: *Staff knowledge and experience positively affects Self efficacy*

H9.2: *Staff knowledge and experience positively affects Self assessment*

H9.3: *Staff knowledge and experience positively affects Self competence*

B. Top management support

In this study, top management involves the senior level employees who direct and monitor

the work of employees at lower level [23]. Specifically, in the LGAs top management includes Councilors and Council Management Team (CMT). CMT involves Municipal/District Executive Director and Heads of Departments. Involvement and support from the top management of the LGAs creates a positive reaction among accountants and auditors in implementation of accrual based IPSAS [1,29]. When a new system is introduced, support from the top management enhances employee's awareness and leads to effective implementation [50]. Mbelwa et al. [1] and Tanjeh [11] added that political support foster the adoption and implementation of various reforms in the public sector. Support from the top management is expected to have positive relationship with the implementation of accrual based IPSAS in the LGAs. Basing on the above, the study proposes the following hypothesis:

> H10.1: *Top management support positively influences Self efficacy*
> H10.2: *Top management support positively influences Self assessment*
> H10.3: *Top management support positively influences Self competence*

C. Staff training

Staff training affects employee's attitudes, readiness and preparedness in implementation of accrual based IPSAS in the LGAs [1,23,51]. Researcher experiences in the LGAs shows that LGAs accountants are not adequately trained to implement accrual based IPSAS. In addition, LGAs rely on donor funded training and there is insufficient in-house accrual based IPSAS training in the LGAs. Kalulu [52] concluded that building capacity to accountants and auditors in the government leads to positive implementation of accrual based IPSAS. Staff training is expected to have a positive relationship with implementation of accrual based IPSAS, as hypothesized hereunder:

> H11.1: *Staff training positively affects Self efficacy*
> H11.2: *Staff training positively affects Self assessment*
> H11.3: *Staff training positively affects Self competence*

D. Implementation cost

The process of implementing accrual based IPSAS in the LGAs involves costs. Costs are incurred in terms of trainings to accountants and

auditors, acquisition of software and hardware system [29,27]. All these need financial resources to support implementation of accrual based IPSAS in the LGAs. Previous findings have stated that inadequate financial means have attributed to failure of many countries to adopt and implement accrual based IPSAS [11,13]. It's commonly known that most of the LGAs in Tanzania don't have adequate financial resources to fund the implementation of accrual based IPSAS. As a result dependency on donor support exists [1,13]. Basing on this, the study expects negative relationship between implementation cost and implementation of accrual based IPSAS in the LGAs. Accordingly, it is hereby hypothesized that:

> H12.1: *Implementation cost negatively affects Self efficacy*
> H12.2: *Implementation cost negatively affects Self assessment*
> H12.3: *Implementation cost negatively affects Self competence*

E. External pressure

External pressure can influence the adoption and implementation of accrual based IPSAS [1,34,53,54]. It is brought by development partners, multinational enterprises, world financial institutions and international accounting firms [9]. These are the main forces for the development, adoption and implementation of accrual based IPSAS [14,5,13]. Additionally, Mbelwa et al. [1] and Cooke and Wallance [55] found that external environmental factors such as external pressure influence the implementation of accounting standards. Such external pressure could affect the implementation of accrual based IPSAS in the LGAs. With this observation, it is hereby hypothesized as follows:

> H13.1: *External pressure positively influences Self efficacy*
> H13.2: *External pressure positively influences Self assessment*
> H13.3: *External pressure positively influences Self competence*

3. METHODOLOGY

To answer the research questions, a structured questionnaire was developed to obtain the data for analysis from the relevant LGAs in Tanzania particulary from Dodoma region. For the purpose of meeting large and diverse population of the study to answer the research questions, survey design was the appropriate method. A structured

questionnaire is a best and systematic way of obtaining information for variables that are difficult to observe and inexpensive access to the organization [56]. It is also considered as an appropriate way of investigating and meeting the large and diverse population of the research, in order to get the relevant answers to the study questions [57].

3.1 Area of the Study and Sample Size

Specifically, this research involved seven (7) LGAs found in Dodoma region in Tanzania. It includes Dodoma City Council and six District Council namely Chamwino, Mpwapwa, Kongwa, Chemba, Kondoa, and Bahi. The reason draws from time, budget constraints and convenience to the researcher. The sample size of the study was 150 respondents from the selected LGAs, who were chosen from among the population of the seven (7) LGA's in Dodoma. The selected sample is consistent with Struwig & Stead [58] who concluded that if sampling has been correctly and carefully followed then sample sizes of 100 to 200 can provide an acceptable indication of the whole population. This was in agreement with Hair et al. [59] who stated that, for studies that use factor analysis, the sample size should be 100 or more.

3.2 Survey Responses Rate

We administered a total of 211 questionnaires using a drop and pick strategy. At the end of data collection exercise 181 questionnaires were completed and collected by the researcher. Out of 181 collected, however, 22 questionnaires were generally not acceptable since they were lacking large sections of the information. Therefore, we decided to discard them. On top of that, data cleaning was done with the view of establishing out of range responses and unengaged items. Also, computation of the standard deviation was employed aiming at checking the variations in the responses given by the respondents. As the outcome of this process, the researcher discarded nine questionnaires due to some variations. This led to the final usable questionnaires being 150. According to Hair et al. [59] the sample size for factor analysis should be 100 or greater. Therefore, for our study the sample size of 150 qualified for factor analysis.

3.3 Data Analyses Strategies

After completion of the data collection exercise, we embarked on data preparation and analyzing the collected data with the purpose of obtaining the findings and to make logic of our research. We coded and recorded the collected questionnaires into a computer package known as Statistical Package for Social Science (SPSS Version 20). We therefore, embarked on data analyses applying the factor analysis followed by multiple regressions. Factor analysis was employed to determine similar constructs and analyze the variables obtained from the research. It is used as a method of eliminating and summarising a huge amount of data with the purpose of making them be easily manageable while not losing necessary information [59]. Our research involved factor analysis due to a number of reasons. We employed confirmatory factor analysis so as to examine the validity of the considered items. As stated earlier, our survey instrument was composed by considering a number of items adopted from past studies as well as from scratch and literature review. This necessitated the use of factor analysis in order to examine the correlation structure and better understanding of the items involved. In addition to that, for the purpose of reducing the number of items included in the survey instruments, factor analysis was inevitable. After the results of factor analysis, multiple regression analysis was applied to explore the relationship between dependent and independent variables. After performing PCA we obtained 15 scales in which multiple regression analysis was employed to explore the influence of the identified factors in implementation of accrual based IPSAS in the LGAs.

4. RESULTS

4.1 Results of Factor Analyses

We carried out factor analyses for fourteen (14) variables with 54 items included in our study. We employed a five-point Likert scale to measure these items. The outcomes of such analyses were as follows.

A. Self-efficacy

As indicated in the survey instrument, self-efficacy constituted seven (7) items. Our factor analysis results indicated that items SE2 had poor correlation matrix with rest of the factors. Moreover, an inspection of the commonalities showed that SE2 had values less than 0.5 cut off, hence dropped so as to comply with the requirement of Principal Component Analysis (PCA). The rerun of the analysis led to two

components being retained (see Table 1). The loading of the remaining factors were more than 0.7 while satisfying the requirements of 60% or higher of the total variances. The KMO and Bartlett's test of sphericity was 0.857 and 0.000 (significant). The Cronbach's alpha value was 0.791.

B. Professionalism

The factor analysis was conducted for four items included in professionalism. Communalities revealed that Prof4 was below 0.5 cuts off. It was therefore dropped. We rerun the analysis with the remaining items. According to the number of factors extracted, the KMO and Bartlett's test of sphericity were 0.669 and 0.000 respectively. Cronbach's alpha value was 0.815 and

commonalities for Prof1, Prof2 and Prof3 were 0.739, 0.827 and 0.644 respectively (See Table 2). Scale3 represents *professional accountants with high ethical conduct*. The total variance explained by scale3 is 73.70%.

C. Statutory control

Our results from factor analysis reported that the correlation matrix between the variables was 0.001 and the KMO and Bartlett's test of sphericity were 0.50 and 0.0001 respectively. The inspection of the communalities showed that both items (STAC1 and STAC2) were above 0.7 cut-offs (see Table 3). Cronbach's alpha value was 0.578. A Scale4 stands for *sanctions by regulatory authority* which contributes 70.36% of the total variance.

Table 1. Factor analysis for self-efficacy

Component	Cronbach's alpha	# items	Cases	Code	Factor 1	Factor 2
Component 1: Scale1: SE	0.791	6	150	SE4	0.862	
				SE6	0.862	
				SE3	0.856	
				SE5	0.848	
				SE1	0.743	
Component 2: Scale2: SE	0.721			SE7		0.971
Total variance explained						
Initial Eigenvalues Total					3.511	1.026
Initial Eigenvalues % of Variance (75.61% total)					58.515	17.095
Overall Cronbach's Alpha						0.791

Table 2. Factor analysis for professionalism

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale3: Prof	0.815	3	150	Prof2	0.910
				Prof1	0.860
				Prof3	0.803
Total variance explained					
Initial Eigenvalues Total					2.211
Initial Eigenvalues % of Variance (total)					73.705
Overall Cronbach's Alpha					0.815
KMO					

Table 3. Factor analysis of statutory control

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale4: STAC	0.578	2	150	STAC1	0.839
				STAC2	0.839
Total variance explained					
Initial Eigenvalues Total					1.407
Initial Eigenvalues % of Variance (70.36% total)					70.362
Overall Cronbach's Alpha					0.578

D. Conservatism

We conducted factor analysis for four items under Conservatism. One item (CONSE3) had a poor correlation matrix with rest of the variables. Moreover, inspection of the commonalities reported that CONSE3 was below the threshold. It was then omitted. We rerun the analysis for the remaining three items. The KMO and Bartlett's test of sphericity were 0.67 and 0.001 respectively. The reliability analysis reported Cronbach's alpha value at 0.745 while commonalities reported were 0.695, 0.718 and 0.576 for CONSE1, CONSE2, and CONSE4 respectively. (Refer Table 4). Scale5 represents *conservatism*. The total variance represented by this scale is equal to 66.28%.

E. Optimism

Our factor analysis for Optimism reported KMO and Bartlett's test of sphericity of 0.50 and 0.0001 respectively. Review of the Communalities revealed that OPT1 and OPT2 were above the cut-off, hence retained for further analysis and interpretation. Reliability testing showed the Cronbach's alpha value was 0.516 (see Table 5). In total 67.39% is represented by scale6, which stands for hope for *attraction of future business opportunities including development partners.*

F. Secrecy

We conducted only a single iteration for this variable. Test of Communalities revealed that all three items (SECR1, SECR2, and SECR3) were above 0.7 thereafter retained for further analysis and interpretation. Reliability analysis results indicated that Cronbach's alpha was 0.676, KMO 0.643 and Bartlett's test of sphericity 0.001 (See Table 6). Scale7 means *secrecy* and it shows 60.73% of the total variance explained.

Table 4. Scale analysis for conservatism

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale5: CONSE	0.745	3	150	CONSE1	0.833
				CONSE2	0.847
				CONSE4	0.759
Total variance explained					
Initial Eigenvalues Total					1.989
Initial Eigenvalues % of Variance (66.283% total)					66.283
Overall Cronbach's Alpha					0.745

Table 5. Scale analysis for optimism

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale6: OPT	0.516	2	150	OPT1	0.821
				OPT2	0.821
Total variance explained					
Initial Eigenvalues Total					1.348
Initial Eigenvalues % of Variance (67.391% total)					67.391
Overall Cronbach's Alpha					0.516

Table 6. Scale analysis for secrecy

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale7: SECR	0.676	3	150	SECR1	0.793
				SECR2	0.717
				SECR3	0.824
Total variance explained					
Initial Eigenvalues Total					1.822
Initial Eigenvalues % of Variance (60.731% total)					60.731
Overall Cronbach's Alpha					0.676

G. Transparency

As detailed in Table 7 transparency involved three factors. The outcome of factor analysis indicated that KMO and Bartlett's test of sphericity was 0.63 and 0.0001 respectively. Investigation of Communalities revealed that all three items qualified for further analysis and interpretation. Reliability analysis revealed 0.714 as Cronbach's alpha. Scale8 stands for *publication of financial statements*. It contributes 64.33% of the total variance explained.

H. Uniformity

We conducted two iterations for three items involved in Uniformity. In the first iteration, one item was dropped (UNIF1). This was to comply with the requirement of PCA. Test of communalities suggested that the remaining two factors were in compliance with the requirements of PCA and showed good correlation between the variables. The measure of sampling adequacy for KMO and Bartlett's test of sphericity was 0.50 and 0.0001 respectively. Table 8 shows the outcome of factor analysis for Uniformity. Reliability testing revealed 0.647 as Cronbach's alpha (See Table 8). Scale9 represents *Standardized financial statements*. It is explained by 77% of the total variance.

I. Flexibility

Flexibility constituted two factors namely FLEX1 and FLEX2. Reliability testing showed 0.395 as Cronbach's alpha. The measure of sampling adequacy for KMO and Bartlett's test of sphericity was 0.5 and 0.002. Communalities for the items were below 0.7 cut-offs. The component matrix for FLEX1 and FLEX2 was 0.79 each (See Table 9). Since reliability testing was below the required criteria, this variable was not used for further analysis and interpretation, hence dropped.

Table 7. Scale analysis for transparency

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale8: TRANS	0.714	3	150	TRANS1	0.789
				TRANS2	0.869
				TRANS3	0.745
Total variance explained					
Initial Eigenvalues Total					1.93
Initial Eigenvalues % of Variance (64.33% total)					64.339
Overall Cronbach's Alpha					0.714

Table 8. Scale analysis for uniformity

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale9: UNIF	0.647	2	150	UNIF2	0.878
				UNIF3	0.878
Total variance explained					
Initial Eigenvalues Total					1.543
Initial Eigenvalues % of Variance (total)					77.13
Overall Cronbach's Alpha					0.647

Table 9. Scale analysis for flexibility

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Component 1: Scale: FLEX	0.395	2	150	FLEX1	0.79
				FLEX2	0.79
Total variance explained					
Initial Eigenvalues Total					1.247
Initial Eigenvalues % of Variance (total)					62.339
Overall Cronbach's Alpha					0.395

J. Staff knowledge and experience

Our factor analysis for staff knowledge and experience involved seven items. We conducted only one iteration. Since all seven items had good commonalities and correlation matrix with the rest of the factors, no item was dropped. These items were retained for further analysis and interpretation. The analysis of the KMO and Bartlett's test of sphericity was 0.839 and 0.001(significant) respectively. Factor analysis disclosed two components. Components of each factor are shown in Table 10. Scale10 stands for *staff experience* while scale11 stands for *understanding and skills*. Evaluation of the summated scale correlation matrix indicates existence of a strong negative association between scale10 and scale11. In addition, scale10 and scale11 contribute 60% and 16.8% of the total variance (76.8%). Reliability testing for these two scales was more than 0.7 (Cronbach's alpha).

K. Top management support

We ran a factor analysis for Top Management Support involving seven (7) items. During the first iteration, item TMS5 showed poor correlation matrix and communality problem. In the second iteration, item TMS4 also was dropped due to the same problem. Due to the reporting of the required commonalities, items TMS1, TMS2, TMS3, TMS6, and TMS7 were retained for further interpretation and use. In addition, measure of sampling adequacy revealed KMO and Bartlett's test of sphericity of 0.733 and 0.0001 respectively. The inspection of the rotated component matrix revealed components one and two. Component one was represented by items TMS1, TMS2, and TMS3. Component two was represented by items TMS6 and TMS7. These items were retained for future analysis and interpretation (See Table 11). Scale12 stands for *Implementation Policies* whereas scale13 represents *willingness and support from CMT*. Scale12 contributes 50.48% while scale13 contributes 21.65% of the total variance explained (72.14%). Assessment of the summated scale correlation matrix of bivariate correlation indicates existence of a positive significant relationship between scale12 and scalel3. Reliability testing for scale12 and scale13 was reported at 0.524 and 0.725 respectively as Cronbach's alpha.

Table 10. Scale analysis for staff knowledge and experience

Component	Cronbach's alpha	# items	Cases	Code	Factor 1	Factor 2
Component 1: Scale 10: SKE	0.881	7	150	SKE6	0.900	
				SKE5	0.850	
				SKE7	0.846	
				SKE4	0.650	
Component 2: Scale 11: SKE	0.75			SKE1		0.850
				SKE2		0.833
				SKE3		0.769
Total variance explained						
Initial Eigenvalues Total					4.130	1.178
Initial Eigenvalues % of Variance (75.82%total)					59.997	16.823
Overall Cronbach's Alpha					0.881	

Table 11. Scale analysis for top management support

Component	Cronbach's alpha	# items	Cases	Code	Factor 1	Factor 2
Component 1: Scale12: TMS	0.524	5	150	TMS2	0.845	
				TMS1	0.812	
				TMS3	0.765	
Component 2: Scale13: TMS	0.725			TMS6		0.874
				TMS7		0.828
Total variance explained						
Initial Eigenvalues Total					2.524	1.083
Initial Eigenvalues % of Variance (72.138% total)					50.488	21.651
Overall Cronbach's Alpha						0.524

L. Implementation cost

This variable constitutes three factors namely IMC1, IMC2, and IMC3. Reliability testing resulted in 0.587 Cronbach's alpha. We conducted factor analysis for these items. Inspection of Communalities and correlation matrix led to drop in IMC3. This was due to PCA requirements. Final iteration suggested two factors being retained, which are IMC1 and IMC2. These items had the required correlation matrix and didn't report any communalities problems. The KMO and Bartlett's test of sphericity were 0.50 and 0.0001 respectively. Table 12 shows the outcome of factor analysis. Scale14 means *Implementation Costs* and it has 70.48% of the total variance explained.

M. Staff training

Our factor analysis for staff training consisted of four items. Inspection of the commonalities supported that all items should be included for next analysis and interpretation. The measure of adequacy sampling showed KMO and Bartlett's test of sphericity of 0.95 and 0.0001 respectively. The Initial Eigenvalues in total were 1.3441 and 1.192 for scale15 and scale16 respectively. Reliability testing indicated that Cronbach's alpha is more than 0.70 for each scale (See Table 13). Scale15 stands for *training necessity* while scale16 stands for *in-house training.* The total

variance explained is 33.32% and 29.79% for scale15 and scale16 respectively.

N. External pressure

We employed factor analysis for external pressure. Reliability testing was 0.548 Cronbach's alpha. Item EXP2 had communalities problem and poor correlation. This was discarded. Our final iteration led to two items being retained. These items reported good commonalities and correlation matrix between them. The measure of adequacy sampling showed KMO and Bartlett's test of sphericity of 0.610 and 0.0001 respectively. The Initial Eigenvalues in total and in percentage of variances were 1.350 and 67.477 respectively (See Table 14). Scale17 stands for *pressure from development partners.*

4.2 Results for Multiple Regression Analysis

Implementation of accrual based IPSAS in the LGAs was measured by using three dependent variables namely Self Efficacy, Self Assessment and Self Competence. After applying factor analysis, we examined each dependent variable by using two independent variables namely Accounting-cultural values and practical factors. The next section presents the outcomes of multiple regression analysis for each dependent variable against independent variables.

Table 12. Scale analysis for implementation cost

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Scale14: IMC	0.587	2	150	IMC1	0.84
				IMC2	0.84
Total Variance Explained					
Initial Eigenvalues Total					1.41
Initial Eigenvalues % of Variance (70.488% total)					70.488
Overall Cronbach's Alpha					0.587

Table 13. Scale analysis for staff training

Component	Cronbach's alpha	# items	Cases	Code	Factor 1	Factor 2
Component 1: Scale15: STR	0.96	2	150	STR1	0.829	
				STR4	0.747	
				STR3		0.819
Component 1: Scale16: STR	0.87			STR2		0.698
Total Variance Explained						
Initial Eigenvalues Total					1.341	1.192
Initial Eigenvalues % of Variance (63.32% total)					33.325	
						29.795
Overall Cronbach's Alpha						0.96

Table 14. Scale analysis for external pressure

Component	Cronbach's alpha	# items	Cases	Code	Factor 1
Scale17: EXP	0.548	2	150	EXP1	0.821
				EXP3	0.821
Total Variance Explained					
Initial Eigenvalues Total					1.35
Initial Eigenvalues % of Variance (67.477% total)					67.477
Overall Cronbach's Alpha					0.548

4.2.1 Accounting-cultural values

Accounting-cultural values constituted our independent variables and it was measured by scale3 to scale9. Recall in factor analysis, seven determinants emerged after performing PCA. Under this parts the outcome of multiple regressions for the determinants of Self-efficacy, Self-assessment and Self-competence against accounting-cultural values are presented. The next sections present the results.

A. Determinants of self efficacy

For the aim of testing the influence of accounting-cultural values to implementation of accrual based IPSAS in the LGAs, self efficacy was taken as dependent variable. As indicated in Table 15, Panel A shows existence of significant influence between scale3 and scale9 against self efficacy. In addition, scale3 and scale9 reveals positive and negative significant influence respectively. However, scale4 to scale8 have insignificant influence to self efficacy. Generally, the statistical model is significant (R^2=0.53; F=1.146; P<0.000). There is no multicollinearity problem.

Moreover, for the purposes of improving our regression model and remaining with those independent variables having significant influence, the researcher considered necessary to undertake stepwise regression analysis. Table 16 shows the outcome of this regression.

Analysis of Table 16 shows that, two independent variables (scale3 and scale9) having R^2 value of 0.36 significantly influence self efficacy in implementation of accrual based IPSAS. As per these results, the researcher fully accepts hypotheses H1.1 and H7.1.

B. Determinants of self assessment

As shown in Panel B (Table 17) the regression model investigated the association between self assessment and accounting-cultural values represented by scale3 to scale9. Two dimensions namely scale3 and scale9 have been found having significant positive influence to self assessment in implementation of accrual based IPSAS. The remaining dimensions (scale4 to scale8) indicate insignificant relationship to self assessment. Assessment of the VIF and Tolerance show that there is no multicollinearity problem between the variables. The regression model was at 64% (strong) and the overall relationship was significant (F=1.396; P<0.000).

After performing multiple regression analysis stated above, the researcher embarked into stepwise estimation analysis. The results are shown in Table 18 hereunder.

Table 15. Determinants of self efficacy

Panel A	Independent variable	Beta	t-value	Sig	Tolerance	VIF
Dependent Variable	Constant	2.98	3.01	0.00		
Self efficacy	Scale3	0.06	4.10	0.00	0.95	1.06
	Scale4	0.13	0.98	0.33	0.58	1.71
	Scale5	(0.13)	(0.95)	0.34	0.62	1.61
	Scale6	0.00	0.01	0.99	0.78	1.28
	Scale7	0.05	0.43	0.67	0.75	1.34
	Scale8	0.12	0.90	0.37	0.85	1.18
	Scale9	(0.22)	(1.96)	0.00	0.71	1.41
	R^2=0.53 ANOVA (F4)=1.146, P<0.000					

Table 16. Determinants of self efficacy: Stepwise estimation

Construct	Beta	t-value	Sig	Tolerance	VIF
Constant		12.28	0.00		
Scale3	0.01	2.75	0.00	0.80	1.00
Scale9	(0.19)	(2.36)	0.02	1.00	1.00
		R^2=0.36, ANOVA (F)=5.5, P<0.000			

Table 17. Determinants of self assessment

Panel B						
Dependent variable	**Independent variable**	**Beta**	**t-value**	**Sig**	**Tolerance**	**VIF**
Self assessment	Constant	1.79	1.98	0.05		
	Scale3	0.20	3.01	0.01	0.95	1.06
	Scale4	(0.15)	(1.21)	0.23	0.58	1.71
	Scale5	0.12	0.95	0.34	0.62	1.61
	Scale6	(0.03)	(0.27)	0.79	0.78	1.28
	Scale7	(0.07)	(0.61)	0.54	0.75	1.34
	Scale8	(0.00)	(0.02)	0.98	0.85	1.18
	Scale9	0.24	2.38	0.01	0.71	1.41
		R^2=0.64 ANOVA (F)=1.396, P<0.000				

Table 18. Determinants of self assessment: Stepwise estimation

Construct	Beta	t-value		Sig.	Tolerance	VIF
Constant		7.12		0.00		
Scale9	0.18	2.21		0.00	1.00	1.00
		R^2=0.32, ANOVA (F)=4.92, P<0.000				

From the above (Table 18) only scale9 has been retained due to the fact that, it is strongly significant. Examination of the Variance Inflation Factor and Tolerance highlights non existence of multicollinearity problem with the model. Therefore, hypothesis H7.2 accepted.

C. Determinants of self competence

Recall that we performed multiple regressions analysis, using independent variables (scale3 to scale9) against self competence as our dependent variable. The analysis reported a strongest regression model at 78% and the overall relationship was significant (F=1.726; P<0.000). Moreover, the analysis shows that scale3, scale4, scale8 and scale9 have significant influence to self competence. Scale3 and scale9 have positive significant association to self competence whereas scale4 and scale8 have negative significant influence to self competence. Apart from that, scale5 to scale7 don't show any significant influence to self competence in implementation of accrual based IPSAS. As indicated by the VIF and Tolerance results, there is neither singularity nor multicollinearity problem among the variables (See Panel C in Table 19). In general the regression model is statistically significant (R^2=0.78; F=1.726; P<0.000).

As indicated in Table 20, stepwise estimation was undertaken after multiple regression analysis stated above. Its outcomes are as shown in Table 20. Investigation of the outcomes suggest that, only two constructs (scale3 and scale9) have been retained having significant influence. Therefore, we accept hypotheses H1.3 and H7.3.

4.2.2 Practical factors

As stated in previous sections, the factor analysis performed revealed eight components (scale10 to scale17) which influences implementations of accrual based IPSAS in the LGAs. In this part, we conducted multiple regressions for these components against self efficacy, self assessment and self competence as dependent variables. The results of the determinants of each dependent variable are explained as follows.

Table 19. Determinants of self competence

Panel C						
Dependent variable	**Independent variable**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Self competence	Constant		3.27	0.00		
	Scale3	0.00	6.90	0.00	0.95	1.06
	Scale4	(0.15)	(2.71)	0.01	0.58	1.71
	Scale5	0.09	0.83	0.41	0.62	1.61
	Scale6	0.06	0.71	0.48	0.78	1.28
	Scale7	0.08	0.88	0.38	0.75	1.34
	Scale8	(0.20)	(2.24)	0.03	0.85	1.18
	Scale9	0.16	6.60	0.00	0.71	1.41
	R^2=0.78 ANOVA (F)=1.726, P<0.000					

Table 20. Determinants of self competence: Stepwise estimation

Construct	Beta	t-value		Sig.	Tolerance	VIF
Constant		7.91		0.00		
Scale3	0.16	7.55		0.00	0.75	1.00
Scale9	0.18	2.23		0.03	1.00	1.00
		R^2=0.52, ANOVA (F)=3.76, P<0.000				

A. Determinants of self efficacy

For the purpose of testing the influence of practical factors (scale10 to scale17) to implementation of accrual based IPSAS, self efficacy has been considered as dependent variable. As indicated in Panel A (Table 21) the regression model is good (R^2=82.5%; F=83.24; P<0.000) and the VIF and Tolerance suggest absence of multicollinearity problem among the variables. There is a significant positive relationship between scale10 and self efficacy.

Also, a significant negative association exists between scale15 and self efficacy. The remaining dimensions have no any significant impact to self efficacy.

Examination of Table 22 indicates that, only scale10 has been retained. This is contributed by its significant influence. The R square of the model is 0.816 and there is no indication of multicollinearity problem. Basing on the results of stepwise estimation shown in Table 22, the researcher accepts hypothesis H9.1 only.

Table 21. Determinants of self efficacy

Panel A	**Independent variable**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Dependent variable	Constant		(9.55)	0.00		
Self efficacy	Scale10	0.87	21.20	0.00	0.74	1.35
	Scale11	(0.06)	(1.55)	0.12	0.75	1.34
	Scale12	(0.05)	(1.22)	0.23	0.75	1.34
	Scale13	0.01	0.19	0.85	0.81	1.24
	Scale14	0.03	0.78	0.44	0.94	1.07
	Scale15	0.00	0.05	0.04	0.82	1.22
	Scale16	0.01	0.19	0.85	0.93	1.08
	Scale17	0.08	1.80	0.07	0.69	1.46
	R^2=0.825 ANOVA (F)=83.24, P<0.000					

Table 22. Determinants of self efficacy: Stepwise estimation

Construct	Beta	t-value		Sig.	Tolerance	VIF
Constant		(2.08)		0.04		
Scale10	0.90	25.60		0.00	1.00	1.00
		R^2=0.816, ANOVA (F)=6.555, P<0.000				

B. Determinants of self assessment

Panel B in Table 23 indicates that VIF and Tolerance are within the required criteria, meaning that multicollinearity problem doesn't exist among the independent variables. The regression model (R^2) is 69%. With other things remain constant, scale10; scale12 and scale15 have significant negative relationship to self assessment. There is no significant impact for the remaining of the variables to self assessment.

In addition to multiple regression results presented in Table 22, we conducted stepwise estimation analysis (see Table 24). Independent variables with significant influence to Self Assessment known as scale10 and scale15 have

been reported. As per such results, we fully accept hypotheses H9.2 and H11.2 only.

C. Determinants of self competence

Panel C in 25 shows that scale10 and scale17 are negatively related to self competence while scale11, scale12, scale13, scale14, scale15 and scale16 positively influence self competence of the respondents in implementation of accrual based IPSAS in the LGAs. More specifically, scale10, scale11, scale15 and scale17 significantly influence self competence. Assessment of the regression model indicates that $R^2=29\%$ (poor), although the general relationship is good (F=7.22; P<0.000). Furthermore, test for multicollinearity problem indicates non-existence of it.

Table 23. Determinants of self assessment

Panel B						
Dependent variable	**Independent variable**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Self assessment	(Constant)		3.25	0.00		
	Scale10	(0.20)	(2.15)	0.03	0.74	1.35
	Scale11	0.15	1.60	0.11	0.75	1.34
	Scale12	(0.03)	(0.35)	0.01	0.75	1.34
	Scale13	0.10	1.11	0.27	0.81	1.24
	Scale14	(0.01)	(0.10)	0.92	0.94	1.07
	Scale15	(0.08)	(0.90)	0.04	0.82	1.22
	Scale16	(0.01)	(0.12)	0.90	0.93	1.08
	Scale17	0.11	1.14	0.26	0.69	1.46
	R^2=0.69 ANOVA (F)=1.878, P<0.000					

Table 24. Determinants of self assessment: Stepwise estimation

Construct	Beta	t-value	Sig.	Tolerance	VIF
Constant		12.55	0.00		
Scale10	(0.23)	(2.94)	0.00	1.00	1.00
Scale15	0.11	(6.40)	0.00	1.00	1.00
	R^2=0.55, ANOVA (F)=8.643, P<0.000				

Table 25. Determinants of self competence

Panel C						
Dependent variable	**Independent Variable**	**Beta**	**t-value**	**Sig.**	**Tolerance**	**VIF**
Self Competence	Constant		3.68	0.00		
	Scale10	(0.32)	(3.84)	0.00	0.74	1.35
	Scale11	0.24	2.94	0.00	0.75	1.34
	Scale12	0.03	0.36	0.72	0.75	1.34
	Scale13	0.04	0.55	0.58	0.81	1.24
	Scale14	0.08	1.06	0.29	0.94	1.07
	Scale15	0.14	1.82	0.01	0.82	1.22
	Scale16	0.04	0.57	0.57	0.93	1.08
	Scale17	(0.14)	(6.70)	0.00	0.69	1.46
	R^2=0.29 ANOVA (F)=7.222, P<0.000					

Table 26. Determinants of self competence: Stepwise estimation

Construct	Beta	t-value	Sig.	Tolerance	VIF
Constant		15.47	0.00		
Scale10	(0.44)	(6.04)	0.00	1.00	1.00
Scale15	0.28	3.55	0.00	0.81	1.23
Scale17	(0.32)	(4.11)	0.00	0.81	1.23
		R^2=0.891, ANOVA (F)=25.962, P<0.000			

Moreover, for the purpose of improving our regression model we embarked into stepwise estimation analysis (see Table 26). This table has three independent variables namely scale10, scale15 and scale17. According to these results, the retained variables show significant influence to self competence. Generally, three hypotheses namely H9.3, H11.3 and H13.3 are accepted.

5. DISCUSSION OF THE FINDINGS

5.1 Factors Influencing Implementation of Accrual-based IPSAS in the Selected LGAs in Tanzania

We conducted factor analysis on 54 items in total for the aim of identifying the factors influencing the implementation of accrual-based IPSAS in the Tanzanian LGAs. The researchers found that these items loaded into 15 factors. Therefore, we concluded that these are the factors that influence implementation of accrual-based IPSAS in the LGAs. These scales are described as follows.

Firstly, scale3 (professional accountants with high ethical conduct). This means that the successful implementation of accrual-based IPSAS involvement of professional accountants with high ethical conduct is inevitable. In agreement with our findings, past studies concluded that the existence of technical support from qualified accountants adds value in implementation of accrual-based IPSAS [1,27,13,5]. Moreover, Abimbola [60] and Whitefield [27] documented that, there is a need for the government to increase the employment of qualified accountants in the LGAs. This influence successful implementation of accrual-based IPSAS in the LGAs. Moreover, Athukorola [61] highlighted that implementation of accrual accounting needs trained accountants, particularly qualified accountants who can manage the system.

Secondly, scale13 (willingness and support). Our study indicates that the presence of willingness and support from the CMT influences the implementation of accrual-based IPSAS in the LGAs. In supporting this, Mbelwa et al. [1] and Killagane [62] stated that presence of government commitment affects the whole process of implementation of accrual-based IPSAS. Willingness and support by the CMT are depicted when they support training and education needs of the accountants and auditors [63]. Also presence of top management willingness to change to accrual-basis of accounting and support from external auditors affects accrual-based IPSAS implementation [64,27].

Thirdly, scale10 (staff experience). Our study revealed that the presence of experienced accountants and auditors in the LGAs influences implementation of accrual-based IPSAS. Mbelwa et al. [1] and Zeghal and Mhedhbi [34] concluded that implementation of accounting standards needs the involvement of experienced personnel. Generally presence of experienced staff in the government influences the acceptance of IPSAS [11,65].

Fourthly, training necessity and in-house training (scale16 &15). The provision of in-house training in the LGAs affects implementation of accrual-based IPSAS. In agreement with our findings, Sariman [66] and Mbelwa et al. [1] found that provision of comprehensive training on how to use accrual-based IPSAS influences implementation process. In line with our outcomes, Killagane [62] insisted that training on accrual-based IPSAS is inevitable. This is due to the fact that our accounting education in Tanzania has fewer focuses on government financial reporting. Most emphasis is under commercial accounting system [31].

Fifthly, scale12 (implementation policies): According to our findings, the policies of the LGAs influences the implementation of accrual-based IPSAS. Previous findings have reported that presence of conducive policies leads to effective implementation of any accounting reforms [54,67]. In addition, Rajib [9] and Kalulu [52] highlighted that presence of political will and

support from the oversight bodies facilitates implementation of accrual-based IPSAS.

Sixthly, scale14 (implementation cost): Most of the LGAs face challenges in meeting implementation cost of accrual-based IPSAS. Connolly [7] added that implementation of accrual-based IPSAS is expensive system with fewer benefits to developing countries. This implies that the cost of implementing accrual-based affects the whole implementation process. In addition, Ahmad [23] reported that high IPSAS implementation cost affects the adoption of accrual-based IPSAS.

Finally, other factors reported by our findings include scale4 (sanctions by regulatory authorities), scale17 (pressure from development partners), scale6 (future business opportunities including attraction of development partners) and scale8 (publication of financial statements). Contributions of these factors were 60% or more of the total variance explained. Our results concur with previous studies like [1,34,68,51,36,29]. Generally, such studies concluded that implementation of accrual-based IPSAS is influenced by external pressure, fear of losing donor-funded projects and effective consolidated financial statements of the entire government [1].

5.2 Effects of the Identified Factors in Implementation of Accrual based IPSAS in the LGAs in Tanzania

We used the results of PCA generated from factor analysis to conduct multiple regressions analysis. The purpose of this was to obtain the answers to our second research question. This question aimed at addressing the effects of the identified factors in implementation of accrual based IPSAS in the LGAs. Implementation of accrual based IPSAS, being our dependent variable constituted three constructs namely self efficacy, self assessment and self competence. We constructed hypotheses in section two in order to answer our second research question. The next subsections presents the results of hypotheses testing reported in section two.

5.2.1 Self efficacy and accounting-cultural values

In line with our second research question, the researcher developed thirteen hypotheses related to self efficacy. We used scale3 to scale9 to explore the relationship between self efficacy

and accounting-cultural values. The part below discuses the results of each hypothesis presented in section two:

According with the results presented in Table 15, the main determinants of self efficacy are scale3 (professional accountants with high ethical conducts) and scale9 (standardized financial statements). The stated scales significantly influences self efficacy. This means that, scale3 and scale9 positively influences implementation of accrual based IPSAS at significant level. Our findings are consistent with Azmi and Mohamed [29] and Connolly and Hyndman [7] who concluded that qualified accountants are highly self reliant in implementation of accounting standards. Basing on our findings, the researcher fully accepts hypotheses H1.1 and H7.1 while rejecting scales4 to scale8. In addition, professional accountants are more competent in adoption and implementation of accounting system [1,34].

5.2.2 Self assessment and accounting-cultural values

Recall, in order to answer our second research question, the researcher developed thirteen hypotheses related to self assessment. We used scale3 to scale9 to explore the relationship between self assessment and accounting-cultural values (see Table 16). The next part discuses the results of each hypothesis presented in section two. Our findings provide a strong support for hypothesis H7.2 (refer Table 17). This means that scale9 positively affects self assessment at significant level. Supporting our results, Kalulu [52] highlighted that standardized financial statements in the LGAs facilitates consolidation of government financial statements. He further added that, development of uniform financial reporting formats influences self assessment of the LGAs in the consolidation process. In addition, Killagane [62] in his presentation to accountants and auditors conference emphasized that, the government has not full engagement of professional accountants in the LGAs regarding implementation of accrual based IPSAS. This poses a challenge towards the use of standardized financial statements format in the LGAs.

5.2.3 Self competence and accounting-cultural values

In order to measure self competence as one of our dependent variable, the researcher

developed thirteen hypotheses. Findings for these hypotheses are presented in Tables 18 and 19. We tested the relationship between self competence and accounting cultural values by using scale3 to scale9. Examinations of Table 19 suggest that scale3 and scale9 have been found having significant positive influence to self competence in implementation of accrual based IPSAS. Recall, scale3 stands for professional accountants while scale9 stands for standardized financial statements. Our results provide fully support to hypotheses H1.3 and H7.3. This leads to the rejection of the rest of the hypotheses having scales4 to scale8. In line with our results, we proposed a positive relationship between professionalism and self competence. Supporting our findings Tanjeh [11] stated that probability of adoption and implementation of accrual based IPSAS increases when implementers have the required knowledge and skills. Apart from that, our results are inconsistency with the rest of the hypotheses under self competence. As shown in Table 19, scale4 to scale8 show insignificant relationship with self competence. There is no statistical significant between self competence and scale4 to 8. This implies that, implementation of accrual based IPSAS is not affected by scale4 to 8.

5.2.4 Self efficacy and practical factors

Recall in section four we performed PCA which resulted into eight components under practical factors (independent variables). These components are known as scale10 to scale17. The researcher undertook multiple regressions analyses for these scales against self efficacy (dependent variable). The ensuing part describes the results.The researcher proposed existence of positive association between staff knowledge and experience and self efficacy (H9.1). As stated in Table 21, scale10 supports our hypothesis. Remember scale10 represents staff experience. Our findings are in agreements with past studies such as [34,11,60]. Moreover, Kalulu [52] and Mbelwa et al. [1] emphasized that the availability of experienced staff speeds up the implementation of accrual based IPSAS. The researcher also tested the effect of scale11 to sacle17 to self efficacy in implementation of accrual based IPSAS. According to results depicted in Table 21, there is no statistical significant relationship between scale11, 12, 13,14,15,16 and 17 to self efficacy. Our findings are somehow supported by past studies [34,5,13,51].

5.2.5 Self assessment and practical factors

Under this part, only scale10 and scale15 shows significant negative effect to self assessment in implementation of accrual based IPSAS (refer to Table 23). This is not in agreement with our proposed hypotheses (H9.2 and H11.2). Recall scale10 stands for understanding and skills whereas scale15 represents training necessity. The main factors which may contribute to our findings may be inadequate training to LGAs accountants and auditors [1,27]. This denotes that most of the LGAs accountants don't have adequate understanding and knowledge regarding accrual based IPSAS.

5.2.6 Self competence and practical factors

Recall in Panel C (Table 25) we presented the outcomes of multiple regressions analysis for self competence against practical factors (scale10 to scale17). This part discusses such results against our hypotheses. As presented in Table 25, three scales namely scale10, scale15 and scale17 have been reported having significant association with self competence of the respondents. Our results lead to partial acceptance of two hypotheses namely H9.3 and H13.3 as well as full acceptance of only one hypothesis labeled H11.3. Recall scale10 represents staff experience, scale15 training necessity and scale17 pressure from development partners. Generally our result means that there is a positive significant relationship between staff training and self competence. Findings indicate that, increase in staff training leads to an increase in self competence. Past literature for example, Mbelwa et al. [1]; Azmi and Mohamed [29] and Ahmad [23] indicates that individuals who are frequently trained are more competent than others who are not frequently trained. Furthermore, the study reported a significant negative relationship between external pressure and self competence (H13.3). As evidenced in past studies, implementation of accrual based IPSAS is highly influenced by external pressure from development partners [36,13,34,54]. In line with our findings, it means that external pressure as measured by scale17 (development partner) plays a significant role in implementation of accrual based IPSAS.

6. CONCLUSION

According to our findings, 15 factors have been identified as the factors which influence

implementation of accrual based IPSAS in the LGAs in Tanzania. Such factors include staff experience, understanding and skills, in-house training necessity, involvement of professional accountants with high ethical conducts and hope for future business opportunities including attraction of development partners. In addition, other factors which were determined to influence implementation of accrual based IPSAS in the LGAs are publication of financial statements with standardized format, willingness and support from top management and disclosure of related party transactions. Apart from that, the study also examined how the identified factors affect implementation of accrual based IPSAS in the selected LGAs in Tanzania. Our results show that dimensions which significantly influences implementation of accrual based IPSAS in the LGAs are staff experience (scale10), in-house training necessity (scale15), understanding and skills (scale11), involvement of professional accountants (scale3) and publication of financial statements with standardized format (scale9). Other factors are such as sanctions by regulatory authorities (scale4), pressure from development partners (scale17) and adequate implementation policies (scale12). Apart from that, this research has some limitations. The first limitation is involvement of only 7 LGAs out 185 LGAs in Tanzania. Further studies should be done which takes into account the rest of the LGAs in Tanzania. This could lead to great generalization regarding the factors influencing implementation of accrual-based IPSAS in the LGAs in Tanzania. Finally, in our study, only questionnaires were employed to collect data from the respondents. For further researches, interviews, observations and focus group discussion can be employed to add more value. This will add inner perspective regarding the asked questions and could assist in elaboration of various doubts which may arise during the data collection process.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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