Institutional Isomorphism and Adoption of International Public Sector Accounting Standards by African Countries

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Abstract

The international harmonization of financial reporting standards in the public sector is one of the significant public sector accounting reforms which have gained prominence in the recent past under the New Public Financial Management order. However, previous empirical evidence provided mixed results on the extent of African countries' decision on the adoption of International Public Sector Accounting Standards and its relationship with institutional isomorphism factors. The purpose of this study was to examine the influence of institutional isomorphism (normative, mimetic and coercive) on the adoption International Public Sector Accounting Standards by African countries. The target population was 54 countries; however the final sample was 29 countries which comprised the dataset. A logistic regression analysis was thereafter conducted. Based on the Institutional Theory, the study revealed external public funding (coercive isomorphic pressure), the countries' global competitiveness (mimetic isomorphic pressure), and human capital (normative isomorphic pressure) were non significant factors in a countries decision to adopt IPSAS. This study contributes to the literature on the international accounting in the public sector. The results of the study have significant managerial and theoretical implications for accounting standards regulators, researchers, and multilateral organizations.

Key words: Institutional isomorphism; public sector; IPSAS adoption; Africa and Institutional Theory

1.0 Introduction

The nexus between public accounting standards and their role in improving accountability, transparency and management of public resource has become one of the most contemporary issues in recent times (Arnold and Sikka, 2001; McSweeney, 2009; and Sikka, 2015). However as observed by Iyoha and Oyerinde (2010) and Okaro, (2004) institutionalization of these standards in African countries has been poor due patronage, corruption ineffective governance structures and weak regulation frameworks. As a response to the unique challenges facing developing countries, International Financial institutions notably the World Bank and International Monetary Fund have financed these countries in adopting public sector reforms such as the adoption and diffusion of the International Public Sector Accounting Standards (IPSAS). This level of support indicates the importance attached to accounting as a propeller of both structural and economic policy change (Hopper et al., 2012; IMF, 2008). In an effort to attract international capital flows, a number of countries in developing countries have been implementing these reforms aimed at improving transparency and accountability in the public sector. Despite the increasing widespread acceptance of these standards globally, little empirical evidence on the institutional isomorphism influencing IPSAS adoption has been undertaken. Majority of previous studies have focused on the investigation of factors associated with International Accounting Standards and International Financial Reporting Standard adoption (Archambault & Archambault, 2009; Alon & Dwyer, 2014; Clements, Neill, & Stovall, 2010).

DiMaggio and Powell (1983) asserts that institutional isomorphism is a state where institutions in an environment become more homogeneous for social, political or legitimacy purposes by succumbing to the intensity of societal and political pressure. As observed by (Judge, Li, & Pinsker, 2010; Mnif Sellami & Gafsi, 2017; Tahat, Omran, & AbuGhazaleh, 2018) by understanding the organizational field for the

presence of these institutional pressures, it is theorized that one is better able to understand convergence on homogenized practices and institutionalized behaviors, or how an organizational field becomes institutionalized, around a particular idea or practice. The coercive, mimetic, and normative forces present in the field dictate the institutionalization of organizations. These three pressures, coercive, mimetic, and normative, produce an environment that spurs organizational conformity, or homogeneity, through pressure to appear legitimate, competition mandates associated with funding, and influential professional group and network values. Further, isomorphic change happens when institutions are greatly influenced by institutional environments that dictate how legitimate, successful organizations should look and behave and constrain the ability and motivation of their decision makers to conceive of and implement certain types of organizational change.

The purpose of this article is to examine the institutional isomorphism factors influencing African countries decision to adopt IPSAS. This study was motivated to fill the gap in the prior literature by examining the institutional isomorphism factors associated with countries' decision of adopting IPSAS. There has been little empirical research which has focused only on African countries. Mnif Sellami & Gafsi, 2017 study include 21 African countries in their sample of 110 countries. These study did not attempt to isolate factors were more significant in one particular region as compared to another, such as Africa only. The purpose of this research is to focus only on African countries and identify factors influencing the adoption of IFRS in African countries. Secondly, if isomorphism exist then studies that explore organizational change using an institutional isomorphic framework are important as these studies can illuminate key aspects of organizational change such as efficiency, innovation, and effectiveness. Finally, the changing governance structures and demand for high-quality accounting standards (IPSAS) to resolve public sector accounting's failures is paramount subject under the New Public Management Theory. This study makes important contribution to the literature on the international accounting in the public sector. The results of the study have significant managerial and theoretical implications for accounting standards regulators, researchers, and multilateral organizations.

The paper is structured as follows: Section one review the literature on institutional isomorphism practices and the theoretical framework guiding the study. Section two explains the methodology used in the study and is followed by the next section presenting the results. The final section concludes the study, makes implications of the findings, highlights limitations and offers suggestions for future research.

2.0 Literature Review and Hypotheses Development
2.1 Theoretical Framework
The New Public Management and the Institutional theories are the fundamental theoretical framework in this study. The theories that have been included in the majority of the studies in IPSAS and IFRS include institutional theory (Ahn, Jacobs, Lim, & Moon, 2014; Baker & Rennie, 2006; Mnif Sellami & Gafsi, 2017; Pilcher, 2011);), the economic regulation theory(Leuz & Wysocki, 2016; Mnif Sellami & Gafsi, 2017; Stigler, 1971), and the New Public Management (Agasisti, Catalano, Di Carlo, & Erbacci, 2015; Christiaens & Rommel, 2008; Paulsson, 2006)

The Institutional Theory emphasizes the importance of institutional pressures (isomorphism) on the institutions/entities practices and on the strategic decisions of economies seeking to legitimize national best practices by implementing globally accepted models. These pressure create a nation's isomorphism (Ahn et al., 2014; DiMaggio & Powell, 1983, 2000; Judge et al., 2010). DiMaggio and Powell (1983), opine that institutional isomorphism is a state where institutions in an environment become more homogeneous for social, political or legitimacy purposes by succumbing to the intensity of societal and political pressure. As a reaction to this pressure, institutions try to conform to "best practices" and 'legitimate coercion' to legitimize themselves to the public. According to DiMaggio & Powell, (2000) there are three mechanisms through which institutional isomorphism change occurs namely coercive, mimetic and normative.

Coercive isomorphism emanates from political influence and organizational legitimacy, conveyed through laws, regulations, and accreditation processes (or other outside agency standardization or oversight and compliance requirements). It arises from both formal and informal pressures exerted on organisations by

other organisations upon which they are dependent. Coercive pressures are majorly exerted by international donors or lending institutions requiring high-quality financial statements and financial reporting as a condition for their financial assistance(DiMaggio & Powell, 2000; Madawaki, 2012; Oulasvirta, 2014; D. Perera & Chand, 2015). Coercive pressures that would lead to organizational isomorphism include financial reporting requirements, government mandates, systems of contract law, the budget cycle and regulatory agencies.

Normative isomorphism arises from the influence of "normal" standards, conduct, and working conditions largely exerted by professions and professional groups. It emphasizes uniform behavior by members of distinguishable professional groups. According to (DiMaggio & Powell, 2000; Mnif Sellami & Gafsi, 2017; Pilcher, 2011) IPSAS adoption may be enhanced and stimulated by external parties' pressures and the need to legitimize internal practices. Professional networks and expert groups facilitate information exchange across organizations by creation, development, and diffusion of professional standards and new practices (DiMaggio and Powell, 1983).Mimetic isomorphism is a response to uncertainty where an organization or a nation 'mimics', imitates or models itself after other organizations or nations that are deemed to be successful and legitimate to enhance legitimacy or minimize loss of legitimacy (DiMaggio & Powell, 2000; Mnif Sellami & Gafsi, 2017).

Mimetic pressures arise from global governance, globalization, foreign trade openness, and the global competition pushing (legitimate coercion)' countries to adopt "best practices" such as international accounting standards(Judge et al., 2010). In the context of this research, national governments in Africa are expected to look at other national governments as exemplars for best practices in IPSAS adoption.
Under the New Public Management, the adoption of private-sector management practices improves the efficiency and effectiveness of, and the accountability for, public services(Gruening, 2001; Hood, 1995; N. B., 2014; Negara, 2015; Osborne, Radnor, & Nasi, 2013; Usang, Salim, Usang, & Salim, 2015). The NPM replaced the 'progressive' models of public accountability, as it focuses on controlling inherent corruption in public organizations through elaborate rules and procedures (Gruening, 2001; and Hood, 1995).Proponents argue that the NPM emphasizes accountability for results instead of processes through accrual accounting adoptions as a key tool of "accountingization' of the public sector (Hood, 1995).This enhances greater visibility, influence government accounting (Pina et al., 2009), and elevates the role and status of public-sector accountants and auditors (Caperchione, 2006). The development of NPM is viewed as mechanism to enhance accountability and transparency of governments and this requires financial information are comparable, relevant and useful for decision-making within the public sector(Agasisti et al., 2015; Christiaens & Rommel, 2008; Rodríguez Bolívar & Galera, 2016). Therefore, within the public sector IPSAS and IFRS could provide the benchmark for improving the quality of financial reporting(Navarro-Galera & Rodríguez-Bolívar, 2010; Rodriguez Bolivar & Galera, 2007; Rodríguez Bolívar & Galera, 2016).

The weakness of the NPM theory as highlighted by (Deaconu, Nistor, & Filip, 2011; Hood, 1995; Lapsley & Pallot, 2000; Negara, 2015; S. Perera, Schoch, & Sabaratnam, 2007; Ryan, Mellett, Moll, & Hoque, 2008; Usang et al., 2015) is that governments are under pressure to ''modernize'' their public sectors and as a result of this not-for-profit local governments are being pressured by regulatory and legislative bodies to produce attractive bottom-line results and myriad performance indicators. In addition, public institutions are being coerced to introduce private sector accounting standards in the way of accrual accounting into a public sector environment creating addition stress on discipline and frugality in resource use by emphasis performance compared to strategies(Bellanca & Vandernoot, 2013; Brusca & Martínez, 2016; Christiaens & Rommel, 2008; Gruening, 2001; N. B., 2014; Osborne et al., 2013). There are various interpretations of NPM since Hood, given the underlying purpose of this paper is to examine the implementation of IPSAS in African countries these other forms are not referred to here.

2.2 Hypotheses Development
Given the above theoretical explanations and previous studies three hypotheses will be tested in this study.

2.2.1 Coercive Isomorphism and Adoption of IPSAS
The adoption of International Public Sector Accounting Standards (IPSASs) in particular the Accrual Basis

IPSAS has now become a priority for the International Financial Institutions (IFIs), particularly the World Bank and the International Monetary Fund (IMF) and other donors in less developed countries (LDCs). They have therefore provided financial support to encourage these nations to adopt Western accounting reforms such IFRS and IPSAS (Bakre, Lauwo, & McCartney, 2017).

As emphasized by the institutional theory, these multilateral institutions support the streamlining the accounting system in these countries in accordance with "world's best practices" with the belief it will result in consistency and transparency in the financial management of the country, ensure good governance, boost the confidence of investors, and contribute to strengthening the economy as well as the need for fiscal consolidation (Javed & Zhuquan, 2018; Mnif Sellami & Gafsi, 2017). Hence, to encourage effective management of public resources, accountants and auditors are expected to adhere to the existing accounting and auditing rules and regulations to deliver accountability, ensuring a more equitable distribution of wealth in society (OECD, 2003) As Mnif Sellami & Gafsi, (2017,p.122) assert that, "the level of financial dependence to global financial system increases the sensitivity of countries to external coercive pressures which compels them to adopt the foreign practices such IPSAS". Their result revealed a positive influence of external public funding (coercive isomorphic pressure), the degree of external openness (mimetic isomorphic pressure), and public sector organizations' importance on IPSAS adoption.

Consequently, the need for foreign aid, international financial capital/inflows has compelled most African countries to embark on Financial and Economic Reforms aimed at improving accountability in the management of public resources (Annisette, 2004). As observed by Bakre et al., (2017) IPSASs, is a high-quality accounting standards being utilized globally by public-sector entities in the preparation of general purpose financial reports which could improve transparency and accountability in the management of public resources. Further, the "Big Four" accounting firms have actively provided legitimacy to the global adoption of IPSAS, especially in disadvantaged countries (Annisette, 2004). Therefore, it is expected that countries that are highly dependent on financial assistance, will adopt and implement Western accounting reforms such IPSAS to partake in the "benefits" promised by neoliberalism, which include; improving governance, accountability and attracting international capital,(Baker & Rennie, 2006; Bakre et al., 2017). Thus the following hypothesis is formulated:

H$_1$: Coercive isomorphism has a significant influence on adoption of IPSAS among African countries

2.2.2 Mimetic Isomorphism and Adoption of IPSAS
Institutional theory explains organizational change is driven by "formal legitimacy," or the need to "conform to expectations of key stakeholders in their environment" by copying, imitating or mimicking (mimetic pressures) other organizations or nations that are deemed to be successful (Ashworth, Boyne, & Delbridge, 2009). According to Judge et al., (2010) mimetic pressures emanate from global governance, globalization, foreign trade openness, and the global competition pushing (legitimate coercion)' countries to adopt "best practices" such as international accounting standards. Christiaens, Reyniers, & Rollé, (2010) and Mnif Sellami & Gafsi, (2017) accede that the globalization in economic activity impact on the globalization and harmonization of accounting practices and standards such as IPSAS in the public sector.

Yapa & Ukwatte (2015) and Tolofari (2005) suggest that the adoption of corporate attitudes and practices in the public sector is focused on neoliberalism and agency framework with heavy emphasis on privatization, managerialism, accountability and performance measurement. They suggest that institutions that lack the ability to adopt new technologies tend to imitate best management practices, including performance measurement, from other successful institutions within the industry. This propensity to imitate the practices of successful institutions occurs due to the need to gain legitimacy from their environment. Flynn, Moretti, & Cavanagh (2016)suggest that an organization assumes that imitation of successful management practices, accounting standards, leads to cost saving and improved efficiency, and helps them to gain legitimacy.

In the African countries context, according to the World Economic Forum Global Competitiveness Report 2017/2018 African countries made up 17 of the bottom 20 nations. While the global median score is 60, the

median in sub Saharan Africa (45.2) was the lowest for all the regions analyzed. The annual index ranks countries based on 12 pillars based broadly on these factors: an enabling environment, markets, human capital and an innovation ecosystem. This poor performance has been attributed to weak institutions, administrative complexity, inadequate public policies, poor infrastructure, skills deficit and challenge of countries in the continent to fill the technology gap despite strong economic growth. (Schwab, 2017; World Economic Forum, 2017). Therefore, in an effort to increase their global competitiveness index, attract foreign direct investment (FDI) and strengthen their competitive position on a global scale African countries like Kenya, South Africa and Nigeria are harmonizing their accounting standards in the public sector with the global standards by embracing transparency and comparable financial reporting (Dabbicco, 2013; Judge et al., 2010; Pina & Torres, 2009; Torres & Pina, 2003). DiMaggio & Powell, (1983) advance the theoretical concept of mimetic isomorphism by affirming that organizations compete for resources, customers, political power, and institutional legitimacy, social and economic fitness. Judge et al., 2010 and Pina & Torres, 2009) confirm that indeed institutional theorists agree that the status of an organization has an impact on the degree at which they appear isomorphic to the institutional practices of their environment. Mnif Sellami & Gafsi (2017) posit that the degree of external openness (mimetic isomorphic pressure) stimulate the extensive adoption of IPSAS in the selected countries. Hence, the study proposes the following hypotheses:

H$_2$: Mimetic isomorphism has a significant influence on adoption of IPSAS among African countries

2.2.3 Normative Isomorphism and Adoption of IPSAS
Normative pressure emanates primarily from values of professionalism(Christiaens & Rommel, 2008; Judge et al., 2010; Tahat et al., 2018). Professionalism is concerned with the members of an institution and their desire to maintain autonomy over work process, procedures and legitimization of their work. Institutional practices, including professions, programs, and technologies, function as myths and organizations adopt them ceremonially.

Within the institutional theory, normative pressures such professional networks or boards, on-the-job socialization and networking, training or professional development, formal education, and certification processes accredited by professional bodies enhance the development and diffusion of professional standards such as IPSAS and/or IFRS (Dabbicco, 2013; Pilcher, 2011; Pina & Torres, 2009).

Mir & Sutiyono (2013) explored the public sector financial management reforms of local government agencies in Indonesia using a multiple case study approach. The results showed that there was imbalance between the demand of, supply for, and the quality of the accounting information. There exists a pseudo demand for accounting information for decision-making but the public sector executives rarely use accounting information in decision-making. In addition there was a problem with the production of the information as there were no qualified accountants conversant with the public sector accounting standards and its application.

Mnif Sellami & Gafsi (2017) examined the institutional and environmental factors affecting the IPSAS adoption decision for a sample of 110 countries. Based on institutional theory and theory of economic regulation, the results revealed that education level (normative isomorphic pressure) was a non significant factor. Tahat, Omran, & AbuGhazaleh (2018) examined the factors affecting the development of accounting practices in Jordan by surveying the perceptions of 306 participants and 20 interviewees based on institutional theory. The results showed government of Jordan (regulatory frameworks), pressures from international donors and large economic organizations (politico-economic factors), education and training/development (cultural inputs), and the efforts to attract foreign investments and getting access into the international fund and trade (economic factors) have been influential influences in the development of accounting practices and the adoption of International Accounting Standards.

Tanjeh (2016) investigated the factors influencing the acceptance of government accounting reforms in general and IPSAS in particular in Cameroon. A survey was conducted in the Ministry of Finance (MINFI) and the Ordinary Least Squares (OLS) and Ordered Logistics Estimation techniques used. The results findings revealed the determining factors of IPSAS acceptance in Cameroon were knowledge and awareness, institutional organization, staff training and recruitment, management information system,

qualification, sex, implementation cost, political support, and age. Consequently, the adoption of IPSAS in Cameroon was positively associated with the level of accounting training, education and qualification of staff. These findings were affirmed by (Bdour, Al-Momany, & Qaqish, 2009; Flynn et al., 2016; Gruening, 2001; Jagalla, Becker, & Weber, 2011; Javed & Zhuquan, 2018; Judge et al., 2010; Madawaki, 2012)who observed that in developing economies most human resources and capital goods are allocated to agriculture and manufacturing sectors and investment in the accounting information infrastructure is minimal. Madawaki (2012) asserts that an increase in the education level in a country may increase political awareness and demand for accountability. It is therefore hypothesized that:

H_3: Normative isomorphism has a significant influence on adoption of IPSAS among African countries

3.0 Research Methodology
3.1 Research Design

The aim of this study was to examine the influence of institutional isomorphism factors on adoption of international public sector accounting standards in African countries. Thus, in order to accomplish this objective a quantitative research approach was adopted.).

3.2 Sample and Data Sources

The target population consisted of all African countries classified as IPSAS adopters and non-adopters. The nations' IPSAS adoption status was provided on the IFAC's website. The initial sample consisted of 54 African countries; 25 countries were excluded due to lack of information on the IPSAS adoption status, presence of outliers and missing data on key explanatory variables. As observed by Stainbank (2014) in African countries there is limited information on their accounting practices and for some countries it was difficult to determine when they had adopted the global accounting standards. The final sample is composed of 29 countries consisting of both adopter and countries and IPSAS non-adopting countries. These countries were classified as non-adopters until the year 2017. In this research, IPSAS adoption by countries may be full or partial (cash and/or accrual). The nation's adoption status is presented in Table 3

Table 1: IPSAS adoption' status of the sample countries

Country	IPSAS Adoption
Algeria	1
Benin	1
Botswana	1
Cameroon	1
Chad	1
Democratic Republic of Congo	1
Egypt	0
Eswatini (formerly Swaziland)	1
Ethiopia	0
Ghana	1
Guinea	1
Kenya	1
Liberia	1

Madagascar	1
Malawi	1
Mali	1
Mauritania	0
Mauritius	1
Morocco	1
Mozambique	1
Nigeria	1
Rwanda	1
Senegal	1
Sierra Leone	1
South Africa	1
Tanzania	1
Tunisia	0
Uganda	1
Zimbabwe	1

Source: IFAC, 2017

3.3 Measurement of Variables

Dependent variable –IPSAS Adoption

The dependent variable IPSAS adoption was measured using a dichotomous value which was binary coded as equal to "1"if a country had adopted IPSAS and "0"if a country had not adopted IPSAS. This was because the study sample was divided into two groups of countries namely adopters and non-adopters.

Independent Variables

Coercive Isomorphism Factors

This variable was measured by the amount of external public debt as a percentage of the gross domestic product (GDP)

Mimetic Isomorphism Factors

This was measured by the nations' level of global competitiveness as represented by the World Economic Forum global competitiveness index. The annual index ranks countries based on 12 pillars based namely: an enabling environment, markets, human capital and an innovation ecosystem.

Normative Isomorphism Factors

Normative isomorphism was measured by the nations' human capital index which represented the measure of skills and training of the country's labour force. It consists of the knowledge, skills, and health that people accumulate throughout their lives, enabling them to realize their potential as productive members of society.

Control Variables

Based on previous studies two control variables were selected in this study: financial development and economic growth. Financial development measured the development of the financial markets. It was captured by the level of gross domestic capital formation as a ratio of gross domestic product. Economic growth was measured by the average annual growth rate of real gross domestic product in percentage. These two variables have been widely used in the previous literature and have been shown to have significant

impact on the development of accounting literature particularly on the adoption of international accounting standards(Judge et al., 2010; Mnif Sellami & Gafsi, 2017; Stainbank, 2014).

The variables' measures and data sources are described in Table

Table 2:Variable Measurement

Variables	Measurement	Source(s) & Year
Independent Variables *Coercive Isomorphism Factor* External Public Debt(EXPD)	External Public Debt as % of GDP	World Bank ; World Bank's African Development Indicators, 2017
Mimetic Isomorphism Factor Countries' Global Competitiveness(GC)	Global competitiveness index	(Schwab, 2017; World Economic Forum, 2017a)
Normative Isomorphism Factor Human Capital (HC)	Global Human Capital Index	World Economic Forum(2017b)
Dependent Variable		
IPSAS Adoption(IPSASA)	Binary variable that takes the value "1" if the country has already adopted IPSAS and "0" otherwise	IFAC(2017);ACCA(2017)
Control Variables		
Financial development(FIND)	Gross domestic capital formation as a ratio of gross domestic product	World Bank's African Development Indicators, 2017
Economic growth(ECOG)	Average annual growth rate of real gross domestic product in percentage	World Bank's African Development Indicators, 2017

Multivariate Analysis

Multivariate analysis was applied to examine the effect of the explanatory variables on the dichotomous dependent variable using a logistic regression model presented as follows:

$$= \log\left(\frac{p(y=1)}{1-(p=1)}\right) = \beta_0 + \beta_1 x_{i2} + \beta_2 \cdot x_{i2} + \_ + \beta_p \cdot x_{ik}$$

Log [p(y=1/1-(p=1)=β_0+β_1 EXPD +β_2 GC +β_3 HC +β_4 FIND + β_5 ECOG+ϵ

Where:
EXPD: External Public Debt
GC: Countries' Global Competitiveness
HC: Human Capital
FIND: Financial Development
ECOG: Economic Growth
(p)IPSASA: a dichotomous variable that takes the value "1" if the country has adopted IPSAS and "0"otherwise.
ϵ: the margin of error.

Ordinary least squares regression (OLS) was not deemed appropriate because the outcome variables examined in this study were expressed as dichotomous. Moreover, the use of dichotomous dependent variables violates the assumptions of normality and homoscedasticity in OLS regressions Binary logistic regression expresses the outcome variable as a logit variable through log-linear transformation, which represents a natural log of the odds of the outcome variable occurring or not (Field, 2005). In computing binary logistic regression analyses, the study controlled for the influence of financial development and economic growth.

4.0 Results And Discussions
4.1 Descriptive Statistics

The results of descriptive statistics are summarized. The average relative values for external public debt, global competitiveness, human capital index, financial development and economic growth are 41.193, 3.629, 0.410, 25.952 and 4.210.

Table 3:Results of descriptive statistics

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
EXPD	29	0	29	3.400	100.800	41.193	23.883
GC	29	0	29	2.890	4.520	3.629	0.454
HCI	29	0	29	0.300	0.600	0.410	0.067
FIND	29	0	29	9.700	73.800	25.952	13.618
ECOG	29	0	29	-3.000	10.600	4.210	2.757

4.2 Inferential Statistics

The results of the correlation matrix and the VIF test are presented in Table 4.The results of Table 7 show that all correlation coefficients were below 0.9.The presence of multicollinearity was tested by the variance inflation factor (VIF). The VIF results in Table 4 indicate there are no problems with any VIF in excess of 20 and no tolerance below 0.05 and there should not be any problems in regressing the model. In this

research, the highest VIF value is equal to 2.094 that is below 5. Therefore, there is no multicollinearity among variables. Logistic regression results are presented in Table 4.

Table 4: Results of the Correlation Matrix and the VIF.

Variables	VIF	EXPD	GC	HCI	FIND	ECOG	IPSASA
EXPD	1.249	**1**	-0.083	0.228	-0.033	-0.012	-0.308
GC	1.965	-0.083	**1**	**0.651**	-0.005	0.134	-0.041
HCI	2.094	0.228	**0.651***	**1**	0.052	0.117	-0.240
FIND	1.254	-0.033	-0.005	0.052	**1**	**0.425**	-0.150
ECOG	1.251	-0.012	0.134	0.117	**0.425***	**1**	-0.113
IPSASA	1.182	-0.308	-0.041	-0.240	-0.150	-0.113	**1**

The correlation is significant at the 5% level

Table 5:Logistics Regression Results

Variables	Expected Sign	Coefficient β	Wald	Significance level(p)	Found Sign
Independent variables					
EXPD	+	-0.031	1.088	0.297	-
GC	+	1.062	0.164	0.686	+
HCI	+	-15.498	0.721	0.396	-
Control Variable					
FIND	+	-0.016	0.115	0.735	-
ECOG	+/-	-0.255	0.537	0.464	-
Constant		7.753	1.510	0.219	
R²(Cox and Snell)		0.152			
R²(Nagelkerke)		0.276			
R²(McFadden)		0.206			
Model Chi-Square		18.482			
Sample Size		29			

Equation of the model (Variable IPSASA):
Pred(IPSASA) = 1 / (1 + exp(-(7.75326767317882-3.08194274289752E-02*EXPD+1.06171350845836*GC-15.49785923533...
0.254883036607642*ECOG

The results in Table 4 show a negative but insignificant influence of external public debt on adoption of IPSAS in African countries. This result contradicts the institutional theory proposition that coercive pressures majorly exerted by international donors or lending institutions require high-quality financial statements and financial reporting as a condition for their financial assistance. The finding implies that those countries with higher level of external public debt do not necessary succumb to coercive pressures exerted by external funding body possibly due to their sovereignty.

From Table 4, there is a positive and insignificant effect of global competitiveness on the countries' decision to adopt IPSAS. This finding contrasts with the OECD (2003) who argue that the development of public sector accounting in most countries arise from the mimetic isomorphic pressures from global market place, globalization and the economic openness. Countries with the highest level of global competitiveness are expected to attract foreign direct investments on the basis of their perceived transparency in information disclosure and reporting standards on the global scale.

Further, the results in Table 4 show a negative and insignificant influence of human capital on the dependent variable IPSAS adoption. This result is inconsistent with the institutional theory propositions. Within the institutional theory, normative pressures such professional networks or boards, on-the-job socialization and networking, training or professional development, formal education, and certification processes accredited by professional bodies are expected to enhance the development and diffusion of professional standards such as IPSAS and/or IFRS (Dabbicco, 2013; Pilcher, 2011; Pina & Torres, 2009).

The variables for financial development and economic growth are both statistically insignificant, indicating these factors do not play a significant role on the Africans countries' decision to adopt IPSAS. In summary, the findings of all the study analyses do not support hypotheses H_1, H_2, and H_3, which are coercive, normative and mimetic isomorphism factors.

4.3 Conclusion

This study sought to examine the institutional isomorphism factors influencing IPSAS adoption for a sample 29 African countries within the institutional theory framework. The results showed negative but insignificant influence of external public debt (coercive isomorphic pressure) and human capital (normative isomorphic pressure) on countries' decision to adopt IPSAS. This study is consistent with the results of Mnif Sellami & Gafsi, (2017) who did not find education level of importance in IPSAS adoption decision by countries. In addition, the finding revealed global competitiveness (mimetic isomorphic pressure) has a positive but insignificant influence on IPSAS adoption.

This research contributes to the public accounting literature by focusing on country level institutional factors which have an influence on IPSAS adoption in Sub Saharan Africa. Further, majority of some studies have examined the IPSAS implementation in single country (Ijeoma & Oghoghomeh, 2014; Tanjeh, 2016). Hence, no studies have examined the institutional isomorphism factors associated with IPSAS adoption for many of countries in Africa.

The findings of are significant to a number of stakeholders. Firstly, they provide scholars with an in depth understanding of the status of IPSAS adoption among African countries by examining the key institutional isomorphism factors associated with the countries' IPSAS adoption decision. Secondly, they can assist policy makers and accounting regulators in the development and harmonization of public sector financial reporting standards. Lastly, the results may be useful to multilateral agencies such as the IFC, IMF and the World Bank in their lending policies as it provides an understanding on the contextual factors associated with the adoption of IPSAS in African countries. The main limitation of the study is the limited number of African countries examined, however it is anticipated that the number of countries adopting IPSAS will most likely increase. This study opens new area for further research in diffusion of IPSAS. Future research may examine the impact of micro economic and company specific factors on IPSAS adoption.

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APPENDIX 1: XLSTAT OUTPUT

XLSTAT 2019.1.2.57437 - Logistic regression - Start time: 5/10/2019 at 4:05:16 PM / End time: 5/10/2019 at 4:05:18 PM

Response variable(s): Workbook = IPSAS DATA.xlsx / Sheet = Sheet5 / Range = 'Sheet5'!$G:$G / 29 rows and 1 column

Quantitative: Workbook = IPSAS DATA.xlsx / Sheet = Sheet5 / Range = 'Sheet5'!$B:$F / 29 rows and 5 columns

Model: Logit

Response type:
Binary

Confidence interval
(%): 95

Stop conditions: Iterations = 100 /

Convergence = 0.000001

Maximization of the likelihood function using the

Newton-Raphson algorithm

Summary statistics:

Variable	Categories	Frequencies	%
IPSAS A	0	4	13.793
	1	25	86.207

Variable	Observations	Obs. with missing data	Obs. without missing data	Minimum	Maximum	Mean	Std. deviation
EXPD	29	0	29	3.400	100.800	41.193	23.883
GC	29	0	29	2.890	4.520	3.629	0.454
HCI	29	0	29	0.300	0.600	0.410	0.067
FIND	29	0	29	9.700	73.800	25.952	13.618

| ECOG | 29 | 0 | 29 | -3.000 | 10.600 | 0 | 4.210 | 2.757 |

Correlation matrix:

Variables	EXPD	GC	HCI	FIND	ECOG
EXPD	**1.000**	-0.083	0.228	-0.033	-0.012
GC	-0.083	**1.000**	0.651	-0.005	0.134
HCI	0.228	0.651	**1.000**	0.052	0.117
FIND	-0.033	-0.005	0.052	**1.000**	0.425
ECOG	-0.012	0.134	0.117	0.425	**1.000**

Regression of variable IPSASA:

Correspondence between the categories of the response variable and the probabilities (Variable IPSASA):

Categories	Probabilities
0	0
1	1

Goodness of fit statistics (Variable IPSASA):

Statistic	Independent	Full
Observations	29	29
Sum	29.	29.0

of weights	000	000
DF	28	23
-2 Log(Likelihood)	23.269	18.482
R²(McFadden)	0.000	0.206
R²(Cox and Snell)	0.000	0.152
R²(Nagelkerke)	0.000	0.276
AIC	25.269	30.482
SBC	26.636	38.686
Iterations	0	12

Test of the null hypothesis H0: Y=0.862 (Variable IPSASA):

Statistic	DF	Chi-square	Pr > Chi²
-2 Log(Likelihood)	5	4.787	0.442
Score	5	4.460	0.485
Wald	5	3.321	0.651

Type II analysis (Variable IPSASA):

Source	DF	Chi-square (Wald)	Pr > Wald	Chi-square (LR)	Pr > LR
EXPD	1	1.08	0.297	1.2	0.258

Source					
		8		82	
GC	1	0.164	0.686	0.977	0.674
HCI	1	0.721	0.396	0.901	0.343
FIND	1	0.115	0.735	0.113	0.737
ECOG	1	0.537	0.464	0.632	0.427

Hosmer-Lemeshow test (Variable IPSASA):

Statistic	Chi-square	DF	Pr > Chi²
Hosmer-Lemeshow Statistic	4.970	8	0.761

Model parameters (Variable IPSASA):

| Source	Value	Standard error	Wald Chi-Square	Pr > Chi²	Wald Lower bound (95%)	Wald Upper bound (95%)	Odds ratio	Odds ratio Lower bound (95%)	Odds ratio Upper bound (95%)
Intercept	7.753	6.309	1.510	0.219	-4.612	20.119			
EXPD	-0.031	0.030	1.088	0.297	-0.089	0.027	0.970	0.915	1.027
GC	1.062	2.624	0.164	0.686	-4.081	6.204	2.891	0.017	494.961
HCI	-15.498	18.257	0.721	0.396	-51.280	20.285	0.000	0.000	644967892.732
FIND	-0.016	0.047	0.115	0.735	-0.108	0.076	0.984	0.898	1.079
ECOG	-0.255	0.348	0.537	0.464	-0.937	0.427	0.775	0.392	1.532

Equation of the model
(Variable IPSASA):

Pred(IPSASA) = 1 / (1 + exp(-(7.75326767317882-3.08194274289752E-02*EXPD+1.06171350845836*GC-15.4978592353036*HCI-1.58859319976661E-02*FIND-0.254883036607642*ECOG)))

Standardized coefficients
(Variable IPSASA):

Source	Value	Standard error	Wald Chi-Square	Pr > Chi²	Wald Lower bound (95%)	Wald Upper bound (95%)
EXPD	-0.399	0.382	1.088	0.297	-1.148	0.351
GC	0.261	0.646	0.164	0.686	-1.004	1.526
HCI	-0.565	0.666	0.721	0.396	-1.870	0.740
FIND	-0.117	0.346	0.115	0.735	-0.795	0.560
ECOG	-0.381	0.519	0.537	0.464	-1.399	0.637

IPSASA / Standardized coefficients
(95% conf. interval)
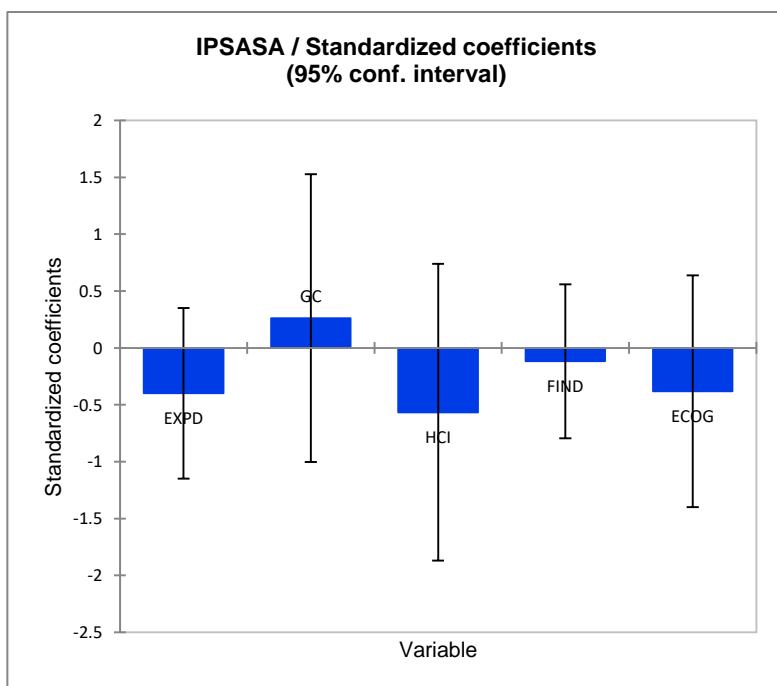
Predictions and residuals (Variable IPSASA):

Observation	Weight	IPSASA	Pred(IPSASA)	Independent	IPSASA/Weight	Pred(IPSASA)/Weight	Std. residual	Std. residual (Independent)	Lower bound 95%	Upper bound 95%
Obs1	1	1	0.955	0.862	1.000	0.955	0.218	0.400	0.087	1.000
Obs2	1	1	0.912	0.862	1.000	0.912	0.310	0.400	0.638	0.984
Obs3	1	1	0.991	0.862	1.000	0.991	0.093	0.400	0.309	1.000
Obs4	1	1	0.962	0.862	1.000	0.962	0.198	0.400	0.674	0.997
Obs5	1	1	0.997	0.862	1.000	0.997	0.057	0.400	0.229	1.000
Obs6	1	0	0.849	0.862	0.000	0.849	-2.369	-2.500	0.327	0.985
Obs7	1	1	0.982	0.862	1.000	0.982	0.136	0.400	0.522	1.000
Obs8	1	0	0.790	0.862	0.000	0.790	-1.939	-2.500	0.195	0.983
Obs9	1	1	0.833	0.862	1.000	0.833	0.448	0.400	0.276	0.985
Obs10	1	1	0.716	0.862	1.000	0.716	0.630	0.400	0.058	0.990
Obs11	1	1	0.831	0.862	1.000	0.831	0.451	0.400	0.352	0.978
Obs12	1	1	0.971	0.862	1.000	0.971	0.172	0.400	0.392	0.999
Obs13	1	1	0.949	0.862	1.000	0.949	0.232	0.400	0.600	0.996
Obs14	1	1	0.927	0.862	1.000	0.927	0.28	0.400	0.322	0.997

Obs15	1	1	0.982	0.862	1.000	0.982	0.135	0.400	0.598	1.000
Obs16	1	0	0.629	0.862	0.000	0.629	-1.301	-2.500	0.105	0.961
Obs17	1	1	0.402	0.862	1.000	0.402	1.220	0.400	0.027	0.942
Obs18	1	1	0.819	0.862	1.000	0.819	0.470	0.400	0.310	0.979
Obs19	1	1	0.488	0.862	1.000	0.488	1.025	0.400	0.051	0.944
Obs20	1	1	0.997	0.862	1.000	0.997	0.055	0.400	0.547	1.000
Obs21	1	1	0.957	0.862	1.000	0.957	0.212	0.400	0.238	0.999
Obs22	1	1	0.829	0.862	1.000	0.829	0.454	0.400	0.296	0.982
Obs23	1	1	0.894	0.862	1.000	0.894	0.345	0.400	0.443	0.989
Obs24	1	1	0.980	0.862	1.000	0.980	0.141	0.400	0.131	1.000
Obs25	1	1	0.894	0.862	1.000	0.894	0.345	0.400	0.602	0.979
Obs26	1	0	0.690	0.862	0.000	0.690	-1.492	-2.500	0.208	0.950
Obs27	1	1	0.940	0.862	1.000	0.940	0.253	0.400	0.628	0.993
Obs28	1	1	0.871	0.862	1.000	0.871	0.386	0.400	0.343	0.989
Obs29	1	1	0.965	0.862	1.000	0.965	0.190	0.400	0.475	0.999

Classification table for the training sample
(Variable IPSASA):

from \ to	0	1	Total	% cor

				rect
0	0	4	4	0.00%
1	2	23	25	92.00%
Total	2	27	29	79.31%

ROC Curve (Variable IPSASA):

ROC Curve (AUC=0.860)

Area under the curve: 0.86