



Moderating Role of Funding on the Management Control System and Performance of Public Universities

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ABSTRACT

Purpose: The study examines the moderating effect of funding on the management control system and performance of south-western public universities in Nigeria.

Design/Methodology/Approach: Research design for the study is cross- survey; this is the most appropriate research design, being a study on perception objectives in nature. The study was carried out in fourteen (14) public universities in the Southwestern region of Nigeria.

Findings: funding activities does not significantly moderate the relationship between result control and performance of public universities ($\beta = -0.042$; $t = 0.648$; $p > 0.259$). However, a negative beta of 4.2% indicates every one increment in the present order of finance will lead to a reduction of 4% from the relationship between result control and performance of public universities in south west Nigeria.

Implications/Originality/Value: The study discovered that present funding scheme moderates the relationship between action and cultural control and does not moderate the relationship between personnel and result control. The study therefore recommends that the government should ensure disbursement of sufficient funds to the university to attain the much need performance.



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Introduction

The performance of public universities is of greater influence on any given nation's facets of development. Also, the inefficient performance of any nation's higher institute of learning indicates a doomed future for such a nation in terms of socio-economic development, political

and intellectual capital (Mahmud, 2020). As widely stated, “destroying any nation’s growth and future requires lowering the quality of their education only”, patients die at the hand of their doctors, buildings collapse at the hand of such engineers, money is lost at the hand of such accountants, government policy mismanage at the hand of such economist, justice is lost at the hand of such judges.

The Times Higher Education (THE) world university rankings 2021, ranked over 1,500 universities across 93 countries and regions and accounts for the widest and most diverse university ratings. This performance ranking scheme was based on 13 carefully scaled performance indicators. It measures the universities performance through four headings: teaching, research, knowledge transfer, and international relations (Time Higher Education, 2020). Ranking keeps gaining acceptance as a symbol of universities management commitment to success by the prospective students, funding bodies and other bodies as its indicators cater for all.

In THE’s 2021 ranking, eleven (11) out of the top one hundred (100) universities are in the United Kingdom, while 36 are in the United States of American and the remaining 53 are universities from Europe and Asian continents. The University of Cape Town was ranked 155th in the world and first in Africa. Another African university that follows this result is also from South-Africa. It was ranked between two hundred to two hundred and fifty (200 to 250). More also, the University of Ibadan was ranked between 401-500 in the world, fifth in Africa, and first in Nigeria.

Management and administration of public universities in Nigeria have also witnessed some reforms like other public sector organizations in Nigeria. All these reforms aim to ensure the attainment of targeted objectives through optimum performance. More also, external control functions are assigned to National Universities Commission (NUC) to ensure adherence to guidelines. However, there persists below the expected performance of Nigeria public universities as reported by the National University Commission (2020); Stuten (2018); Time Higher Education (THE) world university ranking (2021); World Education Studies (2017); Webometric (2019) and incessant reports of funds mismanagement among other scandals in Nigeria public university (Dimunah, 2017; Ekpo, Ukpong & Aniefiok, 2020; Okoroma, 2001). The situations in the preceeding paragraph shows that the level of the commitment of Nigerian public universities’ management to guidelines and directives established to enhance optimum performance is questionable. Therefore, there is a need for appraisal of the policy development and management tactics that emphasize quality assurance, effectiveness, efficiency, and implementation of performance evaluations. These are techniques aimed at personnel performance enhancement; vision and mission statement implementation strategy; orderliness and ethical conduct; and output appraisal.

Over the previous two decades, reports on the performance of Nigeria public universities indicated the performance is far below the international best practices. There have been persistent reports of mismanagement and poor performance in Nigeria's public universities. These blahs are largely attributed to poor management practices from the universities administrators such as defective monitoring and control practices as well as underfunding and undesirable policy from regulatory bodies (Babalola 2014; Okebukola 2019; Onuorah 2012). This depress in performance is fetching large fortune out of the nation; over N190, billion was spent by Nigerians to attain university education in the United State of America alone in the year 2020 (Ojeme & Sunday, 2021).

Nigerians are leaving the nation’s public universities to foreign countries for higher education, spending well over N190billion as stated by the Institute of International Education and the

United States government. Nigeria is also the only African country among the top rated 25 countries of origin for international student in the United State of America with a total of almost 14,000 students over the past few years (Ojeme & Sunday, 2021). This ugly incident may be attributed to our university's management failing to implement an efficient management control system in our universities to enhance performance as result of insufficient funds. This study therefore appraised the role of funding on the effectiveness of the university management control system.

Research Question

How has the interaction between external controls and personnel control systems influenced the performance of public universities in southwestern Nigeria?

What extent is the effect of externalities on the cultural control and performance of public universities in Nigeria?

Literature Review

Management Control System: From a broad perspective, control systems are the technique and tools used to modify the behavior of a whole system or an organization to attain the desired result (Heinicke & Guenther, 2019; Mustapha, 2019). Efficient controls enhance the simplest and cheapest attainments of results (Mahbob et al, 2012). Management Control has been described by many scholars, in many studies, in regards to many views, but all similar in concepts and all are directed towards the organizational goals achievement. "Management control is the means in which managers influence other members of the organization to implement the organization's strategies. It can also be viewed as the system used by the management to regulate the activities of an organization" (Anthony & Govindarajan, 1998). Management Control System is a set of interconnected communication structures that simplify the processing of information to assist managers in coordinating the components and ensuring the organization's purpose on a continuous substructure. It's also a logical combination of strategies for gathering and analyzing data to make orchestrating and control decisions to incentivize employee comportment and evaluate performance.

The goals of a management control system, according to Andrew, (2018) are to facilitate the means of attainment of the organization's goals, ensure that managements and employees are inform of the specific actions required of them in sequence to achieve organizational goals, response and subsequent results to the organization as whole, and prepares the managers for changes in the business environment. A precise control system unifies an organization's various activities and achieves its overall aim. In other words, a control system is intended to bring harmony to an organization's many activities and direct its efforts toward predetermined goals.

University Performance: Universities are entirely different from other industrial or business entities in performance measurement. Regard less of the attribute of managerialism, universities is a distinct outlet. Firstly, the output of the university is extremely difficult, not possible to ascertain objectively; what is the actual teaching output of the university? Shall we choose the number of degrees conferred over distinction in quality which cannot be accurately accounted for? Secondly, the two main performances of the universities are measured by external parties. Teaching qualities are being attested by the industrial captain after the students have graduated. While research efforts are done by the publishers and grants bodies. Thirdly, The Heads are not trained managers; they are appointed or deployed as a result of their experience in their area of discipline. Also, the interrelation between the academic manager and also the management (the academics) appears to be, collegial and not managerial.

Recently, universities are now subject to similar market pressures and significant changes. These

changes led to competitions which has caused the universities to adopt the thought and process of a large corporation to the point where students are perceived and treated as customers (Hilman & Abubakar, 2017). In the bid to survive optimum performance demands, management controls play a crucial role in motivating employees to perform well. It appears relatively little is known about how academics respond to these specific types of controls (Berend & Paul, 2018).

Moreover, ranking is the order of the day in nearly every aspect of human activity. Academic assignments at universities are not exempted, the foremost question is how significant is college ranking and whether or not they are presently being utilized in a biased or naïve manner. There are big variations in overall performance amongst universities from the rating effects offered so far (Mukiyanto et al, 2020). Thus, the common sense of college rating appears appropriate: It allows a college's overall performance in comparison to others. Indeed, college scores are proliferating. Apart from the most famous ones consisting of the ARWU ("Shanghai"), the Times Higher Education (THE), and Quacquarelli Symonds (QS) ranking, at the least 30 different ranking platforms exist (Koen, Gaston & Jarno, 2017). Although there are disagreements on which data, method, and interpretations are perceived as robust.

There have been conflicting opinions about performance measurement that should be adopted by universities around the world. Some scholars believed that performance assessment should only consider study-related coursework, while some are of the opinion that it is imperative to measure student-related academic achievement and non-student-related academic achievement (Ball & Wilkinson, 1994; Hilman & Abubakar, 2017). According to Higgins, (1989) Student's related academic achievement are the student academic status, grade levels, and graduating rates as indicators for evaluating university's performance. As Johnes and Taylor, (1990) is of the opinion that student wastage should be considered, Agha (2007); Lee and Buckthorpe (2008) and Asif, Raouf & Searcy (2012) also emphasize wastefulness and dropout rate of students, while Asif and Raouf (2013) expanded the graduation rate as another strong variable for evaluating university's performance.

The two famously known measures for the university performance globally are the new league tables and university rankings. The two concepts drive the worldwide higher education rivalry (Hilman & Abubakar, 2017). ARWU; Quacquarelli Symonds World University Rankings; Times Higher Education World University Ranking and Ranking Web of Universities (Webometrics) are the prominent ranking bodies that determine global universities overall performance and ranks of the universities objectively (Altbach, 2013; Hilman & Abubakar, 2017). Given the distinctive nature of universities, numerous scholars have questioned the choice of management style fit in either private or public universities.

The emergence of world universities rankings bodies in the last two decades, precisely 2005 has ignited the desire for competitive and benchmarking the nation's universities in Nigeria educational sector. Although the principle and methodology of rankings were challenged, the fact that no Nigerian university has ever been featured among the highest contestant could be a warning call to Nigerian universities managements and therefore the wider society. Nigerian academics are benchmarking their universities against those of South Africa, which have occupied the top five spots in the African continent ranking table (Hilman & Abubakar, 2017).

The older universities are competing with each other to be ranked among the highest five within the country, whereas the efforts for the rank at intervals of one hundred universities in the continent is seen and felt as well. The foremost extremely graded Nigerian university in every year's ranking without any further justification automatically becomes the "best university in Nigeria." The University of Ibadan, often noted not because is the nation's "premier university" and is because of its recent rank in the international arena. To the competing universities, this is

often proof that the primary has not remained the simplest (Materu, Obanya & Righetti, 2011).

Sailesh and Saleh, (2021) Maintaining that pristine intention of the Ranking is to encourage universities internet presence, fortifying the Open Access projects for incrementing notably the switch of scientific and cultural consciousness engendered through the universities to the public. To attain this objective, the notification of ratings is one of the highest puissant and rich implements for beginning and aligning the techniques of vicissitude within the academics, growing the scholars' dedication, and organizing the most cherished long-time strategies.

Mukiyanto (2020), explaining in addition that Web indicators are taken into consideration as variables in the comprehensive analysis and assessment of the university's performance as well as a main factor in appraising the outputs and their relevance impact on the community. This indicator incorporates the presence of the above-said roles predicted from the universities (Sailesh & Saleh, 2021). Webometrics additionally said that they intend to encourage each university and scholars to have an internet presence that replicates as it should be their activities. The entire performance indexes consist of the research efforts, quality of teaching, and impacted undertaking of the universities for the community. This study will appraise the overall performance of the university's employees on the three said output of the universities (research efforts, teaching quality, and community development services) which are the primary goals of establishing the higher institute of learning in Nigeria as enshrined in Nigeria Education Act.

Nigerian Public Universities Funding

The effective delivery of any organization depends to a greater extent on the availability of human, material, or financial resources. These resources are determinants of the performance of any organization including educational institutions (Ekpo, Ukpong, & Aniefiok, 2020). The most talked-about issue today in Nigeria's educational sector is the perennial and almost intractable funding problems of public universities. This challenge has led to the closure of Nigeria's public universities almost every year in the last two decades.

Famurewa (2014) found that the financial constraints of universities are more serious in Africa than in other continents. The Nigerian government provides 70% of the funding, while the Britain provides the remaining 30% of the total recurrent costs. Decades later, the Nigerian government, through the NUC, asked all federal universities to explore ways to generate additional revenue internally. Public universities are required to generate a minimum of 10 percent of their total annual sources from Internal Generated Revenue (IGR) (Okojie, 2009). This task has been adjudged unachievable as it has led to many other issues and challenges.

The NUC is charged with responsibilities of supervision, funding and resources allocation in Nigeria public universities. The policy of the Nigerian Federal Government is not to charge tuition in federal universities, while state governments charge tuition, room and board. Although tuition is free in federal universities however, the federal government through the NUC has mandated that all federal universities must generate 10 percent of their total annual required funds through internally generated fund-raising programs (Odebiyi & Aina, 1999). Therefore, all federal universities obtain 95% of the funds from the federal government through NUC, and universities must comply with NUC's budget and expenditure formula, which is 60%, 39%, 1% of total academic expenditure for administrative budget, and 1% for the administrative budget. Pensions and benefits (Hartnett, 2000).

Expectedly government is to cater to the needs of the educational sector which includes universities, other tertiary institutions, and basic schools. This is to say that the required fund for the management of public universities comes from the total education sector budget. Being the sector that will pilot the future of the nation, contribute to its socio-economic development, United Nations Educational Scientific and Cultural Organisation (UNESCO) recommend that a

minimum of 26% of annual budgeted nation's outflows should be allocated to education. Despite being a member of UNESCO, the Nigerian government has never kept up with this recommendation. In the last ten years, the budgetary allocation to education in Nigeria has never exceeded 10 percent.

It's a fact that funds are important resources, insufficient of it likely to affect the management practices required while efficient management of funds also required an effective management control system. As stated in some studies, educational financing in Nigeria is at the crossroads, funding of universities education tends to be moderating the universities' performance. With funding at a crisis point, the question presently seems to be what effect will funding have on management controls techniques which the universities' management has put in place to ensure optimum performance.

Contingency Theory

Contingency theory as propounded in (1975) by Hofer. He stated that any business theory must be a contingency theory. Contingency theories are capable of influencing the enterprise performance. Contingency theory remains an important aspect of research positivist approach with intent of identifying variables that are correlated with improved organizational performance (Briers & Hirst, 1990; Shields & Shields, 1998). Contingency theories conceptualize the fit between the contextual factors such as organizational structures, leadership styles, or accounting techniques with reference to their effects on organization performance (Otley, 2016).

The contingency theory is among the behavioural theory family. The theory explains that there is no single best way of organizing or leading to performance and those organizational strategies, styles or techniques which are successful in a particular situation might not be successful in another (Fiedler, 1964), whereas the best means of strategies or leadership styles are contingent upon different internal and external constraints. Contingency theory is therefore based on four main subordinating ideas, which are: There is no single best way to manage a situation; The design of an organization and its subsystems must 'fit' into its environment; Effective organizations have proper 'fit' not only between the environments but also between its subsystems; and The requirements of an organization are better satisfied when the organization is properly designed and the management style is appropriate both with the tasks undertaken and the nature of the workgroup".

Contingency theory posits that the performance of the company relied mainly on the alignment of a different organizational factor in a given business situation (Chenhall & Langfield-smith, 1998; Antonio, Daniel, Domingo & Julio, 2016). This theory is based on the premise that there is no single universally appropriate accounting technique or procedure for all firms in all circumstances. This means that efficient organization accounting and control system will vary with organizational contextual factors such as strategy, technology, and environment (Antonio et al, 2016). However, Chenhall, (2003) maintained that in any given organization, effective MCS will support organization managers to achieve the enterprise objectives when the external environment influence is not stronger than internal techniques. This view was corroborated by Antonio et al., (2016) when he stated that alignment of different variables such as technical accounting control has a lot of impact on business performance. The university performance depends on the implemented management control system effectiveness as moderated by the funding which comes from the government. Therefore, contingency theory is the grounded theory for this study.

Methodology

Research design for the study is cross- survey; this is the most appropriate research design, being a study on perception objectives in nature. The study was carried out in fourteen (14) public

universities in the Southwestern region of Nigeria. Collection of primary data was through a 5likert scale research questionnaires, which is to achieve a better understanding and describe the relationship between variables and their characteristics. The sample Size is a total of Two Hundred Thirty-Nine (239) respondents was found suitable after subjecting the sampling frame to the Tyaro Yamane (1967) formulae.

Data Analysis and Interpretation

Prelimarny Test: In an attempt to have a credible finding and as a pre-requisite for PLS- SEM some preliminary tests were carried out on the collected data for the study. The test includes normality tests, tests of multicollinearity, Construct Loadings, Convergent Validity and Reliability and others. The sample of this study is above 200, therefore It is highly recommended to observe the shape of the graphical distribution of the data rather than verifying the value of the kurtosis and skewness statistics. Figure 1 present the histogram which shows the distribution pattern of the data.

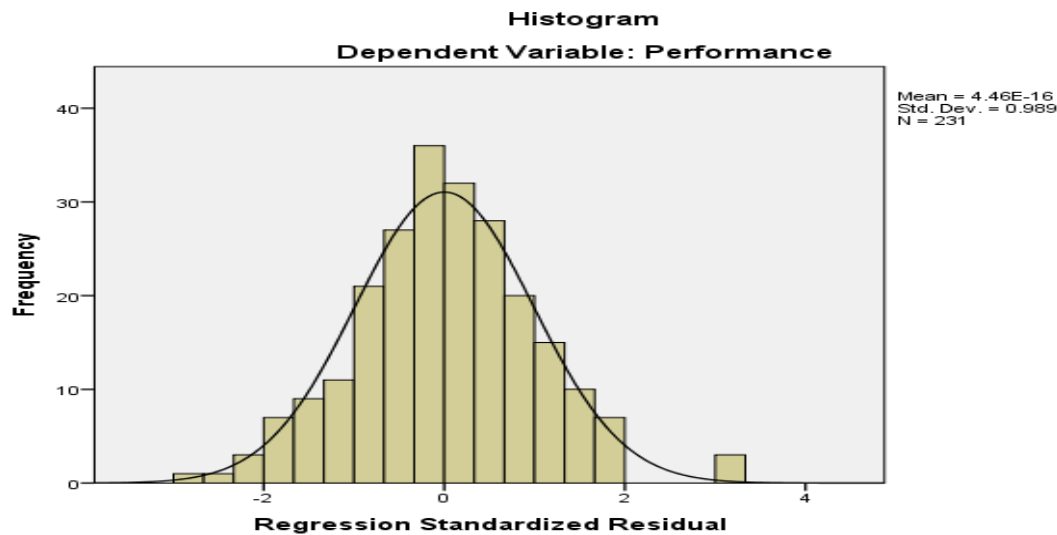


Figure 1. Histogram for test of normality

Based on the shape of the histogram and curve in the figure 1 research variables are normally distributed.

Path Coefficients Results: The study hypotheses were formulated in null forms on the premise that the funding responsibilities of the government has no moderating effects on the relationship between the management control element and performance of public universities in Nigeria. Data obtained were subjected to analysis through PLS SEM with Smart4 software. The result generated is therefore presented in table 1 and Fig 2.

Table 1: Path Coefficient

	B	Std Error	T-Value	P Values	Confidence Interval	
					2.50%	97.50%
AC*FI -> UP	0.123	0.066	1.872	0.031	0.016	0.227
CC*FI -> UP	-0.151	0.060	2.534	0.006	-0.269	-0.070
PC*FI -> UP	0.039	0.059	0.663	0.254	-0.066	0.127
RC*FI -> UP	-0.042	0.065	0.648	0.259	-0.164	0.052
R ² 0.726						

Source: Author's Computation, 2023

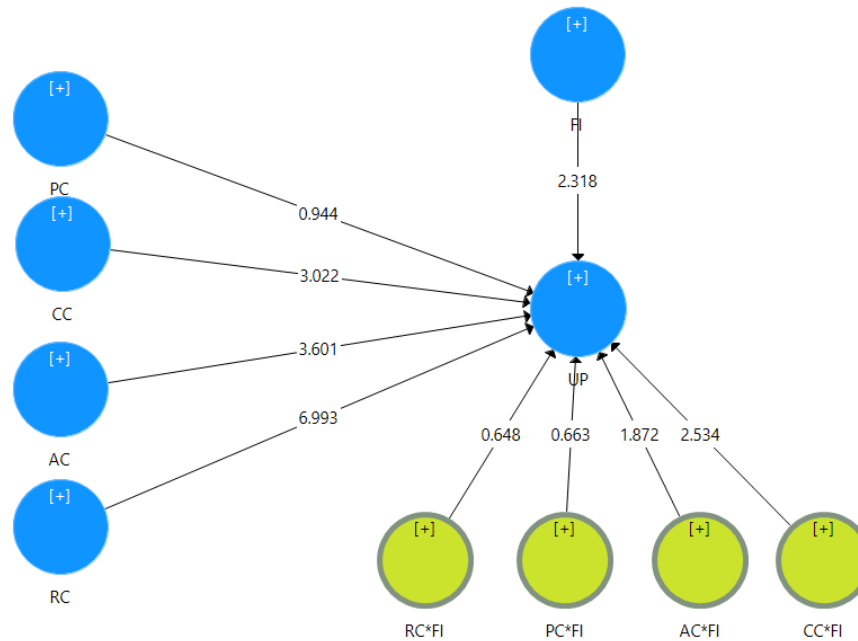


Figure 2 Structural Model

As displayed in table 1, the result indicates that funding positively and significantly moderates the relationship between action control and the performance of universities ($\beta = 0.123$; $t = 1.872$; $p = 0.031$). Having a beta of 12% signifies that, for every one increase in funding, there will be consequence of 12% increment in the relationship between action control and performance of south- west universities.

Similarly, funding efforts moderates the relationship between cultural control and university performance ($\beta = -0.151$; $t = 2.534$; $p = 0.006$). Funding practice at the moment influence the university performance negatively, the beta of -15% indicates a decrease of 15% for any increment in the current fund practice.

As presented on table 1 and fig 2, funding has no significant moderating effect on the relationship between personnel control and performance of universities ($\beta = 0.039$; $t = 0.663$; $p = 0.254$). with a beta of 3.9%, for every increase in funding, an approximately increment of 4% is expected on the performance of the selected universities. More also, funding activities does not significantly moderate the relationship between result control and performance of public universities ($\beta = -0.042$; $t = 0.648$; $p > 0.259$). However, a negative beta of 4.2% indicates every one increment in the present order of finance will lead to a reduction of 4% from the relationship between result control and performance of public universities in south west Nigeria.

Figure 2 shows the moderating effect of funding on management control elements as stated in the table 1 t-value of the funding influence to universities performance is 2.318 in the figure 2 while cultural control has the highest moderated t-value of 2.534. Table 1 also indicates the R^2 of 0.726. This R^2 is almost substantial, according to Hair et al (2017) classification. This is to state that the model predicts 73% of funding moderations on management control system.

Universities are highly cultured environment, where vision and mission are being reflected in the conducts and rituals of each. Moderating result as stated in table 1 indicated that present funding scheme is negatively influencing the effectiveness of cultural controls on the performance of the public universities. This result implies the cultural control in the public universities in Nigeria is been affected adversely. This result revealed one the reason why we have low performance in Nigeria Public universities, if this trend persists, the expected performance will decline to more worrisome situation.

Result control is another important control element in which the moderation of funding was tested on in the study. Result control is a direct control on object of performance. Table 1 revealed that there is a poor funding system in Nigeria Public universities. Result shows that funding does not moderate the relationship between result control and performance. This result implied that despite the implementation of an efficient result control, poor funding is negatively limiting the effects of the result control on the performance.

Conclusion and Recommendation

The study therefore concludes that the fund available to the public universities is not sufficient to moderate the management control element positively to enhance the much-expected performance. The government should ensure disbursement of funds to cater for the needs of the public universities; especially those funds required for efficient management control system.

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