Jurnal EurekaMatika

Journal homepage: https://ejournal.upi.edu/index.php/JEM
doi: https://doi.org/10.17509/jem.v14i1.184

An Empirical Study of Professor Salaries in Selected African Countries

Alfred Ayo AYENIGBA[1], James Serumun IVANDE[2] and Olalekan Tosin TIAMIYU[3]*

[1]Department of Mathematical Sciences, Ajayi Crowther University, Oyo, Nigeria
[2]Department of Statistics, Joseph Sarwuan Tarka University, Makurdi, P.M.B. 2373, Nigeria
[3]Department of Mathematical Sciences, Ajayi Crowther University, Oyo, Nigeria
[1]*Correspondence author: aa.ayenigba@acu.edu.ng

A B S T R A C T

This study compares professor salaries within Africa's higher education system. A quantitative, cross-sectional design is adopted to analyse salaries in 2025 across 13 African countries. The report focuses on pay disparities, how these are correlated to GDP, and how cost-of-living differences affect real purchasing power. The small sample and non-linear analyses, using descriptive statistics, Spearman rank correlation and a nonparametric regression involving cost-of-living adjustment. The results show that nominal salaries exhibit considerable variation, with South Africa (USD 57,474), Uganda (USD 50,594) and Kenya (USD 48,000) ranking highest and Nigeria, Eswatini and Zimbabwe lowest. Salaries are not statistically related to GDP per capita ($r = 0.11$, $p = 0.72$). This implies that the institutional and policy determinants are generally more impactful. When adjusted for cost of living, the disparities are magnified, with Uganda having the highest real purchasing power at USD 194,592 while Nigeria remains critically low at USD 16,667. This points to the need to evaluate remuneration in real terms and raise issues around retention and brain drain.

Article Information

Article history:

Submitted March 11, 2026
Revised April 6, 2026
Approved May 13, 2026
Online available May 15, 2026
Published May 15, 2026

Keywords:
Cost-of-living adjustment,
GDP per capita,
Non-parametric regression,
Pay disparities.

1. INTRODUCTION

Higher education institutions in Africa face difficult challenges that will influence great university staff and transformative university capacity. Colleges and universities all over the continent are running short of resources and infrastructure and are continuously challenged to retain qualified academics (Madeira, 2023). The relationship between higher education quality and faculty compensation is a complex one. Universities require well-remunerated staff for the purposes of education and research. Most countries in Africa have not been able to pay competitive salaries that would help faculty members to deal with a burden of teaching, research, and administrative duties. The huge difference in income between developed and African countries is a major contributor to the significant flight of human capital. Work (2024) argues that this dislocation has had an impact on compensation policies, which are the reasons faculty leave or stay in African universities. Lecturers and researchers

often leave to work abroad due to receiving salaries, which are not sufficient for the international opportunities. This ultimately leads to brain-drain and undermines the local institutions' teaching, research, and overall development.

Research projects that compare faculty pay across contexts have revealed significant differences in the financing and organization of academic pay. In developed nations, staff remuneration is determined by organizational traits, academic status, research output, and governance procedures (Hirsch and Pelkowski, 2025). In contrast, salary structures in Sub-Saharan Africa tend to fall below international benchmarks and rarely reflect faculty qualifications. According to Musa *et al*., (2025), the research productivity and performance of academic staff in North-Central region of Nigeria are largely influenced by the levels of basic salaries, which are much lower than those of comparable institutions abroad. Many African universities lack clear and merit-based pay systems. As a result, there is considerable uncertainty about pay and promotion. As a result, these problems worsen staffing problems. Many potential recruits prefer careers in sectors or countries with clear and competitive pay structures which meet international standards.

The academic staff or professors' quality of work life is much more than their take-home salaries, due to the larger dimensions of professional life. Academic staff working in Ghanaian universities have a moderate overall quality of work-life perception. Furthermore, many express worries regarding stress management, poor pay and a lack of opportunities for advancement (Manor *et al.,* 2025). Akpey -Mensah 2023 states that poor relationship with co-workers and weak support from institutions are the major causes of attrition at emerging Ghanaian universities. It is essential that the fairness of a compensation plan is perceived as just and fair by employees, for them to be motivated and committed to the institution. According to Kenya's chartered universities, perception of equity significantly moderates pay-performance relationship (Metal and Panama, 2025). Information from Bangladesh demonstrates that both internal and external pay equity affect the commitment of faculty members. Consequently, academic staff may compare their pay to different reference groups.

Although higher education is critical for African development, there is very little information on professor salaries on the continent, much of which is old, limited and inconsistent. This hampers insight into regional disparities and the effects of pay on motivation, retention and mobility. Many past studies focus either on developed countries or single developing countries, while they cover only the narrow pay aspects, rather than the whole picture with stakeholders' salaries. It is very crucial to employ reform policies backed by evidence as per the latest research. For instance, the using of faculty members simply paid a lot higher, preferably more than double the annual average national pay. Compensation should be about eighty five percent fixed, with performance related elements kept to a minimum to restrict widening of salary differentials. This study seeks to address the lack of cross-national data by studying the salaries of professors in thirteen African countries. This study seeks to address the lack of cross-national data by studying the salaries of professors in thirteen African countries. The goal of this research is to compare the average annual and monthly salaries of professors, find the relationship with the per capita GDP, as well as study the effect of the cost of living on real income, with correlation analysis, bar plot visualisation, and regression modelling used to examine relationships, compare distributions, and quantify predictive associations across variables.

2. METHOD

This study used a cross-national, descriptive research design and only used secondary data to analyze the university professors' salary in thirteen African countries which were South Africa, Uganda, Kenya, Namibia, Botswana, Angola, the Seychelles, Ghana, Mauritius, Malawi, Zimbabwe, Eswatini and Nigeria. Countries selection relies on availability and comparability of data. This study examines annual and monthly salary values in US dollars with a cost-of-living index for 2025 and GDP per capita. (Dada, 2026).

The information was taken from reliable data with additional information from government, ministry of education, national statistics office, and the central bank. The data for the academic pay structure was principally derived from university annual reports and published salary schedules. International databases, including the World Bank and the UNESCO Institute for Statistics, provide macroeconomic indicators like GDP per capita, inflation, and purchasing power parity, among other data. More data on living costs and economic conditions was provided by peer-reviewed studies and other institution surveys. The research. The researchers opted not to use any sampling methods because they had relevant secondary data available. Various data were collected from various sources when possible and verified and standardized for cross-country comparability. The salary figures were converted from local currencies to US dollars using the official exchange rates. (Statista, 2025).

2.1 Methods of Data Analysis

2.1.1 Correlation and Simple Linear Regression

Correlation Analysis (Pearson's r): This measures the strength and direction of the relationship between professor salaries and GDP per capita.

The conditions for using Pearson's correlation include:

i. Both variables must be continuous and approximately normally distributed.

ii. There should be a linear relationship between the variables.

iii. The data should be free of significant outliers that could distort the correlation.

However, when any of the condition above are violated, corresponding non-parametric test, Spearman Rank correlation coefficient will be used.

Procedure:

1. Ensure both variables are continuous and approximately normally distributed.
2. Use scatterplots to check for linearity and identify outliers.
3. Compute Pearson's correlation coefficient (r) to quantify the strength and direction of the relationship

$$r = \frac{\sum(X_i - \bar{X})\,(Y_i - \bar{Y})}{\sqrt{\sum(X_i - \bar{X})^2\,(Y_i - \bar{Y})^2}} \qquad (1)$$

4. Test the statistical significance of r using a p-value. (Schober, 2018).

Simple Linear Regression: This models the predictive effect of GDP per capita on professor salaries using the equation:

$$y_i = \beta_0 + \beta_1 x_i + \epsilon \qquad (2)$$

where

y_i *is the salary* , x_i *is the GDP per capita and* ϵ *is error term normally distributed*

The conditions for applying simple linear regression include:

i. Linearity: The relationship between GDP per capita and salary should be linear.

ii. Independence: Observations should be independent of each other.

iii. Homoscedasticity: The variance of residuals should be constant across all levels of the independent variable.

iv. Normality: Residuals should be approximately normally distributed.

v. No multicollinearity: Only one predictor is used here, so this condition is inherently met.

However, when any of the conditions above are not met, the corresponding non parametric test, the Rank-based Regression will be used instead. (Kutner *et al.,* 2005)

Procedure:

1. Verify assumptions: linearity, independence, homoscedasticity, and normality of residuals.
2. Fit the regression model by estimating the coefficients ($\beta_0$and β_1) using the least squares method.
3. Assess the model fit using R^2, which indicates the proportion of variance in salaries explained by GDP per capita.
4. Test the statistical significance of the regression coefficient (β_1) to determine whether GDP per capita is a significant predictor of professor salaries.
5. Examine residual plots to check for any violation of assumptions or patterns not captured by the model. (Gujarati and Porter 2009)

Parameter Estimation for $\boldsymbol{\beta_0}$ *and* $\boldsymbol{\beta_1}$

The value of the two parameters of the regression equation is given as:

$$\beta_1 = \frac{\sum(X_i - \bar{X})\,(Y_i - \bar{Y})}{\sum(X_i - \bar{X})^2} \qquad (3)$$

$$\beta_0 = \bar{Y} - \beta_0 \bar{X} \qquad (4)$$

where

$X_i = GDP\ per\ capita\ for\ observation\ i$

$Y_i = Professor\ salary\ for\ observation\ i$

$\bar{X}\ and\ \bar{Y} = mean\ of\ GDP\ per\ capita\ and\ salary\ respectively$

2.1.2 Comparative Analysis, and Multiple Regression

To achieve the third objective, the following statistical methodologies will be employed:

(a) **Calculation of Real Salaries:** Nominal salaries will be adjusted for cost of living to reflect true purchasing power using the formula:

$$\text{Real Salary} = \frac{\text{Nominal Salary}}{(\text{Cost of Living Index}/100)} \qquad (5)$$

(b) **Comparative Analysis:** Descriptive statistics and visualizations will be used to compare purchasing power across countries, highlighting differences in real salaries.

(c) **Multiple Regression Analysis:** This method will examine the combined effect of GDP per capita and cost of living on professor salaries using the equation:

$$y_i = \beta_0 + \beta_1 x_i + \beta_2 x_2 + \epsilon \qquad (6)$$

where

$y_i = the\ salary$,

$x_1 = the\ GDP\ per\ capita$

$x_2 = the\ Cost\ of\ Living\ Index$

$\epsilon\ is\ error\ term\ normally\ distributed$ (Gujarati and Porter 2009)

Parameter Estimation $\boldsymbol{\beta_0, \beta_1\ and\ \beta_2}$

Equation (6) can be written as $Y = X\beta + \epsilon$, where

$Y = n \times 1\ vector\ of\ observed\ salaries$

$$Y = \begin{bmatrix} y_1 \\ y_2 \\ \vdots \\ y_n \end{bmatrix}$$

$X = n \times 3\ matrix\ of\ predictors\ (including\ a\ column\ of\ ones\ for\ the\ intercept)$

$$X = \begin{bmatrix} 1 & x_{11} & x_{12} \\ 1 & x_{21} & x_{22} \\ \vdots & \vdots & \vdots \\ 1 & x_{n1} & x_{n2} \end{bmatrix}$$

$\beta = 3 \times 1\ vector\ of\ parameters$

$$\beta = \begin{bmatrix} \beta_0 \\ \beta_1 \\ \beta_2 \end{bmatrix}$$

$\epsilon = n \times 1 vector\ of\ residuals$

RESULTS

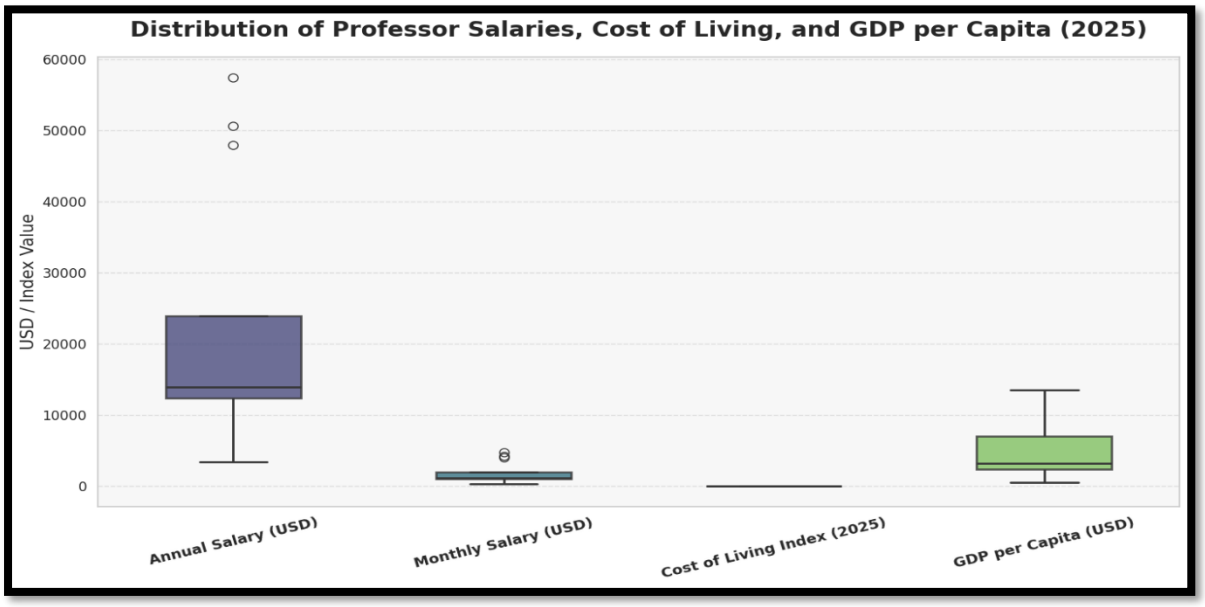
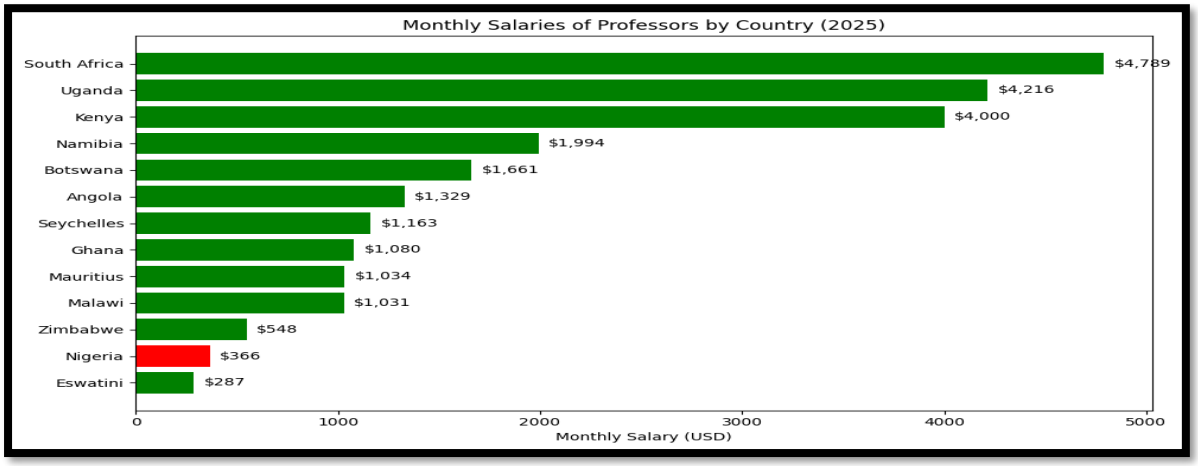


Figure 1: Box Plot of Distributions of Yearly, Monthly, Cost of Living and GDP per Capita

Figure 1 provides economic and academic indicators for 13 African countries in 2025, for example, professor salaries, cost of living indices, GDP per capita among others. In South Africa and Uganda, professor salaries are higher and much more dispersed than in many other countries where they are substantially lower. In comparison, the cost-of-living index remains relatively stable across countries and GDP per capital has moderate variation, revealing economic disparities behind differences in academic pay.

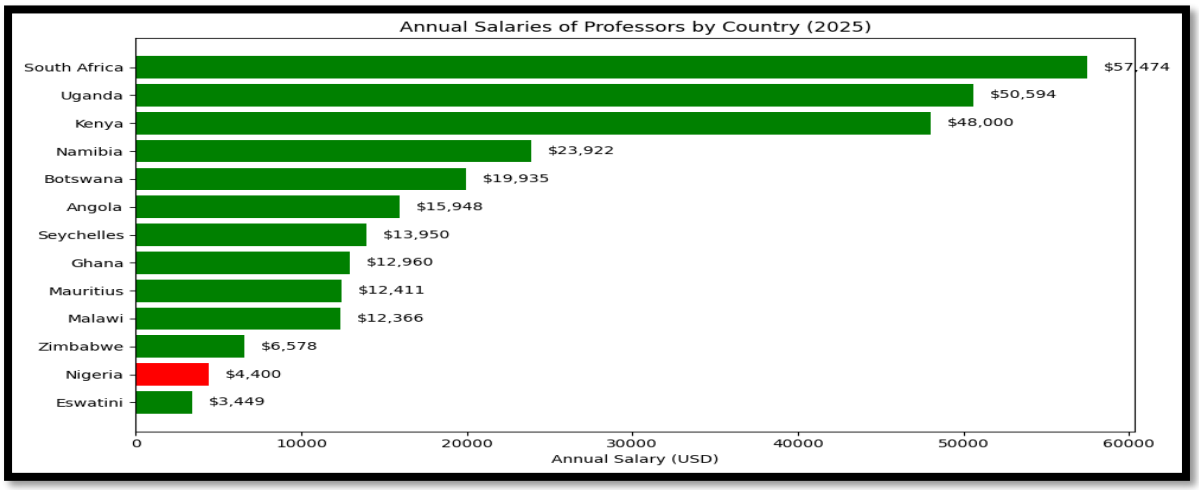


Visualization based on data from Statista (2025) and Dada (2026).

Figure 2: Bar Chart Showing the Monthly Salaries of Professors by Countries

As shown in Figure 2, there was significant variation in monthly professor salaries among selected African countries in 2025. This is an indicator of investment in higher education. The ability of SADC countries to attract and retain academic professionals is highlighted by South Africa, Uganda and Kenya leading the pack of 16 SADC countries with salaries of $4,789, $4,216 and $4,000 respectively. Namibia, Botswana and Angola are in a moderate category between $1,600 and $2,000. By contrast, Seychelles, Ghana, Mauritius and Malawi have

lower pay of $1,000 to $1,200. Zimbabwe, Nigeria and Eswatini are ranked at the bottom, with Nigeria's $366 being the second lowest despite being a large economy. These differences point to uneven policy priorities and economic conditions on the continent with consequences for faculty retention, research productivity and the sustainability of academic careers in the long term.



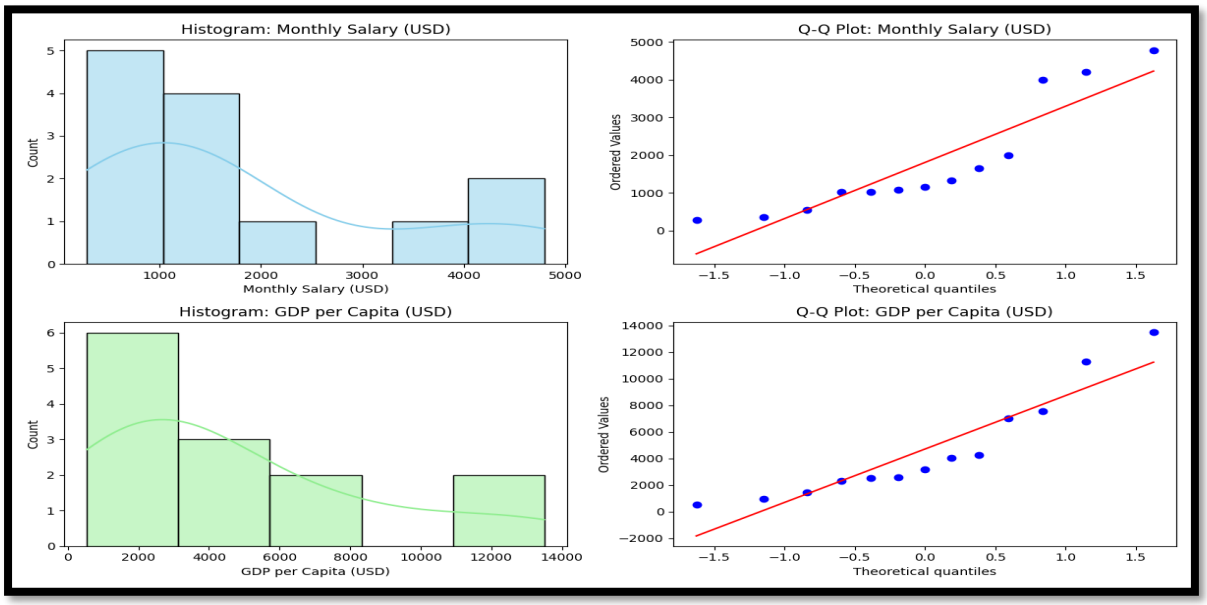
Visualization based on data from Statista (2025) and Dada (2026).

Figure 3: Bar Chart Showing the Yearly Salaries of Professors by Countries

Figure 3 provides a ranking of university professor salaries across thirteen African countries in 2025. The average salaries vary widely across nations. South Africa emerged on top with an average annual salary of $57,474. Uganda follows second with $50,594 and Kenya in third with $48,000. This shows better economic capacity and sustained investment in high-level education. Namibia, Botswana, and Angola pay between 15,000 and 24,000, Seychelles, Ghana, Mauritius, and Malawi pay lower, to the tune of 12,000 to 14,000. According to the scale, Zimbabwe is ranked towards the bottom. Eswatini stands at $3,449 while Nigeria stands at $4,400 per year. Given Nigeria's significance, this is a very low figure. The large differences are indicative of uneven distribution of resources and unequal policy priorities across the continent, along with critical implications for academic mobility, faculty retention and disparities in research teaching quality.

Examining the Relationship Between Professors' Salaries and National Economic Performance Measured by GDP per Capita

The analysis tests basic assumptions, utilizes a Pearson correlation with scatter plots to examine relationships between the salaries of professors and GDP per capita, checks statistical significance with the help of p-value, and models the predictive effect of economic performance on academic salaries. The analysis provides insights on how national economic conditions shape faculty compensation patterns.



Visualization based on data from Statista (2025) and Dada (2026).

Figure 4: Histograms and Q-Q Plots of Monthly Salary (USD) and GDP per Capita (USD)

Table 1: Normality Test Results for Monthly Salary and GDP per Capita

Variable	Shapiro-Wilk W	Shapiro-Wilk p	KS p-value	Normality at 5%
Monthly Salary (USD)	0.816	0.011	0.388	No
GDP per Capita (USD)	0.860	0.039	0.396	No

In the Shapiro–Wilk test both variables' p-values are less than 0.05 which indicates a significant departure from normality. The Kolmogorov–Smirnov test gives a slightly higher p-value for both variables which is, given the insufficient sample size, less informative. The histograms and Q–Q plots all appear to have skewed tails. Thus, rank correlation is adopted instead of any of the parametric techniques.

Table 2: Spearman Correlation Test Results: Professors' Salaries vs. GDP per Capita

Correlation Coefficient	**p-value**	**α (Significance Level)**
0.11	0.72	0.05

Source: Estimated from Statista (2025) and Dada (2026)

Hypothesis

H_{o1}: There is no significant relationship between the salary of the professor and the country's economic performance as measured by GDP per capita.

H_{11}: There is a significant correlation between professors' salaries and the economic performance, represented by the GDP per capita, of their countries.

According to the results, with a p-value of 0.72, which is far greater than 0.05, H_{o1} is not rejected. Thus, it indicates that there is no relationship between professors' salaries and GDP per capita among selected African countries.

Regression Modelling of GDP per capita on professor salaries

Linear regression cannot be applied due to the violation of the normality assumption. The Rank-based Regression will be used.

Table 3: Nonparametric Regression Model Summary

Model	R-squared	Coefficients
Rank-based Regression	0.012	Intercept: 6.23, Slope: 0.11

Source: Estimated data from Statista (2025) and Dada (2026)

The regression model becomes:

$$Rank\ of\ Monthly\ Salary = 6.23 + 0.11 \times Rank\ of\ GDP\ per\ Capita$$

With an R-squared of 1.2% and a slope of 0.11, the results confirm the Spearman correlation that there is no meaningful predictive relationship between GDP per capita and professors' salaries in the selected African countries.

The Impact of Cost of Living on the Real Value of Professors' Salaries Across Countries

The cost of living has an impact on the real value of the salary of professors. Salaries can be converted into real salaries which change the nominal salary into purchasing power. Descriptive statistics and pictures of the respective countries will be used.

Using the formula for real salary in equation (6), we have Table 6 as follows.

Table 4: Real Annual and Monthly Salaries of Professors Adjusted for Cost of Living

Country	Cost of Living Index	Real Annual Salary (USD)	Real Monthly Salary (USD)
South Africa	30.0	191,580	15,963
Uganda	26.0	194,592	16,215
Kenya	28.2	170,213	14,184
Namibia	29.3	81,645	6,805
Botswana	39.5	50,468	4,205
Angola	24.0	66,450	5,538
Seychelles	35.6	39,185	3,267
Ghana	30.6	42,353	3,529
Mauritius	35.6	34,862	2,904
Malawi	25.0	49,464	4,124
Zimbabwe	34.7	18,957	1,579
Eswatini	38.0	9,076	755
Nigeria	26.4	16,667	1,386

Source: Adapted from Statista (2025) and Dada (2026)

Table 4 shows the annual and monthly salaries of university professors across thirteen African countries. Furthermore, the salaries were adjusted for the cost of living for a clearer view on their actual purchasing power. Finally, it also indicates the extent to which the salaries support living standards. According to the survey, Uganda has the highest real annual salary ($194,592) for universities. Uganda is followed by South Africa ($191,580) and Kenya ($170,213). Due to greater purchasing power, it reflects stronger academic earning. It is due to the more significant national investment in education, more favourable institutional policies, and economic stability.

Moderate nominal pay combined with lower living costs has allowed professors in mid-range countries like Namibia, Botswana, Angola and Malawi to enjoy a reasonable standard of living despite earning real annual salaries of $49,000 to $81,000. Seychelles, Ghana and Mauritius have higher nominal earnings but low real earnings because of the cost of living. Zimbabwe, Eswatini and Nigeria earn below $20,000 per year. Nigeria's figure of $16,667, or $1,386 per month, reflects a glaring discrepancy between pay and cost of living that will encourage dissatisfaction, retention struggles and academic brain drain. Higher Education Africa's 2022 salary report indicates that, on a real adjustment perspective, Uganda is actually better off than South Africa in real terms. Malawi and Angola improve in rank, following decreases in affordability. Seychelles and Mauritius decline, as they are too expensive. Nigeria sits close to the bottom. This all underscores the ongoing disparities in academic salary relative to local conditions across the continent.

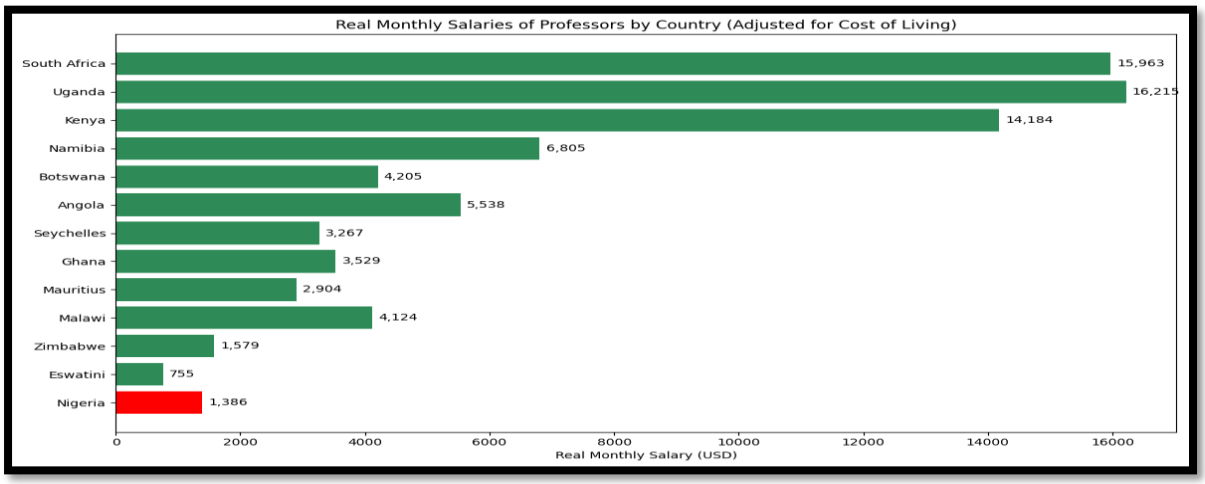


Figure 5: Bar Chart of Real Monthly Salaries of Professors by Country (Adjusted for Cost of Living)

According to figure 5 the monthly salaries of university professors across 13 African countries, adjusted for purchasing power, places Uganda at the top with a salary of $16,215 (about R245 000). Following closely is South Africa ($15,963) and Kenya ($14,184), showing that these universities enjoy a strong economic backing. There is a middle group that includes Namibia, Angola, Botswana, Malawi, Ghana, and Seychelles with a moderate level of purchasing power at the upper end of the scale. At the lower end of the scale are Mauritius, Zimbabwe, Eswatini, and Nigeria. In these countries the high cost of living severely detracts from real salary. Thus, Nigerian professors earn a monthly salary of $1,386 which freights in as the second-lowest despite being the second-largest economy and the largest academic labour force of the continent. The data illustrates an ongoing issue with funding and salaries that limit the retention of academic staff and drive skilled migration as well as limiting the international competitiveness of universities in countries like Nigeria.

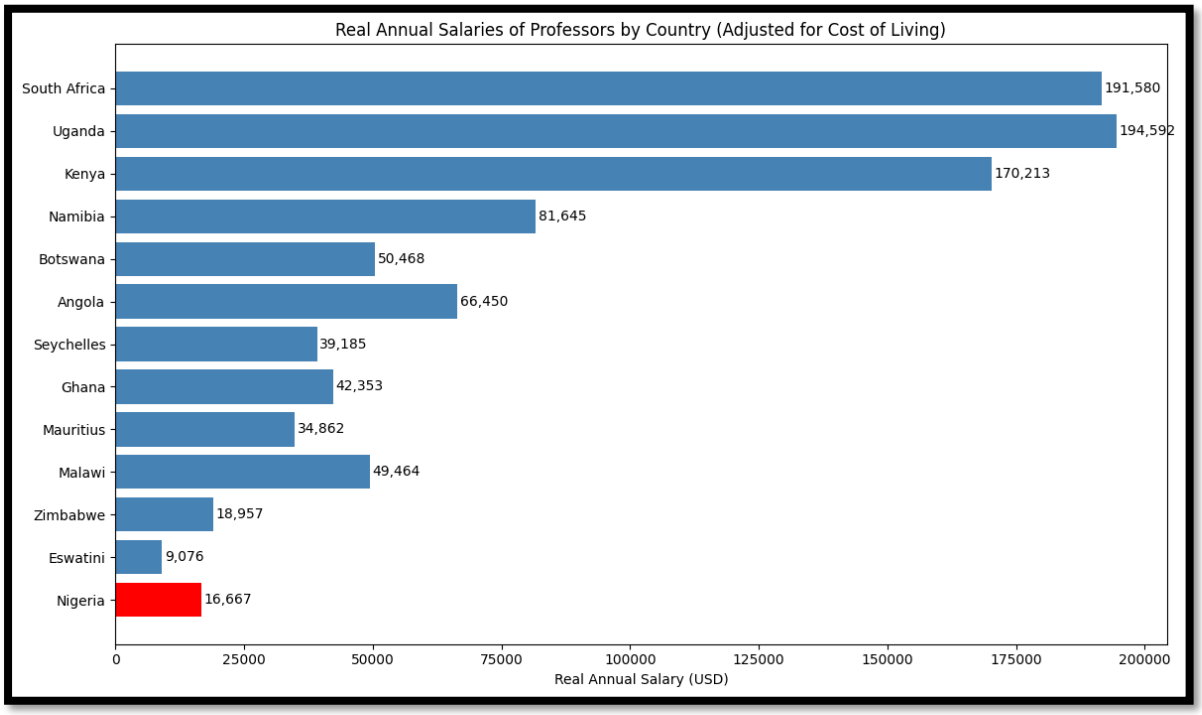


Figure 6: Bar Chart of Real Annual Salaries of Professors by Country (Adjusted for Cost of Living)

The salaries shown in Figure 6 are purchasing power–adjusted annual salaries of university professors in thirteen African countries. Uganda is the highest at $194,592, followed by South Africa at $191,580, and Kenya at $170,213. These amounts indicate that Uganda, South Africa and Kenya have strong economic security. A middle group can be seen with Namibia at $81,645, Angola at $66,450, Malawi at $49,464, Botswana at $50,468, Ghana at $42,353, and Seychelles at $39,185. These countries have moderate purchasing power indicating some level of economic security. The lower-tier groups, of which Nigeria is the 2nd lowest at $16,667 (approximately $1,389 monthly), includes Mauritius at $34,862, Zimbabwe at $18,957, Eswatini at $9,076, which shows constrained financial conditions. Unbelievably, Nigeria is two notches above the lowest (Eswatini). The amount indicates high structural funding constraints limit financial security, drive highly skilled migration, reduce research performance, and undermine the competitiveness and quality of Nigerian universities. This is particularly remarkable in comparison to Uganda, where university professors earn almost twelve times as much.

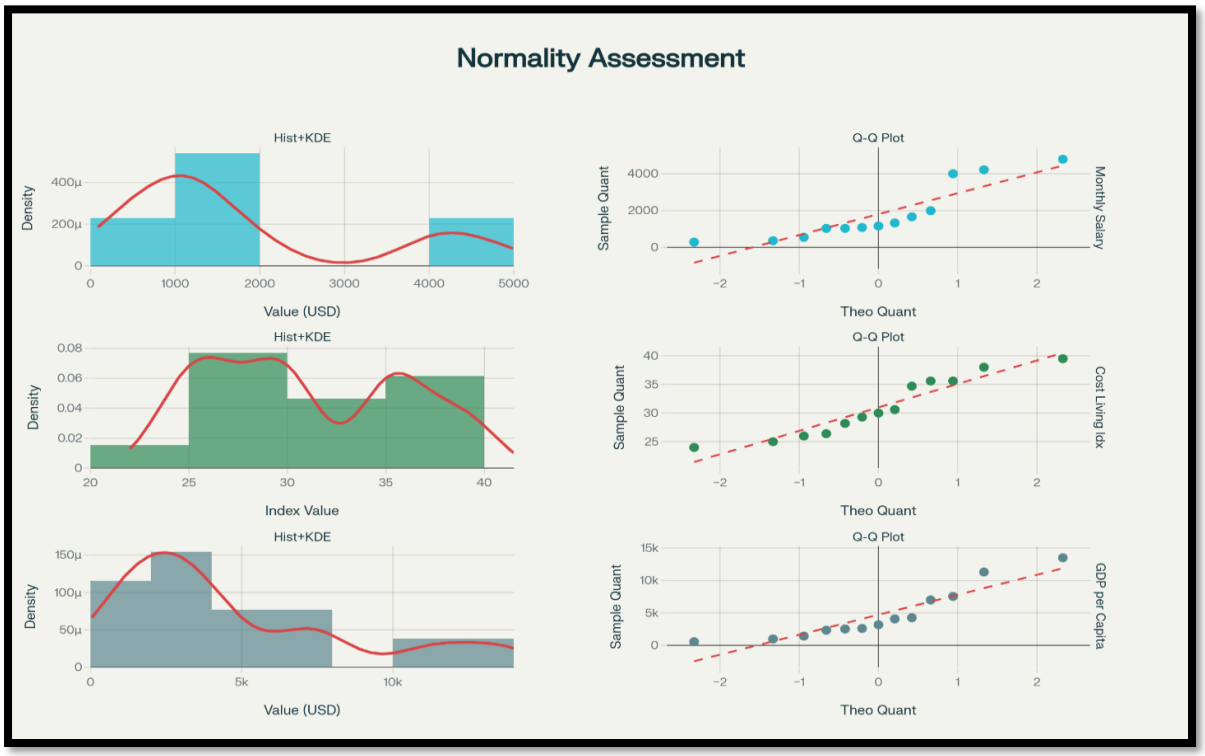


Figure 7: Histograms and Q-Q Plots of Monthly Salary (USD), Cost of Living and GDP per Capita (USD)

Table 5: Normality Test Results for Monthly Salary, Cost of Living Index and GDP per Capita

Variable	W Statistic	p-value	Normality Conclusion
Monthly Salary (USD)	0.816	0.011	Not normal ($p < 0.05$)
Cost of Living Index (2025)	0.934	0.388	Normal ($p > 0.05$)
GDP per Capita (USD)	0.860	0.039	Not normal ($p < 0.05$)

Computed from the sourced data: Statista (2025) and Dada (2026)

Table 7 presents the results of the normality test for the three variables. According to the table, it was found that only the Cost-of-Living Index follows a normal distribution ($p = 0.388$). On the contrary, Monthly Salary (USD) and GDP per Capita (USD) were found to significantly deviate from normality ($p < 0.05$). Therefore, it can be said that the assumptions of linear multiple regression are not satisfied and a nonparametric method is better fit for the analysis of these three variables.

Table 6: Raw Data Table (with Ranks)

Country	Salary	Cost of Living	GDP per Capita	Salary Rank	Cost of Living Rank	GDP per Capita Rank
South Africa	4789	30.0	6994	13.0	7.0	10.0
Uganda	4216	26.0	985	12.0	3.0	2.0
Kenya	4000	28.2	2329	11.0	5.0	4.0
Namibia	1994	29.3	4260	10.0	6.0	9.0
Botswana	1661	39.5	7550	9.0	13.0	11.0
Angola	1329	24.0	3166	8.0	1.0	7.0
Seychelles	1163	35.6	13500	7.0	10.5	13.0

Ghana	1080	30.6	2526	6.0	8.0	5.0
Mauritius	1034	35.6	11300	5.0	10.5	12.0
Malawi	1031	25.0	545	4.0	2.0	1.0
Zimbabwe	548	34.7	1430	3.0	9.0	3.0
Eswatini	287	38.0	4073	1.0	12.0	8.0
Nigeria	366	26.4	2600	2.0	4.0	6.0

Table 7: Nonparametric Regression Model Summary

Metric	**Value**
Intercept	7.502
Cost of Living Rank Coefficient	-0.489
GDP per Capita Rank Coefficient	0.418
R^2 (Coefficient of determination)	0.156
% Variance Explained by Predictors	15.6%

Computed from the sourced data: Statista (2025) and Dada (2026)

Regression Model (using ranks) is given as:

$$\text{Salary Rank} = 7.502 - 0.489 \times \text{Cost of Living Rank} + 0.418 \times \text{GDP per Capita}$$

The model says that higher cost of living ranks leads to lower salary rank (-0.489). Moreover, higher GDP per capita ranks produce higher salary rank (0.418). The constant intercept is 7.502. The model explains only 15.6% of the variance (R^2 = 0.156). Nevertheless, there is a reasonably valuable relationship on a non-parametric basis between the conditions of the economy of the country, cost of living, and salary rank.

DISCUSSION OF RESULTS

An empirical study of professor salaries in thirteen African countries, 2025. The study provides insights into the structure of salaries, relationship with economic performance, and the costs of living effects on real income in African countries' professor salaries. Through analytical methods such as descriptive statistics, data visualization, Spearman rank correlation, nonparametric regression, and cost of living adjustments, the study's aims are achieved. It also demonstrates considerable variations in the salaries of academics across the continent.

A descriptive analysis of the nominal salaries of professors shows great variation. The average annual salary was USD 21,691.31 (SD = USD 17,928.45) and the average monthly payment was USD 1,807.54 (SD = USD 1,494.04). The most costly countries to hire academics globally are South Africa (USD 57,474 per annum), Uganda (USD 50,594), and Kenya (USD 48,000). This is in existence in part because of stronger institutional funding, policy prioritization of higher education, and greater competitiveness in the global academic labour market. On the other hand, Nigeria ($4,400 yearly), Eswatini ($3,449), and Zimbabwe ($6,578) registered the lowest levels of remuneration which signifies a level of underinvestment in academic staff. Nigeria is a particularly interesting case, given the gap between the low level of pay for academics and the size of the economy and university system. The results are in line with earlier reports, which show that limited public funds and governance inefficiencies continue to undermine salary competitiveness in African higher education institutions (Mudogwa *et al.,* 2025). The vastly different standard deviations indicate the presence of

structural inequality, which may lead to further academic migration in search of better compensation overseas (Worku, 2024).

Spearman's rank correlation (r = 0.11, p = 0.72) was not significant. Thus, we do not reject H_{o1}. This implies that there is no monotonic relation of salaries of professors to GDP per Capita (mean = USD 4712.15, SD = USD 4019.11) This result contradicts the Human Capital Theory, suggesting that greater investment in human capital, composed of academic pay, should be found in wealthier countries that have more capital (Jacobsen, 1999). The rank-based regression analysis that follows confirms this interpretation. The least squares R^2 value is merely 1.2% while the slope coefficient is 0.11. This suggests that GDP per capita explains a negligible percentage of salary variations. The weak relationship may be due to a number of contextual factors, such as policy distortions associated with public sector wage ceilings that detach academic remuneration from economic performance and institutional factors, such as collective bargaining outcomes and legacy funding models that focus on non-monetary benefits (Ilyina and Krasyukova, 2025). Nigeria is a case in point. Despite a GDP per capita of USD 2600, professor salaries are among the lowest globally, suggesting sustained misalignment of policy, governance and funding in higher education.

The nominal salary stems were not economically measured. After adjusting the nominal salaries for cost of living by formula 7, the results reveal a significant impact on purchasing power that provides qualitative support for H_{12}. That the real annual salary averaged USD 66,126 is far above the nominal figure. One reason would be the low cost of living indices for the region, which had a mean of 30.99. After adjustment, Uganda (USD 194,592), South Africa (USD 191,580) and Kenya (USD 170,213) retained their leadership position with high nominal pay and low cost of living. But still, after adjustment, Nigeria's real annual salary of USD 16,667 (monthly USD 1,386) remained low, as insufficient nominal pay outweighed the benefit of the lower cost of living. Countries like Malawi and Angola improved their positions due to lower cost of living while Seychelles and Mauritius dropped on the ranking as the real income rose less than the increase in nominal income due to higher expenses. This is in accordance with the Equity Theory, which claims that actual well-being rather than nominal compensation shapes perceptions of fairness (Usman *et al.,* 2025). The cost of living is asserted to be a key moderator of salary adequacy which has direct implications for faculty motivation, retention and international mobility. As a result, this conclusion which is in line with previous studies show that unadjusted salaries hide actual disparities, fuelling faculty dissatisfaction and turnover across Sub-Saharan Africa (Dlamini and Dlamini, 2024; Nanor *et al.,* 2025).

As a whole, the results challenge deterministic economic interpretations of academic pay and highlight the potency of institutional and policy frameworks. Box plots and graphs revealed the notable presence of outliers (like South Africa) and clustering of LI (lower-income) countries. These findings point to possible segmentation in the academic labour market (Jacobsen, 1999). The continuous low ranking of Nigeria is highly alarming. This raises questions related to the sustainability of the country's higher education system. What will be the long-term implication of the higher education system on the country's research productivity, quality of instruction and development of the country?

Data Availability: Based on request.

Conflict of Interest: Authors declare that there is no conflict of interest among them

REFERENCES

Akpey-Mensah, T. L. (2023). Translating Social Capital into Ubuntu to Retain Academic Staff in Emerging Universities in Ghana. *Southern African Journal for Folklore Studies*, *32*(1), 15 pages.

Bian, Y., Chen, L., and Zhao, H. (2024). Gender disparities and salary inequality among young professors: Evidence from public U.S. universities. *Journal of Labor and Education Studies*, 15(2), 145–163.

Bussin, M. and Thabethe, N. (2018). Reward preferences across different demographic groups in South Africa. *SA Journal of Human Resource Management*, 16(1), 1–12.

Dada, A. (2026). *List of African countries where professors earn higher salaries than in Nigeria*. Legit.ng.

Dlamini, T. and Dlamini, P. (2024). Academic staff well-being in South African universities: A narrative review of challenges and compensation factors. *African Journal of Higher Education Studies*, 12(3), 211–228.

Euclid Collaboration, Adewale, O., and Kamara, F. (2024). Colonial legacies and institutional hierarchies in African higher education systems. *African Educational Review*, 30(1), 55–72.

Field, A. (2013). *Discovering statistics using IBM SPSS statistics* (4th ed.). SAGE Publications.

Gujarati, D. N., & Porter, D. C. (2009). *Basic econometrics* (5th ed.). McGraw-Hill Irwin.

Hersch, P. and Pelkowski, J. (2025). Compensation of presidents, provosts, and professors at U.S. public universities. *Journal of Educational and Human Resource Studies*, 2023–0045.

Ilyina, I. and Krasyukova, N. (2025). Remuneration of university teachers in the context of higher school modernization: A Russian perspective. *International Journal of Educational Management*, 39(1), 83–102.

Jacobsen, J. P. (1999). Labor economics and the human capital framework. *Journal of Economic Perspectives*, 13(1), 91–108.

Kayani, A., Osei, M., and Hassan, R. (2023). Compensation practices and firm performance in emerging African markets: Evidence from Egypt and South Africa. *African Journal of Business and Economic Research*, 18(4), 79–97.

Kutner, M. H., Nachtsheim, C. J., Neter, J., & Li, W. (2005). *Applied linear statistical models* (5th ed.). McGraw-Hill Irwin.

Mitalo, R. and Wanyama, K. W. (2025). Moderating effect of perceived equity on the relationship between employee compensation and academic staff performance in Kenyan chartered public universities. *East African Scientific Journal of Education and Business Management*, 8(6).

Mudogwa, T., Chikanda, C., and Ncube, M. (2025). Institutional governance, compensation, and academic productivity in African higher education. *Journal of African Studies in Education and Development*, 17(2), 102–125.

Mumin, A. A. (2025). How do pay and promotion influence job satisfaction in tertiary institutions? Perspectives of academic staff in the Northern Region of Ghana. *Advance*, 14450415.

Musa, K., Akeem, Bakare, A., Friday, Isah, I., Oyabambi, A., Enebi, A., and Owolola, Q. (2025). Reward system: Does base salary influence the performance of academic staff in selected private universities in North Central Nigeria? *Journal of International Studies in Educational Management*, 39.

Nanor, M. A., Poku-Boansi, M., and Adarkwa, K. K. (2025). Determinants of the quality of life of university teachers: A case of a higher education institution in Ghana. *Journal of University Studies and Training*, 42(4).

Owusu, E., Moyo, P., and Van der Merwe, J. (2023). The impact of compensation structure on executive performance in South Africa: A difference-in-difference analysis. *Corporate Governance Review*, 21(3), 214–230.

Rahman, M. S., Som, H. M., Karim, D. N., Rahman, M. H. A., and Karim, M. M. (2023). The effect of pay equity on organizational commitment in higher education institutions in Bangladesh. *Problems and Perspectives in Management*, 21(4).

Schober, P., Boer, C., & Schwarte, L. A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesthesia & Analgesia*, 126(5), 1763–1768.

Statista. (2025). *GDP per capita of African countries*.

Taderera, D. (2023). Managing higher education pain points for knowledge and innovation for Africa's development: Lessons from the rest of the world. *Royal Academy of Sciences International Journal*, 9(2).

Usman, A., Bello, K., and Adeyemi, O. (2025). Reward systems, performance incentives, and productivity: Evidence from Nigerian organizations. *African Journal of Management Research*, 27(1), 65–84.

Van den Broeck, K., Chirwa, E., and Mushi, J. (2023). Structural transformation and the gender pay gap in Sub-Saharan Africa. *World Development Perspectives*, 32, 100475.

Worku, G. M. (2024). Unlocking faculty development scheme in higher education: Utilizing expatriate faculty or reversing brain drain to brain gain? *Scholars*, 74428.