

Research Article

Effect of Public Wages on External Debt in Kenya

Remmy Juma Naibei¹, Dennis Muriithi^{2, *}, Onesmus Mbaabu^{1, *}

¹Department of Social Sciences, Chuka University, Chuka, Kenya

²Department of Physical Sciences, Chuka University, Chuka, Kenya

Abstract

Most developing Africa countries have a high need for capital projects that requires a lot of government spending and attention. However, it is unfortunate that in Kenya, borrowed cash intended for capital projects is diverted to recurrent requirements putting a damper on national investment in viable projects. This poses a significant threat to the economy's growth. The following goal served as a guideline for the study; to determine the influence of public wages on external borrowing debt in Kenya using both cointegration and error correction model. Causal research design was adopted to explain the influence of public wages on external borrowing in Kenya. The study period was from 1970 and 2019 from which a 50-year time series data was employed for analysis. The research relied on secondary data which was collected with the aid of a structured data collection checklist from Central Bank of Kenya, and Kenya National Bureau of Statistics, and World Bank websites. Data analysis was done with an aid of stata, E-views and Ox-Metrics statistical software. Stationarity of variables was tested using PP unit root test where public wages was reported to be stationary at level form. The study employed the use of Ordinary Least Square (OLS) technique in the analysis. There was a significant negative association between public wages and external debt whereby a rise in public wage by 100% indicated decrease in external debt by 101.92%. The overall model was found to be significant since the F-statistic value generated in the analysis was 124.664 with a p-value of $0.000 < 0.05$. Model was a good predictor of external borrowing, with an adjusted R^2 of 0.946 for public wages explaining foreign debt. This research recommends the study recommends that SRC should free up resources using the austerity measures which include wage reductions for government employees. Secondly, the government through the ministry of treasury should raise tax base to increase revenues. Finally, the results of this study may be valuable to government stakeholders who are charged with the responsibility of ensuring economic development through public sector financing, also it is expected to provide important information to policymakers in order to maintain external debt at manageable levels.

Keywords

Public Wages, Error Correction Model, Gross Domestic Product, Vector Autoregressive, External Debt, Recurrent Expenditure

1. Introduction

The term public debt means the entire of government obligations at both the local and national levels. It comes from either native or international sources. Domestic debt refers to

money owing to citizens by the state from commercial banks and other monetary organizations in the state, whereas external debts is the amount of currency unsettled to other na-

*Corresponding author: dkariuki@chuka.ac.ke (Dennis Muriithi)

Received: 30 August 2024; **Accepted:** 18 September 2024; **Published:** 29 September 2024



Copyright: © The Author(s), 2024. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

tions, banks, and financial organizations. Domestic borrowing simply moves resources within a country, whereas external borrowing can expand a country's resource pool [12, 15]. The role of the government's debt is to finance the budget deficit and many countries have followed this strategy during economic downturns. Deficits occur when the government spends more as compared to the earnings it receives.

Following the global debt crisis that erupted in the early 1980s, Sub-Saharan Africa (SSA) countries' debt crises grew intensely. Most emerging African countries over borrowed due to the outcome of the crisis, which led to international banks boosting their credit, but at the same time there was a reduction in global product prices, especially those of petroleum, which worsened the loan obligations disaster in Africa (IMF, 2011).

From 1973 to 1979, oil price shocks worsened the financial crisis in these countries which induced spike in foreign borrowing. The oil price shock directed to severe and often these nations have macroeconomic imbalances that don't produce oil. Consequently, many countries have shifted their focus to foreign financing to assist them in dealing with the consequences of the international financial crisis on their balance of payments [7]. The external loan boosts the borrowing country's capability for production [9]. It is not necessary to obtain an additional loan from foreign nations to pay off the original debt. A study by [4] argued that borrowing from foreign countries will experience a beneficial outcome on the borrowing state's budget if each available overseas loan's marginal yield is equivalent to the principal and interest obligation. Nonetheless, it has been suggested that if borrowing money is the primary funding source, then the private investment will be squeezed out, thus stifling economic progress [13]. Reasonable levels of debt can boost economic growth by increasing capital buildup and yield. Foreign borrowing towards Macroeconomic stability is maintained via investment spending, which further supplies an inflow of capital, this increases domestic savings and hence increases investment demand [3]. Large amounts of aggregated borrowing from abroad, whereby this might lead to a significant influence on the rate of investment and economic growth [6].

In a study by [22] there are two reasons that lead to massive borrowing by nations. The first one is to increase investment, and the other is to increase consumption (salaries and wages, debt servicing and social protection financing). Growing Economic expansion is aided by investments. Through obtaining external debt, a nation which borrows resources and have the potential to obtain international debt could provide a basis for critical imports commodities for investments, alleviating country of external borrowing and shortfall. Further, he emphasized that investment will result in increased economic growth and, as a result, a better economic situation for the country. It's worth noting that investment is associated to an economy's economic growth. High economic growth will improve a country's creditworthiness, which will help it attract additional capital inflows.

When foreign debt accumulates to severe levels, it slows

economic growth by preventing investment, this occurs because the investment rate will be low. The negative association between foreign borrowing and economic growth can be explained by debt overhang hypothesis which asserts that excessive amounts of debt hinder investment because prospective taxes collected would be used to pay off the loans, it will have a detrimental influence on growth [2]. Growing debt, on the contrary, indicates that in future a nation will devote a lot of its income collected on recompensing it, at the expense of critical resident ventures. Since debt service consumes a large portion of national budget, key investments, such as infrastructural projects, are foregone and this could have a detrimental impact on the levels of income result in more unemployment. In a study by Awiti [1], it was noted that the country may not be able to adequately support crucial sectors of the economy that can promote improved growth and offer up additional opportunities to invest if more money is focused on debt servicing instead of economic and social sectors.

Foreign debt is very vital for developing countries and the reason is that it allows them to have access on foreign resources which enables them to finance imports (equipment and material) intended for development plans. Debt may be advantageous in the short term, but it has significant long-term repercussions: funds should first be gained via exporting and then utilized for refund or service the existing loan. All of this is contingent on the prudent and practical use of money borrowed. External debt is usually linked to vulnerabilities and debt crises because the central bank cannot print the hard money required to pay off external debt [17]. Kenya, like many developing countries has an increasing public debt. According to World Bank (2010) this raising debt has been used to make payments on debts and the remainder to fund development projects and recurrent expenditure.

The recurrent expenditure refers to the Payments made for anything other than capital assets. This type of spending has been on the rise in the emerging economies and states over time due to excessive spending, and this habit is also influenced by the availability of foreign help and the ease with which one might borrow [20]. However, reducing government recurrent expenditure is typically difficult due to the negative impact on welfare and employment, which has the potential to aggravate public outrage and political unrest in any nation. In the previous ten years, the cost of public wages has nearly tripled. For instance, it has increased from Sh. 173.5 billion in 2009/2010 financial year to Sh. 483.5 billion in the ending 2019/2020 fiscal year. To put it in perspective, the public salary bill amounted for 32.3 percent of overall recurrent expenditure and 29.6% for the over-all government revenues in the 2009/2010 fiscal year. According to forecasts for the 2019/2020 fiscal year, public wages will account for 27.5 percent of total recurrent expenditure and 23.2 percent of total government income, respectively.

Research by [10] examined the influence of obligation on various areas of government expenditure. Using a random effects model and a sample of 47 emerging states from 1972 to

2001, the research outcome was that, the foreign loan has an undesirable impression on both capital and recurrent expenditure if earnings and salaries are not included. When earnings and pays are added, however, the communal sector seems to be under protection (not harmed by foreign loans liabilities) because they account for a significant portion of social spending. However, the estimation focused on 47 developing economies from which the findings may be indifferent from the current study which focuses to one country in analyzing the effect of recurrent expenditure on external borrowing. In addition, the research was carried out over 17 years ago which may not be suitable for policy formulation. This survey was steered from 1970 to 2019.

A study by [11] on influence of state spending composition on economic development from 1964 to 2011 in Kenya using both the combination of cointegration and error correction model was reported that enhanced government spending on areas such as education and in infrastructural development increase GDP while spending in areas such as government consumption, foreign debts servicing, and payment of salaries and allowances (recurrent) were growth retarding. The research tended to concentrate impacts of public expenditure on the economy due to the increasing wage bill in the Kenyan economy (recurrent expenditure) and extreme rising of external borrowing in the country. The current employed research ordinary least squares model to determine the effect of each component of recurrent expenditure such as wages and salaries on external borrowing in Kenya from 1970 to 2019.

The examination on the importance of government pay as a factor of economic steadiness and competitiveness in Europe. The data analysis showed that rise in government wages leads to decrease in monetary growth [8]. According to the result of the research, governments should exercise caution when determining wages and implementing employment regulations to counter the negative economic and fiscal consequences. On the other hand, a study by [21] showed that government salaries in Germany remained level between the year 2000 and 2008 though efficiency rised by 10% during tim-frame. The two studies were not carried out in Kenya and therefore the policy implications may not be applicable in Kenya. The current study used combination of cointegration and error correction model to model the outcome of recurrent expenditure on external borrowing from 1970 to 2019 in Kenya.

The assessment on the relationship between Romanian wages and labor productivity from 1999 to 2008 and the researcher came to the conclusion that the two variables had a favorable association. The study concluded that the share of labor income and other labour rights increased with labour productivity [5]. The study suggested that there should be an organized system of wage determination so as to enhance productivity in an economy. The estimation on the link between labour output and sectoral earnings in Canada with the use of Cobb-Douglas production spanning for the period 1980 and 2005 and the finding was that between 1980 and 2005, the median wage in Canada scarcely changed, despite a signifi-

cant growth in labor productivity [19]. The sample size used was very small hence the findings of the studies cannot be relied upon, also the studies were not conducted in Kenya. The current study used the data that ranges from 1970 to 2019 and it focused on the effect of recurrent expenditure on external borrowing in Kenya.

Kenya's debt and, in particular, foreign currency have been on the rise since, the same case to recurrent expenditure, undermining the economy's momentum. Even though debt is good, the government is advised to borrow and invest in a wise manner, [23]. Therefore, this proposed study sought to investigate the effect of public wages on external borrowing in Kenya.

2. Methodology

2.1. Research Design

Research design is the organization from which the study follows. It explains how the procedures and techniques used to solve the research problem were carried out [16]. The main goal is to improve the research findings validity by removing potential sources of biasness that could skew the results. The researcher wanted to determine if there was a link connecting cause and effect on recurrent expenditure and external debt so the researcher used a causal research design with keen focus on determining the existence of cause-effect link between independent variables and the dependent variable. Causal research design is essential in pointing out how the variation of exogenous variables results into a change in the endogenous variable. In this case, the use of a causal study design aided in the explanation of how fluctuations in wages, social protection expenditure and debt servicing result in changes in external borrowing measured by external debt variable.

2.2. Data Collection

Data collection is the organized measurement and gathering of evidence on the particular variables that the study is interested in so as to test hypotheses, obtain answers for the study objectives and asses the outcome [14]. Quantitative data was used in this investigation. Yearly time series data for the period from 1970 to 2019 was employed. Data was obtained from Statistical reports; economic surveys of; Central Bank of Kenya, World Bank and IMF publication reports, International Monetary Fund (IMF), and Kenya National Bureau of Statistics (KNBS). The data was gathered by downloading it from the websites of the selected sources and then saving it in Microsoft Excel for analytical purposes.

2.3. Model Specification

The main aim of this study was to examine the effect of recurrent expenditure on external borrowing in Kenya for the period 1970 to 2019. In the study, the explained variable is

external borrowing and the exogenous variables include; wages, social protection expenditure and debt servicing.

In order to determine the effect of recurrent expenditure on external borrowing in Kenya, the study follows the argument of [18] that Economic theories aren't good enough to explain the precise factors that influence growth.

In accordance with previous research and in order to better test the effect of recurrent expenditure on external borrowing in Kenya, the multivariate statistical model specification in this study will use variables like wages, social expenditure, debt servicing and external debt. Based on the above information, we can specify the following empirical model.

$$\ln EXT_t = \beta_0 + \beta_1 \ln WGS_t + D_1 + D_2 + D_3 + \epsilon_t \quad (2)$$

Where;

$\ln EXT_t$ - is the natural log of external borrowing (External debt),

$\ln WGS_t$ - is the natural logarithm of wages,

$D_i (i = 1,2,3)$ = the dummy variable for SB (1982,1992, 2007)

ϵ_t -is the error term

The error term (ϵ) is included to represent omitted variables in the specification of the model.

3. Results and Discussion

3.1. Descriptive Statistics

The data was evaluated using descriptive statistics such as mean and standard deviation. To see if the data was normally distributed, the Skewness, Kurtosis, and Jarque-Bera tests were used and the findings were summarized on the Table below.

Table 1. Descriptive Statistics and Normality Test.

	lnEXT	lnWGS
Mean	-0.816	-0.515
Maximum	0.277	-0.252
Minimum	-1.543	-0.655
Std. Dev.	0.449	0.0783
Skewness	0.334422	1.504
Kurtosis	1.416	1.773
Jarque-Bera	1.643	4.871
Probability	0.440	0.000
Observations	50	50

The findings presented in Table 1 show the descriptive and

normality test statistics. The findings reveal that the mean value of external debt (lnEXT), and public wages (lnWGS) is -0.816, and -0.515 respectively. These mean values implied that the data values in every given state were on average across the sample period which implies generalization of the data. The standard deviation of the variables was 0.449 and 0.0783 respectively. The standard deviation indicated that the values in the data sets were close to the mean on average. Further, the maximum value of the study variables ranged between -2.041 and 0.277, and the minimum value ranged between -4.597 and -0.655 respectively. Because their skewness test values were found to be falling inside the threshold of ± 3 , the normality test results revealed that all the variables were normally distributed. For instance, the skewness values of external debt (lnEXT) and public wages (lnWGS) were 0.334 and 1.504. Regarding the kurtosis test, the values for the variables were 1.416 and 1.773 respectively which were less than ± 2 . Further, the Jarque-Bera statistic values were 1.643 and 4.871 respectively which were less than the threshold of less than 5.9.

3.2. Test for Stationarity

The test results for both the data set in level and at the first difference with intercept and no trend was determined so that their deficiencies could be overcome. In this study non-stationary series were made stationary by differencing. The variables were examined in their level forms first, followed by a difference test, with the findings reported in Table 2.

Table 2. Unit root at Level Form.

Variable	PP-Statistic at Level Form	Stationary Status
External debt (lnEXT)	-1.200	Not stationary
Public sector wages (lnWGS)	-3.394	Stationary

MacKinnon Critical value at 5%=-2.9222449

The findings shown in Table 2 shows the Phillips Peron (PP) test statistic values of the variables under study. The PP test statistic value for External debt (lnEXT) data is -1.200 at level form. The MacKinnon critical value of -2.9222449 at significance level of 5% are used in the comparison. The value of the test statistic exceeds the MacKinnon critical value; hence the value lies in the acceptance region of the null hypothesis that the External debt (lnEXT) data is not stationary. Therefore, this implies that the data on External debt (lnEXT) was first differenced so as to make it stationary.

For the Public wages (lnWGS) data, the Phillips-Perron (PP) test statistic result is -3.394 at the level form. The MacKinnon critical values of -2.922 at a 5 percent significance level was used

to do the comparison. The value of the test statistic is lower than the MacKinnon critical value, as a result, the number falls inside the rejection range of the null hypothesis. This implied that the data on public sector wages (lnWGS) is stationary.

Table 3. Unit Root at First Differencing.

Variable	PP-Statistic at First Difference	Stationary Status
Eternal debt (DlnEXT)	-5.746	Stationary

MacKinnon Critical value at 5%=-2.923780

Table 3 shows that the data on External debt (DlnEXT) was found to be stationary at first difference since their PP statistical test values is -5.746 which was less than the MacKinnon critical value at 5% significance level (-2.923780). The rejection zone of the null hypothesis of non-stationarity includes all variables. Hence, this leads to the rejection of null hypothesis and it is concluded that external debt is stationary at first difference.

3.3. Test for Co-integration

When two or more non-stationary time series have the same order of integration and a linear combination of these series is stationary, co-integration is employed to find a long-run equilibrium. In order to ensure long-run relationships, tests are performed if the time series is non-stationary. Long-run equilibrium is a relationship that holds between variables that are not stationary individually. The Ordinary Least Square (OLS) approach was used to estimate the model when the parameters are integrated in the same order. If the parameters are integrated in different orders, the co-integrated vectors are estimated using the Engle granger 2-step technique

Table 4. Stationarity Test for Residuals.

PP Test value	5%	Status
-6.647	-2.922449	Stationary

Table 4 shows stationarity test of the residuals from the estimated variables. The appropriate lag length was 1 for the estimation of dependent variable (external debt) and the independent variable which is public wage of the model because it minimizes the Akaike Information Criterion value. Phillips Perron (PP) test was used to test for the stationarity of the residuals. The computed PP test value for the endogenous variable, exogenous variable and the

dummy was -6.647 which is less than the critical value at 5% (-2.922449) and therefore the residual was stationary. This showed that there was cointegration between dependent variable of external debt and independent variable of public wage.

3.4. Granger Causality Test

There exist three types of causality between variables which include neutral causality, unidirectional causality and bidirectional causality. Neutral causality exists if there is no relationship between two variables. Variables which have neutral causality are eliminated from the model. Unidirectional causality exists if only one variable influences the other. A p-value of less than 0.05 suggests that the variables are causally related, whereas a p-value of larger than 0.05 implies that they are not. Granger causality test results were shown in Table 5.

Table 5. Granger causality Test.

Null Hypothesis:	Obs	F-Statistic	Prob.
lnWGS does not Granger Cause lnEXT	49	0.0803	0.778
lnEXT does not Granger Cause lnWGS		2.835	0.0990

The results in Table 5 indicate that lnWGS and lnEXT has neutral causality because their p values were greater than the critical value of 0.05 which implies that they are statistically independent.

3.5. Vector Autoregressive Analysis (VAR) Diagnostics

The VAR diagnostics involving lag order selection and the test for normality of the random variable were carried.

Lag Order Selection

The most appropriate lag length to be used in model estimation was determine by the Schwartz information criterion (SIC), and Akaike information criterion (AIC). Since the data was annual, different models were calculated with the maximum lag length of four. A lag length is favored if it minimizes the AIC value (Lee & Phillips, 2015).

Table 6. Lag Order selection Result.

Lag	AIC	SIC
0	-0.705	-0.552
1	-1.148	-0.995

Table 6 indicates that the lag length that minimizes the AIC value is of lag 1. The lag length that minimizes the SIC value is also of lag 1. This implied that the model of the relationship between endogenous and exogenous variable were well estimated using a lag length 1.

3.6. Diagnostic Tests

Pre-estimation diagnostics on the presence of multicollinearity, autocorrelation, and heteroscedasticity were performed before reporting the findings of the model. Diagnostic tests were required to check that the OLS assumptions were met and that the models produced were trustworthy for forming inferences.

3.6.1. Autocorrelation Test

The OLS estimators are unbiased yet inefficient when autocorrelation is present. To determine if the error terms were serially autocorrelated, the Durbin Watson test was performed. Table 7 contains the results.

Table 7. Autocorrelation results.

Model (OLS)	Durbin Watson (DW)
1	0.937

Table 7 shows the results of the model which indicated the DW statistic to be 0.937. This indicated the presence of both positive and negative autocorrelation in the model. This means that OLS estimates are unbiased and therefore reliable hypothesis test (t-statistics)

3.6.2. Heteroscedasticity Test

The Breusch-Pagan-Godfrey test was used to detect heteroscedasticity. If the p-value of the test statistic is less than 0.05, the null hypothesis of homoscedasticity is rejected, and heteroscedasticity is assumed.

Table 8. Breusch-Pagan Test for Heteroscedasticity.

Model	Chi-square	Prob>Chi-Square
1	4.983	0.173

Table 8 shows that p-values for Chi-square and F-statistics in the model were greater than 0.05 at the 5% level of significance (F-statistic 4.983, p-value 0.173 > 0.05), indicating that the null hypothesis of a constant variance which implied the absence of heteroscedasticity was accepted.

3.6.3. Multicollinearity Test

The independent variables in the regression must have no association for OLS estimation to work. When there is multicollinearity, the explanatory variables tend to have a close association, resulting in the estimation model being less sensitive. The absence of a multicollinearity problem will be assumed if the VIF score is less than ten (Jou & Cho, 2014).

Table 9. Test for Multicollinearity.

Variable	VIF
lnWGS	1.159

The VIF values for all of the variables in the model were less than 10, as shown in Table 9. This suggested that the explanatory variable is not multicollinear. This means that the coefficients and p- values will not be affected hence can be trusted in the interpretation of the results.

3.7. Error Correction Model

The macroeconomic variables were estimated using the error correction model. The model estimates variables that have a long-run equilibrium connection. The results of co-integration tests revealed that the variables have a long-term link. This made it possible to estimate error correction models. The study was carried out in accordance with the assumptions, and a model was created to describe the relationship between the variables. T-ratios were used to examine the level of significance for the independent variables at a 5% level of significance. At a 5% significance level, adjusted R-square was used to calculate the percentage of the dependent variable that was explained by the independent variables.

To examine the effect of public wages on external debt in Kenya, the study evaluated a model with public wage, being the explanatory variable while external borrowing was included as explained variable. A dummy variable was used to represent the structural breaks in the economy caused by political factors.

Table 10. Vector Error Correction Model Results for External Debt Equation with Public Wage.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.193	0.166	1.158	0.0234
lnWGS	-1.0192	0.229	-4.450	0.0001
D1	-0.107	0.0659	-1.625	0.0117

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D2	0.186	0.0767	2.423	0.0198
D3	-0.0883	0.0749	-1.179	0.0240
Residuals	0.115	0.144	5.656	0.000
R-squared	0.954			
Adjusted R-squared	0.946			
F-statistic	124.664			
Prob(F-statistic)	0.000			
Durbin-Watson stat	0.937			

The coefficient results in Table 10 can be represented using the OLS equation below.

$$\ln EXT = 0.193 - 1.0192 \ln WGS - 0.107D1 + 0.186D2 - 0.0883D3 + 0.815$$

The regression results indicating the presence of a long run association between external debt and recurrent expenditure are presented in Table 11. The coefficient of constant, debt servicing, social protection expenditure, public wage and dummy variables representing structural breaks for the years 1982, 1992 and 2007 are 0.193, 0.480, -0.00299, -1.0192, -0.107, 0.186 and -0.0883 respectively. The model had a constant of 0.193 implying that external debt increases by 19% regardless of being affected by public wage, social protection expenditure and debt servicing. The model was found to be significant with F-statistic being positively infinite and the p-value of 0.000<0.05 implying that the model was significant. The Adjusted R-square (measure of goodness of fit) is 0.946 implies that the public wage account for 94.64% of the fluctuations in the external debt. As a result, public wage was an excellent predictor of external debt. At a 5% level of significance, all of the variable coefficients were found to be stationary because their values were smaller than the p-value of 0.05.

There was a negative association between public wages and external debt in Kenya. An increase in public wage by 100% leads to decrease in external debt by 101.920% holding other factors constant. The P- value of *lnWGS* was 0.0001 which was less than 5% significance level therefore the model is significant hence the null hypothesis was not supported and therefore concluded that *lnWGS* is linearly related to *lnEXT*

3.8. Normality Test of the Residuals

The OLS requires that the disturbance term be normally distributed with zero mean, and constant variance for all variables. The Jarque-Bera and Kurtosis statistics were used to normality test of the data with null hypothesis showing

absence of normal distribution for residual terms for all the values.

Table 11. Normality Test for Residuals.

	Residual statistic
Jarque-Bera	1.367754
Kurtosis	3.126882
Prob-value	0.504657

The result in Table 11 indicates that the probability (p-value 0.504657) for Jarque-Bera (1.367754) and Kurtosis (3.126882) statistics was larger than 0.05 at 5 percent significance level implying acceptance of the null hypothesis, that the residuals, were normally distributed for all values in the model.

3.9. Effect on Public Wages on External Borrowing in Kenya

There was a negative relationship between public wages and external debt in Kenya. An increase in public wage by 100% leads to decrease in external debt by 101.920% holding other factors constant. The finding of the study were contrary with the findings from Mahdavi (2004) who investigated the impact of debt on different categories of government spending, were (2011) investigated the impact of Kenya's recurrent expenditure and external debt servicing, Maingi (2013) carried out a study on impact of public expenditure composition on economic growth, and Holm-Hadulla (2010) addressed the importance of government pay as a factor of macroeconomic stability and competitiveness in Europe all found negative relationship between external debt and public wages. However, the findings were in line with the findings of Done (2011) examined the relationship between Romanian wages and labor productivity and found a positive relationship between wages and productivity which eventually lead to low external debt. Also, the findings were in line with the findings of Sharpe, Harrison & Arsenault, (2008) estimated the link between labour productivity and sectoral wages which found out that the despite the wages remaining unchanged, the productivity increased and this can lead to low level of external debt.

4. Conclusion

The research found that the Government spending on wages and salaries has the effect of crowding out private investment which has a detrimental effect on the growth of the economy. Although public wage is important, its return is low because insufficient attention is paid to efficiency and capital maintenance. Furthermore, public wage is created with the sole pur-

pose of achieving the welfare of a country's population rather than making profits, therefore the public sector's contribution to economic growth is minimal yet significant to overall growth.

5. Recommendation

The following suggestions are offered based on the study's findings:

1. The government through Salaries and Remuneration Commission (SRC) should consider harmonizing the salaries and wages of the public workers so as to fall within the budget. This will go a long way to curtail the unnecessary borrowing for recurrent spending. which is the state institution in charge of setting the wage levels for public sector employees, should conduct reviews of government employee benefits.
2. The government through its ministry of treasury should raise the tax base so as increase the tax revenues, which will enable the government to meet its budget. This will help in shielding the government from seeking for external borrowing to meet the increasing economic and population needs.

Abbreviations

GDP	Gross Domestic Product
IMF	International Monetary Fund
KNBS	Kenya National Bureau of Statistics
OLS	Ordinary Least Squares
SRC	Salaries Renumeration Commission
SSA	Sub Saharan Africa

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Awiti (2015). Total debt servicing and Macroeconomic Performance in Kenya.
- [2] Baum, (2013). Debt and growth: new evidence for the euro area. *Journal of international money and finance*, 32, 809-821.
- [3] Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. *American economic review*, 90(4), 847-868.
- [4] Cline, W. R. (1985). International debt: from crisis to recovery? *The American Economic Review*, 75(2), 185-190.
- [5] Done, I. (2011). The Correlation between Wages and Labor Productivity-the Maximum Expression Synthesis of Economic Efficiency. *Petroleum-Gas University of Ploiesti Bulletin, Technical Series*, 63(4).
- [6] Eaton, J. (1993). Sovereign debt: A primer. *The World Bank Economic Review*, 7(2), 137-172.
- [7] Hartlyn, J. (2019). *Latin American political economy: financial crisis and political change*. Routledge.
- [8] Holm-Hadulla (2010). Public wages in the euro area: towards securing stability and competitiveness. *ECB Occasional Paper*, (112).
- [9] Krugmma, K. L. (1985). *The external debt of sub-Saharan Africa: origins, magnitude, and implications for action* (Vol. 735). World Bank.
- [10] Mahdavi, S. (2004). Shifts in the composition of government spending in response to external debt burden. *World Development*, 32(7), 1139-1157.
- [11] Maingi, J., & Thuku, G. K. (2013). The impact of public expenditure components on economic growth in Kenya 1964-2011. *International Journal of business and social Science*, 4(4).
- [12] Muinga, R. M. (2014). *External public debt and economic growth in Kenya* (Doctoral dissertation, University of Nairobi).
- [13] Muraya (2013). *The effects of governance and public expenditure on economic growth in Kenya* (Doctoral dissertation, University of Nairobi).
- [14] Origlia, A. (2018). An audiovisual corpus of guided tours in cultural sites: Data collection protocols in the chrome project. In *2018 AVI-CH Workshop on Advanced Visual Interfaces for Cultural Heritage* (Vol. 2091, pp. 1-4).
- [15] Putunoi, G. K., & Mutuku, C. M. (2013). Domestic debt and economic growth nexus in Kenya. *Current Research Journal of Economic Theory*, 5(1), 1-10.
- [16] Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics & Management Sciences*, 6(2), 1-5.
- [17] Rais, S. I., & Anwar, T. (2012). Public debt and economic growth in Pakistan: A time series analysis from 1972 to 2010. *Academic research international*, 2(1), 535.
- [18] Sala-i-Martin, X. X. (1997). *The optimum quantity of money: Theory and evidence* (No. w5954). National Bureau of Economic Research.
- [19] Sharpe (2008). *The relationship between labour productivity and real wage growth in Canada and OECD countries*. Ottawa, Ontario: Centre for the Study of Living Standards.
- [20] Shonchoy, A. S. (2010). Determinants of government consumption expenditure in developing countries: A panel data analysis. *Institute of Developing Economies (IDE) Discussion Paper*, 266.
- [21] Soest, A., & Stancanelli, E. (2010). Does income taxation affect partners' household chores?
- [22] Soludo, C. C. (Eds.). (2003). *African voices on structural adjustment*. Africa World Press.
- [23] Wray, L. R. (2009). An alternative view of finance, saving, deficits, and liquidity. *International Journal of Political Economy*, 38(4), 25-43.