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MANAGING THE DEBT PROFILE IMPACT ON HUMAN DEVELOPMENT IN WEST AFRICAN MONETARY ZONE: TO WHAT DEGREE HAS THE THRESHOLD BEEN EXCEEDED?

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Abstract

This study focused on the effect of external debt burden on human development index among the West African Monetary Zone countries. It sought to assess the significance of external debt burden, and to suggest measures that could enhance its effectiveness and human development in West African Monetary Zone. To achieve the objective of the research, some macroeconomic and human development indicators, using the ex-post facto research design was applied. The population and the sample size of the study comprised of six (6) ECOWAS countries that make up the West African Monetary Zone. The data were collated, analyzed and tested using descriptive statistics, country-specific and the panel data ARDL analysis techniques. From the analysis, it was revealed that external debt service payment and external debt both significantly affect human development index though adversely in the Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone. This implies that education, health and per capital income which are the components of the Human Development Index (HDI) deteriorates as the level of revenue that goes to debt servicing gets higher. This also happens as more debts are contracted especially above the size of most West African Monetary Zone member economies. Based on the findings, the study recommended that the external debt thresholds should be considered by the Ghanaian economy when formulating their external debt management policies, thereby reducing their reliance on external debt funds. Domestically generated revenue, especially tax revenue, should be revamped and galvanized, in such a way that tax avoidance and evasion would be reduced drastically, to bridge the resulting gap in expenditure. Also, to mitigate the adverse effect of external debt and its corresponding payment obligation, the Nigerian government should sort for loans with favourable terms and conditions after a rigorous evaluation, not on exigency, to reduce the cost of the debt. A well-developed capital market will reduce the rate of external borrowing.

Keywords: Human Development Index; Debt Service Payment; Debt Burden; WAMZ; ECOWAS.

1. INTRODUCTION

The need to attain robust growth and sustainable development has led various West African Monetary Zone (WAMZ) countries to adopt different policies and strategies at various stages of their development since attaining their independence. However, owing to distortions in the economic, financial and institutional arrangements in this region in the 1960s, recourse to external debt to galvanize the economies towards sustainable development became the norm from the 1970s onwards (Manasseh et al, 2022). The benefits of external credit and the adverse effects of excessive external debt accumulation on human capital development, as well as economic growth, have received a lot of attention in economic literature. Among the key arguments for external borrowing is the need to finance essential social and economic infrastructure in the context of inadequate or deficit national savings. Notably, over the past

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few decades, the external debt stocks of West African Monetary Zone countries have increased significantly, making the debate on its role in financing these countries' development process particularly important (World Bank, 2023). It has been documented that from the 1980s, when the debt crisis involving several nations of the world occurred, external debt in African economies had reached unsustainable levels, while they were simultaneously grappling with its concomitant negative macroeconomic effects (Aladejare, 2023). As external debt is hardly denominated in a borrower country's currency, this situation predisposes these economies to various distortionary issues such as exchange rate fluctuation, sudden-stops in capital flows and sharp capital outflow which could potentially snowball into a full-blown macroeconomic crisis (Musibau et al, 2018).

However, as sub-Saharan Africa's economic and social conditions and other developing economies worsened, particularly in the first half of the 1990s, there was cause for concern globally. Some of the internal causal factors were low or declining output growth rates, high population growth rates and falling per capita output levels. Other related factors were domestic macroeconomic policy failures and policy mistakes. These effects resulted in rising inflation, high unemployment, rising fiscal deficits and capital flight (Nwakoby & Ezeaku, 2021). For instance, available empirical evidence shows that in sub-Saharan Africa, per capita income (measured by gross national product per person) declined at an average annual rate of 2.2 per cent between 1980 and 1989. The terms of trade between 1985 and 1990 fell by 9.1 per cent; export volume was stagnant, while import volume plummeted at an average annual rate of 4.3 per cent. Frequency distribution of sub-Saharan Africa's inflation rates shows that the percentage of countries with inflation rates of 10 per cent or less rose to about 61 per cent in 1995 – 1997 from 46 per cent in 1990 – 1994, 54 per cent in 1985 – 1989 and 28 per cent in 1981 – 1984 (Musibau et al, 2018).

However, to tackle the debt crisis, creditors (Paris Club, London Club, among others) designed and implemented a series of options; such as debt swaps, debt restructuring and debt rescheduling, to ensure full debt payment. Despite these interventions, the governments of developing countries, especially those of West Africa Monetary Zone (WAMZ), still defaulted in their obligations, hence, making these financial rescue initiatives by the creditor countries and institutions imperative. Furthermore, the Heavily Indebted Poor Countries (HIPCs) initiative, which the International Monetary Fund (IMF) and the World Bank inaugurated in 1996, was the first comprehensive campaign to terminate unsustainable debt, reduce debt burden, and assist the permanent exit from debt dependence among the poor economies of the world (Kalu, Igwe, Okoyeuzu & Ukpere, 2017). Under this initiative, Western leaders agreed to write off large portions of several African nations' external debts. Following the launch of the Heavily Indebted Poor Countries (HIPC) Initiative in 1996, the debt relief framework encompassed private and government creditors, along with the World Bank and International Monetary Fund (IMF). Moreover, in 2005, the Multilateral Debt Relief Initiative (MDRI) provided US$76bn in debt-service relief to 36 countries, 30 of them in Africa. The Multilateral Debt Relief Initiative allowed for 100 per cent relief on eligible debts owed to the International Monetary Fund, World Bank and the African Development Fund (AfDF) for countries completing the Heavily Indebted Poor Countries Initiative process. However, stocks of external

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debt have been increasing in most of these countries, following unbridled borrowing in recent years, coupled with the collapse in local currencies and commodity prices (World Bank, 2023).

For West African economies, their structure and trend performance are similar to sub Saharan Africa's leaning. Prevalent among the patterns are the weight of accumulated foreign debt repayment and servicing. Agreed, the resources of West African economies are grossly insufficient; however, a substantial proportion of the available resources are committed to external debt servicing and repayment obligations. Indeed, there are enormous socio-economic costs that accompany servicing and repaying external debts. Resort to external borrowing could result from weak public financial management, which gives rise to a host of adverse movements in macroeconomic fundamentals, such as exchange rate mismanagement. The expectation of currency devaluation leads to speculative capital flight (Tarawalie & Jalloh, 2021). As the literature further posits, inadequate capital inflows due to debt overhang can cause severe import strangulation. Import strangulation holds back export growth, and this propagates import shortages. Debt overhang and other uncertainties depress investment and development; dwindling investment combined with shortages of essential imports results in declining real output (N'Zue, 2020). Also very worrisome is the severity of debt when perceived in the light of an unusually fragile and narrow production base and low capacity of many African countries to meet their debt service obligations. These fallouts that no doubt, create an impetus for further examination, is a matter of empiricism.

Table 1: West African Monetary Zone government external debt (% of GDP)

WAMZ Countries	Government Debt (% of GDP)						
	2010-2017	2018	2019	2020	2021	2022	2023
The Gambia	63.5	83.6	83.0	83.5	82.3	79.1	72.3
Ghana	45.1	62.0	62.6	78.9	83.5	84.9	71.1
Guinea	44.1	39.3	38.4	43.8	47.5	45.8	35.5
Liberia	25.3	40.1	54.8	61.9	56.6	54.8	52.3
Nigeria	18.7	27.7	29.2	35.0	35.7	36.9	39.8
Sierra Leone	45.8	69.1	71.7	73.7	71.1	68.0	88.9

Source: World Bank Development Indicators

At this point, however, it needs to be stated that there is ample evidence in empirical literature that if procured sustainably and applied productively, foreign loans can be an effective ancillary to human capital development and economic growth (Musibau et al, 2018; Tarawalie & Jalloh, 2021). Examples of countries that have productively employed debt in the growth and development process include South Korea, Chile, Brazil and Ghana (N'Zue, 2020). While evidence exists on the extents to which external credit affect growth and human capital development, there is no study that has established and compared the extents to external debt burden influences human capital development among the West Africa Monetary Zone countries. It is against this backdrop that this study seeks to examine the effect of external debt burden on human development index among the West Africa Monetary Zone countries.

The debt threshold features and the indebtedness of the countries in the West African monetary Zone is the motivation for this study. The study therefore is an attempt to analyze the debt

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overhang hypothesis by an empirical examination of the nexus between high indebtedness and human development, with particular focus on West African Monetary Zone, while relating the outcome to the Debt-GDP ratios of the West African Monetary Zone member countries. The study also looks at the reality of these theories with emphasis on the debt-development nexus. To pursue this objective, country-specific data sets covering 33 years for all West African Monetary Zone member countries were gathered from the World Bank Development Indicators and analyzed following Autoregressive Distributed Lag (ARDL).

2. THEORETICAL UNDERPINNING AND LITERATURE REVIEW

2.1 Theoretical Underpinning

The major theoretical bases for this work are the debt overhang theory and the dual gap theory. The debt overhang theory was propounded by Krugman in 1988. It narrated a condition where the debt of a country exceeds its future capacity to repay it. The debt overhang theory opines that if the future debt stock is expected to be larger than a country's repayment ability, then the expected debt service obligations will likely be an increasing function of the country's output. This theory implies that large, accumulated debt stocks can discourage investment and reduce growth due to external creditors' imposition of high marginal taxes (Adeve & Karabou, 2022). The relationship between a country's foreign debt and growth has mostly based on the negative effects of debt overhang. Chindengwike (2022) explains debt overhang as a condition where the projected settlement on external debt is lower than the contracted value of debt. If the external debt of a country exceeds its capacity to repay, the expected debt service eats deep into the debtor country's output. Thus, larger part of the country's domestic earnings is effectively taxed away by existing foreign creditors and domestic and foreign investors, and thus economic development is discouraged.

The concepts of debt overhang theory centered on the negative effects of external debt on investment in physical capital. A high level of external debt can hamper government's ability to execute structural and fiscal reforms, since larger part of earnings from both domestic and foreign are used to repay foreign creditors. This condition has severe adverse effects on low-income countries, where accelerated structural reforms are required for sustainable rapid economic growth.

Debt overhang also dampens investment and growth by escalating uncertainty. As the amount of external debt increases, there is increasing uncertainty as regards the measures government will resort to in order to pay its debt obligations, with negative effects on investment. In particular, as external debt accumulates, expectations are that government will increase tax in order to service its debt obligations service obligations.

Excessive debt can also lead to capital flight if the private investors fears imminent devaluation and/or increases in taxes to service the debt. Theoretical literature suggests that external debt has a positive effect on investment and growth up to a given level; away from this level, however, its effect is adverse. As indicated in N'Zue (2020), the relationship linking the face value of external debt and investment can be represented as a kind of Laffer curve: as

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accumulated debt increases beyond a threshold level, the expected repayment starts to fall due to the adverse effects. The implication is that a rise in the nominal debt gives rise to an increase in repayment up to the threshold level; along the wrong side of the debt Laffer curve.

On the other hand, the dual gap was propounded by Chenery in 1966 and posted that most economies have experienced a shortfall in trying to bridge the gap between the level of savings and investment and have resorted to external borrowing in order to fill this gap. This gap provides the motive behind external debt, which is to fulfill the lack of savings and investment in a nation as increases in savings and investment would vis-à-vis lead to a rise in economic growth and development (Edeminam & Aras, 2022). The dual-gap analysis is providing a framework that shows that the development of any nation is a function of investment and that such investment requires domestic savings which is not sufficient to ensure that development take place.

The dual-gap theory is coined from a national income accounting identity which connotes that excess investment expenditure (investment-savings gap) is equivalent to the surplus of imports over exports (foreign exchange gap) (Asafo et al, 2019).

2.2 Debt Crisis in the West African Monetary Zone Countries

Six African countries constitute the West African Monetary Zone. Below is the review of historical effect of debt crisis on the economy of the countries.

Debt Crisis on the Nigerian Economy

The total external debt stocks, (current US$) in Nigeria was $98,335.33 million in 2022. This indicator has fluctuated in value for the past 42 years, between N18, 702.25 billion and N2.33 billion in 1981. Total Debt service on foreign debt (TDS, current US$) in Nigeria was $486,424,000 as of 2013. This indicator fluctuated in value for the past 53 years, between $8,807,116,000 in 2005 and $94,469,000 in 1971 (World Bank, International Debt Statistics, 2014). According to World Development Indicators (WDI-2024), Nigeria's economy is striving to leverage the country's vast wealth in fossil fuels in order to displace the poverty that affects about 33% of its population. The coexistence of this enormous wealth in natural resources and extreme poverty in Nigeria is referred by economists as the resource curse, although resource curse which has led to maladministration of resource by the citizens of the nation. In 2005, Nigeria had an understanding with the Paris Club of lenders to cancel all of its bilateral foreign debt. The lenders agreed to forgive most country’s debt, while Nigeria will pay off the remaining part using the oil revenues. Nigeria's economy is extremely inept outside the oil sector. More so, human capital is underdeveloped. The debt forgiveness did not in any way impact positively to the living standard of the citizen (Mqolombeni, Tewari & Ilesanmi, 2023).

From 2003 to 2007, Nigeria tried to implement an economic reform program called the National Economic Empowerment Development Strategy (NEEDS). The purpose of the NEEDS was to raise the country's standard of living through a variety of reforms, including macroeconomic stability, deregulation, liberalization, privatization, transparency, and accountability.

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Debt Crisis on the Ghanaian Economy

External debt stocks, total (DOD, current US$) in Ghana was $15,831,510,000 as of 2013, and $44,839,810.52. This indicator has fluctuated in value over 53 years, between $15,831,510,000 in 2013 and $546,219,000 in 1971. Debt service on external debt, total (TDS, current US$) in Ghana was $931,201,000 as of 2013. The value for 43 years has fluctuated between $931,201,000 in 2013 and $32,348,000 in 1973 (World Bank, 2023).

According to World Development Indicators (WDI-2014), the economy of Ghana has potentials in the manufacturing and exportation of digital technology goods, automotive and ship construction and exportation, and the exportation of diverse and rich resources such as hydrocarbons and industrial minerals. These have given Ghana one of the highest GDPs per capita in Africa. In order to pay its debt service obligations, Ghana embarked on stringent tax drive. The tax administration that commenced in 1998 had a single rate but since entered into a multiple rate which has adversely affected investment (Musibau et al, 2018).

Debt Crisis on the Gambian Economy

The total external debt stocks, (current US$) in the Gambia was $1,129.55 million in 2022. External debt stock rose from US$ 5.08 million in 1970 to US$ 674.42 million in 2006 (a year before The Gambia reached its HIPC completion point) while external debt service rose from US$ 0.13 million in 1970 to reaching its climax in 1990 at US$ 30.31 million corresponding to a period of debt default in The Gambia (1985 -1990). In 2000, the country statistics showed external debt stock of US$ 437.96 million, US$ 616.54 million in 2005, and US$ 674.42 million in 2006. Consequently, after the HIPC initiative, the stock of external debt declined reasonably to US$ 395.78 million in 2012 but only a little changed in the country's external debt service payments at US$ 23.95 million in 2012. However, the economy's debt records showed the value of her external debt worth about US$ 1,671.5 million in 2021, and comprises of concessional and semi-concessional loans from multilateral creditors, with creditors from the Middle East forming the single largest creditor sub-group (Mqolombeni et al, 2023).

Debt Crisis on the Sierra Leonean Economy

The total external debt stocks, (current US$) in Sierra Leone was $2,331.20 million in 2022. Sierra Leone's external debt composition since 2000 has been multilateral, bilateral and commercial credits. Multilateral debt dominated the country's external debt composition during and after the period of debt relief. Between 2002 and 2006, multilateral debt on average constituted 59.6 percent during the period. This was followed by debt on bilateral loans which constituted an average of 25.7 percent during the same period whilst the average composition of commercial credits and short-term arrears was 15 percent. After debt relief in 2006, the composition of the country's external debt changed marginally. Debt on multilateral loans continued to dominate Sierra Leone's foreign debt portfolio between 2007 and 2015, followed by commercial loans and bilateral loans. The average share of multilateral loans during the period was 61 percent whilst those of commercial credits and bilateral loans were 27.9 percent and 11.2 percent respectively (Hassan & Meyer, 2021).

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Debt Crisis on the Guinean Economy

The total external debt stocks, (current US$) in Guinea was $4,929.02 million in 2022. Guinea's external debt since 1998 consisted multilateral, bilateral and trade credits. Multilateral debt dominated the country's external debt composition during and after the period of debt relief. This was followed by bilateral debt and commercial credits. The average composition of multilateral debt between 2000 and 2005 was 59.45 percent whilst the average share of bilateral debt during the same period was 40.04 percent. Guinea's commercial foreign debt on average constituted 4.68 percent. Between 2006 and 2010, the share of Guinea's multilateral debt increased whilst bilateral and commercial debts decreased, with average composition of 65.4 percent, 33.48 percent and 1.14 percent respectively (Hassan & Meyer, 2021). Between 2011 and 2015, multilateral debt constituted 52.09 percent of Guinea's external debt whilst the average share of bilateral debt was 43.82 percent. The average share of debt on commercial credit between the periods was 4.08 percent.

Debt Crisis on the Liberian Economy

The total external debt stocks, (current US$) in Liberia was $1,904.05 million in 2022. Available data on Liberia's external debt composition revealed that the country's external debt comprised multilateral, bilateral, debt on loans contracted from the international capital market and other commercial loans. Multilateral debt dominated the country's foreign debt portfolio for most of the period under review. This was followed by bilateral debt, debt contracted from international capital market and other foreign commercial loans respectively. On average, the share of multilateral debt in total external debt between 2004 and 2015 was 51.1 percent, whilst that of bilateral debt was 37.8 percent (Ehikioya et al, 2020). The remaining 11.1 percent were debt contracted from the international capital market and other foreign commercial debt.

2.3 Empirical Review

2.3.1 Empirical Review from Non-African and Advanced Countries

Several empirical researches have emerged in determining the effect of external debt burden on human capital development in both developed and developing countries. Most of this study have produced conflicting, and sometimes, contradictory results.

Mezni and Djebali (2022) investigated the effect of external debt and human development index in the MENA region. Examining the efficacy of external debt on debt development index for 12 countries in the MENA region for a period of 1990-2019, as well as the utilization of panel data analysis, results from the study revealed that loans granted by the International Monetary Fund (IMF), trade openness and foreign direct investment had positive influence on the Human Development Index (HDI) in the MENA region. Gross fixed capital formation and domestic private sector credits negatively affect the HDI of MENA countries.

Yousaf and Mukhtar (2020) examined the relationship between external debt and capital accumulation nexus in Pakistan. The study employed the ARDL bound testing technique for the period 1972-2016. The study found a negative relationship between the external debt to revenue ratio and the stock of capital in Pakistan. Other indicators of external debt, such as the

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external debt service to revenue ratio, external debt to export ratio, and external debt service to export ratio, were also found to lead to a decrease in the stock of capital in Pakistan.

Petrushenko, Korneyev, Nebaba, Banchuk-Petrosova and Bohorodytska (2022) assessed the external debt impact on a country's economic development indicators. Using a period of 2009-2021 for Ukraine, as well as the ordinary least square regression technique, findings showed that the understudied indicators are closely related to each other, and the change in GDP by 62 percent depends on the change in external public debt.

Azretbergenova, Zhetibayev and Yessymkhanova (2022) examined the relationship between external debt and economic growth in the BRIC countries. Studying the efficacy of the objective on the four (4) BRIC countries for a period of 1990-2021, findings from the panel data analysis revealed the presence of a long-term relationship between external debt and economic growth variables in BRIC countries.

Chien, Chau, Aldeehani, Huy, Tan and Mohsin (2022) investigated the extent to which external debt as a new determinant of fiscal policy influence sustainable economic growth. The study utilized a period of 2000-2018 for 5 South Asian sub-regional countries. Using the longitudinal root-analysis, pooled ordinary least square, quantile estimation and output estimation, the research paper found that total external debt and external debt services have significant effects on sustainable economic growth in the South Asian sub-region.

Zhang, Dawood and Al-Asfour (2020) examined the effect of external debt on economic growth. The study used a period of 1995-2019 for eighteen (18) selected Asian developing and transition economies. To achieve the studied objective, the dynamic heterogeneous panel data methods, pooled mean group (PMG), robust cross-sectional augmented autoregressive distributed lag (CS-ARDL), and pairwise panel causality test were utilized. The study found a causal relationship between external debt and economic growth in developing countries, both in the short-run and long-run.

Shkolnyk and Koilo (2018) assessed the relationship between external debt and economic growth in Ukraine and other emerging economies. The study utilized a scope of 2006-2016, for eleven (11) emerging economies. The ADL model and correlation analysis were utilized. Findings from the study showed that there was a critical level of debt burden for emerging economies, where the marginal impact of external debt on economic growth becomes negative.

2.3.2 Empirical review from developing and African countries

Tarawalie and Jalloh (2021) examined the effect of external debt and economic growth nexus in the ECOWAS states. The study employed panel data for the period 2000-2019. The findings suggested that external debt, openness to trade, and control of corruption are the main determinants of economic growth in the ECOWAS countries. Moreover, trade openness had a positive effect on growth, while both external debt and control of corruption had a negative impact on growth.

Aladejare (2023) investigated the impact of external debt on longevity in 14 developing countries in West Africa for a period of 1981-2020. Utilizing the Panel unit root, cointegration,

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and estimation procedures incorporating panel dataset cross-sectional dependency and heterogeneity, findings revealed that unsustainable, illiquid, and insolvent external debt, as well as macroeconomic volatility, had a negative impact on longevity in West African countries and other developing countries.

Nwakoby and Ezeaku (2021) examined the effect of concessional debt on economic development in the West African Monetary Zone. The study employed the fixed and random effect panel regression for the period of 1975-2014. Findings from the study revealed that multilateral and bilateral concessional debts had a significant positive effect on the standard of living in the region.

N'Zue (2020) studied the impact of external debt on economic growth in the ECOWAS region. The study utilized the Panel CS-ARDL for the period of 1990-2016. Findings revealed that external debt had a positive impact on economic performance up to a threshold. Furthermore, in the short run, the threshold stood at 45 percent and in the long run, it stood at 42.52 percent. Beyond these points, additional external debt accumulation negatively affected the regional economic performance.

Musibau, Mahmood, Ismail, Shamsuddin and Rashid (2018) investigated the causal effect between external debt and economic growth among ECOWAS member countries. Utilizing the panel data statistical technique for the period of 1980-2015. Results and findings showed evidence of both long and short-run causality between external debt and economic growth among ECOWAS member countries.

Adeve and Karabou (2022) examined public debt and development sustainability issues in the West African Economic and Monetary Union (WAEMU). The study evaluated the 8 member countries in the West African Economic and Monetary Union for the period of 2004-2018. Using the dynamic panel generalized methods of moments, findings pointed out a negative and significant contribution of public debt to the development sustainability of the West African Economic and Monetary Union (WAEMU) countries.

Chindengwike (2022) investigated the effect of external debts on sustainable economic development in developing countries. The study employed the quarterly panel data for the period of 1999-2020. The study found a long-term association between external debts and sustainable economic development in developing countries.

Edeminam and Aras (2022) examined the effect of external debt on expected years of schooling in Nigeria and Ghana. The study employed the Phillips-Perron and Augmented Dickey-Fuller unit root test methods for the period 1990-2019. Findings from the study revealed that there was no long-run cointegration among the variables for Nigeria, but there was long-run cointegration among the variables for Ghana.

Ehikioya, Omankhanlen, Osuma and Inua (2020) investigated the dynamic relations between public external debt and economic growth in African countries. Evaluating the relationship between public external debt and economic growth 43 African countries for the period of 2001-2018, findings from the Johansen Cointegration test and system Generalised Method of

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Moments showed evidence to support a long-run equilibrium relationship between external debt and economic growth in Africa.

Asafo, Matuka & Dominic (2019) examined the influence of external debt on economic growth in Sub-Saharan Africa countries, with 48 Sub-Saharan Africa countries as the study population. The study employed a two-step system General Method of Moments (GMM) technique, for a period of 1990-2017. Findings from the study pointed that contemporaneously, external debt had a negative and statistically significant impact on Gross Domestic Product growth.

3. METHODOLOGY

The data for the measurement of the variables were collected using various secondary sources, data on external debt burden, external debt service payment to gross domestic product, human development index, climate change, gender inequality, exchange rate and gross domestic product were carefully collected from World Development Indicator, United Nation Development Programme and Central Bank Statistical Bulletin of various countries studied for the period. The population and the sample size of the study consist of all West African Monetary Zone member countries (Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone). The study will cover a period of 33 years (1990 to 2022). A time series technique will be used to determine the effect of external debt burden on human development index.

Based on the theories under review in this study, and the hypotheses of this study, a model showing the effect and relationship amongst/between the variables of interest shall be specified in consonance with the work of Mezni & Djebali (2022).

$$HDI = f(EXDB)*CTLV$$

Where:

EXDB = External debt burden, which will be supported by external debt service payment to gross domestic product (EDSP)

HDI = Human development index

CTLV = Controlled variables are drawn from the United Nations Development Programme, proxied by climate change (CCH), gender inequality (GIN), exchange rate (EXR) and Gross Domestic Product (GDP). Therefore, the econometric model after the ARDL model shall be in line with the dependent variable, thus:

$$HDI_{it} = \partial_0 + \partial_1 LOGDSPGDP_{it} + \partial_1 LOGEXDB_{it} + \partial_1 LOGCCH_{it} + \partial_1 LOGGINI_{it} + \partial_1 LOGGDP_{it} + \partial_1 LOGEXR_{it} + \varepsilon_{it}$$

Regression constant = ∂_0

Regression coefficient = ∂_1

Stochastic error term = ε

The subscript "it" shows the combination of cross section (N) and time (T). The countries under study make up the cross sections, while the sample period represents the time dimension.

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Theoretically, it is expected that external debt burden and external debt service payment should positively and negatively impact human development index of the WAMZ countries respectively (b1, b2 > 0) as a priori expectations, ceteris paribus. As seen in the table below:

Table 2

S/N	Variable	Notation	Role	Source	Expected sign
1.	Human development index	HDI	Dependent variable	UNDP	Nil
2.	External debt burden	EXDB	Independent variable	WDI	+ or -
3.	External debt service payment to gross domestic product	DSPGDP	Independent variable	WDI	+ or -
4.	Climate change	CCH	Control variable	UNDP	+ or -
5.	Gender inequality	GINI	Control variable	UNDP	+ or -
6.	Exchange rate	EXR	Control variable	WDI	+ or -
7.	Gross domestic product	GDP	Control variable	WDI	+ or -

Author compilation

The implication of the above expectation is that an increase in external debt burden and external debt servicing to gross domestic product will be associated with positive influence on human development index.

The ARDL model is to basically ascertain the long and short run connection between external debt burden and human development index of the WAMZ countries. The ARDL method has many benefits when compared with other co-integration techniques, and can be used notwithstanding if the underlying variables are wholly 1(0), 1(1) or jointly co-integrated, and can also be estimated with little sample features. The study shall design the ARDL model for appraisal as stated beneath:

$$
\begin{aligned}
logHDI_{it} = \alpha_0 & \\
& + \sum_{k=1}^{n} \alpha_1 \Delta logHDI_{1t-1} \\
& + \sum_{k=1}^{n} \alpha_2 \Delta logEXDB_{1t-1} + \sum_{k=1}^{n} \alpha_3 \Delta logDPSGDP_{1t-1} + \sum_{k=1}^{n} \alpha_4 \Delta logCCH_{1t-1} \\
& + \sum_{k=1}^{n} \alpha_5 \Delta logGDP_{1t-1} + \sum_{k=1}^{n} \alpha_6 \Delta logEXR_{1t-1} + \sum_{k=1}^{n} \alpha_7 \Delta logGINI_{1t-1} \\
& + \partial_1 logHDI_{1t-1} + \partial_2 logEXDB_{1t-1} + \partial_3 logDPSGDP_{1t-1} \\
& + \partial_4 logCCH_{1t-1} + \partial_5 logGDP_{1t-1} + \partial_6 logEXR_{1t-1} + \partial_2 logGINI_{1t-1} \\
& + \varepsilon_{it}
\end{aligned}
$$

The general model is uncoupled to show the respective models for testing the twelve formulated hypotheses as follows:

$H_{O1,3,5,7,9,11}$: There is no significant effect of external debt burden on human development index in the Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone.

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$$logHDI_{it} = \alpha_0 + \sum_{k=1}^{n} \alpha_1 \Delta logHDI_{1t-1} + \sum_{k=1}^{n} \alpha_2 \Delta logEXDB_{1t-1} + \sum_{k=1}^{n} \alpha_4 \Delta logCCH_{1t-1} + \sum_{k=1}^{n} \alpha_5 \Delta logGDP_{1t-1} + \sum_{k=1}^{n} \alpha_6 \Delta logEXR_{1t-1} + \sum_{k=1}^{n} \alpha_7 \Delta logGINI_{1t-1} + \partial_1 logHDI_{1t-1} + \partial_2 logEXDB_{1t-1} + \partial_4 logCCH_{1t-1} + \partial_5 logGDP_{1t-1} + \partial_6 logEXR_{1t-1} + \partial_2 logGINI_{1t-1} + \varepsilon_{it}$$

$H_{O2,4,6,8,10,12}$: There is no significant effect of external debt service to gross domestic product payment on human development index in the Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone.

$$logHDI_{it} = \alpha_0 + \sum_{k=1}^{n} \alpha_1 \Delta logHDI_{1t-1} + \sum_{k=1}^{n} \alpha_3 \Delta logDPSGDP_{1t-1} + \sum_{k=1}^{n} \alpha_4 \Delta logCCH_{1t-1} + \sum_{k=1}^{n} \alpha_5 \Delta logGDP_{1t-1} + \sum_{k=1}^{n} \alpha_6 \Delta logEXR_{1t-1} + \sum_{k=1}^{n} \alpha_7 \Delta logGINI_{1t-1} + \partial_1 logHDI_{1t-1} + \partial_3 logDPSGDP_{1t-1} + \partial_4 logCCH_{1t-1} + \partial_5 logGDP_{1t-1} + \partial_6 logEXR_{1t-1} + \partial_2 logGINI_{1t-1} + \varepsilon_{it}$$

Where $\in_{it}$ is the error term and Δ represent the first difference operator, HDI_{it}, is proxy for human development of the WAMZ countries. On the other hand, EXDB and EDSP are proxies for measuring external debt burden in their natural logarithm, CCH, GIN, EXR and GDP are control variables in these equations. These equations' estimates $(n+1)k$ number of regressions in order to obtain the optimal lag length for each variable. While n is the total number of lags that were used, k is the number of variables in the estimation. An appropriate lag selection based on criteria such as Akaike information criterion (AIC) and Schwarz Bayesian criterion (SBC). All coefficients of the short run equation are coefficient relating to the short run dynamicsof the model's convergence to equilibrium and φ in equation above represents the speed of adjustments. The F-statistics was used to establish the association of the series of the model in the long run. Hence, the hypothesis stated in the null and alternate form is as follows:

$H0$: $\rho 1 = \rho 2 = 0$

$H1$: $\rho 1 \neq \rho 2 \neq 0$

The t-statistics critical and the tabulated values are compared as a decision criterion. The major reason this study adopts the ARDL methodology is that it has been accepted by many studies in recent studies due its wide applicability. Other advantages of ARDL data methodology are that, by controlling of individual heterogeneity, the model estimators can be less biased since the degree of freedom will be increased. Following the basic principles as stated in the methodology section, the specified ARDL model will be estimated and analyzedin different

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ARDL equations to reflect the dependent variables of the study. The study shall employ the descriptive statistics, summarized unit root test and other preestimation tests.

4. RESULTS

The data set for this study is longitudinal covering the six (6) investigated ECOWAS countries that make up the West African Monetary Zone (WAMZ) namely Gambia, Ghana, Guinea, Nigeria, Liberia and Sierra Leone. The period covered is 1990 to 2022 (33years). The full data set for the study arranged in panel form is presented in Appendix One (1). The dependent variable is human development index (HDI) while the core independent variables are external debt burden (EXDB - measured as the ratio of aggregate external debt over the gross domestic product) and the external debt service payment (EDSP) which is the aggregate amount spent on debt servicing by the debtor economies as studied. The studied controlled for climate change (CCH), inequality (GINI), exchange rate (EXR) and size of the economy (GDP). The variables apart from the scaled ones were used in their natural logarithmic form. The cross sections are too small to allow for full scale panel estimation and the hypotheses were formulated on country specific basis, hence the use of country-specific estimators benchmarked on a pseudo panel result. First, we present the basic descriptive statistics of the dataset in both country specific and pooled form.

Table 3: Basic Descriptive Statistics

Averages	EDSP			EXDB			CCH			EXR			GIN			GDP			HDI		
	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV	$\bar{x}$	σ	CV
Nigeria	3.08	2.41	0.78	4.15	2.00	0.48	0.68	0.12	0.18	146.55	116.63	0.80	0.67	0.00	0	2.66	1.70	0.63	0.50	0.02	0.04
Ghana	1.38	2.04	1.48	1.68	1.36	0.81	0.34	0.13	0.38	1.86	2.12	1.14	0.57	0.04	0.07	2.93	2.59	0.88	0.53	0.05	0.09
Gambia	30	89	2.97	5.89	1.88	0.32	0.20	0.02	0.10	26.93	15.46	0.57	0.61	0.02	0.03	1.15	4.70	4.08	0.42	0.05	0.11
Guinea	1.28	44	34.38	3.01	7.40	2.46	0.20	0.05	0.25	4156.53	3136.06	0.75	0.62	0.01	0.02	6.66	4.48	0.67	0.38	0.06	0.15
Liberia	62	1.92	0.03	2.13	1.11	0.52	0.19	0.04	0.21	77.24	42.93	0.56	0.66	0.00	0	2.27	1.11	0.49	0.45	0.02	0.04
S/Leone	44	36	0.81	1.44	4.13	2.87	0.09	0.03	0.33	3.82	3.34	0.87	0.64	0.01	0.02	2.29	1.51	0.66	0.37	0.06	0.16
Panel	7.87	1.71	0.22	1.09	1.77	1.62	0.29	0.20	0.68	700.58	1942.59	2.77	0.62	0.04	0.06	5.38	1.22	0.22	0.44	0.07	0.15

$\bar{x}$ = Mean; σ = Standard Deviation, CV=Coefficient of Variation.

Source: Authors Computation

The measures of central tendency and dispersion of the datasets as well as their respective coefficients of variations are reported. The burden of debt service payment in the studied countries is shown by Gambian (30), Liberian (62) and Sierra Leonian (44) averages respectively outweighing the panel average of 7.87. The instability is further shown by the massive standard deviation and the coefficients of variation of most of the countries that are greater than unity (1). The debt crises in the zone is also seen as the mean external debts of all the studied countries are seen to be greater than the panel average of 1.09. The full details of the descriptive statistics especially the normality profile shows consistency with the behaviour

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of economic time series. The datasets are observed to be largely fat-tailed (positively skewed) and highly peaked (leptokurtic) Next, the correlational matrix of the datasets is presented. This is a necessary test for the degree of linear association of the dataset. The result of the pooled data is presented in table 4 and the country specific datasets are presented under their relative specific objectives.

Table 4: Panel Correlation Table

Correlation							
t-Statistic							
Probability	**HDI**	**CCH**	**EDSP**	**EXDB**	**EXR**	**GDP**	**GIN**
HDI	1.000000						

CCH	0.645487	1.00					
	8.193859	-----					
	0.0000	-----					
EDSP	0.446812	0.678372	1.000000				
	4.842240	8.951803	-----				
	0.0000	0.0000	-----				
EXDB	0.554260	0.841948	0.760819	1.000000			
	6.456165	15.12904	11.36645	-----			
	0.0000	0.0000	0.0000	-----			
EXR	-0.028954	0.059764	-0.038592	-0.035950	1.000000		
	-0.280833	0.580470	-0.374445	-0.348773	-----		
	0.7795	0.5630	0.7089	0.7280	-----		
GDP	0.277766	0.730682	0.547079	0.801463	-0.016151	1.000000	
	2.803355	10.37651	6.336464	12.99314	-0.156614	-----	
	0.0061	0.0000	0.0000	0.0000	0.8759	-----	
GIN	-0.650331	-0.034592	-0.028388	0.058556	0.045362	0.380974	1.000000
	-8.300110	-0.335584	-0.275347	0.568693	0.440255	3.994961	-----
	0.0000	0.7379	0.7837	0.5709	0.6608	0.0001	-----

R = Coefficient, {} = T-stat and [] = P-value

It is observed that the variables are independently distributed as the correlation coefficients are not too high to suggest near singular matrix. A look at the core explanatory variables and the outcome variable (HDI) showed that debt service payment and external debt burden respectively correlate significantly. The linear association of the other variables with themselves and the dependent variable are shown in the table.

The stationarity properties of the investigated variables in both country specific and panel forms are shown in table 5. Stationarity test results helped in determining the appropriate estimation method given that the order of integration of the series is a significant evaluation criterion for this purpose.

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Table 5: Country Specific and Panel Unit Root Test

	Nigeria			Ghana			Sierra Leone				Gambia			Liberia		Guinea			LLC		IPS	
	ADF-Stat	CV @ 5%	INF	ADF-Stat	CV @ 5%	INF	ADF-Stat	CV @ 5%	INF	ADF-Stat	CV @ 5%	INF	ADF-Stat	CV @ 5%	INF	ADF-Stat	CV @ 5%	INF	T-stat	INF	T-stat	INF
EDSP	-8.44	-3.57	I(0)	-8.44	-3.57	I(0)	-2.65	-1.95	I(1)	-6.52	-3.56	I(1)	-3.92	-3.56	I(0)	-6.25	-3.56	I(1)	-7.33 (0.00)	I(1)	-8.24 (0.00)	I(1)
EXDB	-6.07	-3.56	I(1)	-6.07	-3.56	I(1)	-4.40	-3.56	I(1)	-5.99	-3.56	I(1)	-2.51	-1.95	I(1)	-4.78	-3.56	I(1)	-2.26 (0.01)	I(1)	-3.94 (0.00)	I(1)
CCH	-6.67	-3.58	I(1)	-6.67	-3.58	I(1)	-3.65	-3.58	I(1)	-4.03	-3.58	I(0)	-4.50	-3.63	I(1)	-4.18	-3.60	I(0)	-4.74 (0.00)	I(1)	-6.33 (0.00)	I(1)
EXR	-4.15	-3.56	I(1)	-4.96	-3.60	I(1)	-3.51	-2.96	I(1)	-3.64	-3.56	I(1)	-4.88	-3.56	I(1)	-4.19	-3.59	I(1)	-0.99 (0.16)	I(1)	-3.88 (0.00)	I(1)
GIN	-3.91	-3.71	I(1)	-6.87	-3.56	I(1)	-3.87	-1.96	I(0)	-6.99	-4.10	I(1)	-4.73	-3.75	I(1)	-	-	-	-4.05 (0.00)	I(1)	-3.14 (0.00)	I(1)
GDP	-4.38	-3.56	I(1)	-6.54	-3.56	I(1)	-4.21	-3.56	I(1)	-5.80	-3.56	I(1)	-3.91	-1.95	I(1)	-4.69	-3.58	I(0)	-1.95 (0.02)	I(1)	-3.90 (0.00)	I(1)
HDI	-4.09	-3.04	I(1)	-4.11	-3.56	I(1)	-4.38	-3.56	I(0)	-5.53	-3.56	I(1)	-3.61	-3.52	I(0)	-4.23	-3.59	I(1)	-2.24 (0.01)	I(1)	-4.57 (0.00)	I(1)

Source: Computed by the Author using E-views

The stationarity test for the country variables returns with a combination of order one (1) and order zero (0) variables. The null hypothesis of no stationarity was rejected in levels for some and first difference for others. This provided a good justification for the use of the Autoregressive Distributed Lag model which accepts a combination of I (0) and I (1) variables. The full panel unit root test using IPS, LLC, ADF and PP shown in Appendix 3. Only IPS and LLC are in table 5 for want of space.

4.1 Autoregressive Distributed Lag Results (Country-Specific and Pooled)

The results of the country specific autoregressive distributed lag model of the study are presented in table 6. This formed the basis for the test of the hypotheses formulated in pursuit of the set objectives of the study.

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Table 6: Country Specific and Panel Ardl Table

Variables	Nigeria			Ghana			Sierra Leone			Gambia			Liberia			Guinea			PANEL		
	C	T-stat	P-value	C	T-stat	P-value	C	T-stat	P-value	C	T-stat	P-value	C	T-stat	P-value	C	T-stat	P-value	C	T-stat	P-value
EDSP	0	-0.58	0.59	0.04	1.89	0.08	0.19	1.66	0.14	-0.01	-3.94	0	0	-30.28	0.02	-0.01	-2.8	0.01	-0.001	-5.64	0
EXDB	-0.04	-1.64	0.17	-0.01	-5.83	0	-0.02	-2.44	0.04	-0.01	-15.39	0	0	25.87	0.02	-0.09	-3.26	0	-0.001	-2.49	0
CCH	0.25	1.63	0.17	0.02	4.51	0	0	0.42	0.68	-0.1	-2.47	0.06	-0.03	-16.78	0.03	21.6	0.11	0.9	0.001	0.51	0.61
EXR	0	2.85	0.04	0	-1.64	0.12	0	1.46	0.18	0	3	0.03	0	41.3	0.01	0	-0.1	0.91	0.03	11.15	0
GIN	0.94	1.26	0.27	0.01	5.51	0	0.04	6.79	0	-0.06	-0.57	0.59	0.49	15.07	0.04	-	-	-	-0.08	-1.23	0.22
GDP	0.04	3.82	0.01	-0.88	-10.48	0	-0.97	-2.63	0.03	0.03	3.37	0.02	0.04	83.36	0	1.81	0.11	0.91	0.03	20.96	0
C	-0.31	-0.88	0.42	0.47	4.94	0	0.38	0.99	0.35	-	-	-	-0.87	-25.54	0.02	-	-	-			
BGLM	2.42 (0.20)			0.71 (0.50)			2.46 (0.31)			3.95(0.20)			3.78(0.11)			2.48(0.11)					
BPG	1.77(0.24)			0.59 (0.83)			0.75 (0.67)			1.82(0.33)			0.92(0.51)			1.46(0.23)					
CUSUM	Stable			Stable			Stable			Stable			Stable			Stable					

Source: Computed by the Author Using E-views

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First, the diagnostic tests as reported in the lower rung of table 6 are discussed. The suspicion of autocorrelated residuals is erased by the result of serial correlation langrage multiplier test following the Breusch Godfry protocol. The p-values for all the countries are found to be greater than 0.05 implying a refusal to reject the null hypothesis of no serial correlation in all the six (6) countries.

The confirmation that all the residuals are homoscedastic is shown by the results of the Bruesch-Pagan-Godfrey test for heteroscedasticity. The null hypothesis of no heteroscedastic residual cannot be rejected for all the countries which is evidence in favour of constant variance of the error term for all succeeding lags.

The Cumulative Sum of Square (CUSUM) test proved that the models for all the countries as estimated are stable, followed the correct functional form, had no redundant variables and had no specification biases.

The results of the diagnostic tests confirm that the results are fit for purpose and are good enough for meaningful inferences.

The hypotheses testing was done using the country-specific estimates and the Panel-ARDL results were used as robustness checks.

For Gambia, the result shows that external debt service payment and external debt burden both exert negative and significant impact on human development index. The result shows that the two variables worsen human development index by 1% respectively for every unit change. This is to say that education, health and per capital income which are the components of HDI deteriorates as the level of revenue that goes to debt servicing gets higher. This also happens as more debts are contracted especially above the size of the Gambian economy. **It is therefore concluded** that external debt service payment and external debt both significantly affect human development index though adversely.

For Ghana, the result shows that external debt service payment had a positive and insignificant effect on human development index. External debt burden on the other hand, exerted a significant impact on human development index. The result shows that external debt burden worsens human development index in Ghana by 1% for every unit change. This is to say that education, health and per capital income which are the components of HDI deteriorate as more debts are contracted especially above the size of the economic growth threshold. It is found that external debt significantly but adversely affect human development index in the Ghanaian economy.

For Guinea, the result shows that external debt service payment and external debt burden both exert negative and significant impact on human development index. The result shows that the two variables worsen human development index by 1% and 9% respectively for every unit change. This is to say that education, health and per capital income which are the components of HDI deteriorates as the level of revenue that goes to debt servicing gets higher. This also happens as more debts are contracted especially above the size of the Guinean economy. **There is the** conclusions that external debt service payment and external debt both significantly affect

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human development index though adversely in the Guinean economy. For Liberia, the result shows that external debt service payment and external debt burden both exert significant impact on human development index. While external debt service payment caused 1% adverse change in HDI, external debt burden brought about 1% positive change in HDI. This is to say that education, health and per capital income which are the components of HDI improve for every unit change in debt burden and deteriorates as the level of revenue that goes to debt servicing gets higher. It is concluded that external debt service payment and external debt both significantly and adversely affect human development index in the Liberian economy.

In the case of Nigeria, the result shows that external debt service payment and external debt burden both exert non-significant impact on human development index. While external debt service payment caused 1% adverse change in HDI, external debt burden brought about 4% negative change in HDI. This is to say that education, health and per capital income which are the components of HDI deteriorates as the level of revenue that goes to debt servicing gets higher and debt burden gets higher. These findings are found to be non-significant in both cases as the t-statistics and the associated p-value fall outside the acceptance region. It is found that external debt service payment and external debt both non-significantly but adversely affect human development index in the Nigerian economy.

The results for Sierra Leone shows that external debt service payment exert positive and non-significant impact on human development index and external debt burden exert negative and significant impact on human development index. The result shows that external debt burden reduces human development index by 2% respectively for every unit change. This is to say that education, health and per capital income which are the components of HDI deteriorates as more debts are contracted especially above the size of the Sierra Leonian economy. The conclusion is that external debt service payment non-significantly affect HDI while external debt significantly and adversely affects human development index.

5. CONCLUSIONS

External borrowing has a significant impact on the growth and investment of a nation up to a point where high levels of external debt servicing sets in and affects the growth, as the focus moves from financing private investment to repayments of debts. From the study, at low levels, debt has positive effects on growth, but above particular points or thresholds, accumulated debt begins to have a negative impact on growth, as high debt service payments, shifts spending away from health, educational and social sectors. This obscures the motive behind external borrowing which is to boost growth and development in the West African Monetary Zone, rather than get drowned in a pool of debt service payments which eats up most of the Zone's resources and hinders growth due to high interest payments on external debt. However, the major cause of external debt crisis situation among member countries in West African monetary zone is the fact that these foreign loans are not being used for developmental purposes. Instead of using it to venture into capital projects that will better the economy, they are secretly shrouded.

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To service debt, the interest and principal on loans must be paid on time, while using the gross domestic product to evaluate the overall health of the economy as at the time of payment. Findings from the study revealed that excessive foreign indebtedness is one of the major impediments to economic growth and stability, as most West Africa Monetary Zone countries often contracted large amount of external debts that has led to the mounting of trade debt arrears at highly concessional interest rates. Accumulated debt service payments create a lot of problems for countries especially the developing nations, reason being that a debt is actually serviced for more than the amount it was acquired, and this slows down the growth process in such nations. The inability of an economy to meet its debt service payments obligations has resulted in debt overhang or debt service burden that has militated against her growth and development.

However, human development is wealth and financial stress severely affects the health, education and standard of living of the population. A high degree of debt repayments can behave as an active source of anxiety that leads to poor physical, health and economic distress that in turn might worsen overall societal welfare. Such stresses instigated by the debt effect can tend to enhance unhealthy behaviours and poor health services, high literacy rate and detrimental to the citizenry's standard of living. Indebted economies tend to enlarge additional debt to pay for good quality health and food care services, quality education and standard of living to the masses. Debt accumulation can minimize the accessibility of forthcoming resources for human development-related investments and tend to a vicious phase, where largely accumulated debt could be a consequence and cause of poor health conditions, education and standard of living.

Some empirical support to the findings arising from this study include Yeboah et al (2023), Ali (2022), Ijirshar et al (2016) and Epaphra & Mesiet (2021), Shah et al (2023), Wirajing et al (2023) and Thi & Le (2022) who found that external debt service payment and the external debt had significant, but negative impact on human development and economic growth.

Conversely, Hassan & Meyer (2020) and Olusegun et al (2020) in their study found that external debt service payment had positive, but insignificant impact on human development and economic growth. Sandow et al (2022) and Petrushenko et al (2022) Edeminam & Aras (2022), Saengchai et al (2019) and Onyekwelu et al (2014) in their study found that external debt service payment

Omotor (2021), Odejimi & Ozor (2018), and Mezni & Djebali (2022)

Given that external debt service payment and external debt both significantly affect human development index though adversely in the Gambia, the government of the Gambia should undertake structural reforms aimed at effective debt management practices in the country. That is, reforms or policies that ensures the quality of budgetary and financial management, efficiency of revenue mobilization via an effective tax system, quality of public administration, and rule-based governance. Taking these reforms into account will strengthen the quality of public sector management and, in effect, ensure debt sustainability and positive growth as expected. Furthermore, such reforms will ensure that the funds borrowed are devoid of corrupt

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practices and are channeled to productive sectors of the economy, increasing productivity, and hence human and economic development in the Gambia.

The external debt thresholds should be considered by the Ghanaian economy when formulating their external debt management policies, thereby reducing their reliance on external debt funds. Domestically generated revenue, especially tax revenue, should be revamped and galvanized, in such a way that tax avoidance and evasion would be reduced drastically, in order to bridge the resulting gap in expenditure.

Given the adverse effect of external debt service payment and external debt on human development in Guinea, the Guinean government should adopt a pragmatic approach towards reducing their external debt burden by efficient use of the already accumulated debt. They should take practical steps towards total eradication of misallocation and squandering of the borrowed funds. Moreover, the funds should address many priority areas such as human capital development, poverty eradication, bridging infrastructural deficits, stimulating production, and other endeavours that promote the economy's welfare and development. Doing this would stimulate inclusive growth in the economy and eliminate the burden of external debt currently holding sway in the country.

For the government of Liberia, external debts should be contracted solely for economic reasons, and not for social or political reasons. This is to avoid accumulation of external debt stock overtime and prevent an obscuring of the motive behind external debt. Also, the authorities responsible for managing Liberia’s external debt should adequately keep track of the debt payment obligations, and the debt should not be allowed to pass a maximum limit so as to avoid debt overhang.

To mitigate the adverse effect of external debt and its corresponding payment obligation, the Nigerian government should sort for loans with favourable terms and conditions after a rigorous evaluation, not on exigency, in order to reduce the cost of the debt. A well-developed capital market will reduce the rate of external borrowing.

For the Sierra Leone economy, government should apply loans only on beneficial capital investments capable of liquidating itself, rather than spend it on recurrent expenditure. This will reduce the debt overhang effect on the economy.

Geographically, this study become one of the most recent and extensive study done on the effect of external debt burden on the human development index in West African Monetary Zone. Therefore, taking a cumulative observation of 1386 panel of 6 West African Monetary Zone member countries for 33 years period, from 1990-2022, giving its due advantage over previous studies on external debt burden and human development in Africa. The findings of this study provide clear empirical evidence on the effect of external debt burden on human development index in West African Monetary Zone. The result improves our understanding and appreciation of the idea of external debt burden in the face of large debt accumulation by developing countries. Therefore, foreign and domestic lenders, regulatory authorities and academics can adopt our findings and recommendations, so as to achieve desired and required result.

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