INTERACTION EFFECT OF MAJOR POWER COMPETITION ON THE EFFECTIVENESS OF DEVELOPMENT ASSISTANCE ON INCOME INEQUALITY: IN THE CASE OF EAST AFRICAN IGAD MEMBER COUNTRIES

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Abstract
In the current era characterized by globalization and interdependence, foreign aid has emerged as a crucial tool for safeguarding and promoting the national interests of donor countries. Nevertheless, the increasing divergence of national interests of major powers is casting a formidable shadow over the efficacy of foreign aid in mitigating income inequality. This paper seeks to examine the interaction effect of the US-China global power competition on the causal relationship between Development Assistance and income inequality in member states of the Intergovernmental Authority on Development (IGAD). The study Employing a Multiple Moderated Regression and Random Effect Model to analyzes two decades data from eight East African IGAD member states. The findings indicate that the competition for global influence between the United States and China plummets the effectiveness of development assistance, leading to a widening impact on Income Inequality in IGAD member states.

Key Words: Development Assistance; Moderated Multiple regression; Major power competition, Income Inequality, East Africa

JEL Classification: D63, O55, P33, P46

I. INTRODUCTION

In a globalized and interdependent world, foreign aid is and has been used as a means to protect and advance national interest. As it has been seen during the cold war, U.S. foreign aid was mainly used to fight and contain the USSR and communism (Lee, 2011). However, following the historical juncture of the cold war in 1991 the collapse of USSR led socialist camp, the multipolar world order is replaced by the U.S. led unipolar liberal capitalist world order (Arbatov, 2014).

Then After, the US lead Global Hegemonic political power was the dominant power and architect which keeps global peace and stability and enforces Democratization, Human rights, and poverty through global interventionist Institutions like UN—International Criminal Court— WBG, NDI (National Democratic Institute for International Affairs). However, Global political dynamics seem to change due to rising forces in the Far East, China. Which has a different political economy internally. Moreover, it also has distinct views, practices, and global approaches to issues like Democracy and Human rights.

On the other dimension, foreign aid is instrumental to reduce the challenges of global peace and security by playing a positive role in addressing country-specific internal conflicts which arise from inequality. Since essentially, it's linked to fundamental security and economic interests of major powers— Such as US— in their global operation. However, due to competition b/n U.S. and China, Aid conditionalities aimed to foster democratization and reducing income inequality could be neglected or compromised as a result of other national interest priorities to maintain global dominance.

Why IGAD?

IGAD is regional Intergovernmental cooperation that aims to boost peace and security, and economic cooperation and integration among eight-member states (Kenya, Ethiopia, Djibouti, Eritrea, Somalia, Sudan, South Sudan, and Uganda) (Dersso, 2014). It was established in 1996 replacing the Intergovernmental Authority on Drought and Development that was founded in 1986 (Ibid).

East Africa is one of the major battlefields of the U.S and China due to the geopolitical importance of the region. According to IRIS (2017, my italics) "Since 2000, the United States has shared the region with China, splitting interests between America's military-industrial security sphere and China's economic and trade relations… [moreover, other great powers or regional powers —Russia, Turkey, Gulf states—in international system (IS) including EU are] … projecting powers in ways that challenge "American hegemony." In addition, since IGAD member states in East Africa are either part of or have an influence over the red sea and Arabian Peninsula which is the major global trade root that hosts 20% of global

trade volume, (Vertin, 2019, p.13, Ali and Isse, 2005, Chaisse and Górski, 2018). Apart from that, it also connects Europe with East Asia and Australia. As it links the Indian Ocean and the Mediterranean Sea through the Suez Canal and close geographic location to Middle East countries, —oil economies.

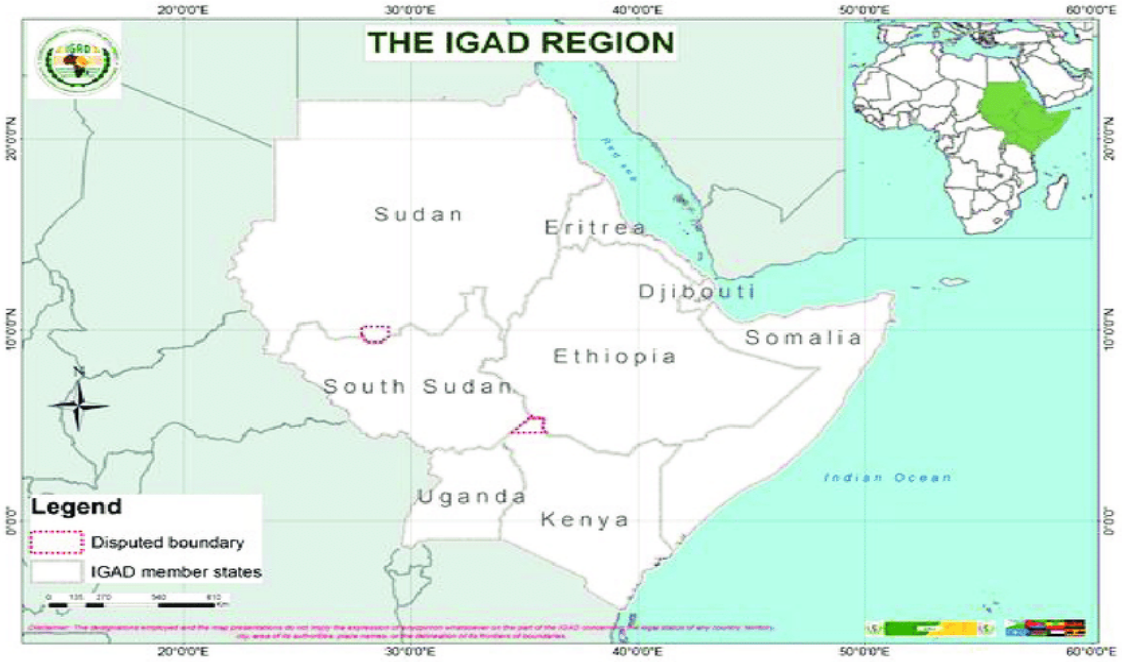

Figure. 1 Map of IGAD Member states (Akanmu et al., 2016)

The study investigates the impact of Foreign Aid (ODA) on Income Inequality in the context of global competition b/n U.S. (Hegemonic state) and China (the emerging Global power) for protection and advancement of political and national security interests over IGAD member states.

II. LITERATURE REVIEW

Foreign Aid or Official Development Assistance (ODA) is relatively a new concept. (Edwards, 2015). Similarly, according to Morgenthau (1962, p.2) Foreign aid is described as a new phenomenon in international relations that is provided in different forms (Financial, Technical) from the developed world to developing countries. Only In 2019, ODA by member countries of the OECD (organization of economic cooperation and development) Development Assistance Committee (DAC) totaled USD 152.8 billion, representing 0.30% of their combined Gross National Income GNI (OECD, 2020). It is rational to ask why this enormous amount of Foreign Aid is given and does it really serve the intent of development as "many countries register low per capita income after receiving enormous amounts of foreign aid " (Ali and Isse, 2005, p.2, my italics). Similarly, Comparing the impact of 15 billion USD Marshall plan granted for the European Recovery Program (ERP) in 1948 to reconstruct Europe after the second world war (Berolzheimer, 1953, pp.116-117) vis-a-vis a $1 trillion ODA in the past 50 years the results are not the same(Alemu and Lee, 2015, p.449).

According to Magid (2012) The success of the Marshall Plan in Europe's recovery is not primarily due to direct economic effects, since it has had little direct economic impact, compared to indirect economic effects. The key reasons for Europe's unsurpassed growth were, in particular, the implementation of liberal capitalist policies and the political implications, mainly the idea of European integration and government-business partnerships or (PPP) public-private partnerships.

On the contrary, concerning inefficacy and poverty, Dambisa Moyo argues that foreign aid to Africa is not just ineffective, but "malignant." though Africa is granted more than $1 trillion in development sustenance and aid in the past 50 years, "she argues that, aid has failed to deliver sustainable economic growth and poverty reduction"—and has actually made the continent worse off" (Wales, 2009, my italics) since it's influenced by external conditions and the nature and performance of political institutions in ODA recipient countries (McGillivray et al., 2006). likewise, Other scholars argue that foreign aid is effective, but only under the right conditions (Herzer and Nunnenkamp, 2012) However, looking at the conditionalities pressure on sovereignty, —policy freedom— and taking the effect of SAP in Africa as an example, Mosley et al. (1995) perceived foreign aid as not only inefficient to reduce poverty, but also as means to foster dependency.

Widening income inequality is the defining challenge of our time (Dabla-Norris et al., 2015). According to reports of Oxfam (2020), "The world's 2,153 billionaires have more wealth than the 4.6 billion people who make up 60 percent of the planet's population". However, on contrary, governments collect only 4 cents in every dollar of tax revenue that comes from taxes on wealth. Furthermore, the super-rich avoids as much as 30 percent of their tax liability. The effects of Inequality on emerging markets and developing countries (EMDCs) are mixed. since some countries are experiencing declining inequality, but there are prevalent inequities in terms of access to education, health care, and finance. Moreover, issues like equity and fairness are global values for many societies irrespective of the level of development and political ideology that makes inequality a global agenda at stake. Thus, due to magnitude of the problem, the consequences of overlooking inequality are costly as it would reduce political and economic stability, and raise crisis risk (Dabla-Norris et al., 2015).

ODA has been regarded as among the most crucial elements which are capable of addressing poverty and income inequality issues in the developing world through fostering long-term economic growth (Pham, 2015). To serve this purpose Sub Saharan Africa was provided ODA amounting to $80 billion and $125 billion in 2008 and 2010, (Ibid). Despite the volume of ODA, many studies are conducted solely to investigate the impact of ODA on economic growth, but few studies have focused on the impact that aid has on income inequality(Barrett et al., 2005). However, the results are opposite, according to Authors, like Bourguignon et al. (2009) found that the distributional impact of aid is enhancing equality. On contrary, Layton (2008, p.5) Observed that the impact of foreign aid on income inequality is almost null or doesn't have a significant effect "somewhere between zero and weakly positive". According to the researchers, there has been no sufficient and timely study that particularly incorporates the effects of ODA on income inequality in the context of competing global powers (US and China) who are major donating countries for IGAD member states.

Theoretical foundation

The most important element that makes this research unique is that it incorporates the context of U.S- China's competition for global dominance in the IGAD region. Theoretically, HST (Hegemonic stability theory) indicates the necessity of hegemonic or dominant power which is reinforced by great power states for the international system to be more likely to remain stable (Yazid, 2015 ,pp. 68-71). However, due to economic inefficiencies in maintaining global peace and order which is caused by overstretched global presence; the hegemonic state loses its global power gradually. Moreover, "over time, there would be uneven growth of power and erode the international hierarchy within the system as new technologies are developed" (Griffiths et al., 2008 ,p. 148, my italics). Thus, according to this theory, in the context of US-China global power competition would be considered as a signal for the possibility of multipolar world order. Also growing rivalry over economic and military interests, and political dominance globally would influence the effect of ODA on IIQ in IGAD member states that are located over the red sea region. It's mainly due to ODA is also used as foreign policy instrument to advance non-altruistic purposes such as to slow down influence capability of each other and win power contest for better global influence.

Power competition

Conceptually power is interpreted as Power-over and Power-to in international level. According to Pansardi and Bindi (2021) Power-over means the ability of one to execute its interest through influencing another to do it by itself. While power-to refers when one country directly enforces its interest to another country by itself. Thus, Influence is one of the ways to measure and express power. In FBIC power is defined as a conscious manifestation of influence where all capabilities are coordinated towards achieving desired outcomes by successfully modifying the behavior of another state. This definition mainly underpins on the concept of power-over.

Foreign Bilateral Influence Capacity (FBIC) Index is a power measurement index designed by The Atlantic Council and Frederick S. Pardee Center for International Futures. FBIC index is a composite of two main factors which affect states capability to exert influence in the international system. The first one is bandwidth, which measures the degree or the volume of relations in terms of economic, political, and security areas. It shows the potential of the states to crate influence (Moyer et al., 2021). The second sub-indicator is dependency, shows the relative dependency of one state over the other on security and economic dimensions. Thus, Fig.2 shows the US and China's competition over twenty years period of time using FBIC as an indicator of power.

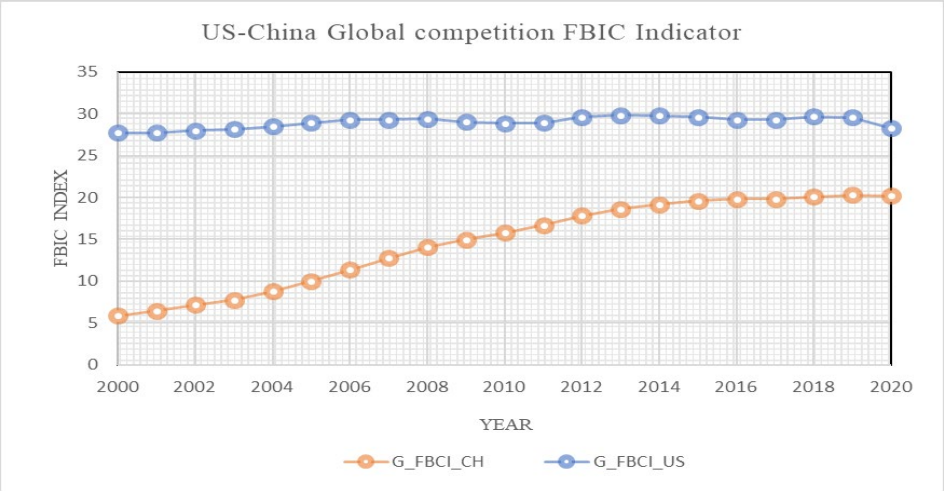

Figure 2. Trend graph FBIC of US and China Pansardi and Bindi (2021)

III. DATA AND METHODS

To analyze and compare the effect of US and China ODA on income inequality, the research employed five variables, from credible international databases. GINI coefficient, ODA, government expenditure, Employment in agriculture, and trade openness are taken from the SWIID, WID, OECD, AIDDATA, and World Bank World Development Indicators database. Secondary data is gathered for 20 years period of time from 2000 to 2020. Moreover, the data has unbalanced long panel data format that consists of eight countries of IGAD member states which are Djibouti, Eritrea, Ethiopia, Kenya, Somalia, South Sudan, Sudan, and Uganda. To take advantage of the data volume available at hand Imputation technique is employed after proper investigation of the nature of missingness of data points that are lost within 20 years period of time across eight countries except for South Sudan which the data covers only for 9 years after the day of independence July 9, 2011. Finally, variable description is incorporated in Table 1.

Table 1. Summary of variables

Variable	Indicator	Source
Income inequality	GINI coefficient	SWIID, WID
ODA	Net ODA US and China	OECD &AIDDATA
Employment in agriculture	Employment in agriculture (% of total employment)	WBG
Government expenditure	government spending (% of GDP)	WBG
Trade openness	export and import (% of GDP)	WBG
Global power competition	FBIC index	The Atlantic Council and Frederick S. Pardee Center for International Futures

Source: Authors compilation

Methodology

The methodological approach designed to address the research question has two major procedures. Primarily, an appropriate model is identified and introduced over specified variables to compare and analyze the moderating effect of US and China global power advancement on the impact of ODA on income IIQ. Consequently, best-fit moderation analysis technique is selected and executed.

$Y_{it} = \beta + \beta_1 X_{1,it} + \beta_2 X_{2,it} + \alpha_i + u_{it}$……eq (1)

Where: Y= dependent variable, β = intercept, β_1 *and* β_2 = coefficients i =levels or countries in the panel data, t =time, α_i= Country specific time-invariant effect, u_{it} = Idiosyncratic error term.

In the first stage, Random effect model is selected as an appropriate model to control unobserved country-specific

effect after testing using Housman specification test (1978). The test helps to choose between random effect and fixed effect models. The null hypothesis assumes unobserved heterogeneity (α_i) is correlated with independent variables. As per the test Ho is not rejected, since level of significance (P-value) is not < 0.05. Thus, failing to reject the Ho leads to choosing the ransom effect over fixed effect model to control unobserved heterogeneity (α_i). Consequently, Breusch-Pagan Lagrange multiplier (LM) test is conducted to select appropriate model between random effect and pool OLS. The null hypothesis refers that there is no panel or level effect which means all levels have the same intercept. The null hypothesis is rejected at significance level of P-value < 0.05 which indicates the presence of panel effect.

As indicated in general model, Random effect model assumes that individual specific effect (α_i) is random and not correlated with independent variables. However, a composite error term which is $\alpha_i + u_{it}$ are serially correlated at level or for each country since it replicates itself as time-invariant country specific effect. This is the situation where random effect model becomes handy. It adjusts time demean values by multiplying them with a parameter value between 0 and 1 where 1 denotes fixed effect and 0 denotes pooled OLS. Therefore, random effect model controls level effect by partially pooling out idiosyncratic error variance and estimate it using GLS estimator.

Moderated Multiple Regression (MMR) Analysis

Moderation is one type of conditional indirect effect models that measures the effect of independent variable on dependent variable under the condition or influence of a third variable called moderator variable.

Mathematical denotation

$$Y = \alpha + \beta_1 X + \beta_2 Z + \beta_3 XZ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots .. eq\ (2)$$

$$Y = (\alpha + \beta_2 Z) + (\beta_1 + \beta_3 Z)X \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots . eq\ (3)$$

Where: Y dependent variable, α = Intercept, $\beta_1\ and\ \beta_2$ = coefficients of X Independent variable and Z moderator variable.

As highlighted in eq (3) after reorganizing eq (2), the interaction term in the second bracket shows how the effect of X on Y varies by the value of Z. The value of Z affect β_3; in the product term. Therefore, it's possible to observe change in β_3 at different values Z.

According Aguinis et al. (2017) moderator variable is explained as a variable that influences the causal effect relation between dependent and independent variable to change either in magnitude or direction conditional on the change in moderator variable. It is also handy to analyze whether difference in a causal effect relationship exists between multiple groups depending on the third variable used as a parameter to classify groups (MacKinnon, 2011). In the scope of this paper US FBIC is introduced as a moderator variable to investigate and compare how it changes overtime affect the performance of China ODA on IIQ in IGAD MS. Similarly, China's FBIC is used as a moderator to analyze its influence over time on the effect of US ODA on IIQ. Figure 3 explains moderating effect conceptual model in visual terms for a better understanding of what is highlighted above. The arrow between X and Y represent direct effect of interest variable, while Z represents indirect conditional effect.

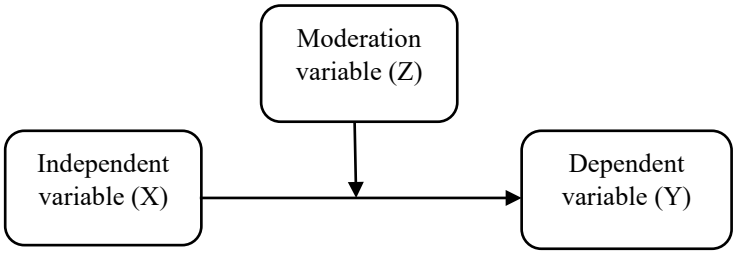

Figure 3. Conceptual model

There are multiple statistical approaches to conduct Moderation effect. Among them, product indicator, Two-stage and Orthogonalization are used broadly. However, the research applied product indicator approach since its recommended approach when moderator variable is reflective (Ramayah et al., 2018). According to Götz et al. (2010) when the variable is a latent the relationship between the latent variable and the measurement used to measure unobserved variable could be either Reflective or Formative. In a reflective relation measures are a manifestation or indication of the latent variable. Whereas in formative relations measurement are essential characteristics of latent variable (Urbach and Ahlemann, 2010). In this research Global Foreign Bilateral Influence Capacity measurement is taken as one of indicators of power competition.

Moderator variables can be classified into three main categories depending on the type of influence they create. Essentially, moderators have directional and magnitude/ straightening types of influence over the effect of interest variable

on the outcome variable (Baron and Kenny, 1986). Figure 4, coined by Sharma et al. (1981) depict four quadrants classified based on interaction on horizontal axis and relations between moderator and interest variable on the vertical axis. The variable in first quadrant is an exogenous variable since moderator has relation with independent or dependent variable but no interaction. Variable in quadrant two is Homologizes variable which has strengthening effect through error term. A variable in Q3 has both relation with DV or IV and interaction. This variable is considered as a quasi-moderator, which influence the type of relation. Q4 hosts pure moderator that has no relation with IV but has significant interaction with the interest variable.

	Related to DV and/ or IV	Not related to DV or IV
No Significant Interaction	Q1 Exogenous variable Not moderator	Q2 Homologizer Strengthening effect through error term
Significant Interaction	Q3 Quasi Moderator Influence form of relation	Q4 Pure Moderator Influence form of relation

Figure 4. Typology of Moderator variable specification (Sharma et al., 1981)

In the product approach model, three successive hierarchical regression has to be made to identify the existence and type of moderation effect by examining the equality of coefficients across regressions (Zedeck, 1971, Cohen et al., 2014). The first one is basic model only with independent variable which is the basic model in (eq 4,5). Followed by a basic model including moderator variable (FBIC) (eq 6,7). The last regression is the second regression plus the product or interaction term (eq 8,9). Mathematical denotation:

$$IIQ_{it} = \beta + \beta_1 Net\ US\ ODA_{,it} + \beta_2 Agri\_Empl/\ Total\_Emp_{,it} + \beta_3 Trade\ openes/\ GDP_{,it} + \beta_4 Gov't\ expe/\ GDP_{,it} + \alpha_i + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \text{eq4. (Basic model 1)}$$

$$IIQ_{it} = \beta + \beta_1 Net\ US\ Chian_{,it} + \beta_2 Agri\_Empl/\ Total\_Emp_{,it} + \beta_3 Trade\ openes/\ GDP_{,it} + \beta_4 Gov't\ expe/\ GDP_{,it} + \alpha_i + u_{it} \ldots\ldots\ldots\ldots\ldots\ldots eq5 \text{ (Basic model 1)}$$

$$IIQ_{it} = \beta + \beta_1 Net\ US\ ODA_{,it} + \beta_2 Agri\_Empl/\ Total\_Emp_{,it} + \beta_3 Trade\ openes/\ GDP_{,it} + \beta_4 Gov't\ expe/\ GDP_{,it} + \beta_5 G\_FBCI\_CH_{it} + \alpha_i + u_{it} \ldots\ldots \text{eq 6 (with moderator, model 2 US)}$$

$$IIQ_{it} = \beta + \beta_1 Net\ US\ Chian_{,it} + \beta_2 Agri\_Empl/\ Total\_Emp_{,it} + \beta_3 Trade\ openes/\ GDP_{,it} + \beta_4 Gov't\ expe/\ GDP_{,it} + \beta_6 G\_FBCI\_US_{it} + \alpha_i + u_{it} \ldots\ldots \text{eq 7 (with moderator model 2 CH)}$$

$$IIQ_{it} = \beta + \beta_1 Net\ US\ ODA_{,it} + \beta_2 Agri\_Empl/\ Total\_Emp_{,it} + \beta_3 Trade\ openes/\ GDP_{,it} + \beta_4 Gov't\ expe/\ GDP_{,it} + \beta_7 Net\ US\ ODA_{,it} \times G\_FBCI\_CH_{it} + \alpha_i + u_{it} \ldots\ldots \text{eq 8 (Interaction model 3 US)}$$

$$IIQ_{it} = \beta + \beta_1 Net\ China\ ODA_{,it} + \beta_2 Agri\_Empl/\ Total\_Emp_{,it} + \beta_3 Trade\ openes/\ GDP_{,it} + \beta_4 Gov't\ expe/\ GDP_{,it} + \beta_8 Net\ US\ ODA_{,it} \times G\_FBCI\_US_{it} + \alpha_i + u_{it} \ldots\ldots \text{eq 9 (Interaction model 3 CH)}$$

Where, β= Intercept, $\beta_1, \beta_2, \beta_3, \beta_4 = coefficients$ of other independent variables, β_5, β_6= Coefficient of moderator variable G_FBIC China and US, β_7, β_8 = Coefficients of the Interaction term, i =levels or countries in the panel data, t =time, α_i= Country specific time-invariant effect, u_{it} = Idiosyncratic error term.

After running regressions highlighted above in a sequential procedure, it is possible to identify and classify the type of moderator variable using a framework designed by Sharma et al. (1981). The decision tree has four decision points as demonstrated below in figure 5.

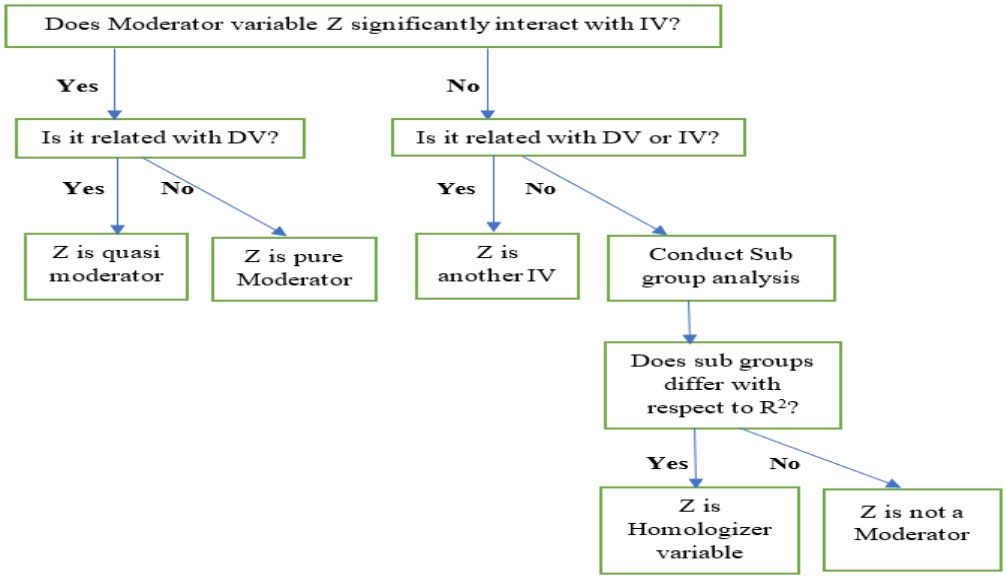

Figure 5 Moderation effect analysis procedure (Sharma et al., 1981)

IV. RESULT AND DISCUSSION

Table 2 shows, mean, standard deviation and Pearson correlation coefficients to describe data characteristics. Moreover, Pearson correlation is used to examine whether moderator variable (G_FBIC) is correlated with IV and DV; which is helpful to identify the type of moderator effect.

The average Income distribution score of IGAD member states is 43.49, which can be categorized within high level of income disparity range of 0.4–0.5 or 40%-50% (Aysan et al., 2021). Looking at the average ODA values, US donation amounts 0.353 billion whereas Chains is 0.169 billion USD. In comparison, this makes US ODA higher by 48%. Comparing of U.S.0.335 billion and China's 0.527 billion standard deviations, US ODA shows low variability. This depicts, US ODA distribution has relatively constant flow across years and over countries in the region. On contrary, the Chinese ODA has high variability. This could be because ODA includes huge concessional loans granted to commence massive infrastructure investment projects for some specific countries. Average Global bilateral influence capacity index of US is 29 which is higher than by 51.37% as compared to China's influence capacity of 14.9. looking at standard deviation values US has a consistence level of influence whereas china influences significant variability. This shows significant growth in terms of bilateral influence which is also one indicator of Chinese global power. Person correlation coefficients of both moderator variables (G_FBCI_US and G_FBCI_CH) are not significantly correlated with DV (GINI) or IV (ODA US and ODA CHINA) except G_FBCI_CH is significantly correlated with IV of US ODA. However, according to Table 2 since G_FBCI_CH is not related to DV or the creation variable; we can conclude that both variables qualify as pure moderators. Therefore, there is interaction effect.

Table 2. Descriptive statistics

Variables	Mean	St. Dv	P corr (r)		
			GINI	ODA US	ODA CHINA
GINI	43.49773	6.149688			
Net ODA US	0.3530582	0.3359087			
Net ODA CHINA	0.1695216	0.527211			
Agri_EmplofTempl	66.53354	16.05875			
TradeopenessasofGDP	74.40958	86.07539			
GovexpenoneducGDP	13.1644	9.071619			
G_FBCI_US	29.01291	0.6564592	0.0857		-0.0276
G_FBCI_CH	14.91	5.0614	0.1106	0.3386*	

Significance level: **P<.01 (Author's Computation)

As highlighted in Figure 5 moderation regression analysis procedure, table 3 and 4 depicts three models which are regressed for both US and China to identify the existence, types, and effects of a moderator variable. Moreover, to compare how US ODA effect on IIQ varies in the context or condition where china's Global power influence changes and vice versa. In other words, Its masseurs the directional or magnitudenal effect of US ODA on IIQ of IGAD MS conditional at different levels of China Global bilateral influence capacity and vice versa.

This is measured using spotlight analysis via mean centering which helps to reduce multiclonality and easy interpretation of interaction effect (Iacobucci et al., 2017). According to Aiken et al. (1991), spotlight analysis is done by mean centering (which is selecting three pointes of moderator variable at mean and 1 standard deviation (SD) above and below the mean) to examine the change in slopes or direct effect of interest IV (ODA) at different values. ODA values at mean, one standard deviation above and below the mean are selected to examine and compare how FBIC effect changes when US and China's ODA vary it values at average, minus and plus SD.

Table 3 Moderation effect Model: US ODA by Global Chinese FBIC (ODAUS*G_FBIC_CH)

Variables	*Model 1_US*	*Model 2_US*	*Model 3_US*
Intercept	59.55516***	61.50001***	69.59317***
ODAUS	4.538499**	5.453348***	-4.233814
Agri_EmplofTempl	-0.1983003***	-0.2010876***	-0.2469814***
TradeopenessasofGDP	-0.0147781*	-0.0172456*	-0.0260458**
GovexpenoneducGDP	-0.2534046***	-0.2978692***	-0.4347058***
G_FBCI_CH		-0.0892527	-0.2816068*
ODAUS*G_FBCI_CH			0.6324959*
R^2	0.2979	0.3364	0.3686
ΔR^2			0.0322

Significance level: *P<.05, **P<.01, ***P<0.001 (Author's Computation)

Table 3 shows the effect of US ODA on IIQ in the context of Chinese global influence measured by FBIC. Comparing three models, Model 1 _US depicts ODAUS has a positive and significant effect on IIQ. Which means US ODA increases income inequality. This result is in line with Pham (2015) research that shows ODA has a positive effect on IIQ. Whereas In the second model which includes moderator variable, G_FBIC_CH has no direct significant effect on IIQ. Thus, it's possible to conclude that G_FBIC_CH is not another independent variable. Model 3_US, which is a complete model, shows significant positive interaction effect of G_FBIC_CH. Therefore, according to the procedure implicated on Fig 4 G_FBIC_CH can be labeled as a pure moderator since it has interaction effect but has no neither correlation nor significant effect with IV. Generally, based on model 3_US, it's possible to conclude that G_FBCI_CH has average marginal effect on the form (direction) of relations b/n US ODA and IIQ positively. In other words, considering an incising Chinese global influence trend highlighted in fig 1. It's possible to conclude that growing Chinese global power affects US ODA to have an increasing effect on IIQ by 0.63% in IGAD MS. Moreover, even though R^2 is low, the introduction of interaction term improves R^2 (explaining power) of the relation by 3.2%.

Table 4 Moderation effect Model: Chinese ODA by US Global FBIC (ODACH*G_FBIC_US)

Variables	Model 1-CH	Model 2-CH	Model 3-CH
Intercept	62.15156***	50.18056**	62.57589***
ODACHINA	-1.68499**	-1.688394**	-72.10537*
Agri_EmplofTempl	-0.2040639**	-0.1990177**	-0.1993569**
TradeopenessasofGDP	-0.0198043**	-0.0206711**	-0.0213143**
GovexpenoneducGDP	-0.2458011***	-0.2415199***	-0.2397635***
G_FBCI_US		0.4011741	-0.0204134
ODACHINA*G_FBCI_US			2.407329 *
R^2	0.2535	0.2672	0.2948
ΔR^2			0.0276

Significance level: *P<.05, **P<.01, ***P<0.001 (Author's Computation)

Table 4 illustrates three models to examine the effect of Global US power on causal effect relation of Chinese ODA on IIQ. In model one CH, Chinese ODA has significant negative or decreasing effect on income inequality. In model 2CH, G_FBCI_US has no significant effect. In addition, it has no significant correlation with both IV and DV. Thus, it can't be categorized as another independent variable. Finally, in model 3CH, US global power has significant positive influence on the effect of Chinese ODA on IIQ. This implies, under the presence of US global power, the effect of Chinese ODA increases IIQ by 2.4% in IGAD member states. Furthermore, looking at changes in R^2 value; moderation effect enhanced the explaining power of the model by 2.76%.

In general, by observing the interaction effect coefficients of US and China global influence which are computed by averaging the difference in effect over the distribution of moderator variable, it's possible to conclude that both US and Chinas global power competition that is measured by global bilateral influence capacity has an average positive significant moderation effect on the causal effect relations of ODA on IIQ.

There are two limitations of this study. Lack of sufficient prior studies on similar topics which employed indirect conditional effect is one of the limitations of the study; since it reduces the chance of improving robustness of econometric method through learning from prior studies. Therefore, the study had to visit literature of cognitive science to study the applications and drawbacks of moderation effect model. The other traits of validity are lack of solitary data sources for ODA and IIQ; which may increase inconsistency as a result of data treatment differences. Moreover, the missing data huddling process may have its own limitation. However, sufficient attention is paid by examining the nature of missing data Multiple Imputation technique is employed.

V. CONCLUSION

The era of great power competition has multidimensional influence over a wide range of sociopolitical and economic dynamics in international system. Concerning the interest of the article, it assessed the implications of US and China's competition on the causal-effect relations of ODA and income inequality in East Africa. The result depicts power competition influences ODA of both countries to have a widening effect on IIQ in IGAD member states. This insight would be helpful for policy makers in aid recipient countries to design policy instruments to minimize the adverse effect of US-China competition on Income inequality. Furthermore, it might initiate other researchers to investigate how global power dynamics affect the relations between Foreign Aid and other variables such as, Poverty, Internal Political instability, and governance.

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