

Okoyeuzu, Chinwe; Kalu, Ebere Ume

Article

Official development assistance to the West African Subregion: Do the trade war and economic policy uncertainties in the US and China Matter?

Research in Globalization

Provided in Cooperation with:

Elsevier

Suggested Citation: Okoyeuzu, Chinwe; Kalu, Ebere Ume (2022) : Official development assistance to the West African Subregion: Do the trade war and economic policy uncertainties in the US and China Matter?, Research in Globalization, ISSN 2590-051X, Elsevier, Amsterdam, Vol. 4, pp. 1-5, <https://doi.org/10.1016/j.resglo.2021.100070>

This Version is available at:

<https://hdl.handle.net/10419/331009>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by-nc-nd/4.0/>



Official development assistance to the West African Subregion: Do the trade war and economic policy uncertainties in the US and China Matter?

Chinwe Okoyeuzu, Ebere Ume Kalu

University of Nigeria, Nsukka, Nigeria

ARTICLE INFO

Keywords:

ODA
Economic Policy Uncertainty
Trade War
West Africa
The US and China

ABSTRACT

This work was set to investigate empirically the possible impact of economic policy uncertainties as well the trade conflict between China and the US on the Official Development Assistance to the West African Sub-region. From the bivariate test for linear association, we found a co-movement of the War with ODA. This implies that aids can increase even as the war goes on as such aids may be used as a penetration strategy for trade and other economic purposes. It was also found that there is a greater sensitivity of ODA to US uncertainty than the Chinese Uncertainty. The error correction model shows that it is obvious that Official Development Aids adjust to the shocks and dynamics of the raging economic uncertainties and trade war between China and the US.

Introduction

West African countries have been receiving extensive aids from donor economies like US and China given that most developing countries rely mostly on such form external financing. Official Development Assistance (ODA) has been viewed as a measure of effort by donor nations in developing the recipients' economy. The extent of development achieved by developing countries through aid allocation remains a subject for investigation. Despite the volume of ODA inflows from both China and US, limited works have been carried out on the principles and rationales underlying ODA. There are varying opinions to such debate. For instance, [Prizzon and Mustapha \(n.d.\)](#) affirm that foreign aid is a prerequisite for developing countries in boosting investment.

While considering the economic development of Sub Saharan Africa, [Oguindipe et al. \(2014\)](#) asserts that, to upgrade the standard of living in Africa, foreign aid is a necessity. The rapid increase of aid inflow into Africa in general prompted the demand to soften and progress the terms of aid especially as it concerns loan (OECD, 2011). With mild conditionality, concessional aid inflow become heightened (Hynes and Scot, 2013). Despite such increase, West African countries remain very poor and at the same time heavily dependent on loans ([Alkire et al., 2016](#)).

Donor nations like US and China for instance continue to extend multilateral and bilateral aid to Africa. Just recently a trade dispute heightened between the two major donor nations, creating policy uncertainties of varying degrees and dimensions. The need to investigate the relationship between ODA and such wars and uncertainties has been exacerbated by the intensity of the trade war between the two major donors to Africa. Even as the trade war between US and China rages, China is making serious effort to expand trade with Africa to cushion the

effect of the trade dispute. Basically, donor countries are never unmindful of the aids from other donor nations to countries in which they hold economic interest. The donor countries make effort to boost trade, nurture African industry and strengthen their security. Flowing from this, ODA could be viewed as a response to donor's interest. Scholars like Clark, Gibson, and Rayans (2014) assert that donor countries could use aid for patronage especially after trade war.

What major impact the trade war between China and US as major donors has on a significant recipient like Africa remains a question requesting some investigation. Works on aids trade relationship indicate that bilateral trade becomes stronger where concessional aid exists. Resnick and van de Walle (2013) affirms the influence of foreign aid on African Democratization. Similarly, [Takala and Piattoeva \(2012\)](#) confirms a link between ODA and the state of education.

Scholars have attempted to fill the void by adopting the gravity model as a rationale for such aids. Following [Anderson, 1979](#); [Anderson & van Wincoop, 2003](#), the gravity model connects many factors that affect trade and international flows including aids. Following this and other theoretical positioning, it becomes necessary as a subject of investigation to resolve the trilemma of economic policy uncertainties in these two donor nations of US and China, trade war between and aid linkage to West African sub-region (that is predominantly a receiving nation). This is done by measuring the responsiveness of the Official Development Assistance in the West African economy, to the Economic Policy Uncertainties Indices of the US and Chinese economies respectively; and the trade war (dummy) between the period 1992 and 2018.

It is worthy of note that findings arising from this study can provide a precise understanding of the uncertainty-trade war and aid linkage as it concerns the interaction of aid donor and recipient economies. The

<https://doi.org/10.1016/j.resglo.2021.100070>

Received 13 August 2021; Received in revised form 5 November 2021; Accepted 5 November 2021

Available online 11 November 2021

2590-051X/© 2021 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

evidence presented will add to the sparse literature in this area while extending the frontier of scientific investigation into the aforementioned aid-uncertainty relationship. This will be of both policy making and research relevance. More so, it will guide in the formulation of bilateral exchanges between such heavy donor nation and developing economies in the mould of the West African economies.

In this study we follow four analytical considerations. Firstly, we present the basic statistical properties of the used series in the form of descriptive statistics and test for linear associations. Secondly, we show the stationarity properties of the series as a guide to understanding the orders of integration and also, selection of the appropriate estimation method. Thirdly, we test the short run and long run estimates following the Autoregressive Distributed Lag Model framework as developed by Pesaran and Shin (2001). The third consideration is that our paper investigates the long run and dynamic profile of the variables in the form of the ARDL bound test and error correction representation. We also test the reliability and validity of our estimates using various diagnostic tests.

The rest of this work is arranged as follows: section two reviews related literature, while section three presents data and method of empirical analyses. The penultimate section discusses the result, and section five concludes the study.

Brief review of relevant literature

Loans and grants that are extended on concessional terms by either bilateral or multilateral sources are referred to official development assistance (Gunatilake et al., 2011) The main aim of Official development assistance (ODA) is to promote economic development and welfare of the developing countries. Technical assistance other than loans and grants are significantly inclusive. When loans are viewed as concessional and reportable as ODA, it must meet certain requirements like having 25% of it calculated at a discount rate of 10% (OECD, 2014).

Essentially, ODA is viewed as a bilateral aid, when such aid comes directly from donor to recipient country. On the other hand, aid may be extended to a recipient country through a lending institution that serves as an intermediary. The International Development Association (IDA) of the World Bank is a known lending windows.

On the premise of concessionality, ODA has been described as a subsidized credit due to its nature and purpose with emphasis on concessional character (Abuzied, 2009). Supporting the concessionality standpoint, scholars argue that ODA is guided by how developed the recipient country is; as well as how vital the project is.

From the African perspective, literature suggests that China is the most influential donor countries (Dreher & Fuchs, 2015). Chinese aid to Africa has been presented in a bad light by some scholars as being self-centered and selfish, see, Zhao (2014), Biggeri and Sanfilippo (2009). On the other hand, The US economy has made attempts to aid many countries in bilateral or multilateral form, though emphasis on bilateral aid is more (Tarnoff & Lawson, 2009). For most African countries, aid from US is directed towards sectors that deal with health and education with an agency such as the United States Agency for International Development (USAID) championing the cause.

Empirical works investigating the impact of aid on economic development in recipient countries abound. For instance, US export to Africa has been documented to have a positive link with bilateral aid (Nowak-Lehmann et al., 2010; Martínez-Zarzoso et al., 2014). Investigations have also revealed that US lay emphasis on national interest when compared with other donors. (Harrigan and Wang, 2011; Alesina and Dollar, 2000).

Aids from donor countries are differently influenced. Comparing reasons for aid allocation to Sub-Saharan Africa by US and China, Amusa et al. (2016) documents that for China, natural resource remains the major interest in extending aid to most recipient African economies.

The rapid increase in aid flows to Africa comes from China has been noticed in recent times (Lengauer, 2011). Chinese aid relies on official

channels to target infrastructure and innovation in developing countries. Evidently, Chinese investments in Africa is heavily tilted towards infrastructure, Gharib (2013) captured it to be around 70%. Aids are sometimes said to be guided by selfish interest (Wang & Ozanne, 2010). There are varying opinion to the claims of Wang & Ozanne, given the fact that Dreher and Fuchs (2015) report that Aid from China does not depend on recipients natural endowment.

It is however noteworthy that non-availability of data in the past did not encourage studies along this line. Even attempts made on this has been country-specific. More so, none to the best of our knowledge has brought in policy uncertainties and trade conflicts in donor nations into consideration. With some captured statistics from reputable sites, this study is among the first to shed light on China – US with emphasis on ODA using extensive quantitative techniques with the West African sub-region as a specific geography.

Description of data, model specification, and empirical methodology

The study used annualized and yearly-averaged time series from 1992 to 2018. The series are drawn as follows: US Economic Policy Uncertainty Index (EPUS); (Baker, Bloom, and Davis, 2019) China Economic Policy Uncertainty Index (EPUCH) (David, Liou, and Sheng, 2019); Official Development Assistance (ODA) from Bloomberg. Trade War (TWAR) is created as a dummy with 1 for period of intense war 2013–2018 and 0 for period with little or no trade spat (1992–2012).

Model specification and theoretical consideration

The study focuses on investigating the elasticity of Official Development Assistance (ODA) to the policy uncertainty of two leading donor nations (China and the US) as well as the trade spat between the US and China. Theoretically, this study follows Dudley and Montmarquette's (1976) model of a Single Donor's Bilateral Official Development Assistance as cited in Wall (1995). This follows that the Donor nation (D) has the objective of maximizing the sum of the impact of aid on the Recipient Nation (R). This study investigates possible limiting factors to the Donor impact maximization objective in ODA offering. In this case, looking at TWAR and Economic Uncertainties as possible objective constraint. The relationships under study is functionally represented thus:

$$LODA = f(EPUS, EPUCH, TWAR)$$

The model expressed in full specification appears thus:

$$LODA_t = \beta_0 + \beta_1 EPUS_t + \beta_2 EPUCH_t + \beta_3 DTWAR_t + \varepsilon_t \quad (1)$$

The error term in the equation is ε_t .

Pre-estimation tests

This study carries out a score of pre-estimation tests designed to measure the time series and statistical properties of the series under study. Basic descriptive statistics such as tests for central tendency; tests for spread and variations as well as measures of correlation or linear association. In addition, the stationarity properties of the series are tested using a structural break consistent approach that shows the influence of innovation and additive outliers. The stationarity test follows the form shown in the equation below:

$$\Delta y_t = P y_{t-1} + \mu + \alpha v_t(t_{used}) + \lambda t + \sum_{i=1}^p \alpha_i \Delta y_{t-i} + \mu_t \quad (2)$$

Where $(t_{used}) = Tb/T$ which is the trimmed sample.

$v_t(t_{used})$ allows for the break which can either be in the level where it is equal to 1 when $t > t_{used}$ and 0 if otherwise. It can also break in the deterministic trend where $v_t(t_{used}) = t - t_{used}$ if $t > t_{used}$ and 0 if otherwise.

The structural break consistent unit root tests are used in this circumstance. The Augmented Dickey Fuller sequential procedure for

unit root test that uses the whole sample is carried out with a design of selecting the break date endogenously.

The study adopts the ARDL method due to its several advantages compared to other regression and cointegration methods. Firstly, it remains efficient in the face of small samples; it is a dynamic model hence less prone to autocorrelation and other deficiencies common with other regression models and also, it accommodates variables with different orders of integration, [I(0) and I(1)] though it does not take I(2).

Following Pesaran and Shin (2001) as cited in Arize, Kalu, and Nkwor (2017), the formal augmented-ARDL model is defined as

$$\phi(L, p)y_t = \sum_{i=1}^k \beta_i(L, p)x_{it} + \delta'w_t + \mu_t \tag{3}$$

Where:

$$\begin{aligned} \phi(L, p) &= 1 - \phi_1L - \phi_2L^2 - \dots - \phi_pL^p \text{ and} \\ \beta_i(L, p) &= \beta_{i1} + \beta_{i1}L + \beta_{i2} + \dots + \beta_{iqi}L^{qi} \quad i = 1, 2, \dots, k \end{aligned} \tag{4}$$

and where L is a lag operator such that $LY_t = y_{t-1}$, and w_t is an $s \times 1$ vector of deterministic variables such as the intercept term, dummy variables, time trends or exogenous I(1) variables with fixed lags. The choice of the optimal model was made using the SBC information criteria

The Cointegration test for long run relationship follows the bound test procedure as prescribed by Pesaran and Shin (2001) following the ARDL. Two sets of critical values namely lower and the upper bound, with the upper bound computed on the assumption that all variables in the ARDL model are I(1) and the lower bound on the assumption that these variables are I(0). There are three likely outcomes in the Bound Tests Process. If the F-stat greater than the lower and upper bound, reject the null hypothesis of no long run relationship meaning that cointegrating relationship exists; F-stat less than the lower and upper bound, refuse to reject null hypothesis of no long run relationship. F-stat at the chosen level of significance falls within the lower and upper bound, results is inconclusive.

After establishing the existence of cointegrating relationship among the variables in the specified models, error correction representations and long run coefficients are estimated following the form specified in the equations below for two models respectively.

$$\begin{aligned} \Delta LODA_t &= \pi_p + \sum_{i=1}^k \delta_{ip} \Delta LODA_{t-i} + \sum_{i=1}^{k1} \tau_{ip} \Delta EPUS_{t-i} + \sum_{i=1}^{k2} \theta_{ip} \Delta EPUCH_{t-i} \\ &+ \sum_{i=1}^{k3} \sigma_{ip} \Delta DTWAR_{t-i} + \omega_{2p} EPUS_{t-1} + \omega_{3p} EPUCH_{t-1} \\ &+ \omega_{4p} DTWAR_{t-1} + \xi_{1t} \end{aligned} \tag{9}$$

The estimates are diagnosed to ensure their validity and reliability for the purposes of drawing evidence-based conclusions on the short run and long run dynamics of ODA relative to the trade war and the economic uncertainties in the warring economies of China and the US.

Table 1
Summary of basic descriptive statistics.

	ODA	EPUCH	EPUS	TWAR
Mean	8528954565.538	108.1815	112.2296	0.222222
Median	8112689888.000	104.6000	112.1000	0.000000
Maximum	17693419536.00	277.8000	157.9000	1.000000
Minimum	3175780000.000	33.70000	67.10000	0.000000
Std. Dev.	4166889079.738	60.22742	28.98373	0.423659
Skewness	0.282682041483	1.209755	-0.015702	1.336306
Kurtosis	1.809720531505	4.138278	1.543450	2.785714
Jarque-Bera	1.881101906048	8.043416	2.387840	8.087372
Probability	0.390412677048	0.017922	0.303031	0.017533
Coeff of Variation	0.05	0.56	0.26	1.91

Results

Descriptive statistics and linear association

Table 1 below presents a summary of the basic descriptive statistics of the variables under study. Evidently, it contains the measures of central tendency, dispersion and most significantly, the coefficient of variation which is a relative figure of central tendency and dispersion. It can be seen that the uncertainty and war related parameters exhibit greater volatility than the ODA. Uncertainty in China has a coefficient of variation of 56% as that of US has 26% and Trade War proxy stands at 191% confirming its oscillatory disposition.

The indications of normality suggests that economic uncertainty in US (EPUS) is negatively skewed and platykurtic while that of China (EPUCH) post a positive skewness and leptokurtosis. While trade war and official development assistance have the same distribution pattern as they are both positively skewed and kurtosis less than normal (3). Jarque Bera S(0) and K(3) combined tests accepts normality for EPUS and ODA with a nonsignificant probability value and non-normality for ODA and TWAR with significant probability values. This goes to show that the Trade War and ODA do not follow a normal distribution pattern.

Also, Table 2 shows all the variables' degree and direction of linear association. It can be inferred that positive but insignificant correlations exist among all the variables with the exception of ODA and TWAR that share a positively significant correlation at 45% with a significant t-statistics and the associated probability value. This shows a co-movement of the War with ODA. This implies that aids can increase even as the war goes on as such aids may be used as a penetration strategy for trade and other economic purposes.

The stationarity properties of the series are shown in Table 3 following the application of the augmented Dickey-Fuller (ADF) framework with a lag length selected by Schwarz criterion. Structural break consistent unit root test with provision for innovation outlier and additive outlier detection was used. The results as displayed in Table 3 shows a combination of I(0) and I(1) variables for which cause the ARDL estimation framework was used in the study.

Table 2
Correlation matrices.

	ODA	EPUCH	EPUS
EPUCH	0.060434 0.296607 0.7693		
EPUS	0.221564 1.113102 0.2767	0.151653 0.751640 0.4596	
TWAR	0.446352 2.443598 0.0223	0.238010 1.200504 0.2417	0.261423 1.326846 0.1970

Table 3
Summary of breakpoint unit root test.

Innovation Outlier				Additive Outlier				
Series	CV@5%	ADF STAT	Break Date	Inference	CV@5%	ADF STAT	Break Date	Inference
EPUCH	-4.86	-6.05	2001	I(0): P < 0.01	-4.86	-5.57	2001	I(0): P < 0.01
EPUS	-4.86	-4.89	2005	I(0): P < 0.05	-5.18	-6.08	2001	I(1): P < 0.05
TWAR	-5.18	-1286071	2011	I(0): P < 0.01	-5.18	-20961287	2005	I(0): P < 0.01
ODA	-5.18	-6.58	2004	I(0): P < 0.01	-5.18	-5.87	2006	I(1): P < 0.01

Short and long-run elasticities

We now discuss the short-run and long-run ARDL estimates as reported in Table 4. In the short run, we found ODA to be a negatively significant function of economic policy uncertainty in the US (EPUS) with a 1.4% degree of elasticity. Economic Policy Uncertainty in China and Trade War were all found to be insignificant in the short run.

All the Uncertainties in the US and China became negatively significant in the long run and Trade War remained insignificant. While EPUCH posted a negative elasticity coefficient from 0.1%, EPUS stands at 4% in the long run.

Following the bound testing approach, a long run cointegrating relationship is detected between Official Development Assistance and the exogenous variables. The F-stat of 4.49 greater than the upper bound of 3.79 provides evidence in support of long run cointegrating relationship. On this premise, we reject the null hypothesis of no cointegration and conclude in favour of cointegration regardless the order of integration of the variables.

The error correction model shows a certain return to long-run equilibrium from short-run disequilibrium for the estimated model given that the error-correction term is significantly negative at 31%. This implies that a deviation from the equilibrium level in the current year will be corrected by 31%. Consequently, it takes about three years to restore the long-run equilibrium state in the estimated model.

Our model is consistent, efficient and unbiased as shown by the diagnostic tests reported in the lower rung of Table 4. The models are without heteroscedastic residual as shown by the insignificant BPG F-stat; no autocorrelation as shown by the DW-stat that is approximately equal to 2. The tests are without misspecification as shown by the RESET test even as the appreciably high adjusted-R² shows a reasonably high goodness of fit. The fact that all error-correction term coefficients are between 0 and 1 signifies that the relationship is within predictable limits (Arize et al., 2017).

Table 4
Short run and long run estimates.

	ShortRunEstimates	LongRunEstimates
	$LOGODA = f(\Delta EPUS, \Delta EPUCH, \Delta TWAR)$	$LOGODA = f(EPUS, EPUCH, TWAR)$
$\Delta EPUS$	-0.0139(2.35)**	
$\Delta EPUCH$	0.001(0.916)	
$\partial DTWAR_t$	-0.95(1.52)	
EPUS		-0.04(2.56)**
EPUCH		-0.001(1.87)*
$\partial DTWAR_t$		-0.29(1.60)
Bound Test		
F = 4.49		
I(0) = 2.62; I(1) = 3.79)		
Error Correction Representations		
ECM_{t-1}	-0.31(5.90)	
Diagnostic Tests		
BPG (F)	1.70(0.1752)	
RESET	0.467(0.504)	
\bar{R}^2	0.898	
Jarque Bera (Normality)	0.601(0.740)	

Conclusions

This work was set to investigate empirically the possible impact of economic policy uncertainties as well as the trade conflict between China and the US on the Official Development Assistance to the West African Sub-region. Our estimation processes returned some findings leaving us with some key conclusions.

From the bivariate test for linear association, we found a co-movement of the War with ODA. This implies that aids can increase even as the war goes on as such aids may be used as a penetration strategy for trade and other economic purposes. In the short run ARDL estimates, we found ODA to be a negatively significant function of economic policy uncertainty in the US (EPUS) with a 1.4% degree of elasticity. Economic Policy Uncertainty in China and Trade War were all found to insignificant in the short run. This implies that a point increase in US uncertainty reduces ODA by 1.4% economic policy uncertainty makes US reduce aid to West Africa even as China do not seem to adjust aids in the face of such uncertainties, this implies that these aids may be driven by factors other than such uncertainties or their triggers.

All the Uncertainties in the US and China became negatively significant in the long run and Trade War remained insignificant with ODA showing more responsiveness to the US uncertainty at a 4% decrease and China just 0.1%. This shows a greater sensitivity of ODA to US uncertainty than the Chinese Uncertainty. The error correction model shows a certain return to long-run equilibrium from short-run disequilibrium for the estimated model given that the error-correction term is significantly negative at 31%. This implies that a deviation from the equilibrium level in the current year will be corrected by 31%. Consequently, it takes about three years to restore the long-run equilibrium state in the estimated model. It is obvious that Official Development Aids adjust to the shocks and dynamics of the raging economic uncertainties and trade war between China and the US.

By implication, it is clear that the economies of the West African Sub-region are exposed to the international flow channels as represented by the ODA; consequently the managers of these economies should drive towards self-reliance and enhanced domestic capacity so as to reduce overdependence on foreign aids and the continuing shreds of economic imperialism. It is expected that this study will produce increased interest in the area of investigating the aid-uncertainty interface between donor and recipient nations for policy enunciation and academic research purposes.

Funding

The funding of this publication is by the collective effort of the listed authors and no institutional source is involved.

CRedit authorship contribution statement

Chinwe Okoyeuzu: Conceptualization, Validation, Formal analysis, Investigation, Resources, Data curation, Visualization, Supervision, Project administration. **Ebere Ume Kalu:** Conceptualization, Methodology, Software, Validation, Formal analysis, Data curation, Visualization, Supervision.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

The authors acknowledges the efforts of our students who assisted in Data Mining for this study.

References

- Alesina, A., & Dollar, D. (2000). Who gives foreign aid to whom and why? *Journal of Economic Growth*, 5(1), 33–63.
- Alkire, S., Jindra, C., Robles, G., & Vaz, A. (2016). *Multidimensional poverty in Africa. Oxford poverty and Human Development Initiative OPHI Briefing*, 40.
- Amusa, K., Monkam, N., & Vieg, N. (2016). *The political and economic dynamics of foreign aid: A case study of United States and Chinese aid to sub-Sahara Africa. (No. 201628)*.
- Amusa, K., Monkam, N., & Vieg, N. (2016). *The political and economic dynamics of foreign aid: A case study of United States and Chinese aid to sub-Sahara Africa. (No.1628)*.
- Anderson, J. E. (1979). A theoretical foundation for the gravity equation. *The American Economic Review*, 69, 106–116.
- Anderson, J. E., & van Wincoop, E. (2003). Gravity with gravitas: A solution to the border puzzle. *American Economic Review*, 93(1), 170–192.
- Arize, A., Kalu, E., & Nkwor, N. (2017). Banks versus markets: Do they compete, complement or Co-evolve in the Nigerian financial system? An ARDL approach. *Research in International Business and Finance*, 45, 427–434.
- Biggeri, M., & Sanfilippo, M. (2009). Understanding China's move into Africa: An empirical analysis. *Journal of Chinese Economics and Business Studies*, 7(1), 31–54.
- Dreher, A., & Fuchs, A. (2015). Rogue aid? An empirical analysis of China's aid allocation. *Canadian Journal of Economics*, 48(3), 988–1023.
- Gharib, M. (2013, April 30). *6 surprising facts about Chinese aid to Africa*. Available at: <https://www.one.org/us/2013/04/30/6-surprising-facts-about-chinese-aid-to-africa/>.
- Gunatilake, H., Fabella, R. V., & Lagman-Martin, A. (2011). Foreign aid, aid effectiveness and the new aid paradigm: A review. *Sri Lankan Journal of Agricultural Economics*, 12 (13), 39–81.
- Harrigan, J., & Wang, C. (2011). A new approach to the allocation of aid among developing countries: Is the USA different from the rest? *World Development*, 39(8), 1281–1293.
- Lengauer, S. (2011). China's foreign aid policy: Motive and method. *Culture Mandala: Bulletin of the Centre for East-West Cultural & Economic Studies*, 9, 35–81.
- Martínez-Zarzoso, I., Nowak-Lehmann, F., Parra, M. D., & Klasen, S. (2014). Does aid promote donor exports? *Commercial Interest Versus Instrumental*, 67(4), 559–587.
- Nowak-Lehmann, D., Martínez-Zarzoso, I., Cardozo, A., Herzer, D., & Klasen, S. (2010). *Foreign aid and recipient countries' exports: Does aid promote bilateral trade?*.
- Ogundipe, A., Ojeaga, P., & Ogundipe, O. (2014). Is aid really dead? Evidence from sub sahara Africa. *International Journal of Humanities and Social Science*, 4(10), 300–314.
- Prizzon, A., & Greenhill, R. (n.d). The aid effectiveness agenda: The benefits of going ahead – A commentary on the final report. *Paper commissioned by ODI's European Development Cooperation strengthening programme*, 1-22.
- Tarnoff, C., & Lawson, M. L. (2009). Foreign aid: An introduction to US programs and policy. Library of Congress Washington DC Congressional Research Service.
- Takala, T., & Piattoeva, N. (2012). Changing conceptions of development assistance to education in the international discourse on post-Soviet countries. *International Journal of Educational Development*, 32(1), 3–10.
- Wall, J. H. (1995). *Allocation of Official Development Assistance Journal of Policy Modelling*, 17(3), 307–314.
- Wang, X., & Ozanne, A. (2010). *Two approaches to aid in Africa. China and the West*.
- Zhao, S. (2014). A neo-colonialist predator or development partner? China's engagement and rebalance in Africa. *Journal of Contemporary China*, 23(90), 1033–1052.

Further reading

- Liu, & Tang, A. B. (2018). *China Economic Review*, 48, 46–65.