CHAPTER FIVE

CONCLUSION AND POLICY RECOMMENDATION

5.1 Conclusion

This thesis has been built on analyzing whether agricultural aid and food aid impacted selected food security indicators in 16 West African countries between 2009-2018. The research methodology was based on the Two-Stages Least Square (2SLS) instrumental variable approach. From the regressions, the result outcomes may not reflect the complete research expatriation but certainly explain the reality in West African countries, in which the result indicated a mixed finding. However, despite these mixed findings, a small degree of impact was found on the notion that donor aid, in general, would improve food security in West Africa. Although the degree of impact varies across the four estimated food security indicators, the regression indicated that there are factors that determine or contribute to the result's outcome.

The result in this study contributed to the significant concern about government effectiveness and control of corruption by suggesting that the impact of donor aid on food security is conditional on recipient countries' institutional qualities. The implications of the result suggest that countries with a low score on the government effectiveness index and a high score on corruption are more likely to be food insecure than countries with the opposite scores. These conclusions are in line with several studies on development assistance effectiveness in developing countries (Kaya & Kaya, 2019 and Petrikova, 2016). The result has shown that even though the average value of total aid disbursement to the agriculture sector was low in some countries, the result supported some of the hypotheses earlier developed.

The result stating that agricultural aid impacts the average value of food production does not support **H1**; it shows that agricultural aid negatively influences the average value of food availability. This result is inconsistent with previous evidence and theory discussed on the effect of agricultural aid and domestic food production. However, this may be explained by external factors highlighted in the result above. Since the government is the primary channel for receiving aid, the institutional capacity to facilitate effective agricultural policy management and aid-

related projects and programs to achieve its intended purpose could further explain the result. Furthermore, the variable of government effectiveness shows that the impact of aid is conditional on the recipient country's sound governance systems, which can be assessed by government institutional quality, corruption, and access to information.

The second regression, though not statistically significant, shows that an increase in agricultural aid in West Africa will decrease food accessibility. While the result in column three states that agricultural aid influences utilization is positively and statistically significant, suggesting that an increase in agriculture aid significantly improves access to clean drinking water facilities. This is not surprising, given the negative consequences of political instability and civil conflict on domestic food stability. The statistical result indicated a negatively and statistically significant coefficient, suggesting that agricultural aid negatively influences food stability in the study sample. This result did not support the fourth hypothesis. In line with the first objective and research question, the findings have shown that, to some extent, agricultural aid impacts food accessibility and utilization in West Africa.

Regarding food aid, in columns 1 and 2, the result stating that food aid impacts food availability and accessibility were invalid, indicating that food aid cannot influence both dimensions. Supported by previous studies, one primary explanation for this result suggested that food aid provided in West Africa is a short-term policy instrument to support emergencies. On the other hand, H2 was supported, suggesting that an increase in financial food aid reduces the prevalence of undernourishment. Similarly, finding the evidence in H3 also positively impacted food utilization by improving access to essential drinking water and addressing short-term food stability in the sub-region. In essence, therefore, the research's second objective and question related to food aid have indicated that food aid has impacts food accessibility, utilization, and stability in West Africa.

Generally, the study found that the demand for official development assistance to improve food insecurity is very high, while the supply is very low within West African countries. However, the findings have suggested that donor aid does not have a sustainable long-run effect on food security because of the weak

government institution, high levels of corruption in some countries, and the inconsistency of aid flows. Moreover, the negative effect of aid on food availability shows that it is inconsistent with improving domestic food production. As a result, a considerable gap will always exist between domestic food production and food insecurity in the sub-region.

5.2 Policy Recommendation

In line with the findings, the government and donor aid providers require strong futuristic policies focusing on agricultural improvement and infrastructure development extension, especially in the rural areas where agricultural activities are the primary source of income.

The statistical result has shown that agriculture value-added has a significant short and long-run multiplier effect on food security indicators. To narrow this low domestic food production gap in food availability, the study suggests that governments across the region should re-prioritize agriculture value-added by increasing investment in technological innovation and modernization of agricultural systems.

Furthermore, government and development providers should pay attention and increase investment in climate mitigations and land irrigation to improve domestic food production in West Africa.

5.3 Direction for future research

The generalizability of these results is subject to certain limitations. First, food availability, accessibility, utilization, and stability dimension have many different indicators that can be used for analyses. In this study, one indicator was selected from each dimension for the analyzes. Second, the data collected for the study is only limited to ten years of observation, implying a short panel data. Therefore, the result precludes the final conclusion regarding the findings, which only suggest based on the outcome of the regression statistics.

Future research should build upon these limitations by utilizing data from multiple indicators of each dimension and be more objective in the years of observation.

Finally and most importantly, the study used panel data of 16 West African countries with different characteristics such as (geographical or demographic and socio-economic) which tends to affect production and food insecurity differently. Further, the study used the Two-Stage Lease –Square, a fixed-effect model, to address two significant problems in the study sample. Firstly, the model has addressed and discussed the reserve causality between donor aid and food security variables.

Secondly, the endogeneity problems where the study assumed that donor aid is not exogenous to food insecurity. Implying that it's dependent on other determinant factors or variables such as (climate change, irrigations, poverty and others) that are very important but were not observed or have been omitted in the model due to lack of data. However, the author believes that those omitted variables have explanatory power in predicting the outcome variables. Therefore, considering the omitted variable bias, which has not been fully addressed in this study, the link between donor aid and food insecurity in individual countries could be analysed further when the data is fully available to improve those variables.

REFERENCES

- Adenle, A. A., Wedig, K., & Azadi, H. (2019). Sustainable agriculture and food security in Africa: The role of innovative technologies and international organizations. *Technology in Society*, 58(May), 101143. https://doi.org/10.1016/j.techsoc.2019.05.007
- Africa, Southern. (2018). Food Assistance for Assets (FFA) in Southern Africa. June 2018–2019.
- Africa, Sub-saharan. (2017). Is Aid for Agriculture Effective in A G D I Working Paper. 83073.
- Africa, W. (2019). West Africa Economic Outlook 2019.

 https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2019

 AEO/REO_2019_-_West_africa.pdf
- African Development Bank, 2018. (2018). West Africa Economic Outlook West Africa Economic Outlook.
- African Development Bank Group. (2016). Feed Africa: Strategy for transformation in Africa 2016 2025. African Development Bank Group. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Policy-Documents/Feed_Africa-Strategy-En.pdf
- Alabi, R. A. (2014). Impact of Agricultural Foreign Aid on Agricultural Growth in Sub-Saharan Africa. AGRODEP Working Paper 0006, July, 1-39file:///F:/PHD/Thesis materials/Paper Material.
- Alene, A. D. (2010). Productivity growth and the effects of R & D in African agriculture. *Agricultural Economics*, 41(3–4), 223–238. https://doi.org/10.1111/j.1574-0862.2010.00450.x
- Anetor, F. O., Esho, E., & Verhoef, G. (2020). The impact of foreign direct investment, foreign aid and trade on poverty reduction: Evidence from Sub-Saharan African countries. *Cogent Economics and Finance*, 8(1). https://doi.org/10.1080/23322039.2020.1737347
- Banik, D. (2019). Achieving Food Security in a Sustainable Development Era. *Food Ethics*, 4(2), 117–121. https://doi.org/10.1007/s41055-019-00057-1
- Bank, W. (2003). Reforming Public Institutions and Strengthening Governance. Reforming Public Institutions and Strengthening Governance, November.

- https://doi.org/10.1596/0-8213-5416-7
- Barkat, K., & Alsamara, M. (2019). The Impact of Foreign Agricultural Aid and Total Foreign Aid on Agricultural Output in African Countries: New Evidence from Panel Data Analysis. *South African Journal of Economics*, 87(3), 354–375. https://doi.org/10.1111/saje.12224
- Brück, T., d'Errico, M., & Pietrelli, R. (2019). The effects of violent conflict on household resilience and food security: Evidence from the 2014 Gaza conflict. World Development, 119, 203–223. https://doi.org/10.1016/j.worlddev.2018.05.008
- Carter, M. A., Dubois, L., Tremblay, M. S., & Taljaard, M. (2012). Local social environmental factors are associated with household food insecurity in a longitudinal study of children. *BMC Public Health*, *12*(1), 1–11. https://doi.org/10.1186/1471-2458-12-1038
- Dar, B., Jason, O., & Frank, O. (2019). Profiling poverty in West Africa: A subregional survey. An International Journal of Arts and Humanities ISSN 2227-5452 (Online), July.
- Development, A., & Group, B. (2016). Annual Report 2016. *American Journal of Pharmaceutical Education*, 80(8), S9. https://doi.org/10.5688/ajpe808s9
- Diriye, M., Nur, A., & Khalif, A. (2013). Food aid and the challenge of food security in Africa. *Development (Basingstoke)*, *56*(3), 396–403. https://doi.org/10.1057/dev.2014.15
- Durodola, O. S. (2019). The Impact of Climate Change Induced Extreme Events on Agriculture and Food Security: A Review on Nigeria. *Agricultural Sciences*, 10(04), 487–498. https://doi.org/10.4236/as.2019.104038
- Edwards, S. (2015). Economic Development and the Effectiveness of Foreign Aid: A Historical Perspective. *Kyklos*, 68(3), 277–316. https://doi.org/10.1111/kykl.12084
- Ehlers, L. (2019). Curse or Cure? The Relationship Between Food Aid and Food Security in Sub-Saharan Africa: The Cases of Mozambique and Kenya. December.
- European Commission. (2013). Thematic Policy Document No. 1: Humanitarian Food Assistance. November.

- FAO. (2019a). 2019 Global Report on Food Crisis (GRFC 2019). 202.
- FAO. (2019b). Food Security and Nutrition in the World. *IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, 202. https://doi.org/10.1109/JSTARS.2014.2300145
- FAO, IFAD, UNICEF, WFP, & WHO. (2018). Food Security and Nutrition in the World the State of Building Climate Resilience for Food Security and Nutrition.
- FAO, IFAD, & WFP. (2014). The State of Food Insecurity in the World. The multiple dimensions of food security. Executive Summary.
- Food, A., & Policies, A. (2018). Agricultural policy incentives in sub-Saharan Africa in the last decade (2005-2016): Monitoring and Analysing Food and Agricultural Policies (MAFAP) synthesis study. In *International Journal of Production Research* (Vol. 9, Issue 1). https://doi.org/10.1080/00207547108929862
- Gashu, D., Demment, M. W., & Stoecker, B. J. (2019). Challenges and opportunities to the African agriculture and food systems. *African Journal of Food*, *Agriculture, Nutrition and Development*, 19(1), 14190–14217. https://doi.org/10.18697/AJFAND.84.BLFB2000
- Gassner, A., Harris, D., Mausch, K., Terheggen, A., Lopes, C., Finlayson, R. F., & Dobie, P. (2019). Poverty eradication and food security through agriculture in Africa: Rethinking objectives and entry points. *Outlook on Agriculture*, 48(4), 309–315. https://doi.org/10.1177/0030727019888513
- Gibson, M. (2012). Food Security—A Commentary: What Is It and Why Is It So Complicated? *Foods*, 1(1), 18–27. https://doi.org/10.3390/foods1010018
- Goldhar, C., Ford, J. D., & Berrang-Ford, L. (2010). Prevalence of food insecurity in a Greenlandic community and the importance of social, economic and environmental stressors. *International Journal of Circumpolar Health*, 69(3), 285–303. https://doi.org/10.3402/ijch.v69i3.17616
- Grant, G. (2012). The Relationship Between Food Security and National Security.
- Gulrajani, N., & Calleja, R. (2019). *Understanding donor motivations Developing* the Principled Aid Index. March, 44.
- Gyimah-brempong, K. (2016). Agricultural Aid and Food Security in Africa 1.

- Haug, R. (2018). Food security indicators: how to measure and communicate results. 83.
- Headey, D. D., & Martin, W. J. (2016). The impact of food prices on poverty and food security. *Annual Review of Resource Economics*, 8(1), 329–351. https://doi.org/10.1146/annurev-resource-100815-095303
- Hendriks, S. L. (2015). The food security continuum: a novel tool for understanding food insecurity as a range of experiences. *Food Security*, 7(3), 609–619. https://doi.org/10.1007/s12571-015-0457-6
- Hendrix, C. S., & Brinkman, H. J. (2013). Food insecurity and conflict dynamics: Causal linkages and complex feedbacks. *Stability*, 2(2), 1–18. https://doi.org/10.5334/sta.bm
- Hoinaru, R., Buda, D., Borlea, S. N., Văidean, V. L., & Achim, M. V. (2020). The impact of corruption and shadow economy on economic and sustainable development. Do they "sand the wheels" or "grease the wheels"? Sustainability (Switzerland), 12(2). https://doi.org/10.3390/su12020481
- Hollinger, F., & Staatz, J. M. (2015). Agricultural Growth in West Africa: Market and policy drivers. In *Food and Agriculture Organization and African Development Bank*. https://doi.org/10.1073/pnas.1108924108
- Huttunen, S. (2019). Revisiting agricultural modernization: Interconnected farming practices driving rural development at the farm level. *Journal of Rural Studies*, 71(January), 36–45. https://doi.org/10.1016/j.jrurstud.2019.09.004
- Islam, N. (2011). Foreign Aid to Agriculture Review of Facts and Analysis Nurul Islam Director General's Office. *Communications, January*.
- James Deaton, B., & Lipka, B. (2015). Political Instability and Food Security. *Journal of Food Security*, 3(1), 29–33. https://doi.org/10.12691/jfs-3-1-5
- Jerusalem, E. (2016). *Agriculture in Sub-Saharan Africa: Prospects and challenges for the next decade*. *181*(November 1947), 59–95. https://doi.org/10.1787/agr_outlook-2016-5-en
- Journal, S. A. (2019). The Impact Of Foreign Agricultural Aid And Total Foreign Aid on Agricultural Output in African Countries: New Evidence From Panel Data Analysis. 0, 1–22. https://doi.org/10.1111/saje.12224
- KABONGA, I. (2017). Dependency Theory and Donor Aid: A Critical Analysis.

- *Africanus: Journal of Development Studies*, *46*(2), 29–39. https://doi.org/10.25159/0304-615x/1096
- Kaya, O., & Kaya, I. (2019). Aid to Agriculture and Aggregate welfare. Singapore Economic Review, 64(2), 281–300. https://doi.org/10.1142/S0217590817470026
- Kiawu, J. A., & Jones, K. G. (n.d.). Implications of food aid and remittances for West African food import demand. *African Journal of Agricultural and Resource Economics*, 8(1), 30–44.
- Koirala, K. H. (2015). Three Essays on Land Ownership, Gender, and Agricultural Productivity in The Case of Developing Countries.
- Kungu, J. N., Geofrey1, T., & Kungu2, J. N. (2018). Foreign Aid in Sub-Saharan Africa Countries: Does Foreign Aid Make a Difference in Development? International Journal of Science and Research, August. https://doi.org/10.21275/ART20197687
- Leach, M. (2015). Gender equality and sustainable development. In *Gender Equality and Sustainable Development*. https://doi.org/10.4324/9781315686455
- Lynam, J., Centre, W. A., Roseboom, J., & Consultancy, I. P. (2018). *Investing in Future Harvests*. *July* 2016, 1–4.
- Madziakapita, A. (2008). an Evaluation of the Impact of Food Aid on Food Security: the Case of Ngabu Area in Malawi University of South Africa Supervisor: Dr. Da Kotzé March 2008. *Africa*, *March*.
- Maggio, A., Scapolo, F., van Criekinge, T., & Serraj, R. (2018). *Global Drivers and Megatrends in Agri-Food Systems*. 2016, 47–83. https://doi.org/10.1142/9789813278356_0002
- Mahadevan, R., & Hoang, V. (2016). Is There a Link Between Poverty and Food Security? *Social Indicators Research*, *128*(1), 179–199. https://doi.org/10.1007/s11205-015-1025-3
- Mahembe, E., & Odhiambo, N. M. (2019). Foreign aid and poverty reduction: A review of international literature. *Cogent Social Sciences*, 5(1). https://doi.org/10.1080/23311886.2019.1625741
- Mary, S., & Mishra, A. K. (2020). Humanitarian food aid and civil conflict. World

- Development, 126. https://doi.org/10.1016/j.worlddev.2019.104713
- Mashizha, T. M., & Dzvimbo, M. A. (2019). Food Security and Rural Livelihoods in the Doldrums: Exploring Alternatives for Sanyati through Sustainable Development Goals. *Africanus: Journal of Development Studies*, 48(2). https://doi.org/10.25159/0304-615x/4752
- Mungiu-Pippidi, A., Hartmann, T., Mungiu-Pippidi, A., & Hartmann, T. (2019).

 Corruption and Development: A Reappraisal. *Oxford Research Encyclopedia of Economics and Finance*, *March*, 1–30.

 https://doi.org/10.1093/acrefore/9780190625979.013.237
- Muraoka, R., Jin, S., & Jayne, T. S. (2018). Land access, land rental and food security: Evidence from Kenya. *Land Use Policy*, 70(January), 611–622. https://doi.org/10.1016/j.landusepol.2017.10.045
- Mustafa, S. (2020). REVISIONS TO THE FAO FOOD PRICE. November 2013, 72–78.
- Muth, M. K., Karns, S. A., Mancino, L., & Todd, J. E. (2019). How much can product reformulation improve diet quality in households with children and adolescents? *Nutrients*, *11*(3). https://doi.org/10.3390/nu11030618
- Napoli, M., Muro, P. P. De, & Mazziotta, P. M. (2011). *Towards a Food Insecurity Multidimensional Index (FIMI)*. 1–72.
- Ngcamu, B. S., & Chari, F. (2020). Drought influences on food insecurity in africa: A systematic literature review. *International Journal of Environmental Research and Public Health*, 17(16), 1–17. https://doi.org/10.3390/ijerph17165897
- Nin Pratt, A. (2015). Inputs, Productivity, and Agricultural Growth in Africa South of the Sahara. *SSRN Electronic Journal, March*. https://doi.org/10.2139/ssrn.2591566
- Nkomoki, W., Bavorová, M., & Banout, J. (2019). Factors associated with household food security in Zambia. *Sustainability (Switzerland)*, 11(9), 1–18. https://doi.org/10.3390/su11092715
- Nsiah, C., & Fayissa, B. (2019). Trends in Agricultural Production Efficiency and their Implications for Food Security in Sub-Saharan African Countries. *African Development Review*, 31(1), 28–42. https://doi.org/10.1111/1467-

- 8268.12361
- Nugusse, W. Z. (2013). Impact of food aid on household food security: empirical evidence. *African Journal of Business and Economic Research*, 8(1), 109–125.
- Nwozor, A., & Olanrewaju, J. S. (2020). The ECOWAS agricultural policy and the quest for food security: assessing Nigeria's implementation strategies. Development Studies Research, 7(1), 59–71. https://doi.org/10.1080/21665095.2020.1785904
- OECD/FAO. (2016). Agriculture in Sub-Saharan Africa: Prospects and challenges. *OECD-FAO Agricultural Outlook 2016-2025*, *181*(November 1947), 39. https://doi.org/10.1787/888933381341
- OECD. (2019). WHAT IS NOT ODA? Official Development Assistance (ODA). April, 1–8. www.oecd.org/dac%0Ahttp://www.oecd.org/dac/stats/What-is-ODA.pdf
- öNDER, H. (2021). The impact of corruption on food security from a macro perspective. *Future of Food: Journal on Food, Agriculture and Society*, 9(1), 1–11. https://doi.org/10.17170/kobra-202011192215
- ONU. (2019). World population prospects 2019. In *Department of Economic and Social Affairs. World Population Prospects 2019*. (Issue 141).
- Paper, A. W., Beyene, L. M., Alabi, R. A., Ajetomobi, J. O., Belloumi, M., Kwaramba, M., Gakuru, R., Mathenge, N., Laborde, D., Tokgoz, S., Brillet, J. L., Santeramo, F., Estrades, C., Fofana, I., Balma, L., Traore, F., Kane, D., Report, A. D., Barron, M., ... Femenia, F. (2014). Impact of Agricultural Foreign Aid on Agricultural Growth in Sub-Saharan Africa: A Dynamic Specification. *The Trade Impact of European Union Preferential Policies*, 1(November), 1–20. https://doi.org/10.1227/01.NEU.0000349921.14519.2A
- Pawlak, K., & Kołodziejczak, M. (2020). The role of agriculture in ensuring food security in developing countries: Considerations in the context of the problem of sustainable food production. *Sustainability (Switzerland)*, 12(13). https://doi.org/10.3390/su12135488
- Peng, W., & Berry, E. M. (2019). Author 's personal copy Author 's personal copy The Concept of Food Security. 2, 1–7.
- Perez-Cueto, F. J. A., & Olsen, A. (2020). The multifaceted dimensions of food

- choice and nutrition. In *Nutrients* (Vol. 12, Issue 2, pp. 10–12). https://doi.org/10.3390/nu12020502
- Petrikova, I. (n.d.). In Pursuit of Food Security: Who Should Provide Aid Where and How.
- Petrikova, I. (2016). Global food security and development aid. In *Global Food Security and Development Aid*. https://doi.org/10.4324/9781315544496
- Qian, J. (2014). Breakthrough of Sub-Saharan Africa 'S Agricultural Production in the 21st Century:
- Regional, E., & For, P. (2010). ECOWAS Regional Policies For Agriculture And Industry:
- Rustad, S. A., Rosvold, E. L., & Buhaug, H. (2020). Development Aid, Drought, and Coping Capacity. *Journal of Development Studies*, *56*(8), 1578–1593. https://doi.org/10.1080/00220388.2019.1696958
- Sabogu, A. (2020). Understanding Land Conflicts and Food Security in West Africa: Triggers and Perspectives From Dorimon in. 4(06), 84–108.
- Sare Marie Hovland Kjeldsber. (2017). Food Aid in Protracted Crises.
- Seki, R., S. M. and B. M. A. (2016). Has the ten-year implementation of the regional agriculture policy of the Economic Community of West African States (ECOWAP) contributed to improve nutrition? Food and Agriculture Organisation of the United Nations (FAO), Regional Office for Africa, 28.
- Sheahan, M., & Barrett, C. B. (2017). Food loss and waste in Sub-Saharan Africa:

 A critical review. *Food Policy*, 70, 1–12.

 https://doi.org/10.1016/j.foodpol.2017.03.012
- SHEIKH, M. M. (2017). Impact of Drought on Food Security in North Eastern Kenya (Study of Mandera County From 2005-2015). 7(6), 742–750. http://41.67.44.46/handle/123456789/3935
- Shirazi, N. S., Mannap, T. A. A., & Ali, M. (2009). Effectiveness of foreign aid and human development. *Pakistan Development Review*, 48(4), 853–862. https://doi.org/10.30541/v48i4iipp.853-862
- Singirankabo, U. A., & Ertsen, M. W. (2020). Relations between land tenure security and agricultural productivity: Exploring the effect of land registration. *Land*, 9(5). https://doi.org/10.3390/LAND9050138

- Ssozi, J., Asongu, S., & Amavilah, V. H. (2019a). The effectiveness of development aid for agriculture in Sub-Saharan Africa. *Journal of Economic Studies*, 46(2), 284–305. https://doi.org/10.1108/JES-11-2017-0324
- Tal, H. (2019). The Future is Now. *Alpha Omegan*, 102(4), 155–156. https://doi.org/10.1016/j.aodf.2009.10.015
- Thapa, I., Resource, W., & District, D. (2020). Foreign Aid: Positive and Negative Impact in Developing Countries. July.
- The, C., Of, D., Insecurity, F., & Africa, I. N. (2020). 2019 Africa Regional Overview of Food Security and Nutrition. In 2019 Africa Regional Overview of Food Security and Nutrition. https://doi.org/10.4060/ca7343en
- Thirtle, C., Lin, L., & Piesse, J. (2003). The impact of research-led agricultural productivity growth on poverty reduction in Africa, Asia, and Latin America. *World Development*, *31*(12), 1959–1975. https://doi.org/10.1016/j.worlddev.2003.07.001
- Thompson, D. F. (2018). Theories of Institutional Corruption. *Annual Review of Political Science*, 21(1), 495–513. https://doi.org/10.1146/annurev-polisci-120117-110316
- Tranchant, J. P., Gelli, A., Bliznashka, L., Diallo, A. S., Sacko, M., Assima, A., Siegel, E. H., Aurino, E., & Masset, E. (2019). The impact of food assistance on food insecure populations during conflict: Evidence from a quasi-experiment in Mali. *World Development*, 119, 185–202. https://doi.org/10.1016/j.worlddev.2018.01.027
- Twongyirwe, R., Mfitumukiza, D., Barasa, B., Naggayi, B. R., Odongo, H., Nyakato, V., & Mutoni, G. (2019). Perceived effects of drought on household food security in South-western Uganda: Coping responses and determinants.

 *Weather and Climate Extremes, 24(March), 100201.
 https://doi.org/10.1016/j.wace.2019.100201
- UNDP. (2020). Charting pathways out of multidimensional poverty: Achieving the SDGs. *Undp*, *July*, 1–52.
- United Nations. (2015). The Millennium Development Goals Report. *United Nations*, 72. https://doi.org/978-92-1-101320-7
- United Nations. (2019). The sustainable development goals report 2019. United

- Nations Publication Issued by the Department of Economic and Social Affairs, 64. https://undocs.org/E/2019/68
- Vizcarra, M., Palomino, A. M., Iglesias, L., Valencia, A., Espinoza, P. G., & Schwingel, A. (2019). Weight matters—factors influencing eating behaviors of vulnerable women. *Nutrients*, 11(8), 1–18. https://doi.org/10.3390/nu11081809
- Wako, H. A. (n.d.). Aid, institutions and economic growth in sub-Saharan Africa:

 Heterogeneous donors and heterogeneous responses.

 https://doi.org/10.1111/rode.12319
- Wong, J. T., de Bruyn, J., Bagnol, B., Grieve, H., Li, M., Pym, R., & Alders, R.
 G. (2017). Small-scale poultry and food security in resource-poor settings: A review. *Global Food Security*, 15(May), 43–52.
 https://doi.org/10.1016/j.gfs.2017.04.003
- World Bank. (2015). Ending Poverty and Hunger by 2030 An AgEndA for tHE globAl food SyStEm Second Edition with foreword. *Ending Poverty and Hunger by 2030*, 3–6.
- Yu, B., & You, L. (2013). A typology of food security in developing countries. China Agricultural Economic Review, 5(1), 118–153. https://doi.org/10.1108/17561371311294810