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Department of Statistics and Actuarial Science
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RESEARCH

Interests	Statistics · Financial Modelling · Extreme value theorem · Panel Data Analysis
Areas	Economics and Econometrics · General Health Professions · Finance · Renewable Energy, Sustainability and the Environment · Demography · Marketing

RESEARCH SUMMARY

44	1,015	14	17	8.34	40%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 44 publications listed below, 2015–2026. Field-weighted impact is the mean over the 30 works scored for it; 1.00 is the world average for works of the same field, type and year. 12 of the 30 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Associate Professor 2022–present
Statistics and Actuarial Science, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Senior Lecturer 2017–2022
Mathematics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Lecturer 2013–2017
Mathematics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Lecturer 2008–2013
Statistics, University for Development Studies, Tamale, Ghana

EDUCATION AND QUALIFICATIONS

PhD (Applied Statistics) 2008–2011
Statisttics, University for Development Studies, Tamale, Ghana

MSc. (Financial Mathematics and Statistics) 2003–2006
Mathematics, Technische Universität Kaiserslautern, Kaiserslautern, Germany

BSc. (Mathematics) 1997–2001
Mathematics, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

PUBLICATIONS

Journal articles 44

1. Abigail Yeboah Boateng, **Akoto Yaw Omari-Sasu**, Maxwell Akwasi Boateng (2026). A Novel Modification of the Cairns–Blake–Dowd Model: Consideration for Retirement Cohort Trends. *Journal of Probability and Statistics*. https://doi.org/10.1155/jpas/5354903
2. **AY Omari-Sasu**, MA Boateng (2026). Estimating the Actuarial Funding Towards the Micro Pension Scheme in Ghana, A Hybrid of The Multiple Decrement Model and the Markov Process Model: Actuarial Funding for Ghana's .... *Journal of Science and Technology (Ghana)*. https://www.ajol.info/index.php/just/article/view/337402
3. Prince Owusu, Nianxin Wang, Zhiwen Li, **Akoto Yaw Omari-Sasu** (2026). Visible recommendation dominance in digital retail interfaces: Balancing algorithmic guidance and consumer agency. *Journal of Retailing and Consumer Services*. https://doi.org/10.1016/j.jretconser.2026.105020
4. **A OMARI-SASU**, M BOATENG (2025). A NEW BIVARIATE FAMILY OF DISTRIBUTIONS BASED ON THE CLAYTON ARCHIMEDEAN COPULA AND DAGUM DISTRIBUTION. *AFRICAN JOURNAL OF EMPIRICAL RESEARCH Учредители: AJER Publishing*. https://scholar.google.com/scholar?cluster=18321199305029679727&hl=en&oi=scholarr
5. Julius Kwaku Adu-Ntim, **Akoto Yaw Omari-Sasu**, Maxwell Akwasi Boateng, Isaac Adjei Mensah (2025). A novel bivariate regression model derived from the clayton copula and the Odd Dagum-G family and its application. *Scientific African*. https://doi.org/10.1016/j.sciaf.2025.e02761
6. Harris Odoi Yemoh, Emmanuel Kojo Aidoo, Maxwell Akwasi Boateng, Felix Okoe Mettle, **Akoto Yaw Omari-Sasu** (2025). Bivariate Modelling of Stochastic Features: A Convex Mixture Copula Approach. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v43i2.4
7. Wenxin Wang, Isaac Adjei Mensah, Samuel Atingabili, **Akoto Yaw Omari-Sasu** (2025). Climate change as a game changer: Rethinking Africa's food security- health outcome nexus through a multi-sectoral lens. *Scientific Reports*. https://doi.org/10.1038/s41598-025-99276-2
8. Sandra Addai-Henne, M Torto, **O SASU**, WA Pels (2025). Forecasting Scabies Trends in Ghana using Seasonal Autoregressive Integrated Moving Average and Generalized Linear Model. *Applied Medical Informatics*. https://ami.info.umfcluj.ro/index.php/AMI/article/view/1094
9. **AY Omari-Sasu**, MA Boateng (2025). Hybridization of the multiple decrement model and the Markov process model to estimate the benefits of the micro pension scheme in Ghana. *African Journal of Empirical Research*. https://scholar.google.com/scholar?cluster=17210014661228246613&hl=en&oi=scholarr
10. Wenxin Wang, Isaac Adjei Mensah, Samuel Atingabili, **Akoto Yaw Omari-Sasu**, Emmanuel Nouwati, Clement Yenube Kunkuaboor, Emma Serwaa Obobisa, Mu Qiao (2025). Obesity Kuznets Curve conjecture assessment in African economies: conditioning effects of urbanization, food, and trade using gender-based regional analysis. *Globalization and Health*. https://doi.org/10.1186/s12992-025-01121-8
11. Adu Sakyi, P Amoako-Yirenkyi, NK Frempong, **AY Omari-Sasu** (2025). Seemingly unrelated time series model for forecasting the peak and short-term electricity demand: Evidence from the Kalman filtered Monte Carlo method (vol 9, e18821, 2023). *HELIYON*. https://scholar.google.com/scholar?cluster=12714748659627117810&hl=en&oi=scholarr
12. Wenxin Wang, Isaac Adjei Mensah, Samuel Atingabili, **Akoto Yaw Omari-Sasu**, Emmanuel Nouwati, Clement Yenube Kunkuaboor, Mu Qiao (2025). The nexus between food security, health outcomes, and climate change: a multisectoral approach to sustainable development in Africa. *BMC Public Health*. https://doi.org/10.1186/s12889-025-23269-z
13. Prince Owusu, Zhiwen Li, Isaac Adjei Mensah, **Akoto Yaw Omari-Sasu** (2024). Consumer response to E-commerce service failure: Leveraging repurchase intentions through strategic recovery policies. *Journal of Retailing and Consumer Services*. https://doi.org/10.1016/j.jretconser.2024.104137
14. Prince Owusu, Zhiwen Li, **Akoto Yaw Omari-Sasu** (2024). Optimizing consumer engagement and repurchase intentions: The role of strategic post-purchase communication. *Journal of Retailing and*

Consumer Services. https://doi.org/10.1016/j.jretconser.2024.104095

15. Alfred Quarcoo, Isaac Adjei Mensah, **Akoto Yaw Omari-Sasu**, Clement Yenube Kunkuaboor, Emmanuel Nouwati (2024). Revisiting the drivers of electricity consumption in designated Sub-Saharan African regions: Unraveling the role of education. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e41345
16. Abigail Yeboah Boateng, **Akoto Yaw Omari-Sasu**, Maxwell Akwasi Boateng (2024). Stochastic Mortality Models with Birth Cohort Effects in Older People: A Systematic Review. *African Journal of Empirical Research*. https://doi.org/10.51867/ajernet.5.4.125
17. Hao Chen, Samuel Atingabili, Isaac Adjei Mensah, **Akoto Yaw Omari-Sasu**, Evelyn Agba Tackie, Francisca Arboh, Bertha Ada Danso (2023). Does obesity Kuznets curve exist in developing economies? Evidence from 38 African countries based on heterogeneous panel data analysis on income-level classification. *Frontiers in Public Health*. https://doi.org/10.3389/fpubh.2023.1200555
18. Frank Kofi Owusu, Peter Amoako-Yirenkyi, Nana Kena Frempong, **Akoto Yaw Omari-Sasu**, Isaac Adjei Mensah, Henry Martin, Adu Sakyi (2023). Seemingly unrelated time series model for forecasting the peak and short-term electricity demand: Evidence from the Kalman filtered Monte Carlo method. *Heliyon*. https://doi.org/10.1016/j.heliyon.2023.e18821
19. M. A. Boateng, **A. Y. Omari-Sasu**, R. K. Avuglah, N. K. Frempong (2022). A Mixture of Clayton, Gumbel, and Frank Copulas: A Complete Dependence Model. *Journal of Probability and Statistics*. https://doi.org/10.1155/2022/1422394
20. Gershon Kwame Mantey, Felix Kwabena Edusei-Tawiah, Dennis Osei Yeboah, **Akoto Yaw Omari-Sasu** (2022). Modelling the Determinants of Students' Performance in Mathematics. *African Journal of Educational Studies in Mathematics and Sciences*. https://doi.org/10.4314/ajesms.v18i1.8
21. Mohammed Musah, Isaac Adjei Mensah, Morrison Alfred, Haider Mahmood, Muntasir Murshed, **Akoto Yaw Omari-Sasu**, Frank Boateng, Joseph Dery Nyeadi, Cephas Paa Kwesi Coffie (2022). Reinvestigating the pollution haven hypothesis: the nexus between foreign direct investments and environmental quality in G-20 countries. *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-021-17508-0
22. Wenxin Wang, Samuel Atingabili, Isaac Adjei Mensah, Hong Jiang, Hao Zhang, **Akoto Yaw Omari-Sasu**, Evelyn Agba Tackie (2022). Teamwork quality and health workers burnout nexus: a new insight from canonical correlation analysis. *Human Resources for Health*. https://doi.org/10.1186/s12960-022-00734-z
23. Marian Amoakowaah Osei, Leonard Kofitse Amekudzi, **Akoto Yaw Omari-Sasu**, Edmund Ilimoan Yamba, Emmanuel Quansah, Jeffrey N.A. Aryee, Kwasi Preko (2021). Estimation of the return periods of maxima rainfall and floods at the Pra River Catchment, Ghana, West Africa using the Gumbel extreme value theory. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e06980
24. Koketso Phale, Fanglin Li, Isaac Adjei Mensah, **Akoto Yaw Omari-Sasu**, Mohammed Musah (2021). Knowledge-Based Economy Capacity Building for Developing Countries: A Panel Analysis in Southern African Development Community. *Sustainability*. https://doi.org/10.3390/su13052890
25. Isaac Adjei Mensah, Mei Sun, **Akoto Yaw Omari-Sasu**, Cuixia Gao, Emma Serwaa Obobisa, Tolulope Temilola Osinubi (2021). Potential economic indicators and environmental quality in African economies: new insight from cross-sectional autoregressive distributed lag approach. *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-021-14598-8
26. Isaac Adjei Mensah, Mei Sun, Cuixia Gao, **Akoto Yaw Omari-Sasu**, Huaping Sun, Benjamin Chris Ampimah, Alfred Quarcoo (2020). Investigation on key contributors of energy consumption in dynamic heterogeneous panel data (DHPD) model for African countries: fresh evidence from dynamic common correlated effect (DCCE) approach. *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-020-09880-0
27. Ellis Kobina Paintsil, **Akoto Yaw Omari-Sasu**, Matthew Glover Addo, Maxwell Akwasi Boateng (2019). Analysis of Haematological Parameters as Predictors of Malaria Infection Using a Logistic Regression Model: A Case Study of a Hospital in the Ashanti Region of Ghana. *Malaria Research and Treatment*. https://doi.org/10.1155/2019/1486370
28. Isaac Adjei Mensah, Mei Sun, Cuixia Gao, **Akoto Yaw Omari-Sasu**, Dongban Zhu, Benjamin Chris

Ampimah, Alfred Quarcoo (2019). Analysis on the nexus of economic growth, fossil fuel energy consumption, CO2 emissions and oil price in Africa based on a PMG panel ARDL approach. *Journal of Cleaner Production*. https://doi.org/10.1016/j.jclepro.2019.04.281

29. Rhydal Esi Eghan, Peter Amoako-Yirenkyi, **Akoto Yaw Omari-Sasu**, Nana Kena Frimpong (2019). Time-Frequency Coherence and Forecast Analysis of Selected Stock Returns in Ghan Using Haar Wavelet. *Journal of Advances in Mathematics and Computer Science*. https://doi.org/10.9734/jamcs/2019/46323
30. P Amoako-Yirenkyi, **AY Omari-Sasu** (2019). Time-frequency coherence and forecast analysis of selected stock returns in Ghana using Haar wavelet. *J Adv Math Comput Sci*. https://www.academia.edu/download/67742506/56453.pdf
31. Maxwell Akwasi Boateng, **Akoto Yaw Omari-Sasu**, Richard Kodzo Avuglah, Nana Kena Frempong (2018). Hybrid Clayton-Frank Convolution-Based Bivariate Archimedean Copula. *Journal of Probability and Statistics*. https://doi.org/10.1155/2018/5902839
32. **A.Y OMARI-SASU**, REINDORF NARTEY BORKOR, ADU SAKYI, ISHMAEL JESSE NARH ADIKORLEY (2018). Modeling GHS-USD Exchange Rate in Ghana: Application of Stochastic Volatility Model. *International Review of Management and Business Research*. https://doi.org/10.30543/7-2(2018)-15
33. Maxwell Akwasi Boateng, **Akoto Yaw Omari-Sasu**, Nana Kena Frempong, Richard Kodzo Avuglah (2018). On a Hybrid Clayton-Gumbel and Gumbel-Frank Bivariate Copulas with Application to Stock Indices. *Journal of Advances in Mathematics and Computer Science*. https://doi.org/10.9734/jamcs/2019/45668
34. MA Boateng, **AY Omari-Sasu**, RK Avuglah, NK Frempong (2017). On two random variables and archimedean copulas. *International Journal of Statistics and Applications*. https://www.academia.edu/download/132417150/ontworandomvariables.pdf
35. **Akoto Yaw Omari-Sasu**, Derrick Asamoah Owusu, Maxwell Akwasi Boateng, I. Tettey (2016). Hedging Longevity Risk using Longevity Swaps: A Case Study of the Social Security and National Insurance Trust (SSNIT), Ghana.
36. **AY Omari-Sasu**, RK Boadi (2016). Logit Model for the determinants of drug driving in Ghana. *International Journal of Statistics and Application*. https://www.academia.edu/download/103015932/showpaperpdf.pdf
37. DA Owusu, SK Appiah, **AY Omari-Sasu** (2016). Pension fund asset allocation under the Markowitz model: A case of the national pension scheme in Ghana. *Applied Mathematics*. https://www.academia.edu/download/63422785/Pension_Fund_Asset_Allocation_under_the_Markowitz_Model20200525-96174-1e9zhp3.pdf
38. DA Owusu, SK Appiah, **AY Omari-Sasu** (2016). Pricing and profit testing of" keyman" life policy of insurance companies in Ghana. *International Journal of Finance and Accounting*. https://www.academia.edu/download/99718945/showpaperpdf.pdf
39. R Boadi, W Obeng-Denteh, **AY Omari-Sasu** (2016). Review of the birch and swinnerton-dyer conjecture. *Am J Math Stat*. https://www.academia.edu/download/110718779/showpaperpdf.pdf
40. **AY Omari-Sasu**, RK Boadi (2016). Statistical models for count data with applications to road accidents in Ghana. *International Journal of Statistics and Applications*. https://scholar.google.com/scholar?cluster=19035069160786386 71&hl=en&oi=scholarr
41. **Akoto Yaw Omari-Sasu**, Daniel Owusu, Maxwell Akwasi Boateng, Z. Sabogu (2016). Survival Analysis of Tuberculosis Patients in Upper West Region of Ghana. *International journal of statistics and applications*.
42. **SK Omari-Sasu** (2015). Generalized Euler method for modeling measles with fractional differential equations. *Int. J. Innovative Research and Development*. https://www.academia.edu/download/38235894/50._APR15176.pdf
43. **Akoto Yaw Omari-Sasu**, Nana Kena Frempong, Maxwell Akwasi Boateng, Richard Kena Boadi (2015). Modeling Stock Market Volatility Using GARCH Approach on the Ghana Stock Exchange. *International Journal of Business and Management*. https://doi.org/10.5539/ijbm.v10n11p169
44. **Akoto Yaw Omari-Sasu** (2015). Volatility Assessment of Equities on the Ghana Stock Exchange. *International journal of statistics and applications*. https://www.academia.edu/download/132534268/showpaperpdf.pdf