



UGANDA CHRISTIAN UNIVERSITY

A Centre of Excellence in the Heart of Africa

SCHOOL OF RESEARCH & POSTGRADUATE STUDIES DISSERTATION CORRECTION COMPLIANCE FORM (POST VIVA FORM)

Date: August 6, 2026

Name of Candidate: Econia Racheal

Reg.No: J24M19/016

Title of Dissertation: *The Effect of Exchange Rate Dynamics on Food Prices in Urban Uganda: An Integrated Machine Learning and Econometrics Analysis of Kampala Markets*

S/N	COMMENTS BY EXTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	Reduce or consolidate the number of research objectives.	The six overlapping objectives were consolidated into four aligned and measurable objectives. The purpose statement and research questions were revised to correspond to the four objectives.	Chapter 1, Sections 1.4, 1.6 and 1.7; pages 3-5.
2	Address the methodological concerns identified in the methods chapter.	Direct textual concerns were addressed by documenting the data challenges and mitigation procedures, clarifying the interpretation of temporal causality, and providing model-specific limitations.	Chapter 3, Section 3.3.1, pages 16-17; Chapter 5, Section 5.10, pages 51-52.
3	Expand the discussion of contradictory findings and acknowledge study limitations more critically.	A dedicated section was added to reconcile the positive level relationships with weak return-volatility correlation, strong tree-model performance with weak benchmark and deep-learning results, short-run wavelet coherence with weaker long-run relationships, and disagreement among the deployed models. A comprehensive limitations section was also added.	Chapter 5, Sections 5.9 and 5.10; pages 50-52.
4	Provide deeper reflection on the limitations of the analytical models.	The revised report discusses limitations associated with OLS, Granger causality, transfer entropy, DCC-GARCH, Markov-switching regression, quantile regression, wavelet analysis, Random Forest, XGBoost, Prophet, deep-learning models, and the simple ensemble.	Chapter 5, Section 5.10; pages 51-52.

5	Make recommendations more specific to individual stakeholders.	Recommendations were reorganized for the Bank of Uganda; Ministry of Agriculture, Animal Industry and Fisheries; Ministry of Finance, Planning and Economic Development; KCCA and market administrators; humanitarian organizations; commodity traders and analysts; system owners; and researchers.	Chapter 6, Section 6.2; pages 54-56.
6	Change the referencing style from IEEE/numbered citations to the APA style required by UCU.	The numbered IEEE style was replaced with an author-date referencing format using `natbib` and `apalike`. In-text citations were converted to parenthetical author-date citations.	Applied throughout the report; References begin on page 57; referencing configuration updated in <i>main.tex</i> .

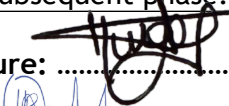
S/N	COMMENTS BY INTERNAL EXAMINER	ACTION TAKEN	INDICATOR
1	No separate internal examiner comments were included in the comments supplied for this correction phase.	No action required at this stage.	Not applicable.

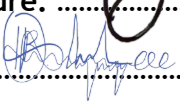
S/N	COMMENTS BY VIVA VOCE PANNEL	ACTION TAKEN	INDICATOR
1	Clearly distinguish and discuss the findings from the causal inference analysis and those from the predictive machine-learning models, highlighting the contribution of each approach to addressing the research problem.	A new section distinguishes the questions, methods, interpretations, contributions, and limitations of the causal and predictive components. Predictive accuracy is explicitly separated from directional causal evidence.	Chapter 5, Section 5.2; pages 46-47.
2	Strengthen the discussion by explaining the role and importance of causal inference within the study and describing how the research objectives and conclusions would have been affected if causal relationships could not be established.	The discussion now explains that, without directional evidence, the conclusions would have been limited to association and prediction. The descriptive and predictive objectives would remain valid, but claims about exchange rates as an upstream food-price warning signal would be weakened.	Chapter 5, Section 5.2; pages 46-47.
3	Review the econometric model specification to address concerns regarding omitted variable bias. Either incorporate relevant explanatory variables	The restricted variable coverage and implications are acknowledged in the data-challenges and limitations sections.	Chapter 3, Section 3.3.1, page 16; Chapter 5, Section 5.10,

	identified in the conceptual framework or justify their exclusion and discuss the resulting limitations.		page 51
4	Expand the report to identify key stakeholders, describe their roles, and explain how the study's findings support their decision-making and operational activities.	A stakeholder table was added covering monetary, agricultural, fiscal, urban-market, humanitarian, commercial, and research stakeholders. The discussion explains the intended decision-support use for each group.	Chapter 1, Section 1.5, page 3; Chapter 5, Section 5.7, page 48; Appendix H, page 81
5	Include a comprehensive discussion of the data challenges encountered and describe the techniques used to address data availability, quality, preprocessing, and integration.	A dedicated subsection documents descriptor rows, missing and non-numeric values, uneven commodity coverage, monthly aggregation, frequency mismatch, merge procedures, implied exchange-rate validation, Kampala market concentration, and unavailable explanatory variables.	Chapter 3, Section 3.3.1; pages 16-17.
6	Revise the research objectives to ensure they are Specific, Measurable, Achievable, Relevant, and Time-bound (SMART), while maintaining alignment with the methodology and expected outcomes.	The revised four objectives identify the variables, Kampala scope, January 2006-September 2025 study period, analytical dimensions, model-evaluation metrics, held-out observations, and July 2026 deployment target.	Chapter 1, Section 1.7; page 6.
7	Strengthen the conclusions and recommendations by explicitly linking the scientific findings to practical applications, policy implications, and business or institutional decision-making.	The conclusion now separates the scientific and applied contributions. Recommendations link regime, quantile, wavelet, predictive, and deployment results to decisions by named institutions and user groups.	Chapter 6, Sections 6.1 and 6.2; pages 53-56.
8	Provide a detailed description of the deployed prediction tool, including its architecture, implementation, functionality, intended users, and practical deployment within the study context.	The architecture and inference workflow were retained and expanded with intended users, functional boundaries, model-specific outputs, humanitarian use, manual input requirements, operational interpretation, and requirements for institutional deployment.	Chapter 3, Sections 3.9-3.9.5; pages 22-25
9	Discuss the limitations of the study's generalizability, particularly its focus on Kampala markets, and identify opportunities for extending or validating the framework in other regions of Uganda.	The thesis now states that the Kampala sample is dominated by Owino Market and cannot automatically represent rural, border, or other urban markets. Future regional validation opportunities are identified.	Chapter 3, Section 3.3.1, page 17; Chapter 5, Section 5.10, page 51; Chapter 6, page 54.
10	Justify the inclusion of humanitarian organizations as stakeholders by explaining how	Humanitarian use is linked to early warning, vulnerability assessment, market monitoring, scenario analysis, cash and	Chapter 1, Section 1.6, page 5; Chapter

	they can use the study's outputs to support food-security monitoring, market interventions, humanitarian planning, and policy formulation.	food assistance planning, intervention timing, field verification, and food-security policy engagement.	5, Section 5.7, page 49; Chapter 6, page 55.
11	Include a critical evaluation of the current predictive model and discuss potential improvements, such as incorporating additional variables, evaluating alternative algorithms, optimizing model parameters, or expanding the dataset.	A critical evaluation and specific improvements were added, including additional explanatory variables, rolling time-based validation, prediction intervals, performance-weighted ensembles, hyperparameter optimization, automated data feeds, and model monitoring. Actual retraining and comparative re-analysis have been reserved for the subsequent phase.	Chapter 5, Sections 5.9-5.10, pages 50-52; Chapter 6, pages 55-56.

Candidate's Name : Econia Racheal

Signature: 

Supervisor's Name: Dr. Ian Raymond Osolo Signature: 

NB: Post Viva compliance form is designed to capture all the corrections recommended by internal examiner (supervisor), external examiner and viva panel.