



Paper: “Modelling and Forecasting Electricity Demand for Commercial and Industrial Consumers in Kenya to 2035”

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Peer review:

Reviewer 1: Dianah Ngui
Kenyatta University, Kenya

Reviewer 2: Yue Cao
Southeast University, China

Reviewer 3: Blinded

Reviewer 4: Blinded

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ESJ Manuscript Evaluation Form 2020

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Please respond within the appointed time so that we can give the authors timely responses and feedback.

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Reviewer Name: Yue Cao	Email:
University/Country: Southeast University/ China	
Date Manuscript Received: 2020-04-04	Date Review Report Submitted: 2020-04-21
Manuscript Title: Modelling and Forecasting Electricity Demand for Commercial and Industrial Consumers in Kenya	
ESJ Manuscript Number: 47.02.2020	
You agree your name is revealed to the author of the paper: Yes	
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Evaluation Criteria:

Please give each evaluation item a numeric rating on a 5-point scale, along with a thorough explanation for each point rating.

<i>Questions</i>	<i>Rating Result</i> [Poor] 1-5 [Excellent]
1. The title is clear and it is adequate to the content of the article.	4
<i>(Please insert your comments)</i> The methods used in this paper is suggested to be presented in the title.	
2. The abstract clearly presents objects, methods and results.	4

<i>(Please insert your comments)</i> This abstract is already presented in a good way.	
3. There are few grammatical errors and spelling mistakes in this article.	4
<i>(Please insert your comments)</i> The authors should carefully check the grammatical errors.	
4. The study methods are explained clearly.	4
<i>(Please insert your comments)</i> At the end of 'Introduction', the novelties of this manuscript should be better explained.	
5. The body of the paper is clear and does not contain errors.	4
<i>(Please insert your comments)</i> The subsections should be presented with a sub-section number.	
6. The conclusions or summary are accurate and supported by the content.	3
<i>(Please insert your comments)</i> The conclusions should be concise.	
7. The references are comprehensive and appropriate.	4
<i>(Please insert your comments)</i> More recent references within 3-5 years should be reviewed.	

Overall Recommendation(mark an X with your recommendation) :

Accepted, no revision needed	
Accepted, minor revision needed	X
Return for major revision and resubmission	
Reject	

Comments and Suggestions to the Author(s):

- 1) The novelties of this manuscript should be clearly explained.
- 2) More references within 3-5 years should be reviewed.
- 3) Sub-section numbers should be added.
- 4) Each item of equations should be explained separately.
- 5) Table 2 is not suitable to present the explanations of variables.
- 6) More sentences should be written to explain the results of tables in the section of 'Results and discussion'.
- 7) All pages should be fully filled.
- 8) What's '***' in Table 7?
- 9) The conclusions should be concise.

Comments and Suggestions to the Editors Only:

This topic is interesting, whereas the quality of this manuscript should be improved to meet the requirements of a journal paper. Revisions should be conducted based on former comments.

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This form is designed to summarize the manuscript peer review that you have completed and to ensure that you have considered all appropriate criteria in your review. Your review should provide a clear statement, to the authors and editors, of the modifications necessary before the paper can be published or the specific reasons for rejection.

Please respond within the appointed time so that we can give the authors timely responses and feedback.

NOTE: ESJ promotes peer review procedure based on scientific validity and technical quality of the paper (not perceived the impact). You are also not required to do proofreading of the paper. It could be recommended as part of the revision.

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Reviewer Name: Dr. Dianah Ngui	
University/Country: Kenyatta University, Kenya	
Date Manuscript Received: April 2 2020	Date Review Report Submitted: April 20 2020
Manuscript Title: Modelling and Forecasting Electricity Demand for Commercial and Industrial Consumers in Kenya	
ESJ Manuscript Number:	
You agree your name is revealed to the author of the paper: <input checked="" type="checkbox"/> Yes/No	
You approve, your name as a reviewer of this paper, is available in the “review history” of the paper: <input checked="" type="checkbox"/> Yes/No	
You approve, this review report is available in the “review history” of the paper: <input checked="" type="checkbox"/> Yes/No	

Evaluation Criteria:

Please give each evaluation item a numeric rating on a 5-point scale, along with a thorough explanation for each point rating.

<i>Questions</i>	<i>Rating Result</i> [Poor] 1-5 [Excellent]
1. The title is clear and it is adequate to the content of the article.	5
<i>(Please insert your comments)</i>	
2. The abstract clearly presents objects, methods and results.	<u>3.53</u>

Needs to clearly state the gap: Not clear on which gap—Is it literature gap?
The paper seems to have a number of objectives apart from drivers and needs to be clearly captured in the abstract as stipulated some parts of the document- 1) “the deviations between previous official forecasts and actual is significant putting into question the official forecast assumptions and further necessitating the need to provide an alternative method to supplement the existing official demand forecasting method”
 2) *The article also contributed to literature by examining the effects of supply side constraints on the demand*

3. There are few grammatical errors and spelling mistakes in this article.	3.5
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The paper needs to be edited. For instance the abstract: Commercial and industrial consumers are the largest electricity consumers in Kenya contributing to over 70% of the electricity demand. Despite their importance in driving electricity demand, there is a gap on the drivers of commercial and industrial electricity demand. The paper used ~~econometric method of~~ ARDL and time series data from 1985 to 2016 to estimate and forecast the drivers of commercial and industrial demand for electricity in Kenya. The results indicated that commercial and industrial consumers’ electricity demand is income elastic. Other drivers include efficiency, electricity price and hydro inflows ~~as a proxy for supply side constraints~~. A forecast of the demand indicated the official demand forecast for commercial and industrial consumers could be overstated and may need to be reviewed.
Estimates of elasticity of demand for commercial and industrial electricity are ~~varied~~ vary

4. The study methods are explained clearly.	3
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- ARDL has the advantage of working with small samples (Belloumi, 2014) and stationary and nonstationary data (Pesaran, Shin and Smith, 2001).- While this statement is authenticated it is not true.. This is because while ARDL is used to test for cointegration using bounds test (I(0) & I(1) data, it does not necessarily mean it can be used to run both stationary and nonstationary data without testing for cointegration--- It is used stand alone as an estimation method. No 2. ARDL has lags and it’s not clear how it has the advantage of working with small samples—My presumption would be that the statement was made on the bounds test and not on the estimation method and so this needs to be differentiated.*
- Since forecasting is one of the objectives, the author needs to state within the methodology the method used to do forecasting, the assumption is that ARDL is used yet it’s not stated*
- On Diagnostic tests: I would refer the candidate to Enders, W. (latest), ~~Appl Econ~~ ~~Time Series Econometrics~~, John Wiley & Sons, New York—From page 206.. Under the column variable, the candidate ought to choose the best parsimonius model guided by the Schwarz Bayesian Criterion /Akaike Information Criterion and report the results for the chosen model only.-Either with both intercept and trend, with intercept or without both intercept and trend. – This part neds to be revisited and written appropriately-The same comment goes for cointegration test*

<ul style="list-style-type: none"> • The author should be advised to choose either the model with no intercept and trend, intercept and no trend, or intercept with trend. Once the correct model is chosen, various diagnostic tests should be carried out to test for its viability (Auto-correlation, Normality, Specification, Heteroskedasticity, stability tests) which paper appear after cointegration test and not before as required. The essence is to ensure only the parsimonious model is used to carry out the cointegration test. • Lag 2 was selected because lag lengths above 3 reduced degrees of freedom". This needs clarification, all lag lengths reduce degrees of freedom., On the same vein, lag lengths are selected using diagnostic tests and not on reducing degrees. And so, this needs to be clarified • The author needs to state the percentages used for the scenarios : "Three scenarios were considered in line with the official government forecasts namely low, base and high scenarios." 	
5. The body of the paper is clear and does not contain errors.	4
<i>Only a few grammatical errors as stated above</i>	
6. The conclusions or summary are accurate and supported by the content.	4
<i>Okey,</i>	
7. The references are comprehensive and appropriate.	4
<i>Quite a number are old yet much has been done on the same</i>	

Overall Recommendation (mark an X with your recommendation) :

Accepted, no revision needed	
Accepted, minor revision needed	X
Return for major revision and resubmission	
Reject	

Comments and Suggestions to the Author(s):

- Include the forecasting objective even in the conclusion since it seems key from the topic but within the context not given much emphasis-From LR, methodology and conclusion
- The methodology for forecasting is not stated.
- The part on Diagnostic and cointegration tests needs to be redone and reported in a standard way-This might not change the conclusions earlier obtained:
- The statement "They are also the highest consumers of electrical energy at

70% of total energy consumed in the country. This is despite their number of customers accounting for less than 10% of the total connections (Lahmeyer, International GmbH, 2016).” This being one of the statements supporting the research gap, How is it related to drivers of demand—It is clear the number of connections are very few—which can make consumption low any way---Needs to clear up this

Comments and Suggestions to the Editors Only:

The author needs to ensure the diagnostic tests are re done and reported in a standard way, forecasting objective handled and reported systematically. The paper is very good and contributes to the literature . Kindly note that the article should be published once the corrections are implemented as much as the recommendation is accepting

