



SDI Review Form 1.6

Journal Name:	British Journal of Economics, Management & Trade
Manuscript Number:	Ms_BJEMT_27663
Title of the Manuscript:	An investigation of the role of population age structure and carbon dioxide emissions in Africa
Type of the Article	

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

To know the complete guideline for Peer Review process, reviewers are requested to visit this link:

(<http://www.sciencedomain.org/page.php?id=sdi-general-editorial-policy#Peer-Review-Guideline>)



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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Compulsory REVISION comments	Lines 129 and 130- When the authors said that “Southern Sudan who became independent 3 years ago”, the statement is not correct. The Republic of South Sudan gained its independence from Sudan in 2011. If we count this time from the present we have 5 years, if we count the time taking in account the last year of the data set (1960-2012) we find 1 year. Lines 132 to 137- It's difficult to accept, taking into account the subject of the manuscript, that authors consider that the French Antarctic Lands, on the southeast of Africa, approximately equidistant between Africa, Antarctica and Australia are part of Africa, even if we consider that this designation is due to a an international convention, that considered these Lands as European. For example, the Kerguelen Archipelago is on the geologic formation known as the Kerguelen Plateau stretches across the southern Indian Ocean near Antarctica. In relation to the Crozet Islands they stay far from tectonic plate boundaries. Also we can have much discussion about the Saint-Paul and Amsterdam Islands or the Adèle Land on the continent of Antarctica. This statement could be applied only for the Iles Éparses of the French Southern and Antarctic Lands that are an administrative unit rather than a single geological unit, with the northern banks likely being extensions of the Comoros Archipelago, while the middle and southern islands are distinct geological features. The statement produced on this manuscript about the French Southern and Antarctic Lands are wrong, valid on for part of the Iles Éparses. Also is wrong to put Saint Helena on Africa because in geological terms St. Helena is a very young island. Its origins lie in the Mid-Atlantic ridge and the outpouring of molten rock from between the diverging African and Latin American tectonic	I agree with the reviewer. I have corrected it. I do not agree with the reviewer's comment. However, the facts I stated are documented and references are made with respect to that account. The reviewer is advice to check the references and correspond that with his own view.



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	plates. In relation to the Ascension Island, unusually, is not hotspot-centred; geophysical and geochemical indications are that the Ascension hotspot lies to the east of the Mid-Atlantic Ridge. In relation to Tristan da Cunha it is thought to have formed on the Walvis Ridge on the African Plate, like Canary Islands, Madeira Island, but also Porto Santo Island or even Santa Maria Island on the Azores that are on the African Plate, but they don't belong to Africa based on their specific geology, biogeography, or in a huge set of possible parameters. Taking this in account it is propose to the authors to remove at least the mention to part of the French Southern and Antarctic Lands, to Saint Helena, Ascension and Tristan da Cunha, Canary Islands, Madeira Island, Reunion, Lampedusa, Lampione and Socotra Island. For example, Socotra Island is one of the most-isolated landforms on Earth of continental origin meaning that are not from volcanic origin. The archipelago of Socotra, geologically was once part of the supercontinent of Gondwana and detached during the Miocene epoch, in the same set of rifting events that opened the Gulf of Aden to its northwest. Using as criteria the African Continental Plate to consider being African oceanic islands, especially those ones that are from volcanic origin, or with specific geology is not a clear scientific criteria. Where are the Plazas de Soberania? The authors want mean Plazas de Soberania? The small islands on the Mediterranean? If yes, this mention don't make any sense when we are centred on the analysis of the CO₂ emissions of Africa. I agree with authors when give emphasis only to the sovereign states on the African continent. Because of that, the mention to the early islands and territories must be avoided. This study must not enter into the controversy surrounding geology, Plate Tectonics or biogeography. Line 152- When used for the first time, the acronyms must but explained, for example, when the authors say "emissions, HFC, PFC, and SFG", must saying "emissions, HFCs (hydrofluorocarbons), PFCs (Perfluorocarbons)". The pollutants that the authors want to mention are not SFG but SF6 (Sulphur hexafluoride).	I agree with the reviewer's comment. The necessary corrections have been made. hydrofluorocarbons (HFCs), (Perfluorocarbons (PFCs) and Sulphur hexafluoride (SF6) I agree with the reviewer's comment. I have replaced σ_u^2 with σ_{ϵ}^2 and cancelled (k=1). k is a constant, which is equal to 1. ln(a) (the constant "ln(a)" scales the model) is a constant and has no economic importance whether we take the logarithms or not. The ln(e_i) gives the same result as e_i. Therefore, both have no effect on our results. To satisfy mathematical principles, I would like to agree with him, and corrections are hereby effected. I agree with the reviewer, and corrections have
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	Line 207 and 208- If x is scalar exogenous variable α_i^* and β_i are n-dimensional vectors not parameters. What is the sense of (k=1) on the sentence? When the authors mention σ_u^2, what is that, the variance of u or the variance of x? They denote σ_x^2? Please explain the meaning of k, or if the case, the meaning of u. Line 279- When we take logarithms on both sides of the equation 3.1.6. we have: $\ln(I_i) = \ln(a P t_i^\alpha A_i^\beta T_i^\varphi e_i) \xrightarrow{\text{yields}}$ $\ln(I_i) = \ln(a) + \ln(P t_i^\alpha) + \ln(A_i^\beta) + \ln(T_i^\varphi) + \ln(e_i)$ $\xrightarrow{\text{yields}}$ $\ln(I_i) = \ln(a) + \alpha \ln(P t_i) + \beta \ln(A_i) + \varphi \ln(T_i) + \ln(e_i)$ This is completing different of the equation 3.1.7. Line 281- Is not the constant “a” that scales the model but the constant “ln(a)”. Line 283 and 284- Indeed e on the equation 3.1.6 is the error term, but we have on the equation 3.1.7 the logarithm of the error term. The logarithm of the error term in the equation 3.1.7 is also an error term, but in this case of the linearized model. Lines 290 and 291- If we assume the equation deduced on the comment for line 279, not all elasticity coefficients could be 1 such as $a = \alpha = \beta = \varphi = e = 1$, because what we assume in this condition is that $\ln(a) = \alpha = \beta = \varphi = \ln(e) = 1$, that signifying $a=e$(Euler number) and the $e=e$ (Euler number). The variable $\square$	been made. Corrected Corrected First, the work he referred to is my work and the results are not the same as he claimed. The paper titled “Measurement of the population density and carbon dioxide emissions in African countries at different income levels” is different from “An investigation of the role of population age structure and carbon dioxide emissions in Africa”. Second, the major difference is that in the former, population density is one of the key predictors of environmental impact whereas in the later population age structure is one of the key predictors. Third, I cannot cite the work because of my experience with past publications. For example, I cited some of my works in a manuscript I submitted for publication, and the reviewer contended that it was a show of academic arrogance. I was asked to remove it, and had another similar experience. Fourth, there is nothing like huge similarities between the two. Previous studies had argued differently on the impact of population
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	must be changed for □. Line 294- The equation is not correct. Line 304- The meaning of “a” and E_{it} on the equation 3.1.9 is not the same of the early mentioned equations. The same comment could be applied to the equation 3.1.10. Line 416 – The authors have the same result as on the work of Saka (2016) that also used the STIRPAT model, clearly shown when this author saying “The empirical findings provided support for the conceptual framework, the findings suggest that the average effect of population density over CO₂ emissions, when the population density change across time and between countries in LICA, increases by 1%”. It is important that authors cite this work and emphasize the difference between their work and the one of Saka (2016) that could be found on https://www.socialscienceregistry.org/trials/1040/history/6845. Plagiarism issue: If one of the authors are not Saka, Abdulrasaki, author of the work "Measurement of the population density and carbon dioxide emissions in African countries at different income levels." Probably we have. The mentioned work could be found on https://www.socialscienceregistry.org/trials/1040/history/6845. We have huge similarities between this manuscript and the one of Saka, Abdulrasaki, not cited on the work. The mentioned work could be found at: https://www.socialscienceregistry.org/trials/1040/history/6845.	dimensions on environmental impacts. We tried show the most significant impact amongst the population dimensions: population growth, population density, population size and population age structure.
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Minor REVISION comments	Line 13- It is suggested to change the : on the phrase “and negative impacts of population age structure: The quantitative...” to a period (.). Line 16-It is suggested to change the comma on the sentence “about 0.67 per cent, 1.08 per cent respectively...” by the word “and” like “about 0.67 per cent and 1.08 per cent, respectively...”. Lines 30 and 31 – The “Enter space” between the line 30 (word “for”) and 31 (word “energy”) must be removed. Lines 60 to 64- Instead the mention of the organisation of the manuscript, in these lines, it is proposed to mention the main goals of the research. Seems to me, not be important to have the enumeration of the titles of the points that we will read following this sentence. The objectives of the presented research are wrongly positioned on the section 2 (point 2.1). Line 68- The first time that we mention an acronym, their meaning must be explained. Based on that, it is proposed to put between parentheses the meaning of STIRPAT (STochastic Impacts by Regression on Population, Affluence, and Technology). Line 69- Since that is not easy to explain the meaning of the acronyms IPAT and ImPACT, when used for the first time, it is proposed to introduce one or two references, such as for IPAT (Commoner 1971; Ehrlich and Holdren 1971) and for ImPACT (Waggoner and Ausubel, 2002). Lines 75 and 76- When the author or authors mention the “The reformulated STIRPAT model is further refined and developed into the concept of ecological elasticity”, they refer the STIRPAT, that is a model that reformulate the IPAT model or to a specific reformulation of the STIRPAT model? This sentence needs to be clarified or a reference. For example Dietz and Rosa, mentioned by York, et al. (2003b) made a specific proposal to reformulate the IPAT model in stochastic terms. The authors are mention the refined STIRPAT model but is modified to answer their research questions? If yes, these sentences must be put in other section.	I do not understand what the reviewer is trying to say! Corrected (“for”) and (“energy”) have been removed. I do not agree with the reviewer. Corrected Corrected Corrected I do not agree with the reviewer. The
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	Lines 76 (starting with “An estimate”) to 92 (ending with “environmental change”)- We don’t know from where the data and results mentioned on these sentences come from. It is important to mention the scientific references. These are conclusions of this research? If yes, must be moved from the section of the Literature Review to the section 5. Line 97- Which study the author or authors are referring to? To his study or to the study of York, et al. (2003a)? If it is their one study this mention is not on the proper section. If not, the sentence needs a clear reference. Lines 100 to 109 (ending with “environmental change”)- Which study the author or authors are referring to? To his study or to another’s studies? If it is their one study this mention is not on the proper section. If not, the sentences need a clear reference or references. Lines 148 to 151- Since the authors examine only the carbon dioxide emissions it is improper to distinguish agricultural methane emissions and agricultural nitrous oxide emissions from energy related methane, methane emissions, nitrous oxide emissions and nitrous oxide emissions in industrial and energy processes. Line 153 – When we read PM10, we must read “PM10 (Atmospheric particulate matter with a mean aerodynamic diameter of 10 µm”. Line 167- When we read “percentage of GDP”, we must read “percentage of GDP (Gross domestic product). Line 173- When we read “data on final consumption expenditure (annual % growth) (FCEG)” we must read “data on final consumption expenditure by government (annual % growth) (FCEG)”. Line 257- The line space must be removed. Lines 350, 357 and 361- The space lines must be removed. Line 374- When we read “is more efficient than OLS” we must	sentences he talked about are an appraisal of literature of the work of York, et al. (2003b). Corrected The reviewer should read the sentence again, it is well referenced. I do not agree with the reviewer. The lines are ok. Agreed and corrected Agreed and corrected Ok Ok Ok 3.1.7 only shows the “technology” and other predictors which was disaggregated in 3.1.14
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	read "is more efficient than OLS (Ordinary Least Squares)". Line 386- The space line must be removed. Line 387- If you estimated model 3.1.14 what you want to show with the equation 3.1.7? Line 411 – When we read "on emissions in LICA" we must read "on emissions in LICA (Lakeland Industry and Community Association?)" LICA countries?. What is the meaning of the acronyms LICA, UICA and LMICA? Line 479- When we read "familiar to us as researcher" we must read "familiar to us as researchers". References List- The reference for "Baltagi, B. (2008). Econometric analysis of panel data (vol. 1). John Wiley & Sons" is incomplete and need to mention the edition (4 edition) and the local of publication. The roles for scientific references must be reviewed. For example the reference "Boserup, E. (1981a). Population and Technological Change: A study of Long-term trends. Chicago: University of Chicago press." Have not the same rules that the "De Waal, T. (2010). The Caucasus: An introduction. Oxford University Press. ISBN 0195399765, 9780195399769: 10." Electronic references such as "Malthus T. R., (1798). Essay on the Principle of Population, seventh ed. (1967). Printed for J. Johnson, London, UK. www.esp.org/books/malthus/population/malthus.pdf, need an accessed date. If the reference is PDF (Portable Document Format) must be cited such a printed book.	to reflect economic structure. Agreed and corrected Agreed and corrected Corrected Corrected
<u>Optional/General</u> comments		