

MASTER THESIS REVIEW

Author: Nathalia Velasco Cardona
Thesis: THE IMPACT OF CLIMATE CHANGE IN THE LOCAL DEVELOPMENT OF SIDS
Reviewer: doc. Mgr. Zdeněk Opršal, Ph.D.

Content

The focus of the thesis is deducible from its title - it seeks to assess the impact of climate change on the development of Small Island Developing States (SIDS). The diploma thesis itself lacks a clearly defined research question or hypothesis. There are a number of questions in the Introduction chapter, but they are more of a rhetorical question and the reader is easily lost in them. The author chooses 6 SIDS from three regions for her analyzes - Grenada, Belize (Caribbean), Fiji, Papua New Guinea (Pacific) and Mauritius and Seychelles (Indian Ocean). In an effort to fulfill the task, the author decided to use econometric methods. Human Development Index (HDI) is selected as a dependent variable, the four independent variables include CO2 emissions, Official Development Assistance (ODA), FDI and population growth.

I have two remarks on i) the selection of variables and ii) the results and their interpretation:

i)

I have doubts about whether CO2 emissions can approximate climate change. CO2 is one of the factors causing change, not a manifestation with a direct impact on local development. It is not clear from the description of the methods whether the CO2 variable (metric tonnes per person) applies to the selected SIDS or whether it is the average for the population of the whole planet (probably the first of the two options is true).

The ODA control variable is referred to in the methods as "ODA net received as a percentage of GDP". However, the results state that "... an increase in the ODA received by the country of 1 monetary unit, it will represent a decrease of the HDI in 0.0067, ceteris paribus" (p. 34). In what form, then, did the ODA variable entered regression analysis - as a share of GDP (and why in this unusual form) or as an absolute value? It is in the form of ODA commitments or ODA disbursements?

Did the author consider working with lagged variables?

ii)

The result of most variables was the opposite of the hypothetical relationship between them. Probably the most important (in terms of focus of the thesis) is the result for the variable CO2: "To an increment of 1 metric ton per capita, it will be an increase on the HDI of 0.01 points, leaving all variables constant" (p. 23). In other words, the increase in CO2 emissions per capita is associated with an increase in HDI. I don't think that the "vulnerability paradox" (see p. 24) is plausible explanation of this relationship. A correlation between CO2 emissions and

economic activity that affects HDI growth is much more likely. In any case, in my opinion, it is questionable to draw conclusions about the impact of climate change on the local development of SIDS from the relationship between CO₂ and HDI.

Another debatable result concerns ODA: “ODA, on the other hand, has a negative impact over the HDI, as an increase in the ODA received by the country of 1 monetary unit, it will represent a decrease of the HDI in 0.0067, *ceteris paribus*.” If I understand correctly from the author's discussion, this negative relationship is attributed to the inappropriate use of ODA in selected SIDS. I believe that an explanation should be sought in the aggregated nature of ODA. It is possible that humanitarian ODA (designed to mitigate natural disasters, not to encourage local development) is a significant part of ODA flows to SIDS.

Country profiles and backgrounds (pp. 14-22) are based on several indicators, which are compared for individual SIDS included in the thesis. In my opinion, this chapter could have been shorter, it is not clear how / why this extensive part is relevant to the objectives of this thesis.

Literature and references

Many of the sources listed in the Bibliography cannot be traced in the text. (for instance: Botzen, J. C. (2018), Aginam, O. (2011), Anderson, A. (2012), Caribsave. (2014), Petzold, J., & Magnan, A. K. (2019), Crossley, M. W., & Sprague, T. (2013), Ebi, K., & Yohe, G. (2013), Gravelle, G., & Mimura, N. (2008), Hickel, J. (2020), Hamilton, J. M., Maddison, D., & Tol, R. S. (2005), Khan, M., Robinson, S., Weikmans, R., Ciplet, D., & Roberts, T. (2020), McSweeney, C., New, M., Lizcano, G., & Lu, X. (2010), Ozturk, I., Al-Mulali, U., & Saboori, B. (2016), Pratt, S. (2015), Scobie, M. (2018) and other...). This may give the impression that the author has tried to artificially inflate a number of sources. This is a serious offense against the rules of academic work in general.

The Bibliography is not sorted alphabetically, which makes searching and orientation difficult.

Formal requirements

The title of the thesis in the diploma thesis assignment (in the STAG system) slightly differs from the title of the submitted diploma thesis (assignment: The Impact of Climate Change on Local Development and International Cooperation for SIDS; submitted thesis: The Impact of Climate Change in the Local Development of SIDS.).

The weakness of the diploma thesis is the linguistic and stylistic quality of the text. I don't assume flawless English, but some sentences have such a specific word order that they are on the verge of intelligibility.

Topics for discussion

Please comment on some of the critical points mentioned above.

Overall evaluation and proposed grade

The diploma thesis addresses an important topic. However, it suffers from some weaknesses, namely the selection of variables for regression analysis, the explanation of the results of the analysis, work with references and literature, and stylistic and grammatical quality of the text.

Despite these reservations, I do recommend the thesis for defense with grade E.

Date: 11th June 2021

Signature: