

Wrocław, December 18, 2024

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The Impact of Economic Development on the Second Demographic Transition (SDT)
in Sub-Saharan Africa (SSA): The Case of Rwanda
Doctoral Dissertation Review

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Introduction

Demographic change is one of the greatest challenges of the modern world. A significant problem is not only the notable dynamics of population growth on a global scale, but also the diversity of demographic trends in different regions. On one hand, there is demographic decline and aging in the societies of the Global North, while on the other, demographic explosion in the countries of the Global South is visible. Moreover, significant differences in demographic changes exist within each region due to varying social, economic, and cultural conditions. Sub-Saharan African countries are currently experiencing significant population growth as a result of the first demographic transition. In this context, Rwanda stands out particularly, as it seems to have entered the phase of the second demographic transition (SDT) in recent years. However, there are few studies in the literature addressing the SDT in the Sub-Saharan African region. The reviewed dissertation partially addresses this research gap.

Structure of the work

The reviewed paper, including indexes and appendices, consists of 180 typed pages (of which 128 pages of text), including 23 tables and 36 figures. The list of literature cited in the work includes over 280 items. However, it should be emphasized that the list could have been significantly longer if the very rich literature on SDT in the world had been more extensively referred to in the body of the work. However, the reviewer is aware that this could have contributed to a significant expansion of the theoretical part of the work. Therefore, it can be concluded that the rich literature on the subject indicates that the Author of the dissertation has recognized the topic quite well.

The dissertation consists of eight main chapters, which are divided into numerous sections and subsections. However, the structure of the work seems to be too expanded in relation to the rather short content of the dissertation, making many subsections less than 1 page of text. This fragmentation is not conducive to the transparency of the work. It seems that some subsections

could have been combined into longer sections. The order of the individual chapters creates a logical whole. However, some objections could be had about their content. In particular, doubts are raised about:

- description of the study area and the research review in the Research Problem section;
- the problematic structure of Chapter II (is it reasonable to discuss demographic transition theory separately for developed and developing countries?);
- the title of Chapter IV not corresponding to its content (it should indicate a correlation with demographic behavior, as the introduction to the chapter actually says);
- major part of the content of Chapter IV is simply a description of cultural values, with no connection to demographics;
- the examples of Kenya and Ethiopia discussed in Chapter V (Do they really illustrate the second demographic transition? Why were only these two countries discussed? Are those examples special compared to other African countries?);
- section “The Traces of the Second Demographic Transition Process in Rwanda” contains more of a description of the determinants of the second demographic transition rather than the traces of this process;
- intermingling of the survey results with the statistical data analysis in Chapter VII.

A separate problem of the dissertation are numerous references to the studies discussing contemporary demographic changes in selected African countries that appear in sections on other issues, such as in the description of research objectives (paragraph 2, p. 10). In particular, the most questionable are references to the demographic changes in Rwanda in the theoretical section of the work, which are the subject of research in this dissertation. Such references can be found e.g. in the discussion of the theory of the second demographic transition (p. 25).

Substantive evaluation of the work

1. Theoretical assumptions of the work

The main objective of the work was “*to investigate the early traces of the SDT in Rwanda*”. It also is further specified that: “*the study examines the roles of the education, health and labour force sectors in the process of the SDT in Rwanda*”. The main and additional purpose of the work is literally answered by the research questions (QI: *To what extent do traces of the second demographic transition manifest in Rwanda?*; QII: *To what extent have measures of socio-economic progress, such as education, the health sector and the labour force, influenced Rwanda’s second demographic transition process?*) and research hypotheses (H1: *The study hypothesized that there are early traces of the second demographic transition (SDT) in Rwanda*; H2: *The study hypothesized that education, health indicators and the labour force play a role in the spread of the SDT in Rwanda*). The theoretical assumptions of the work seem to be well systematized. Although, as it stands, they seem somewhat obvious, in principle not requiring in-depth examination. Moreover, the explanation of the hypotheses is in a way their verification (pp. 12-13). The verification of the research hypotheses also takes place in the theoretical chapter of the work (p. 25 and p. 27). In this context, a much bolder formulation of research hypotheses should be considered.

2. Theoretical Background

As mentioned earlier, the theoretical chapter of the paper is relatively short (14 pages) and omits a number of significant works on the second demographic transition. However, it can be expected that the author's intention was not to overextend the dissertation or overload it with theoretical considerations. What deserves appreciation is the syntheticity of the description and a good understanding of the issues described.

3. Methodology

The description of the research methods does not contain significant discussion points. The description is concise and understandable. However, it seems that too little space is devoted to the description of data sources, particularly their limitation and reliability.

4. Empirical part of the work

The theoretical chapters of the work constitute the scientific value of the entire dissertation. The author managed to collect and analyze a number of very valuable data on the demographic situation of Rwanda and the determinants of the second demographic transition in the country (especially about the labor market). The following two issues should be considered particularly valuable: [1] survey research on Total Fertility Rate in Rwanda (Chapter VII) and [2] analysis of spatial autocorrelation (pp. 70-77). Some doubts can only be raised about the following:

- total fertility correlation section is not really about correlation (Fig. 5.12 shows total fertility rate and Fig. 5.13 – net migration, not correlation of any two measures);
- the increase in the number of health care institutions should be related to population in analyzed years (pp. 80-81);
- in the chapter VII, analyzing the results of a survey, too little space was devoted to the analysis of the spatial differences of the measures.

5. Discussion and Conclusion

The Discussion section is more of a summary of a survey presented in Chapter VII and lacks with a broader discussion of the results of other researches. This part of the paper needs refinement and expansion. Chapter VIII contains the General Conclusion and Remarks. It is well elaborated, and the conclusions contained therein follow from the content of the work.

Technical Remarks

The work is written in good language, and linguistic errors (mainly stylistic) are relatively rare. The biggest concern is the statement “western model of cohabitation” (p. 9). Much more objections should be made to the figures and tables contained in the work. The titles of most of the figures and tables are not complete (they should be structured according to the principle: what? where? when?) or are inappropriate (Fig. 5.6 was titled Gentrification). A major technical shortcoming are:

- the poor quality and legibility of the figures (e.g., Fig. 2.5 - the trends are not visible);
- appearing text in Polish (Figs. 5.1 and 5.3);
- use of grayscale with a large number of categories (Figs. 1.1 and 1.2);
- incorrect chart type (Figs. 7.2-7.4 should be structural);
- overly large data labels;
- lack of information on the data contained in the table (for what year are the data in Tab. 6.2? The title suggests that they refer to a range);

- lack of total values in some tables (e.g. Figs. 7.4, 7.6 or 7.7).

Achievements of the Thesis

- Significant expansion of knowledge on the second demographic transition in sub-Saharan African countries;
- well-structured theoretical assumptions of the work;
- well thought-out research methodology, adequate to the subject matter undertaken and the intended objectives;
- conscientious conduct of a complex scientific study and high analytical skills of the Author;
- collecting the extensive factual material of high cognitive value (in the face of limited data availability);
- valuable survey research, pioneering in the context of the research on the SDT in the sub-Saharan Africa;
- spatial autocorrelation analysis for Total Fertility Rate in respect of the urban and rural areas in Rwanda.

Concluding Remarks

The reviewed dissertation is a well-planned and carried out study discussing the issue of the second demographic transition in the sub-Saharan African countries using Rwanda as an example. The work has significant cognitive and methodological qualities. In the reviewer's opinion, the established objectives and research hypotheses have been appropriately verified. The reviewed dissertation is a valuable study and contains a number of new findings. I highly appreciate the work and determination of the Author.

According to Article 181 of the Law on Higher Education and Science (from July 18, 2018) it can be concluded that: [1] The candidate has a general theoretical knowledge in a discipline of Socio-economic Geography and Spatial Management and is well prepared to conduct scientific research independently, [2] The subject of a doctoral dissertation is an original solution to a scientific problem (one of the first studies on the second demographic transition in the sub-Saharan Africa). Based on the above statements, it should be stated that the reviewed doctoral dissertation titled "The Impact of Economic Development on the Second Demographic Transition (SDT) in Sub-Saharan Africa (SSA): The Case of Rwanda" written by Mgr. Etienne Gatera, under the supervision of prof. Sławomir Kurek, meets the requirements for doctoral dissertations under the above-mentioned Act.

Thus, I submit a motion to the Council of the Scientific Discipline of Socio-economic Geography and Spatial Management of the University of the National Education Commission, Krakow to accept the dissertation and admit Mgr. Etienne Gatera to public defense.