GENDER EQUALITY AND ECONOMIC GROWTH IN SOUTHERN AFRICAN REGION

by

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Thesis submitted in fulfilment of the requirements for the Degree of
Doctor of Philosophy (Economics)

Newcastle Business School
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The University of Newcastle, Australia

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Statement of Originality

The thesis contains no material that has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University’s Digital Repository, subject to the provisions of the Copyright Act 1968.

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I declare that the work embodied in this thesis is the result of original research and has not been submitted for a higher degree to any other university or institution.

I certify that, to the best of my knowledge, any help received in preparing this thesis and all sources have been acknowledged in this thesis.

____________________
Elsa Alexandra Licumba

Date: _________________
Dedication

To my mum, Isabel Vasco Uamusse
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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>2SLQ</td>
<td>Two-stage least square</td>
</tr>
<tr>
<td>3SLQ</td>
<td>Three-stage least square</td>
</tr>
<tr>
<td>AGOA</td>
<td>African Growth and Opportunity Act</td>
</tr>
<tr>
<td>BLUE</td>
<td>Best linear unbiased estimator</td>
</tr>
<tr>
<td>CSD</td>
<td>Cross-sectional dependence</td>
</tr>
<tr>
<td>DRC</td>
<td>Democratic Republic of the Congo</td>
</tr>
<tr>
<td>EFA</td>
<td>Education for All</td>
</tr>
<tr>
<td>EPZ</td>
<td>Export processing zone</td>
</tr>
<tr>
<td>EU</td>
<td>European Union</td>
</tr>
<tr>
<td>FDI</td>
<td>Foreign direct investment</td>
</tr>
<tr>
<td>FE</td>
<td>Fixed effects</td>
</tr>
<tr>
<td>FGLS</td>
<td>Feasible generalised least squares</td>
</tr>
<tr>
<td>fLE</td>
<td>Female life expectancy</td>
</tr>
<tr>
<td>GDP</td>
<td>Gross domestic product</td>
</tr>
<tr>
<td>GMM</td>
<td>Generalised methods of momentum</td>
</tr>
<tr>
<td>HT</td>
<td>Harris–Tzavalis test</td>
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<tr>
<td>IV</td>
<td>Instrumental variable technique</td>
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<tr>
<td>LLC</td>
<td>Levin–Lin–Chu</td>
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<tr>
<td>LM</td>
<td>Lagrange multiplier</td>
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<tr>
<td>MDG</td>
<td>Millennium Development Goals</td>
</tr>
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</table>
MENA: Middle East and North Africa

mLE: Male life expectancy

OECD: Organisation for Economic Co-operation and Development

OLS: Ordinary least square

PPP: Purchasing power parity

R&D: Research and Development

RE: Random effects

RESET: Regression equation specification error test

SADC: Southern Africa Development Community

SGDI: Gender Development Index

SPG: Southern African Protocol on Gender

SSA: Sub-Saharan Africa

SUR: Seemingly unrelated regressions

TB: Tuberculosis

UN: United Nations

US: United States

USD: US dollars

WDI: World Development Indicators
Abstract

This study examines the effect of gender equality in the SADC region between 1970 and 2010. Economic growth is the dependent variable and was measured by real gross domestic product (GDP) per capita at 2005 constant prices. Gender equality in education was measured by the ratio of girls to boys enrolled in primary, secondary and tertiary schooling. Health was measured by life expectancy by gender. Three macroeconomic models were estimated, namely the macroeconomic model of gender equality in education, the macroeconomic model of health disaggregated by gender and the interactive macroeconomic models for both gender equality in education and health disaggregated by gender on economic growth. The analysis collected secondary data from 15 countries from the SADC area. However, most of the countries did not have data on relevant variables, such as GDP and education. Some countries that did have data in education were missing observations for several years, and data were not continuous. Therefore, the study reduced the sample to five countries: Botswana, Lesotho, Mauritius, Mozambique and Tanzania. This sample is considered to represent of the population.

The study key findings are summarised as follows. At aggregate level, gender equality in primary education was found to be positively associated with economic growth in the region. The effect of gender equality in secondary and tertiary education on economic growth is negatively associated to economic growth significant in the region.

The empirical analysis of the period before policy reforms (1970–1989) observed no significant effects of gender equality in primary, secondary and tertiary education. After the period of reform (1990–2010), gender equality in primary, secondary were associated with economic growth in the region. Gender equality in tertiary education after the period of reforms was not significant to economic growth.

The effect of gender equality in primary education was positive and significantly in low-income countries only, namely Tanzania and Lesotho. No significant effect of gender equality in secondary in any country. The effect of tertiary education on economic growth was statistically significant in Mauritius, Mozambique, and Tanzania.
These results have several implications. Firstly, the region should continue to promote
equality in primary and secondary education, as this appears to foster economic growth.
Secondly, the results also advocate some policy adjustment in education planning
within the region, to ensure the retention of girl students and transition to upper levels.
Thirdly, there must be a commitment in policy making to provide quality education that
meets the skill-demand needs of the region. In this context, the results also advocate the
need to accelerate equality in the upper levels and stimulate economic growth through
innovation and knowledge-led growth. This will require strong commitment from the
region to continue with their job creation policies, in order to foster an environment in
which the returns of education are visible and clear, at all levels. Consequently, there is
a need to address the issue of ‘brain drain’ and the creation of stronger incentives to
reduce the migration of highly skilled citizens.

Regarding the effects of health disaggregated by gender, the following results were
found. Female and male long life can significantly improve economic growth in this
region. However, an increase in male life expectancy significantly increases economic
growth, greater than that of females. In the presence of HIV, female and male life
expectancy was not significant to economic growth in this region. In the presence of a
labour force, the effect of female and male life expectancy was not associated with
economic growth in the region. The country analysis found that an increase in female
and male life expectancy was associated with growth in countries with lower levels of
HIV, namely Mauritius and Tanzania.

These results imply that there is a need to continue to tackle HIV infection and related
communicable diseases, to reduce morbidity and increase productivity rates. Continuous
efforts should be made to improve health and overall life expectancy in the region.
Particular attention should be given to the health of women, as they are most affected by
HIV. It is necessary to improve female health while providing education and jobs for
women, as they play a strategic role in poverty reduction.