Fertility Differentials in Sub-Saharan Africa: A Review of Determinants

Introduction

Fertility has been described as the logical target for reducing population growth. The fertility rates in Sub-Saharan Africa are by no means alike as some regions and countries have developed peculiar fertility trends. Some countries have been able to transit from high to low at a very fast pace while others have stalled along the way. For e.g. the total fertility rate (TFR) in Southern Africa (Botswana, Lesotho, Namibia, South Africa, and Swaziland) is about 2.6 children per woman which is estimated to be half the level of Eastern, Western, and Central Africa. The only exception within these regions in Rwanda where a 25 percent fertility decline has been observed between 2005 and 2010 which has been recorder as the first of that speed and magnitude in sub-Saharan Africa. In addition, Malawi has a TFR of about 5.6 which differs from the other southern African countries. This study focuses on Bongaarts model which posits that variations in fertility among countries and among individual women are due to the effects of the proximate variables. Fertility preferences are important in shaping individual fertility behavior, and in most of sub-Saharan Africa, women and men prefer to have large families. Some other factors that have been shown to influence the variation in fertility transitions include the quality of national family planning programs in terms of funding, human resources, logistics, and political commitment. Also, researchers have consistently found that increases in women's education and improvements in infant and child mortality contribute to faster fertility declines. This is logical and highlights the significance of social development policies to demographic change. Education affects fertility through contraceptive use and age at marriage, and mortality decline precedes fertility decline in the demographic transition. Based on this background, this study aims to explore the determinants that differentiate the countries in sub-Saharan Africa that are recording steady fertility declines from those where fertility has been stagnant or even rising?

This paper uses data from nationally-representative Demographic and Health Surveys conducted in each country based on geographical difference with Malawi representing Southern Africa, Nigeria – West Africa, Rwanda – Central Africa and Uganda representing East Africa. In order to qualify, a country needed to have had a DHS from 2010 and beyond where the fertility rates have declined, stalled or still pre-transitional. These four countries met these conditions. In addition, Demographic and Health Survey data allows for international comparability of results because the DHS programme employs similar methodologies in data collections across different countries and settings (Adedeni et al., 2014). The analyses for this present study covered 23,020 (Malawi), 38,948 (Nigeria), 8,674 (Uganda) and 13, 671 (Rwanda) women of childbearing age.

The outcome variable in this study was children ever born. The main reason for using the fertility measure is that no dating is involved, which means that the data cannot be distorted by dating errors. The variable is measured by asking the woman; "How many children have you ever borne alive?" with the expected answer being a number. Explanatory variables used include age, education, partner's education, occupation, place of residence, contraceptive use, age at marriage, age at first birth, religion, household head, child death experience, wealth status and exposure to mass media.

The mean and standard deviation of the dependent and independent variables were presented. Poisson regression analysis was used to examine the specified relationship between children ever born and the community, socioeconomic and demographic variables. Analysis was conducted using Stata software (version 11.2). To account for under-sampling and oversampling of some settings in the country, weighting factors were applied at the various levels of analysis.

Substantial variability was found among the four countries in the determinants of fertility. Similar results were seen between individual level factors and fertility in the four countries while results varied for community level factors.