

Levels and Determinants of Marital Fertility among Low Contraceptive Communities of southern Ethiopia: Experiences of resistant to fertility decline

Extended Abstract

Fertility issues have become the concern of national governments as well as the international communities during the last few decades. Fertility is one of the most important components of population growth and population dynamics affecting multidimensional social and economic life of people. Fertility is a biological phenomenon but it depends heavily on socio-economic, technological, cultural, religious, political and legal factors. Fertility analysis is very important not only from the population growth control point of view but also because of its high correlation with maternal mortality, child survival and many other reproductive health status of women.

This study is an empirical study aimed at estimating the level and identifying the basic demographic, economic and social determinants of marital fertility among some selected rural communities of Southern Nations Nationalities and Peoples Region (SNNPR) of Ethiopia.

In order to collect the required input data, a comprehensive questionnaire was developed. The data were collected from 1467 women who were selected through the multistage stratified sampling technique. Upon the successful completion of the fieldwork, the data entry and analysis were done using the SPSS computer software package. Data analysis was done using both appropriate demographic models and multivariate techniques.

The study employed three major techniques for the estimation of fertility level; namely, the Bongaarts model, and the Coale-Trussell Natural Fertility model. Using the Bongaarts model, the study has estimated the TFR of about 6.4, Total Natural Marital Fertility Rate (TN) of 8.30 and Total Fecundity (TF) of 15.38. Further, the Bongaarts model has estimated the fertility inhibiting effects of the four major proximate determinants (marriage, contraception, induced abortion and post partum infecundability),and found that the post partum infecundability is the prime fertility inhibitor followed by marriage factors. The estimated Total Fertility Rate (TFR), the adjusted Crude Birth Rate and the General Fertility Rate, using the average ratio methods, are estimated to be 6.1 per women, 48.7 per thousand population and 266 per

thousand women respectively. The Coale-Trussell model, which was primarily employed to examine the age patterns of marital fertility, revealed an over all fertility control index of $m=0.15$, suggesting that the population is experiencing vary little voluntary control of birth. Also, the Coale-Trussell model estimated the Adjusted Total Marital Fertility Rate (TMFR) of 7.01.

The relative contribution or the net effect of each independent variable to the dependent variable (children ever born), controlling for all confounding factors, was examined using the multivariate analysis. The findings of the multivariate analysis using Multiple Classification Analysis (MCA) technique revealed that seven predictors (explanatory variables) have significant relationship with fertility. While Son preference, educational status, patriarchal structure and household land size are found to have significant positive relationship with fertility; duration of abstinence and nutritional status are known to yield negative relationship with the response variable.

Finally, on the basis of the findings, few policy recommendations were given. Improving the educational status and autonomy of women, developing incentive systems for rural women and girls, establishing adequate linkage between family planning programs and religious institutions, improving the maternal and child health at grass root level and strengthening the community based access to affordable family planning services were some of the major recommendations given

Country Profile

Ethiopia is located in the horn of East Africa between 3 and 15 degrees north latitude and 33-48 degrees east longitude. It is an ancient country with a rich diversity of peoples and cultures. Covering a total area of some 1,130,000 square kilometer, Ethiopia is a country of great geographical diversity with rugged mountains, flat-topped plateaus, deep gorges, and rolling plains. The country is bordered by Djibouti, Eritrea, Sudan, Kenya, and Somalia (CSA, 2000).

With an estimated population of about 71 million, Ethiopia is the third populous country of Africa, next to Nigeria and Egypt. Fuelled by a high level of fertility rate, the country is experiencing high annual population growth rate of about 2.9 percent. The population increased over the decades from 42.6 million in 1984 to 71 million in 2004 (NOP, 2000; CSA, 2000).

Ethiopia is an agrarian country where agriculture accounts for more than sixty percent of the GDP, employing about 85 percent of the population, and accounts for about 90 percent of the export (CSA, 2000). The country is one of the least developed in the world, with a per capita Gross National Product (GNP) in year 2004 of US \$ 98 (GoE, 2000).As one of the indicators of

economic status of the population, the household expenditure shows very unpleasant distribution. According to the national level expenditure survey (CSA, 1996), about 68.5 percent of the households in the country spend less than 600 dollars (5400 Ethiopian birr) per year, and in rural Ethiopia, the average expenditure per household per year is about 190 dollars. Ethiopian households save only 6.6 percent of their total earnings (CSA, 1996), which is also another way of looking at the depth of the poverty of the nation.

Majority of Ethiopians have little or no education; 62 percent of males and 77 percent of females have no education, 27 percent of males and 17 percent of females have only some primary education, less than 3 percent of males and 1 percent of females have attended (but not completed) secondary level education. Only less than 4 percent of the population completed secondary or higher education. The main occupation of the settled population is farming while about 25 percent of the total land is left for pastoralists. Christian and Islam are the two main religions of the country; 51 percent of the population is orthodox Christian, 33 percent Muslims, 10 percent Protestants and the rest are following diversity of faiths. The country is a home to about 80 ethnic groups that vary in population size from more than 30 million to less than 100 (CSA, 1998; 2000).

It is estimated that about 75 percent of the population suffers from some type of communicable diseases and malnutrition (TGE, 1995). It is estimated that about 50-60 percent of the population is chronically food insecure and more than half of the children below the age of five are stunted; 11 percent of the children are moderately wasted and 1 percent of these children are severely wasted (CSA, 2000). Life expectancy at birth, as an indicator of the health status of the population, is estimated to be about 42 years (PRB, 2003) and the more sensitive indicator, infant mortality rate is 107 per 1000 births, whereas the average sub Saharan Africa IMR is less than 100 per 1000 live births (PRB, 2003). On top of these, maternal mortality ratio in the year 2003 was above 895 per 100,000 births, which is one of the highest in the world (PRB, 2003; CSA, 2000).

Among the nine federal states of the country (Amhara, Oromia, Tigray, Afar, Somalia, Gambella, Benishangul, Region 14, and SNNPR), the Southern Nations ,Nationalities and Peoples Region (SNNPR) , which is the concern of this study, is located in the southern part of the country. With an area of 113,539 square kilometres, it accounts for about 10 percent of the total area of the country. The region constituent of twelve sub-regional administrative areas called 'Zones' classified on the basis of ethnicity (Sidama , Guraghe, Hadya , Wolaita , Bench Maji, Semen Omo, Debub Omo, Gedeo , Keficho , Kembatta, Alaba Tembaro, and Silti ,).In the year 2000, the population of the region was estimated at about 12.5 million, of which 6.2 million male and 6.3 million were female population. The region's population accounts for 20 percent of the total population of the country, which makes it the third populous region in the country next to Oromia and Amhara federal states (SNNPR, 2000; CSA, 2000).

The population profile of the region is characterized by large number of children under 15 (46.7 percent) while those in the age group 15-64 and above 64 accounts for 50 and 3.3 percent respectively. The median age of the population in the year 2001 was estimated to be about 17 years, which again indicates high prevalence of dependency and high population momentum in the years to come. Out of the total population of the region, women in the reproductive age (15-49) account for about 2,970,650 in the year 2000 (47.3 percent of the total female population of the

region). Out of these, only 8 percent live in urban areas while 92 percent reside in rural areas of the region.

The crude birth rate and Total Fertility Rate of the region in recent years was 48.6 and 7 respectively (CSA, 1998). The region is experiencing one of the highest Infant Mortality Rate (113.4 per 1000 live births), under five mortality of 191.5 for both sexes and maternal mortality rate of above 850 per 100,000 live births (CSA, 2000; MOH,2000). About 53.9 percent of children are stunted, 12 percent are severely wasted and 52.5 percent are under weight (CSA, 2000). On top of these, the region exhibits one of the lowest health service coverage in the country (RBOH, 1998). Lack of good antenatal delivery, poor postpartum care, malnutrition, anemia, high fertility and the like contributed to the high regional maternal mortality rate. Moreover, sexually transmitted diseases are among the major health concern of the region. Currently, the HIV cases are increasing very alarmingly and threatening the health status of the citizens and thereby bringing about serious socioeconomic consequences in the region.

Sidama zone is one of the 13 zones found in SNNPRG. It is found in the northeastern part of the region and it is bordered by Oromiya federal state in the north, east and southeast, with Gedeo zone in the South, and North Omo zone in the west (see the map on page vi).

The zone has a total area of 7200 Km² divided into ten sub-zones, locally called 'woredas' and two administrative towns. These ten woredas are; Awassa, Shebedino, Dalle, Aleta Wondo, Darra, Hagere-selam, Arorresa, Bensa, Arbegona, and Boricha wordas and the two towns administrations of Yirgalem and Aleta wondo. Among all woredas, Dale is the largest with a total area of 1494.630Km² while the smallest is Darra with 263.360 km². The zone has different landform characteristics varied from high mountains to low lands as it is true for different parts of the country.

According to the recent estimate, the zone's total population is about 3 million with an average density of 386 persons per km², making it one of the densely populated zones in the region. There is high variation in the population growth rate of rural and urban areas, which is 4.11 and 2.23 percent per annum respectively. Protestant christians account for the majority followed by orthodox Christian, catholic and Islam.

The zone is one of the least developed areas of the country with very closed and rigid social system, and exhibiting very low level of literacy, high infant and child mortality, very low prevalence of contraceptive use (less than 4 percent), high level of maternal and child malnourishment (54 and 50 percent respectively) and very low status of women.

Major Findings

Based on the data collected from 1467 women and the aforementioned methodological considerations, the study has come up with the following conclusions and policy implications:

- ❖ The results of the estimation of the levels of TMFR using two different models (the Coal-Trussell and P/G ratios) showed that the adjusted TMFRs of the study population are 7.01 and 7.81 respectively. While the variations in the results is a function of the models and assumptions involved, the results reveal that the TMFRs estimates have large gap with the estimated TFR of 6.1. The gap between the levels of the estimated TMFRs and TFR, can only be explained by factors of marriage: universal marriage at early ages, and very low level of marital disruptions experienced by the study population.

- ❖ Using the Coal-Trussell model of fertility, the study has also documented that the population is experiencing essentially a natural fertility regime where the overall index of fertility control is computed to be $m = 0.15$. Even though there occurred a drop in fertility of the country as a whole from TFR of 7.7 in 1990 to about 6 in 2000, most of the social structures and norms in many parts of the country including the study area still precipitate high fertility regime. This may imply that the national agenda of population stabilization may find hard time until true fertility transition occurs in the majority of rural communities of the country. The figures computed by the three methods can also suggest that some proximate and background fertility variables such as the very low age at marriage of women, early childbearing, cultural factors (such as strong son preference, patriarchal system, land ownership and rights, religious faiths and the like) are interacting to result in high fertility in the region.

- ❖ Using the Bongaarts model, the study has estimated the TFR of about 6.4, Total Natural Marital Fertility Rate (TN) of 8.30 and Total Fecundity (TF) of 15.38. Further, the study has estimated the fertility inhibiting effects of the four major proximate determinants (marriage, contraception, induced abortion and post partum infecundability),and found that the post partum infecundability is the prime fertility inhibitor (inhibiting about 6. births per woman or 70.3 percent of the total 8.98 births inhibited by the four proximate determinants combined)

followed by marriage factors which inhibited 22 percent or 2.4 births. Due to its very low prevalence, contraception is found to own very low inhibiting power. The policy implication of the findings from Bongaarts model is clear: Certain aspects of socio-economic development (urbanization and modernization) have competing effects on different proximate determinants, which conceal each other out at low-level development. For example, any further progress to be made in increasing formal education in the study area help to raise the age at marriage and delaying child bearing, but small amounts of education also can break down traditional child spacing such as the prolonged breast feeding and post partum abstinence, leading to an increase in marital fertility unless compensated by substantial increase in the use of contraception. Thus, policy makers should note of this factor while taking a step towards fertility-reduction endeavor.

- ❖ Among the study population, the prevalence of contraceptive use is about 6.2 percent suggesting that either there is high unmet need for appropriate family planning or serious resistance to changes in using family planning options for voluntary control of birth. The study has assessed the contraceptive use intention, and found out that larger proportion of the women have a plan to use contraceptives in the future provided affordable contraception is made accessible to them.
- ❖ The study has documented that the majority of both younger and older women in the study population experienced marriage at an early age (before age 15). The marriage factor, early age at first marriage or absence of delayed marriage, are found to explain much of the variations between level of marital fertility and total fertility rates in the study population.
- ❖ The study has located the mean age of child bearing of the study population to be 25.93. Though plausible conclusion may be difficult to make since this figure is calculated for different cohorts in the population, the figure can indicate that the

lower age at child bearing during this reference period contributed to high fertility experience in the population.

- ❖ The analysis presented in this study also highlights the role of son preference in sustaining high fertility levels. The mean children ever born among the sample women varied significantly according to the number of sons the respondent wishes to have during the course of their life. Like in other traditional societies, the material basis for son preference in the study population is evident mainly for the family lineage and economic reasons-first and foremost, security in old age.
- ❖ It is observed that the mean number of children ever born and nutritional status of women has negative relationship, indicating that better nourished mothers will bear less number of children This implies that if there will be improvements in the nutritional status of women in the region during the forthcoming years along with increasing the contraceptive prevalence to a sizable degree, there will be greater room to reduce the fertility level in the region. In the same token, the high level of maternal malnutrition in Sidama zone (54 percent) calls for immediate attention and intervention programs.
- ❖ The land-fertility relationship, which has been scarcely investigated in many of the fertility studies, has been examined in this study. It is observed that households with large operational land usually go for possible higher parities, indicating positive associations between the two variables. In situations where women do not have true right of inheritance, like the study population, land (including the associated resources of cattle and cash crops) may continue to be bride wealth to marital union in the region, continue making women subordinate to the patriarch and land owner.
- ❖ The study documents that the mean number of children ever born to women has significant association with religious status. The analysis has shown that Orthodox Christian women experience higher fertility than Protestant, Catholic

Christian and Muslim women. The fact that religion is deep rooted in the life of the community, it may continue to have detrimental effects on the fertility behavior of couple.

- ❖ It has been noted from this study that the persistence of high natural fertility is deeply rooted in the patriarchal system with its emphasis on family and descent. The adjusted mean of MCA analysis showed that the mean CEB increases as the age difference between the wife and husband increases. Patriarchal (patriarchy) is deeply entrenched in most of Ethiopian's social institutions, giving husbands absolute decision making power, and forcing wives to subordinate their interests to their husbands. Such a system of family life undoubtedly has great deal of repercussion on the prospects of fertility decline in the region. For example, in most instances, higher age difference between wife and husband diminishes the likelihood of communication and discussion on common reproductive issues, in which case the husband/patriarch may dominate the wishes of the wife. In this context, even if a woman feels like using family planning or stop child bearing, she may not initiate the process without her husband's consent.