Age at Marriage, Contraceptive Use and Abortion in Yemen, 1991-1997

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Abstract

This paper attempts to examine the extent of influence of the three components of fertility, age at marriage, extent of modern contraceptive use and the level of abortion on fertility in the Republic of Yemen and to explore the impact of a selected set of demographic and socioeconomic variables on the three fertility components. This study uses data from Demographic and Health Surveys (DHS) conducted in Yemen in 1991/1992 and 1997. The results from this study present empirical evidence of an onset of fertility decline in the Republic of Yemen. An important component of this decline is delayed age at marriage. There has been an increase in modem contraceptive use during the last decade. However, these methods are not widely used at early stages of family formation. The most common method of family limitation among women with large families is abortion. There has been very little change if any in the widespread occurrence of abortion during the last decade. There exist significant urban-rural differences in the levels of contraceptive use and abortion. Improvements in women's education and modern sector labor participation are crucial for increasing age at marriage, and level of contraceptive use and for reducing the prevailing level of abortion.

Key Words: Age at marriage, contraceptive use, abortion, Yemen, family limitation, fertility.

Against wide spread predictions that natural fertility regimes in the Middle Eastern countries will persist in the foreseeable future, almost all countries in the Middle East have experienced fertility declines in recent decades (Rashad, 1999). The fertility decline started in Muslim societies of North Africa such as Egypt, Tunisia and Morocco. Perhaps the first country to register fertility decline was Lebanon. Tunisia and Egypt followed. Approximately ten to fifteen years after the start of the Tunisian fertility transition, Algeria, with a high fertility rate even by fertility level standards for the Arab region, registered declines in fertility. Within a span of 20 years, the total fertility rate in Algeria fell by 3 children (Rashad, 2000). By 1995 all Arab states had undergone some decline in fertility (Rashad, 2000). Currently, fertility has fallen in every Arab country except Yemen. Fertility rates in Yemen closely followed by the Sultanate of Oman are higher than the prevailing fertility rates in the Middle Eastern and North African states (DHS, 1997). Yemen is one of the poorest countries in the world and it now has the highest growth rate.

Total fertility in Yemen is greater than seven children per women of reproductive age. The age at marriage in Yemen is among the lowest in the Arab region. Yemeni women tend to marry early. The first birth interval, duration between marriage and the birth of the child, is shorter than the first birth interval prevailing in any of the Middle Eastern countries (Eltigani, 2001 a). Yet fertility has declined in Yemen. Rashad (2000) attributes the decline to slight increases in the age at marriage while Eltigani (2001b) attributes the same to decline in marital fertility. This paper has three objectives. First is to assess the extent of fertility decline in Yemen during the last decade. Second, to examine the extent of influence of the three components of fertility, age at marriage, extent of modern contraceptive use and the level of abortion on fertility and, finally to explore the impact of a selected set of demographic and socio-economic variables on the three fertility components.

Variables

Demographic studies have long utilized the proximate determinants proposed by Davis and Blake (1956) as variables for explaining fertility. They provide eleven variables associated with three stages of fertility: intercourse, conception and gestation. Successful passage through the three sequential stages is necessary for the occurrence of fertility related outcomes. Thus the three important components of fertility are age at marriage, modern contraceptive use and abortion.

literature on abortion in Yemen is very limited (Weeks, 1988). Questions on abortion in Yemen National surveys such as the 1997 Demographic and Health Survey do not distinguish between spontaneous and induced abortions. Abortion estimates obtained from these sources may not be fully reliable. However, several studies on abortion (Bankole, Singh, and Haas, 1999; Henshaw, Singh, and Haas, 1999; Bairagi, 2001) suggest that particularly in countries where use of contraception is restricted, abortion is used to limit family size (Georges, 1996; Johnson, Horga, and Andronache, 1996).

As education increases, women are less likely to obtain illegal abortion, as they are more aware of the dangers associated with illegal abortion. In Yemen abortion is considered a violation of religious moral codes. Employment in professional occupations increases the undesirability of abortion. Social and economic institutions may perceive violators of moral codes as threats to their institutions. Professional jobholders are less likely to engage in illegal abortion as health risks associated with illegal abortion may disrupt career stability and mobility. Husband's approval of contraceptives brings about an environment supportive of the wife's reproductive health decisions. Thus, the decision to have an abortion may be supported by husband's favorable attitude toward family planning. The desire to have another child reduces the likelihood of abortion. The variable "desire to have another child" is used as a control. In sum, this study suggests that the three determinants of fertility are influenced by contextual variables such as place of residence, human capital variables such as education, labor force participation status, and attitude toward birth control in general. Figure 1 presents the expected model of fertility for Yemen.

Data and Methods

This study uses data from Demographic and Health Surveys (DHS) conducted in Yemen. The Republic of Yemen had two national surveys conducted - in 1991/1992 and 1997. The 1997Yemen Demographic and Maternal and Child Health Survey (YDMCHS) is the second national survey conducted in Yemen since unification of the country. The YDMCHS- 1997 was designed to collect data on households, and ever-married women of reproductive age (15-49). This survey interviewed 10,414 of the 11,158 eligible ever-married women in the age group 15-49 (Central Statistical Organization (CSO)[Yemen] and Macro International Inc. (MI), 1998). The survey conducted during 1991/1992 interviewed 5687 eligible women (Central Statistical Organization (CSO)[Yemen], Pan Arab Project for Child Development (PAPCHILD)[Egypt], and Macro International Inc. (MI), 1994). The subjects covered in the household survey include characteristics of households, housing and living conditions, school enrollment, labor force participation, general mortality, disability,

fertility, and child survival. The areas covered in the survey of women of reproductive age are: demographic and socioeconomic characteristics, marriage and reproductive history, fertility regulation and preferences, antenatal care, breastfeeding, and childcare. The main purpose of the 1997 YDMCHS was to provide detailed information on fertility, family planning, infant and child mortality, maternal and child health, and nutrition. The 1997 YDMCHS included a module to obtain information on female circumcision and information was also collected on height and weight of mothers to measure maternal malnutrition.

Responses from the "Maternal and Child Health Questionnaire" module are used in the present study. This module includes several sections - respondent's background, reproduction, family planning, pregnancy and breastfeeding, immunization and health, fertility preferences, marriage, and husband's background, woman's work, maternal mortality, female circumcision, and height and weight. Descriptions and coding of variables used in the study are given in Table 1.

Analysis and Results

The analysis is conducted in three separate stages. In the first stage, descriptive characteristics of all the variables used in this study are examined. In the next stage, the focus is on the direction of the effects of the three proximate determinants, age at marriage, contraceptive use and abortion status on family size, measured as children ever- born. Family size is regressed on the three determinants. In the final stage, we assess the effects of the selected set of demographic determinants on the three proximate determinants of fertility. Since the dependent variables are categorical in nature, logistic regression is used. The analysis involving all three stages is conducted separately for the 1991 YDHS and 1997 YDHS separately. This provides an opportunity to assess the direction of changes in two sets of relationships. First, between the proximate determinants and family size. Second, between the selected set of demographic variables and the three proximate determinants.

The mean number of children ever-born for the 1991 YDHS is 4.96 children and the median is 5. The mean and median values for the 1997 YDHS data are 4.83 and 4.00 children respectively. Thus there has been a decline, at least by one child, during the 1991-1997 period. Table 1 presents the percentage distribution of all the variables used in the study for the 1991 and 1997 samples. Nearly three-fourth of the 1991 sample respondents lived in rural areas. The difference in the percentages living in rural areas in the 1991 and 1997 is small, about 3 points.