Changes in Marriage, Fertility, and Infant Mortality Trends in Kazakhstan

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In the past decade in Kazakhstan, decreasing fertility rates are accompanied by infant mortality rates that have almost doubled in only five years. According to DHS surveys from 1995 and 1999, the number of children per woman has fallen from 2.5 to 2.0 in only four years, while the infant mortality rate (per 1,000 live births), has increased from 39.7 to 61.9[1]. These opposing forces have tremendous potential impact for the future demographic landscape of Kazakhstan. In addition to describing general trends, I am particularly interested to explore whether these trends likely to persist, or are one-time responses to the recent economic, political, and social changes in the Central Asian region.

In this paper, I use DHS data to explore mechanisms behind both of these trends, as well as the potential consequences for the future adult population. Preliminary results suggest that the dropping fertility rates are concurrent with declining marriage rates and increased use of birth control among young women, which suggest that fertility rates may increase in the future if these women marry and have children to the same degree as previous generations, only at later ages. I use survival-time methods to assess whether women in younger age groups (15-19 and 20-24) are delaying marriage and childbearing, relative to older age cohorts. Preliminary results suggest that each 5-year cohort for women under 50 have had significantly different behaviors relative to the 15-19 year old age cohort. The youngest age group has indeed put off bearing children and marrying relative to all of the older cohorts, yet, curiously, the two previous cohorts (women aged 20-24, and 25-29) actually were more likely to marry and have children before age 20, relative to both younger and older women. The three cohorts prior to these two (women aged 30-34, 35-39, and 40 and older) exhibit a consistent trend towards later childbearing and marriage with each cohort. These results suggest two interesting patterns: firstly, recent marriage and reproductive patterns have become unstable in the past ten years,

following more consistent trends of delaying birth and marriage over time. Secondly, the quickly-dropping fertility rate might be made up in the future by women who had delayed childbearing having similar numbers of children, only at later dates. Crosstab analysis indicates that previously, while women prior to the 25-29 age cohort had put off childbearing to later dates, they had 'caught up' in terms of children ever born by age 30. The role of abortion in Kazakhstan, an important factor as up to 40% of all women have at least one aborted pregnancy by age 50, may confound these results as the percentage of women having early abortions (before age 20) has increased steadily across cohorts. It is unclear whether young women will have more lifetime abortions relative to older cohorts, or whether they are having abortions earlier in order to delay motherhood, whereas older cohorts aborted later mainly to limit the total number of children they had. It is an interesting question that deserves further exploration. The youngest cohort is also using birth control methods at higher rates relative to older cohorts, suggesting younger women are actively attempting to delay birth.

Counterbalancing this potential increase in fertility are high infant and child mortality rates. I have not yet explored enough country-specific causes of infant mortality to suggest mechanisms driving this precipitous increase, but will do so in time for the conference. My preliminary results are also based on the 1999 DHS + data; before the conference, I also will more fully analyze the 1995 DHS-III data to determine the extent of the recent patterns; whether they are likely to persist or are a one-time response to changing conditions in the country.

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[1] Country summary statistics, www.measuredhs.com