Postponement and Recuperation in Cohort Fertility of East Asian Countries

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East Asian countries accomplished rapid economic development in the past and now experience significant decreases in their fertility rates. In European countries where recovered period total fertility rates in recent years women realized their delayed child births in the later times of reproductive years. Different from the European countries women living in the East Asia delayed childbirths but hardly realized child births afterward. It could be the main reason for drop of period total fertility rates in the East Asian countries (Frejka, Jones, and Sardon, 2010; Frejka 2017).

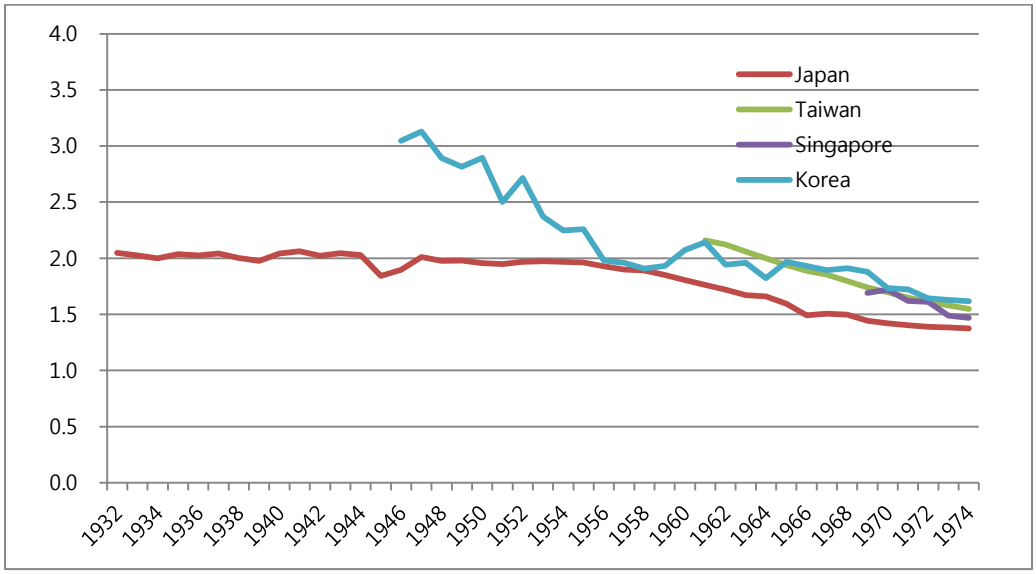
This study looks at cohort fertility rates of Korea, Japan, Taiwan and Singapore from cohort of 1940's to cohort of 1980's. Data from the Human Fertility Database (HFD) were used for Japan and Taiwan. Data from the KOSIS, Statistics Korea and data from「Population Trends 2017」of Department of Statistics Singapore were used for Korea and Singapore, respectively. We compare cumulated cohort age-specific fertility rates between the benchmark cohort (1950~1960) and subsequent cohorts of 1960~1995 extending the works of Frejka, Jones, and Sardon (2010). Following the methodology of Zeman et al. (2018) this study decomposes changes in cohort fertility rates of Korea using parity progression ratios for cohorts from the 1940's to 1970's.

The results from this study show that both period total fertility rates and cohort total fertility rates declined significantly for all of the East Asian countries. Period total fertility rates of Japan almost approached to cohort fertility rates in recent year, however the level of period total fertility rates of Korea were continuously below the level of cohort total fertility. Women in the East Asian countries delayed child birth and number of births also dropped as the previous studies showed. This study found that recent Japanese cohorts almost stop to delay child births. However,

young Korean and Taiwanese women still delay their child birth. It is hard to expect recovery of fertility rates in those countries because the number of children per a woman already significantly dropped. The results from decomposition of changes in cohort fertility rates show similar patterns of the previous studies. The contribution of changing parity progression ratios varied across the cohorts. The decline of the progression ratio to third and higher older mostly contributed to the fertility decline for cohorts between the 1940's and 1950's. The influence of decline in progression ratios to second-births increased up to the cohorts of 1960's and then decreased afterward. The drop of first-birth rates were most influential for the reduction of fertility rates between cohorts of 1960's and cohort of 1970's which show fertility rates below replacement level.

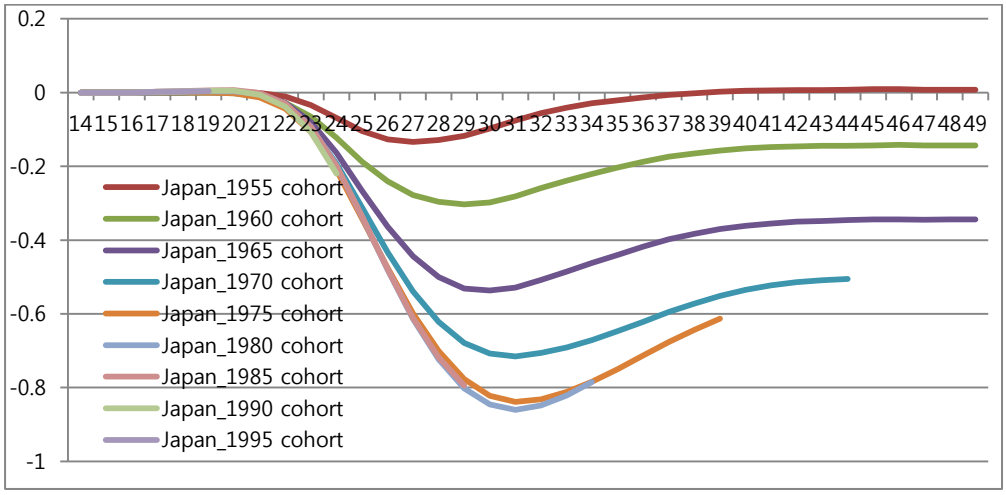
The results from this study demonstrate that fertility rates of East Asian countries would hardly increase in the near future. The decline of first-birth rates and its significant effects on decline of fertility for recent cohort suggest that not only increase in the number of unmarried people but also expansion of couples without children would be the most important reason for the fertility declines in current East Asian countries. Policy effort to increase fertility rates should be targeted on these groups.

<Figure 1> Cohort total fertility rates for Japan, Taiwan, Singapore, and Korea, birth cohorts 1932~1974



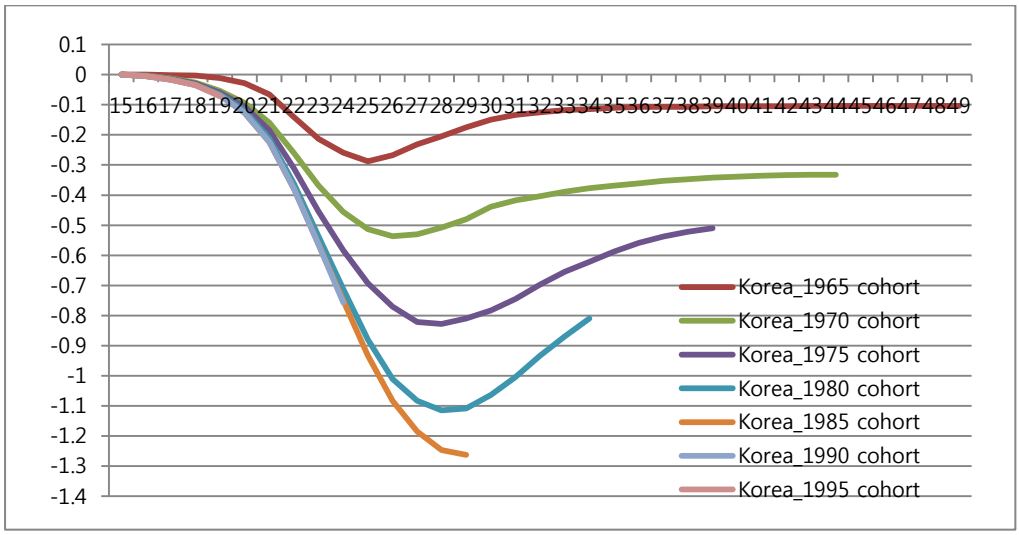
Source) Korea, Statistics Korea, KOSIS (2018); Japan, Taiwan, Human Fertility Database (2018); Singapore: Koh Eng Chuan (2010)

<Figure 2> Differences in cumulative cohort age-specific fertility rates between 1950 benchmark cohort and subsequent cohort, 1955~1995: Japan



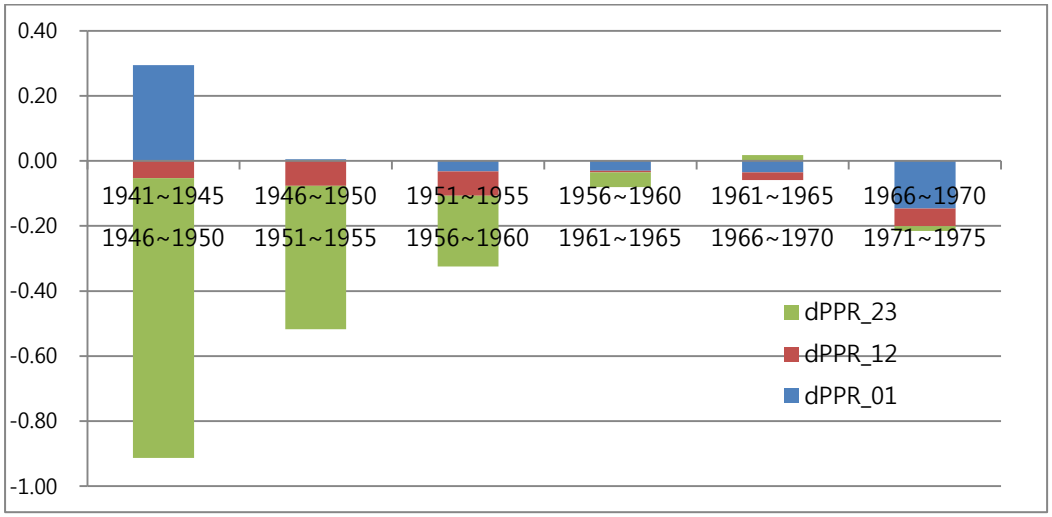
Source) Human Fertility Database (2018)

<Figure 3> Differences in cumulative cohort age-specific fertility rates between 1960 benchmark cohort and subsequent cohort, 1965~1995: Korea



Source) Statistics Korea (2018) KOSIS

<Figure 4> Average contribution of changes in parity progression ratio to first(dPPR_01), second(dPPR_02) and further birth(dPPR_23) to the decline in cohort fertility in Korea



Source) Statistics Korea (2018) Population Census 1985, 1990, 2000, 2005, 2010, 2015