

# Fertility Assumption for Non-Japanese Women Synchronizing with Japanese Age-Schedule

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Population projection based on the cohort component method requires assumptions about age-specific fertility rates in the future. A demographic trend that makes recent fertility projection more challenging is the increase in immigrants. Past studies have revealed the differences between native-born and foreign-born fertility, which suggests the importance of taking account of the heterogeneity in fertility behaviors.

This paper presents a method for projecting fertility rates for non-Japanese women. The key idea behind our model is that fertility rates for non-Japanese women are assumed to move in proportion to the base schedule of fertility, comprised of the age-specific fertility rates of Japanese women. We developed a three-parameter system in which the relative relationship between age patterns of fertility in the two populations is time-invariant, and the future fertility rates of non-Japanese women are driven by projected fertility rates of Japanese women. We discuss the potential applications of the proposed system in a wide range of settings.

**【Keywords】** population projections, fertility assumption, non-Japanese fertility rate

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