

# Forecasting Age-Specific Fertility

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**Abstract:** Forecasting the population of a country requires knowledge of its current population distribution with respect to gender and age, and assumptions for future age-specific fertility and mortality. Changes in mortality are relatively small compared to changes in fertility, which are driven largely by economic and social factors. In this study we use age-specific fertility data freely available from the US Census Bureaus website to construct forecasts for fertility by 7-year age groups from 2016 to 2100 for women in 36 of the worlds most populous countries. The method involves first estimating long-term minimum values for each of these age groups based on current data distributions and then assuming that recent trends in fertility rates will continue until these limiting values are reached, and then remain constant. After that the simple linear regression model was fitted the data to plot future fertility forecasts. The results showed that the fertility rate in each country and the pattern of growth rate predictions were divided into 2 groups. The first group consisted of countries with remarkably similar decreasing trends in fertility whilst, the second group consisted of countries with relatively stable fertility rate forecasts.

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