

Fertility Transition and Pace of Fertility Decline: Evidence from 201 Countries and Areas

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Objective To estimate parameters of fertility transitions in 201 countries and areas of the world and classify countries by onset, stage and pace of fertility decline.

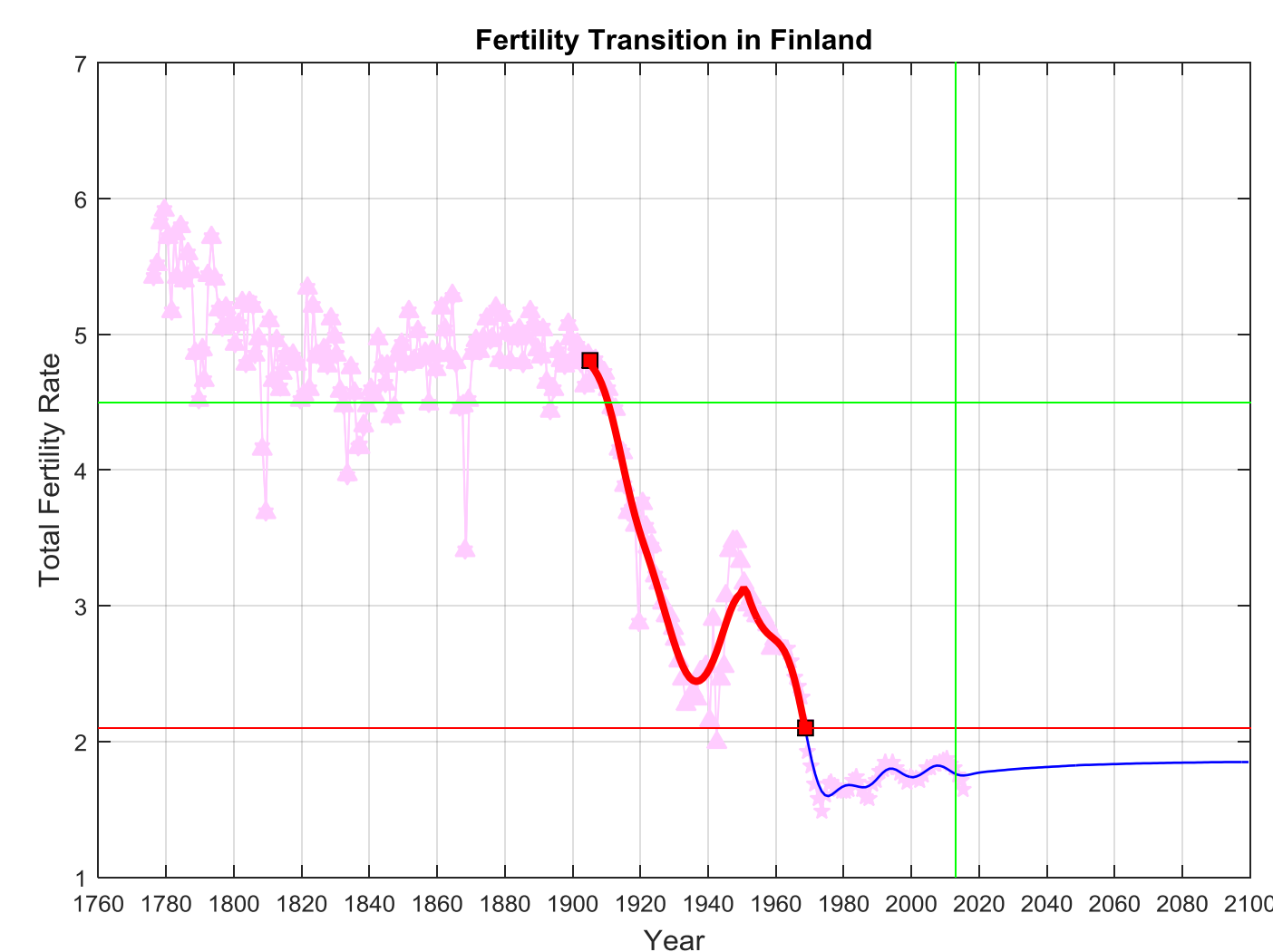
Data: United Nations, Population Division. World Population Prospects: The 2015 Revision. United Nations, Population Division (2017). *World Fertility Data 2017*.

Methods: Coale, A. J. and Watkins, S. C. (eds.) *The Decline of Fertility in Europe*, pp. 31-181. Princeton: Princeton University Press. United Nations, Population Division (2017). *World Fertility Report 2015*.

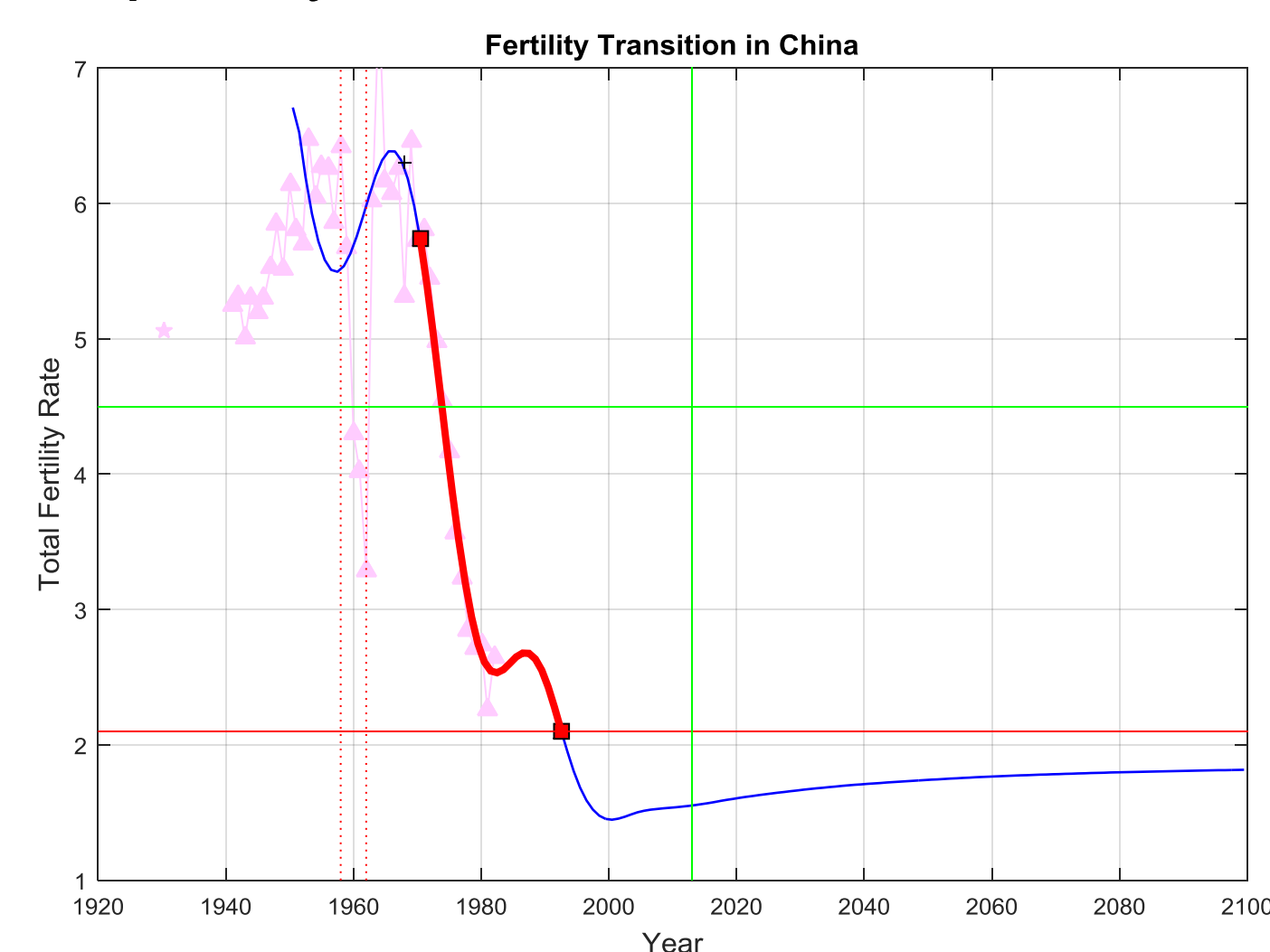
For each country we collect all available empirical evidence on fertility levels and trends, and estimated year of onset and completion of a fertility transition.

Examples of fertility transitions

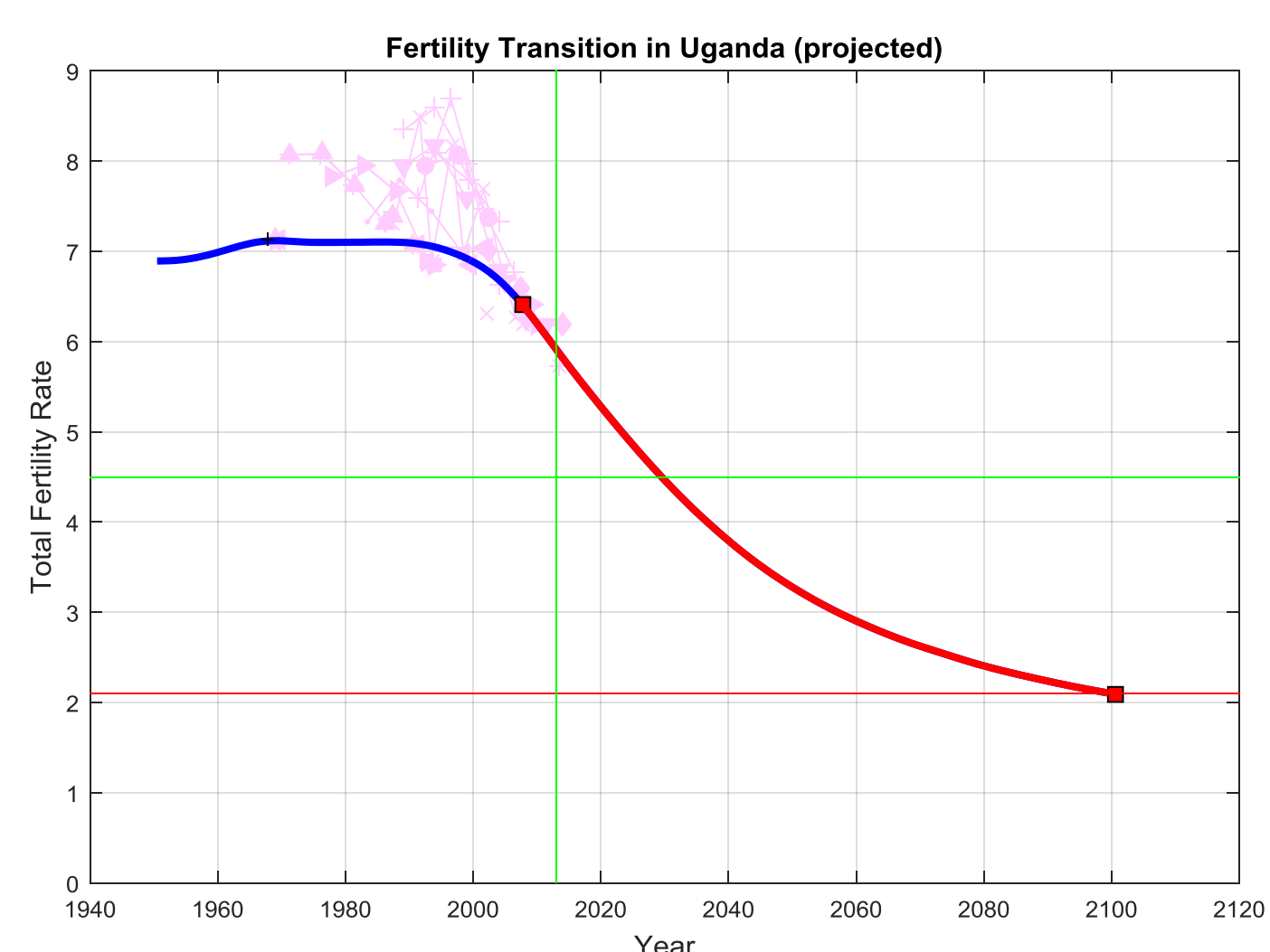
Historical



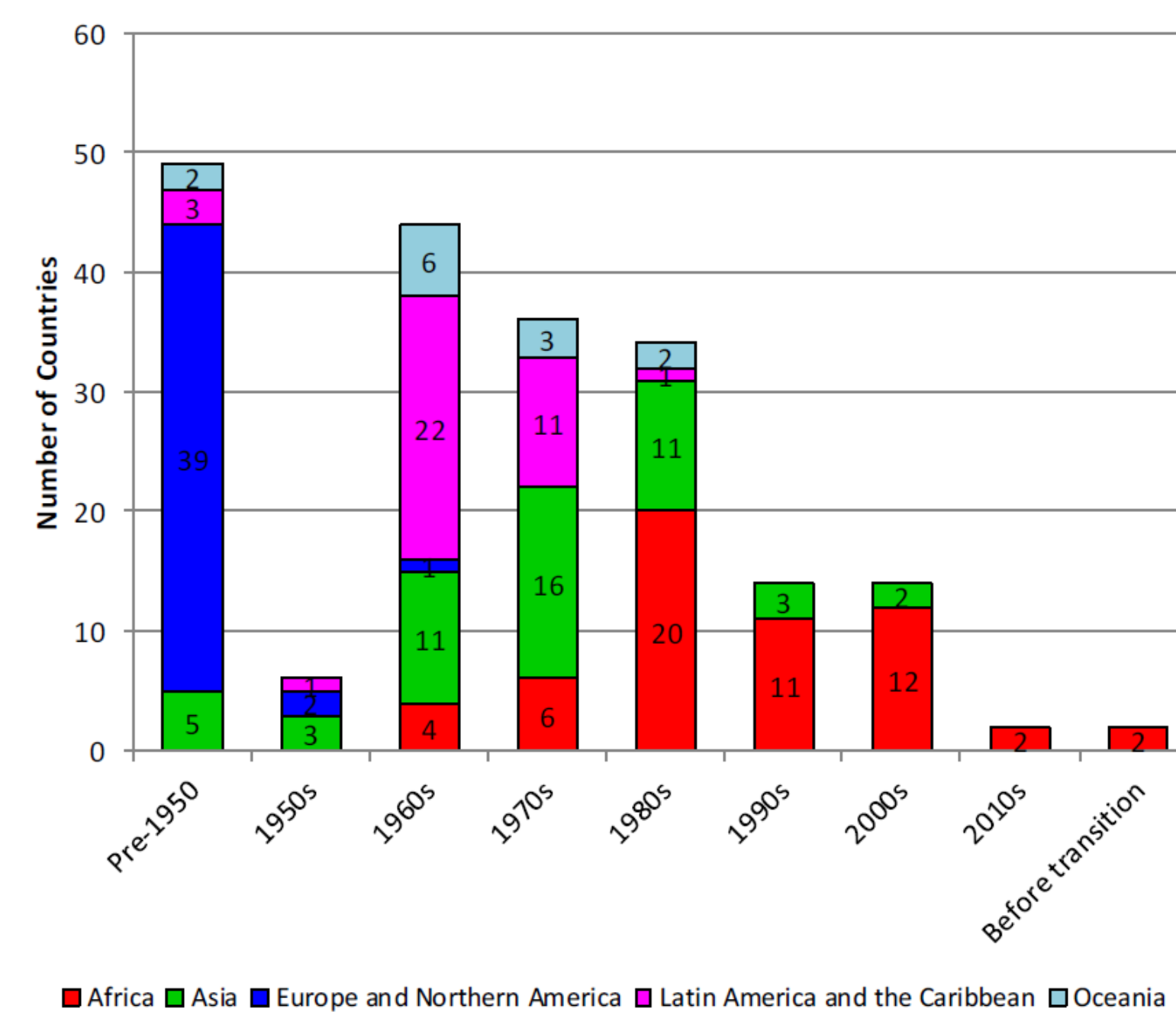
Contemporary



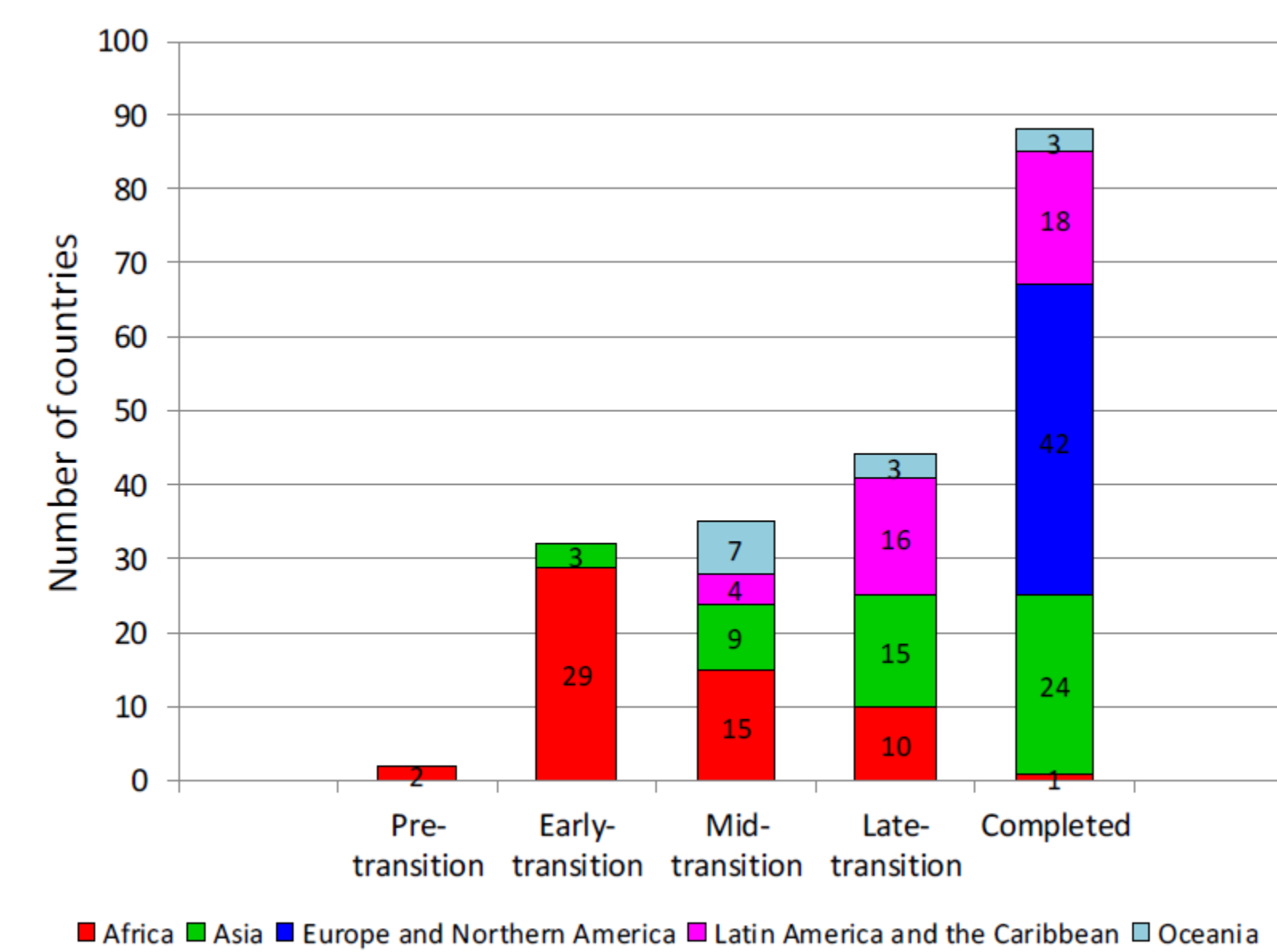
Projected



Distribution of countries by onset of the fertility transition

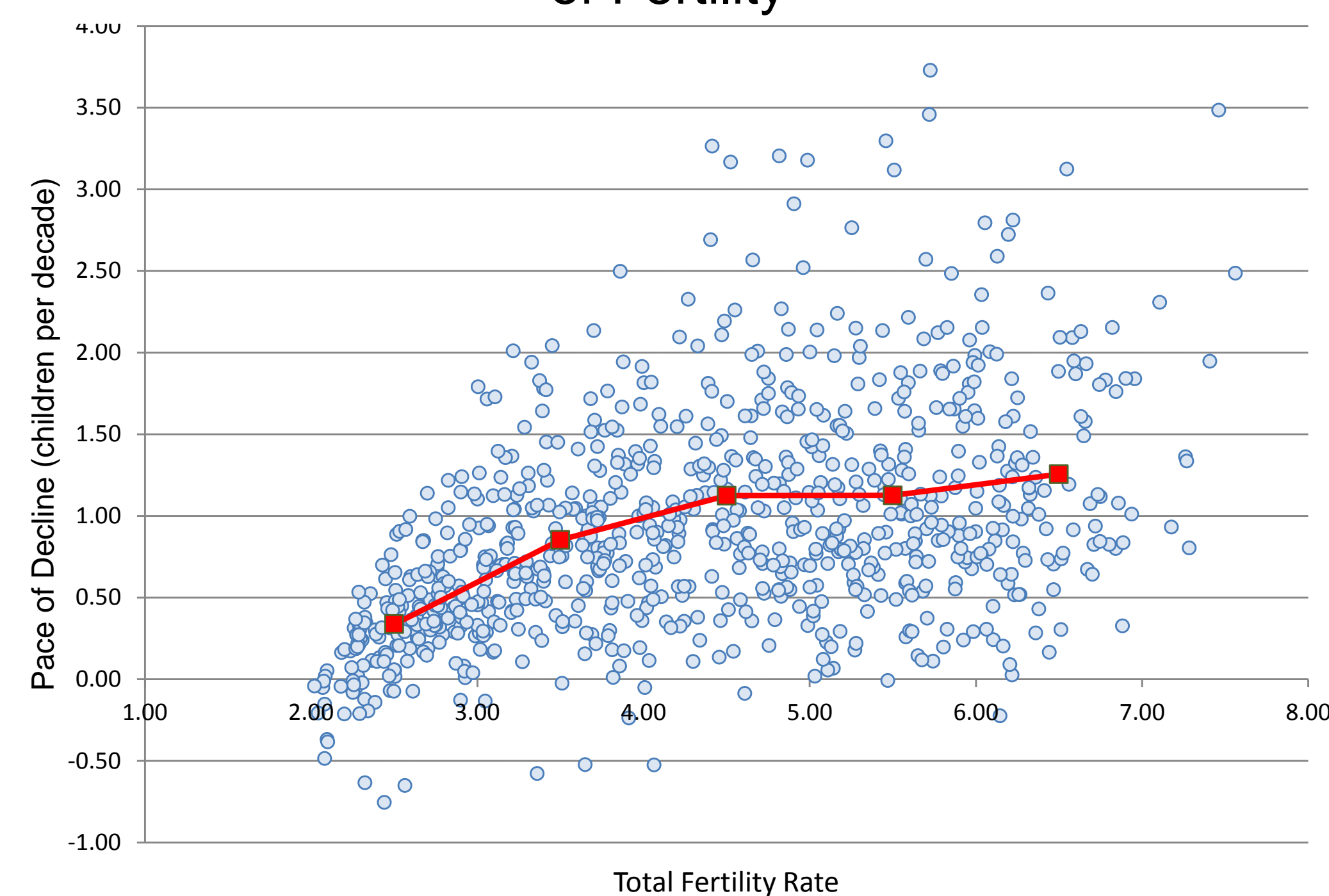


Distribution of countries by stage of the fertility transition in the period 2010-2015

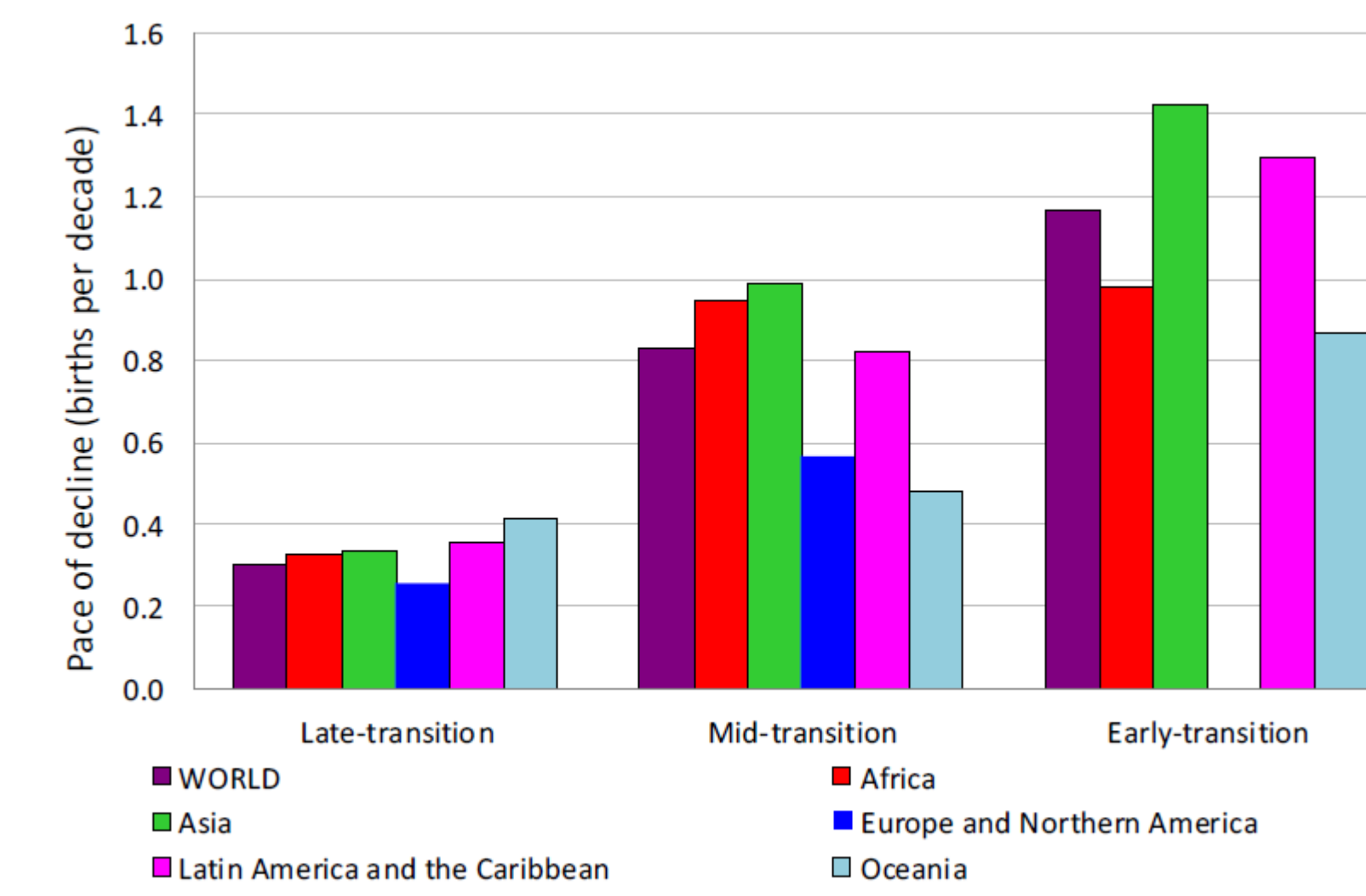


Countries in transition were categorized as (a) early-transition when fertility was above 4.5 births per woman, (b) mid-transition when fertility was between 3 and 4.5, and (c) late-transition when fertility was below 3 but still above replacement-level. Countries where peak fertility since 1950 was below five births per woman were assumed to have commenced their fertility transition prior to 1950. Further, countries where fertility had not declined by 10 per cent from the most recent peak level were considered to be pre-transitional.

Pace of Fertility Decline during Fertility Transition by Level of Fertility

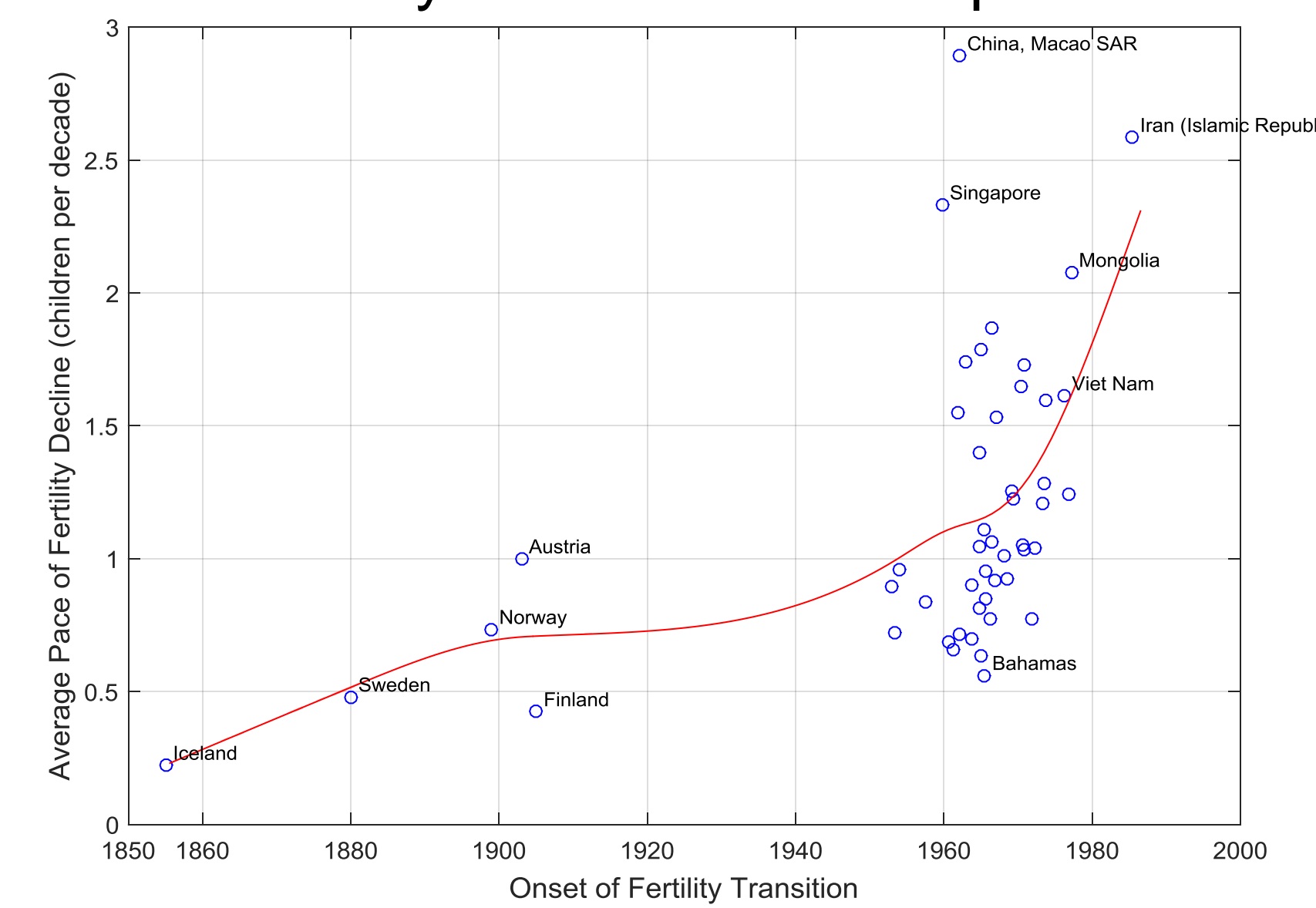


Pace of fertility decline by stage of fertility transition and by region



a) based only on the completed fertility transitions; b) data for Europe for the early-transition stage are missing because for many European countries estimates of onsets of fertility transitions are not available.

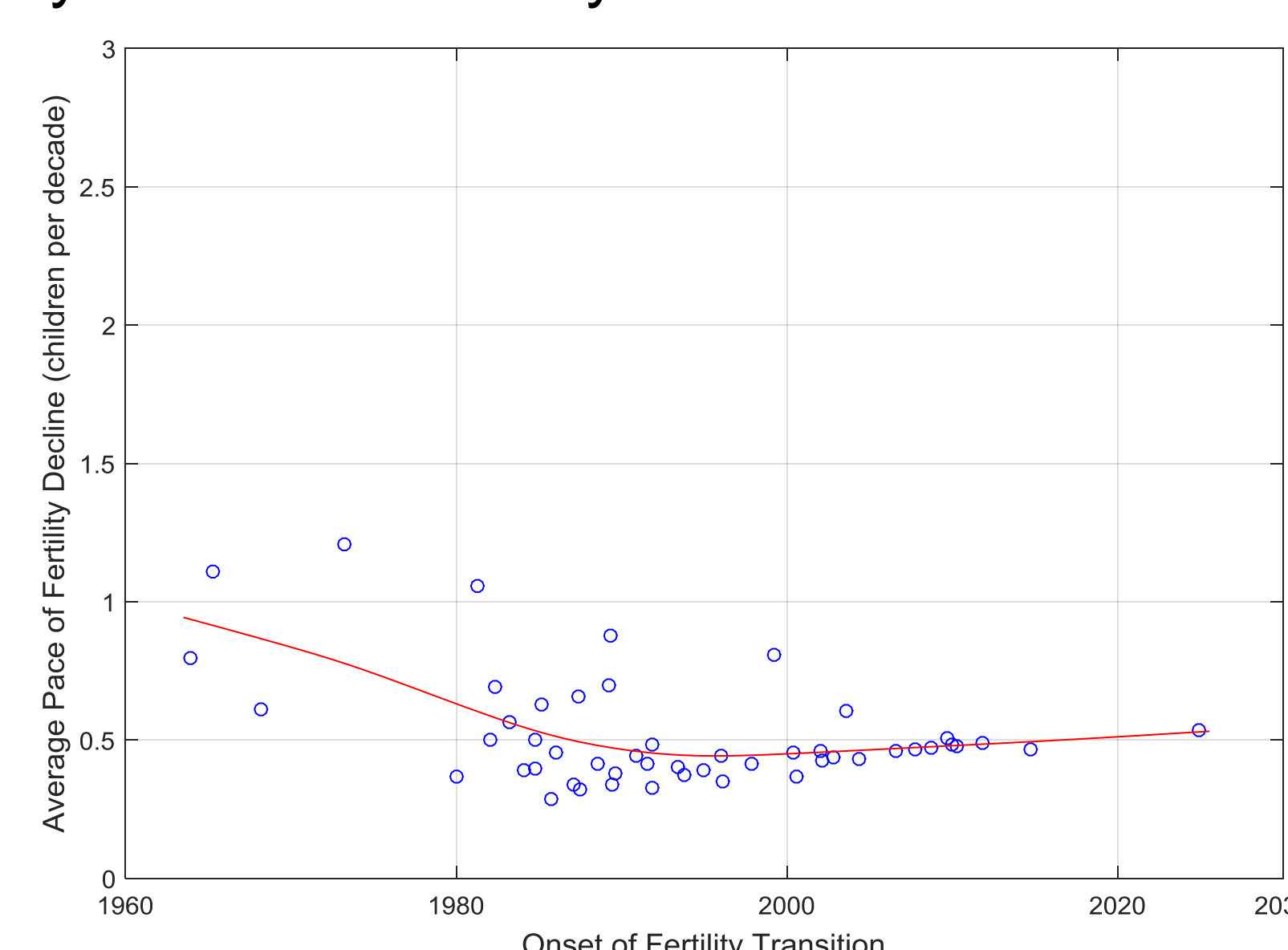
Average pace of fertility decline during fertility transition by onset of fertility transition for completed transitions



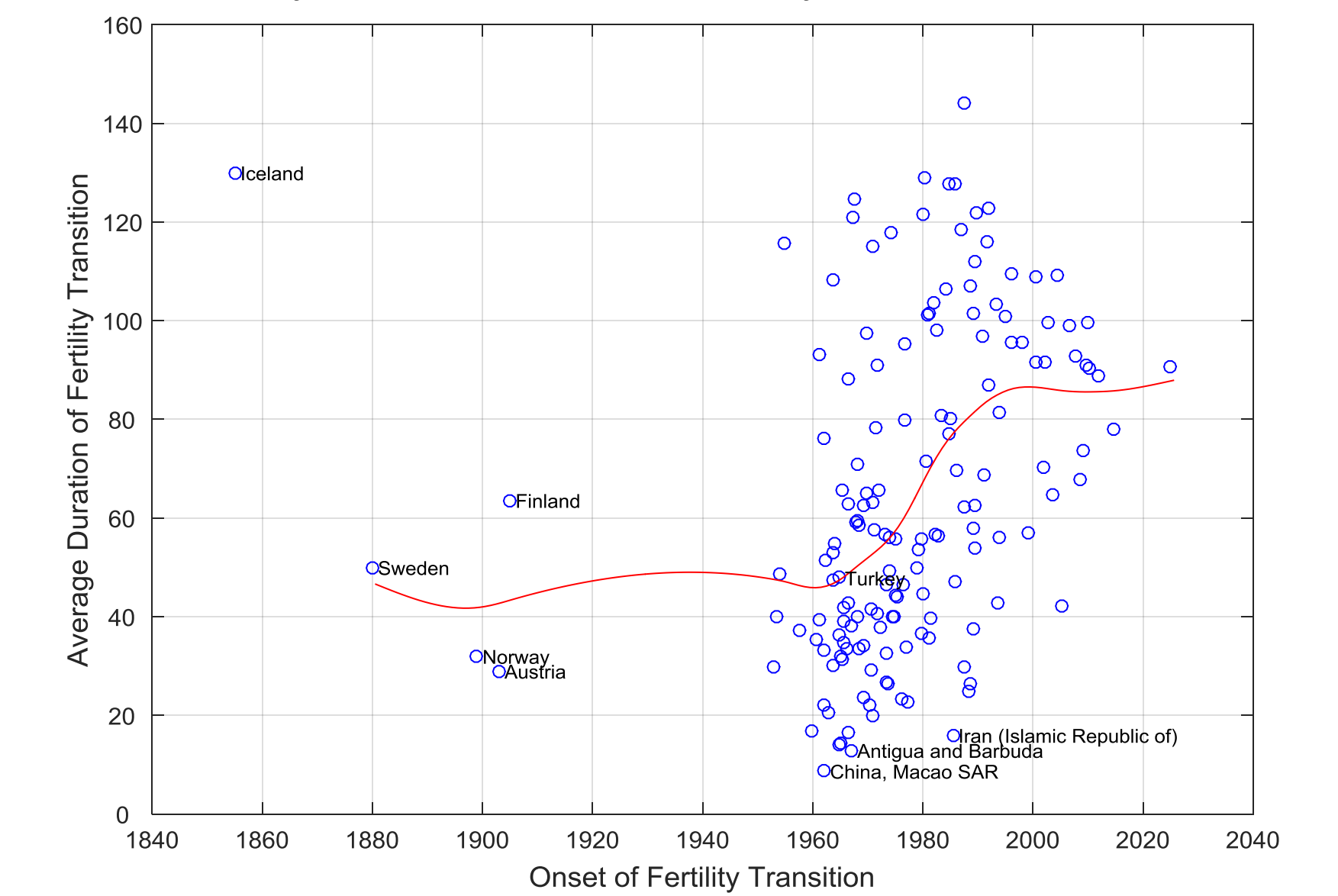
Average pace of fertility decline during fertility transition by onset of fertility transition for projected transitions



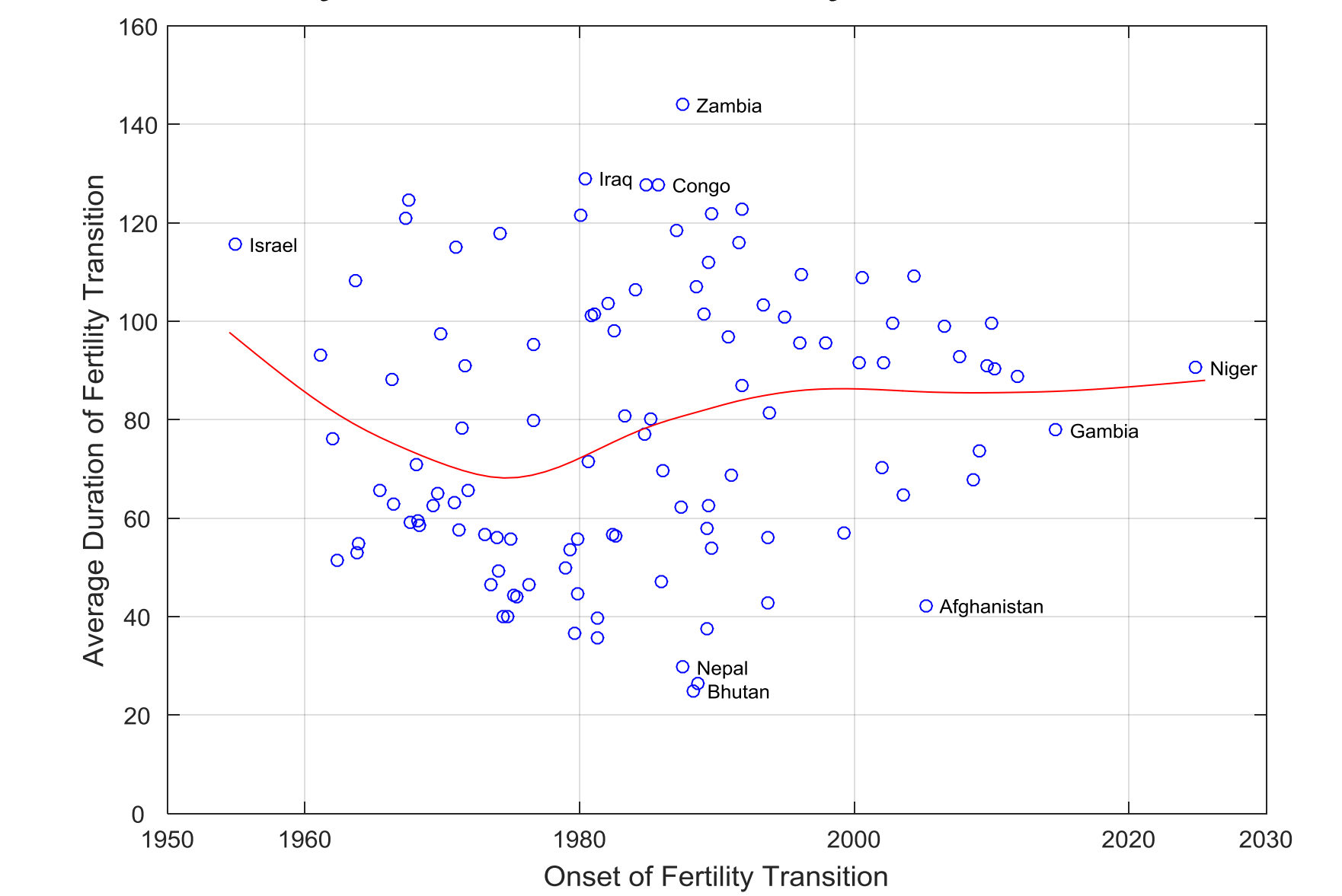
Average pace of fertility decline during fertility transition by onset of a fertility transition in Sub-Saharan Africa



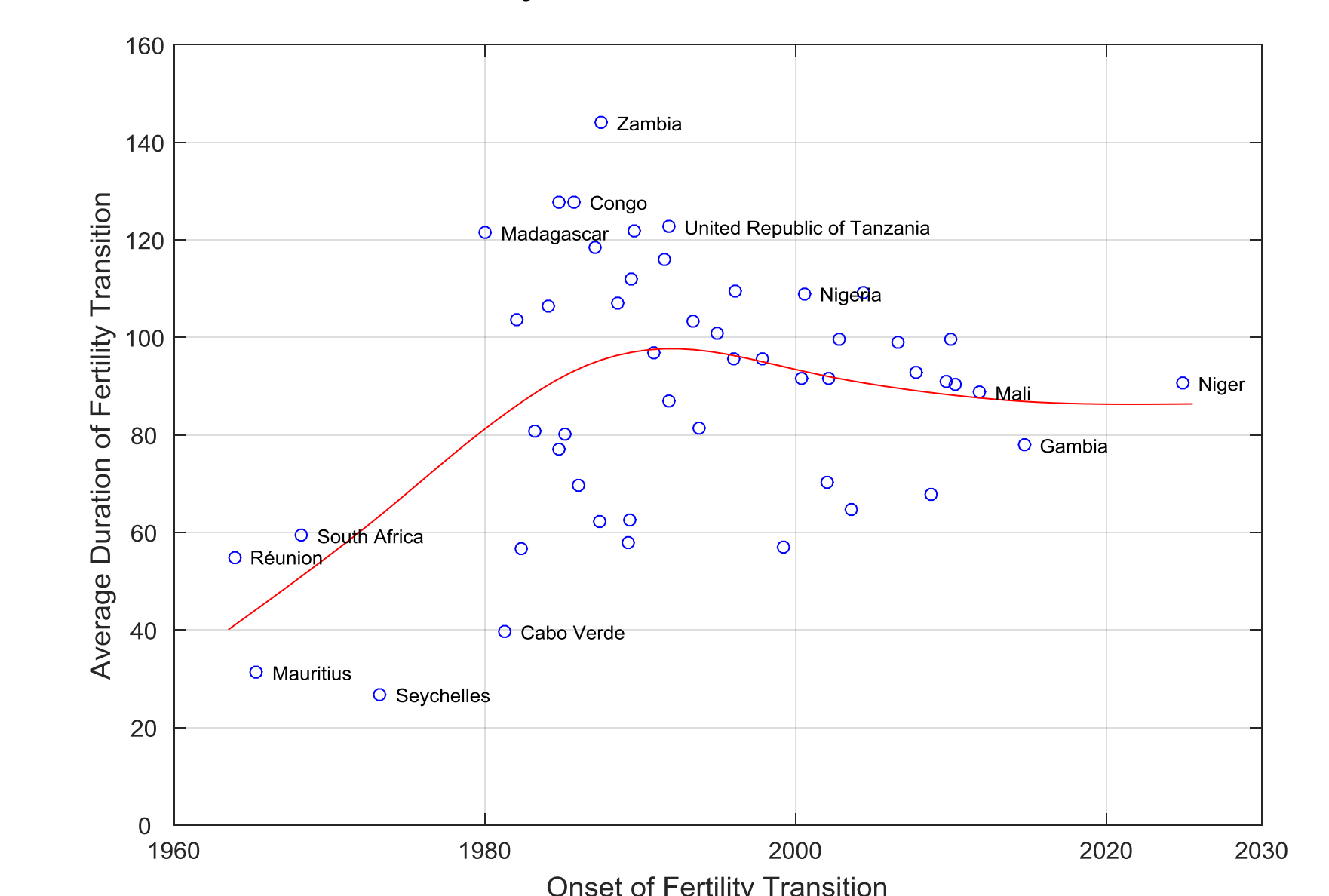
Durations of completed fertility transitions by onset of a fertility transition



Durations of projected fertility transitions by onset of a fertility transition



Durations of fertility transitions in Sub-Saharan Africa



Findings

- By 2013, only two countries have *not* started fertility transitions (Gambia, Niger). By 1970, only 22 countries had completed the transition to low fertility. By 2013, the number of countries with below-replacement fertility had nearly quadrupled, reaching 83;
- Fertility transition started late in Africa but nearly half of the countries in this region are in the middle or in the late state of transition now;
- Pace of fertility decline decelerates towards the end of fertility transition. For TFR higher than 4.5, pace of fertility decline is about 4.5. For lower levels of fertility, it declines linearly reaching zero at about 1.5;
- Analysis of pace of fertility decline by stage of fertility transition and by region provides no visible support that fertility transition in Africa, once it has started, is exceptionally slower than in other parts of the world. Unusually slow fertility declines were found, however, in Oceania, in the countries other than Australia and New Zealand;
- Average pace of fertility decline during fertility transition accelerate over time. For projections, however, pace of fertility decline is assumed to be comparable or slower than historical levels;
- Contemporary pre-transitional fertility levels are higher than historical pre-transitional levels of fertility leading to longer durations of fertility transitions. On average, historical fertility transitions were completed in about 50 years, while contemporary fertility transitions are expected to take between 80 and 100 years.