

The Role of Population Estimates and Projections in the Evaluation of Censuses

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Census and Estimate Processes

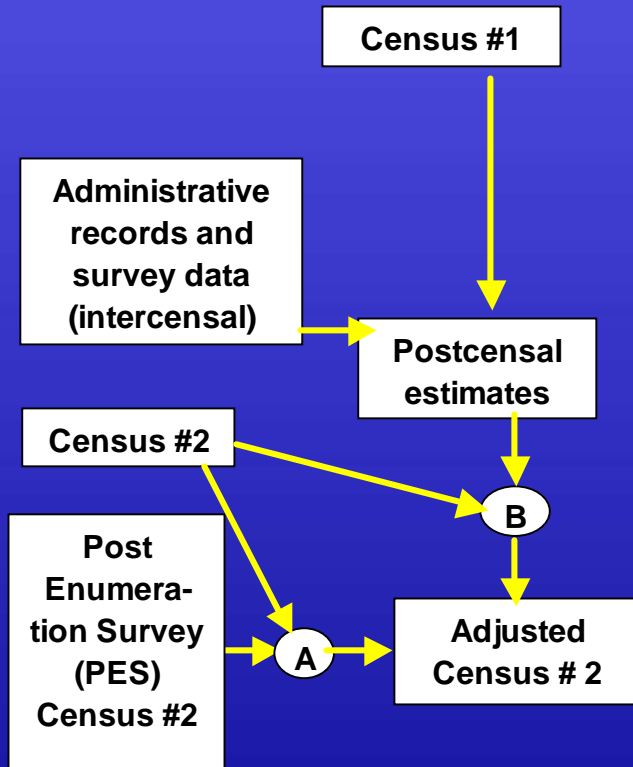
- A. Post Enumeration Survey (PES) evaluation of census results
- B. Evaluation of census results based on estimates or demographic analysis
- C. Evaluation of intercensal components of growth
- D. Adjustment of postcensal components of growth
- E. Evaluation of prior census results
- F. Intercensal estimates (mathematical formula)
- G. Intercensal estimates (based on adjusted censuses and/or components)

U.S. Census 2000

Possible reasons for differences between Census 2000 and 1990 postcensal estimates:

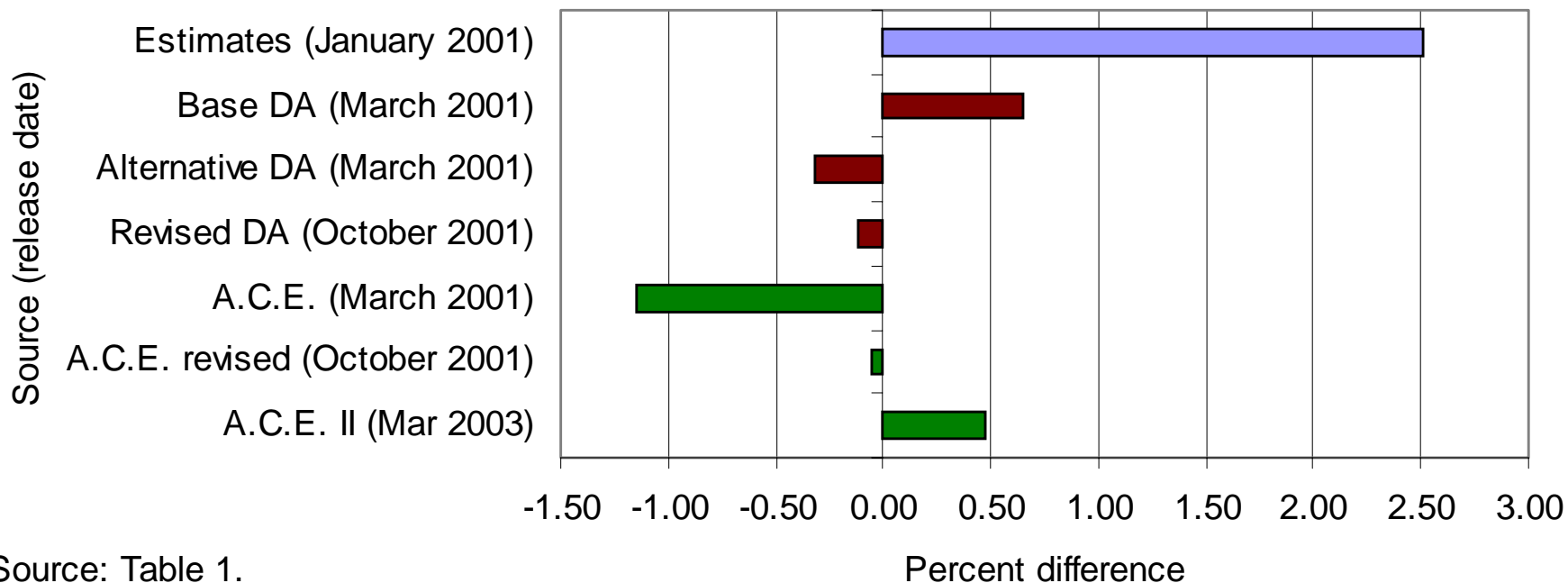
- a. Census 2000 had better population coverage than the 1990 census
- b. Census 2000 was overenumerated
- c. The postcensal estimates were too low

U.S. Census 2000 Evaluation Process



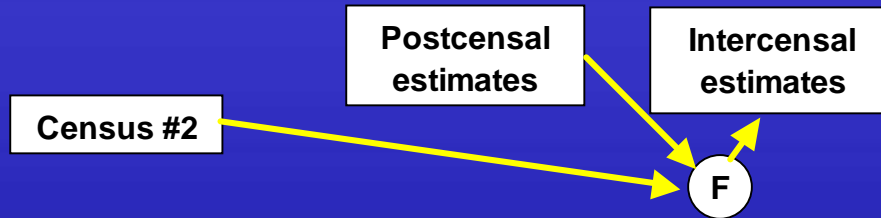
United States

Figure B-1. Percent Difference Between Census Count and Alternative Estimates for the United States: 2000



Source: Table 1.

United States Intercensal Estimates Process



U.S. 1990-2000 Intercensal Population Estimates Method

$$P_t = Q_t \left(\frac{P_{10}}{Q_{10}} \right)^{(t/120)}$$

Where

t = time (in months) elapsed since April 1, 1990

P_t = Population estimate at time t

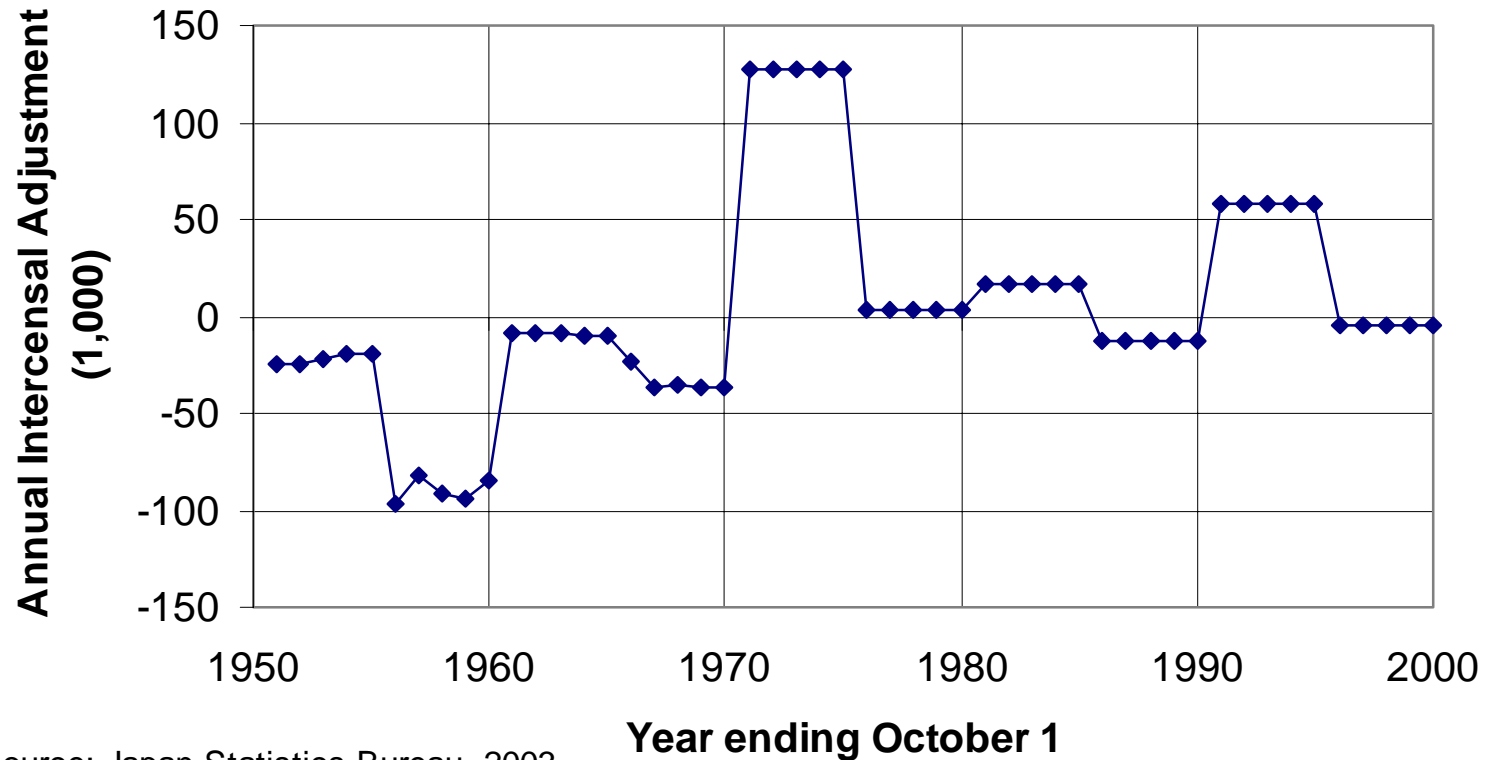
Q_t = Postcensal estimate at time t

P_{10} = April 1, 2000 Census Count

Q_{10} = April 1, 2000 Postcensal Estimate

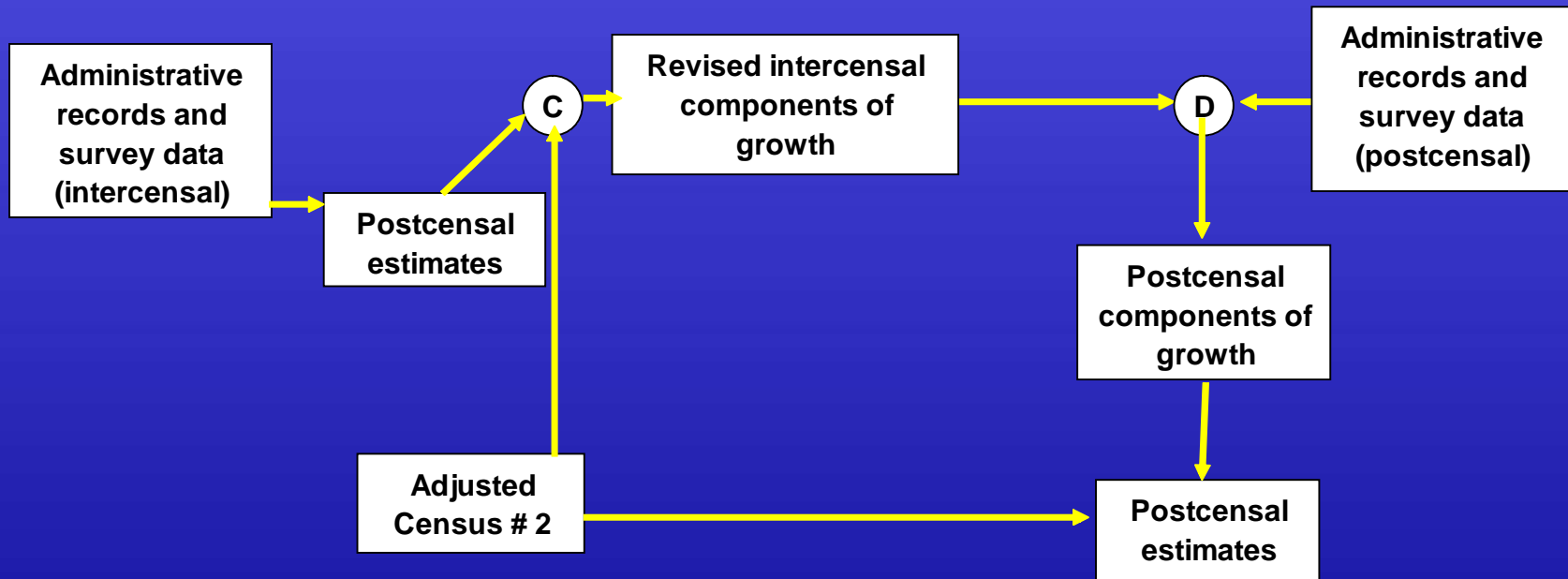
Japan Intercensal Estimates

Figure C. Annual Intercensal Population Adjustment for Japan: 1951-2000



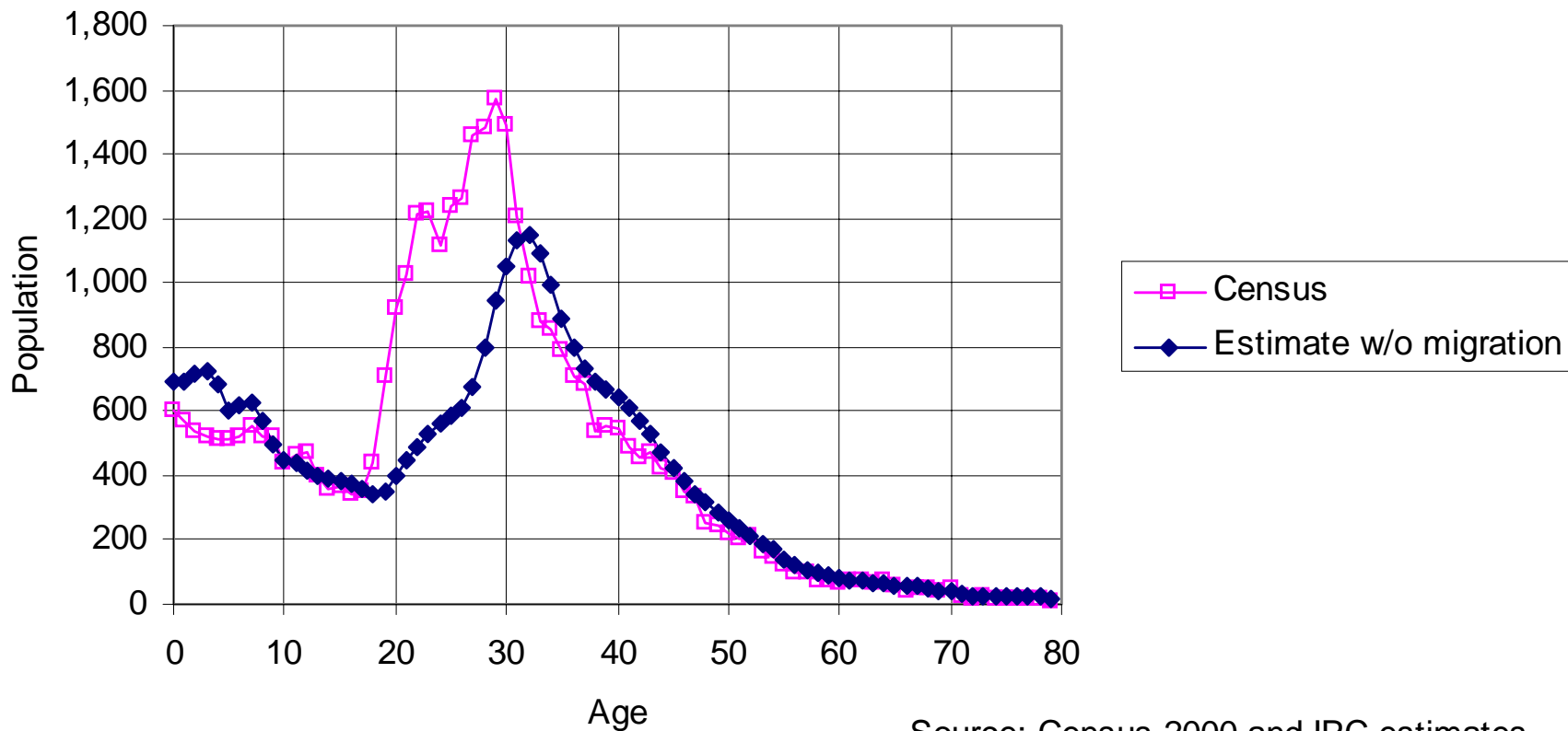
Source: Japan Statistics Bureau, 2003.

IPC Process for Estimating Intercensal Migration in the Northern Mariana Islands



Northern Mariana Islands

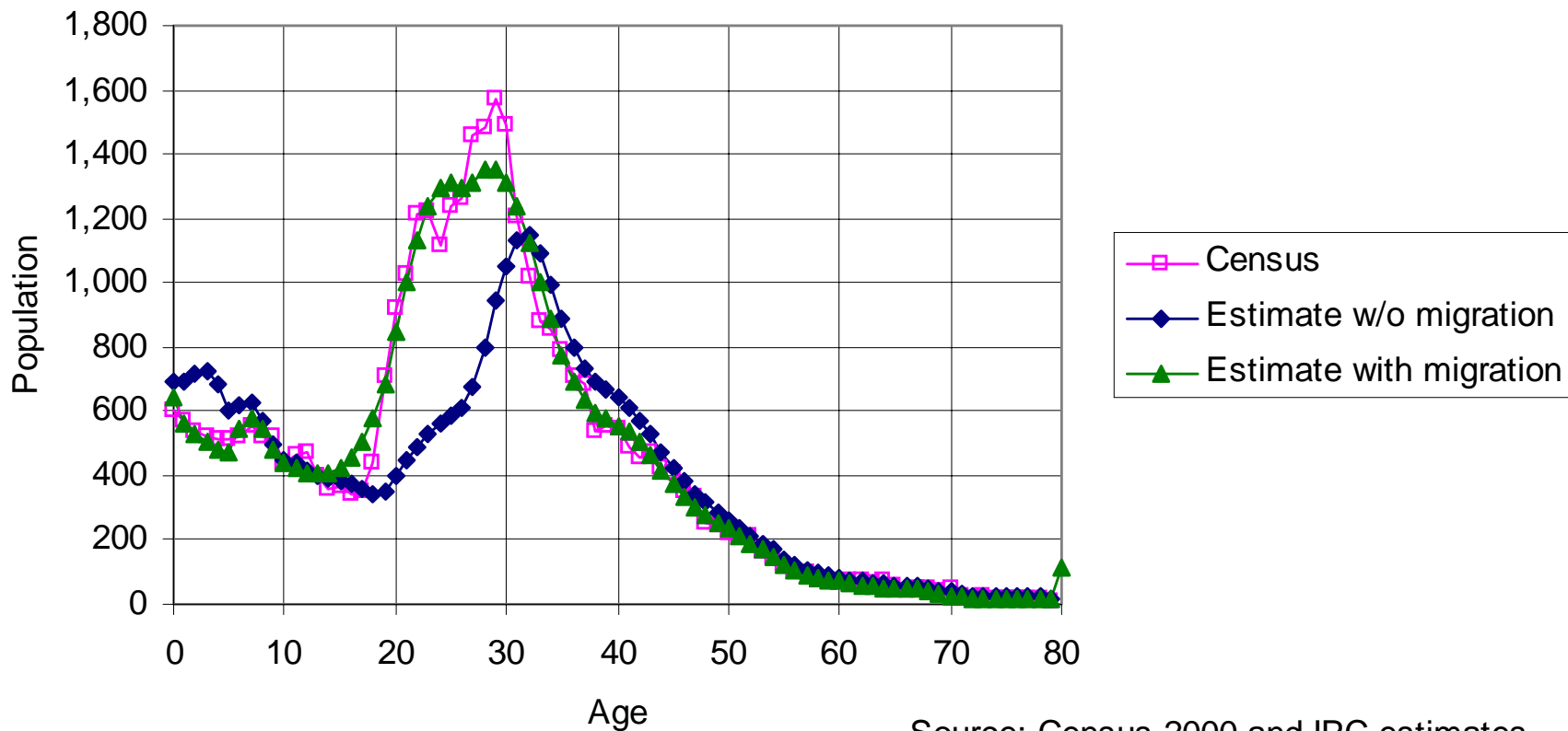
Figure D-2. Comparison of Census 2000 to Estimates of the Female Population of the Northern Mariana Islands



Source: Census 2000 and IPC estimates.

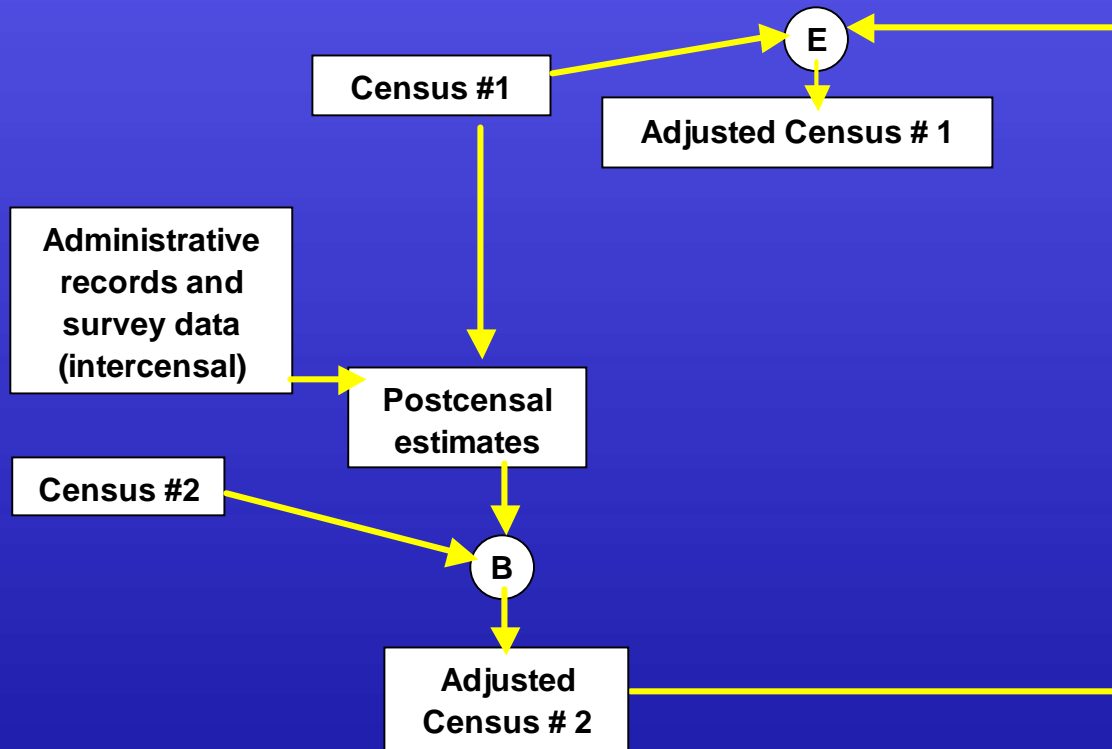
Northern Mariana Islands

Figure D-2. Comparison of Census 2000 to Estimates of the Female Population of the Northern Mariana Islands



Source: Census 2000 and IPC estimates.

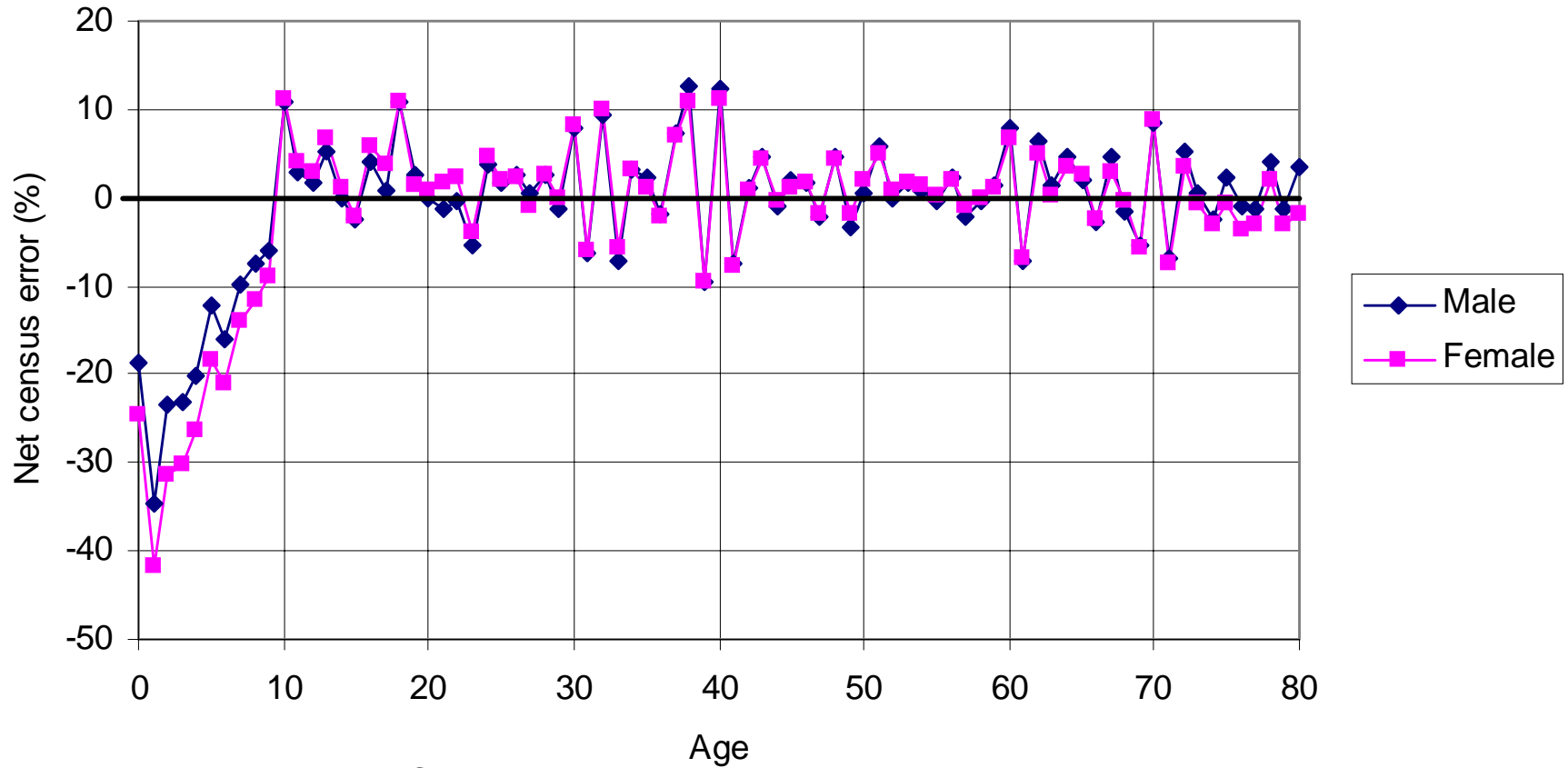
IPC Process for Evaluating The China 2000 and 1990 Censuses



China

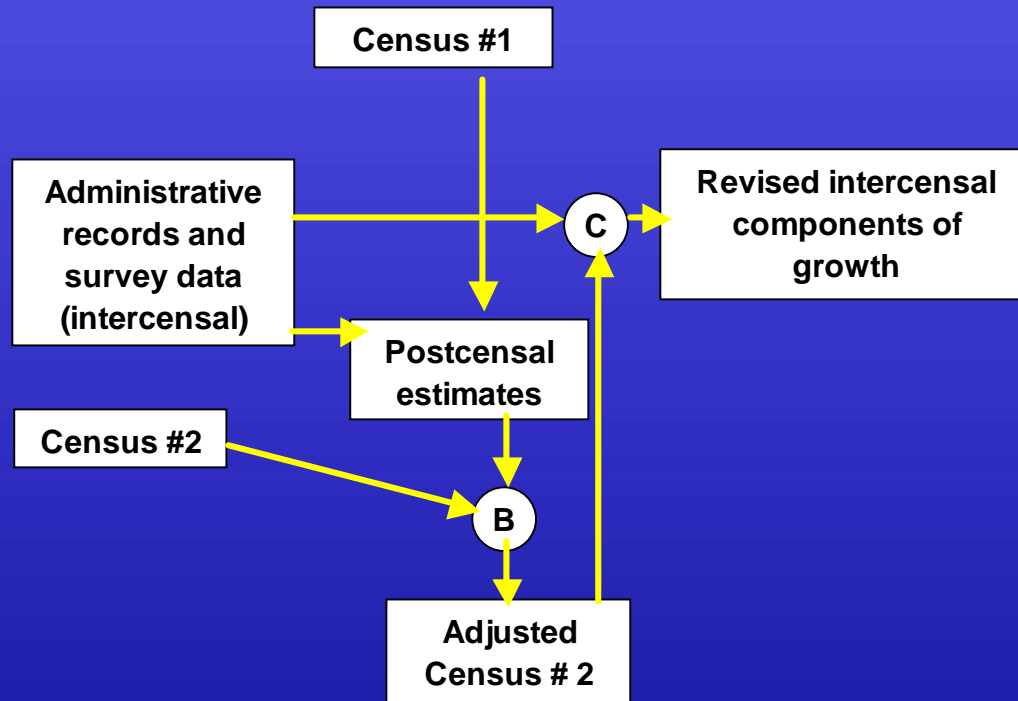
Figure E. Implied Net Census Error (Percent) For China 2000 Census

(A minus sign denotes a net census undercount.)



Source: 2000 census and IPC estimates.

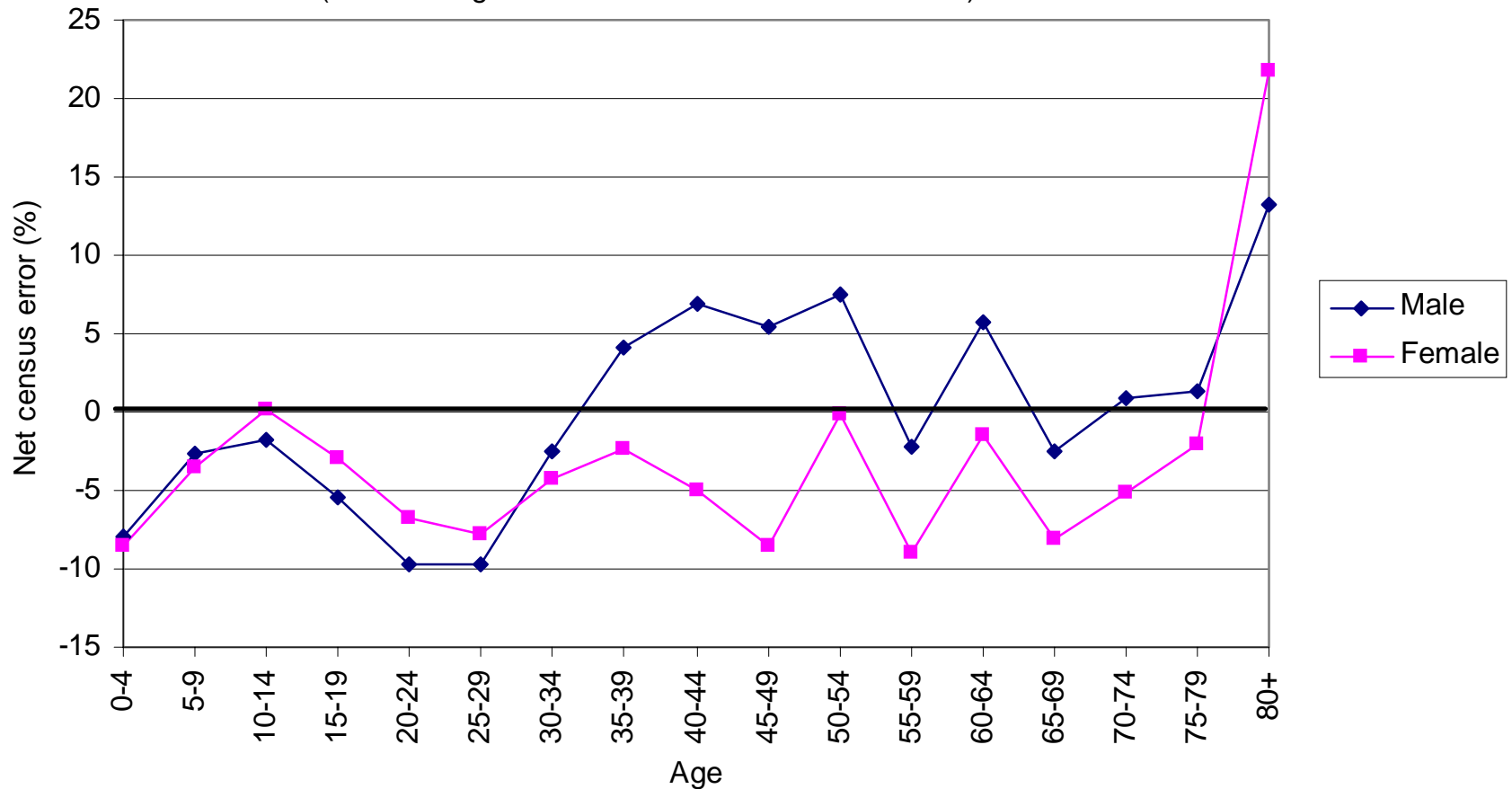
IPC Process for Evaluating the Philippines 2000 and 1995 Censuses



The Philippines

Figure F-2. Implied Net Census Error (Percent) for Philippines 2000 Census

(A minus sign denotes a net census undercount.)



Source: 2000 census and IPC estimates.

Conclusions

- Comparing “old” postcensal estimates to a new census can tell us a lot
 - About the new census
 - About errors in the estimates (including the previous census)
 - About “correcting” our demographic picture