

Rural-urban differentials in later marriage, longer birth interval, and fewer births in China, 1975-2005

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Background

- Total fertility has declined to below replacement level in China since 1990s despite an unsolved controversy about how low it has really reached.
- Below-replacement fertility is defined as a total fertility rate (TFR) below 2.1 births per woman.
- Existing studies of fertility in China have focused on the national and provincial level. Few studies examine rural-urban differentials in recent fertility decline in China.

Why rural-urban differentials in fertility decline?

- Fertility is higher in rural than in urban areas due to rural-urban differences in implementation of the one-child policy and economic development.
- Disaggregation of national fertility data by rural-urban differential is an essential step in understanding both trends in time and variation in space (Scharping 2003: 270).
- It is a challenge to assess the rural-urban-specific fertility trend along with recent rapid urbanization and massive temporary rural-urban migration.

Objectives

- To assess the rural-urban differential in fertility level, age at first marriage and first birth, and birth intervals during 1975-2005
- To decompose the change in TFR_{asfr} by *hukou* status during 1990-2005 into sum of component changes in:
 - population composition by characteristic of nonfarm employment, education, and residence
 - age-characteristic-specific proportions currently married
 - age-characteristics-specific marital fertility rates
- To decompose the *hukou* difference in China's TFR_{asfr} in 1990 and 2005 into sum of component changes

Definition of rural-urban population

- China's rural and urban populations are legally defined by agriculture or non-agriculture household registration (*hukou*) status.
- Rural-urban migrant women with agricultural *hukou* status are subject to fertility policy for rural population in origin.
- Only a few rural women had converted their *hukou* from agricultural to non-agricultural if they are married to a non-agricultural husband, displaced due to state-initiated land expropriation for urban expansion, or *hukou* reform in small cities and towns.

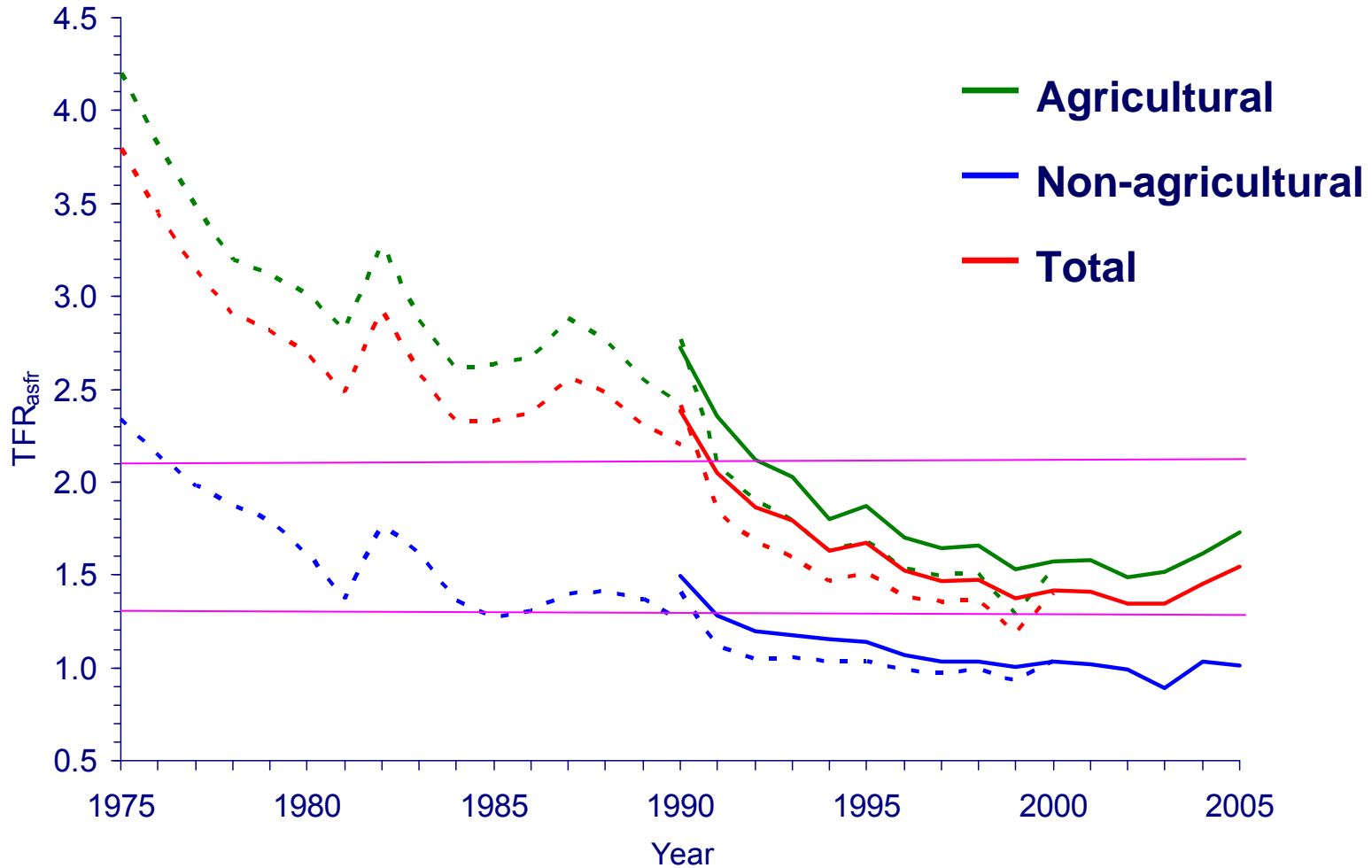
Definitions (cont.)

- The 1990 and 2000 censuses and 2005 mini-census
- TFR_{asfr} — calculated from age-specific fertility rates
- TFR_{pppr} — calculated from parity progression ratios (PPPRs)
- PPPRs and “mean failure time” for the transitions:
 - ρ_M : women’s own birth to her first marriage (B–M);
 - ρ_B : women’s own birth to parity 1 (B–1);
 - ρ_1 : parity 1 to parity 2 (1–2);
 - A_m : mean age at first marriage for B–M transition;
 - A_1 : mean age at first birth for B–1 transition;
 - CB1: mean closed first birth interval for M-1 transition;
 - CB2: mean closed second birth interval for 1-2 transition.

Methods

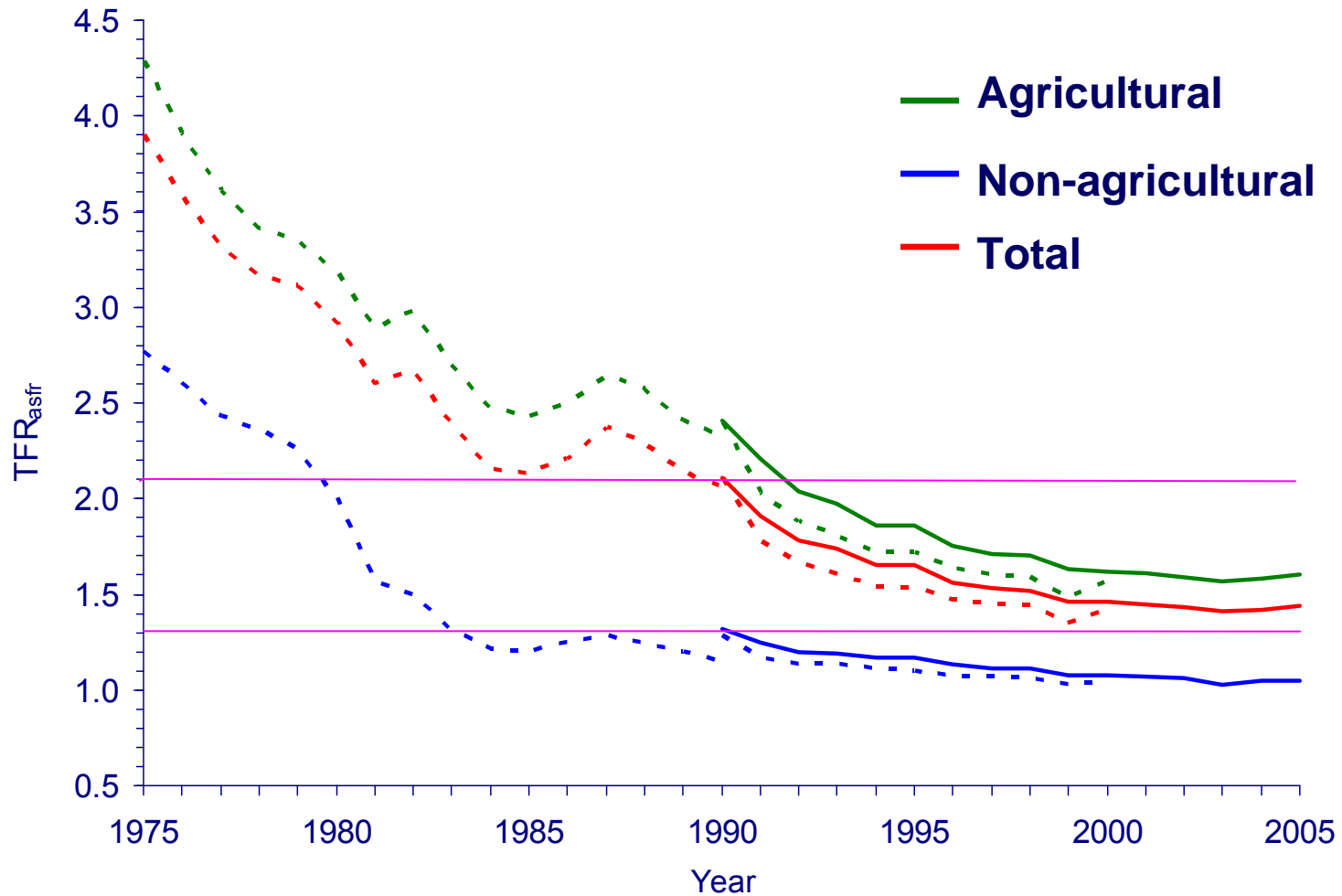
- Fertility estimates used birth history reconstruction method, an extension of the own-children method (Cho et al. 1986)
- Period life tables of parity progression (Feeney), calculated from reconstructed birth histories, allow calculation of:
 - PPPRs (p_M, p_B, p_1, p_2 , etc.);
 - “mean failure time” (A_m, A_1 , etc.).
- Decomposition method (Retherford et al. 2004) was used to analyze:
 - changes in TFR_{asfr} by *hukou* status and characteristic in China during 1990-2005;
 - *hukou* differences in TFR_{asfr} in 1990 and 2005.

Figure 1 Trends in TFR_{asfr} for all women in China and by *hukou* status, 1975-2005



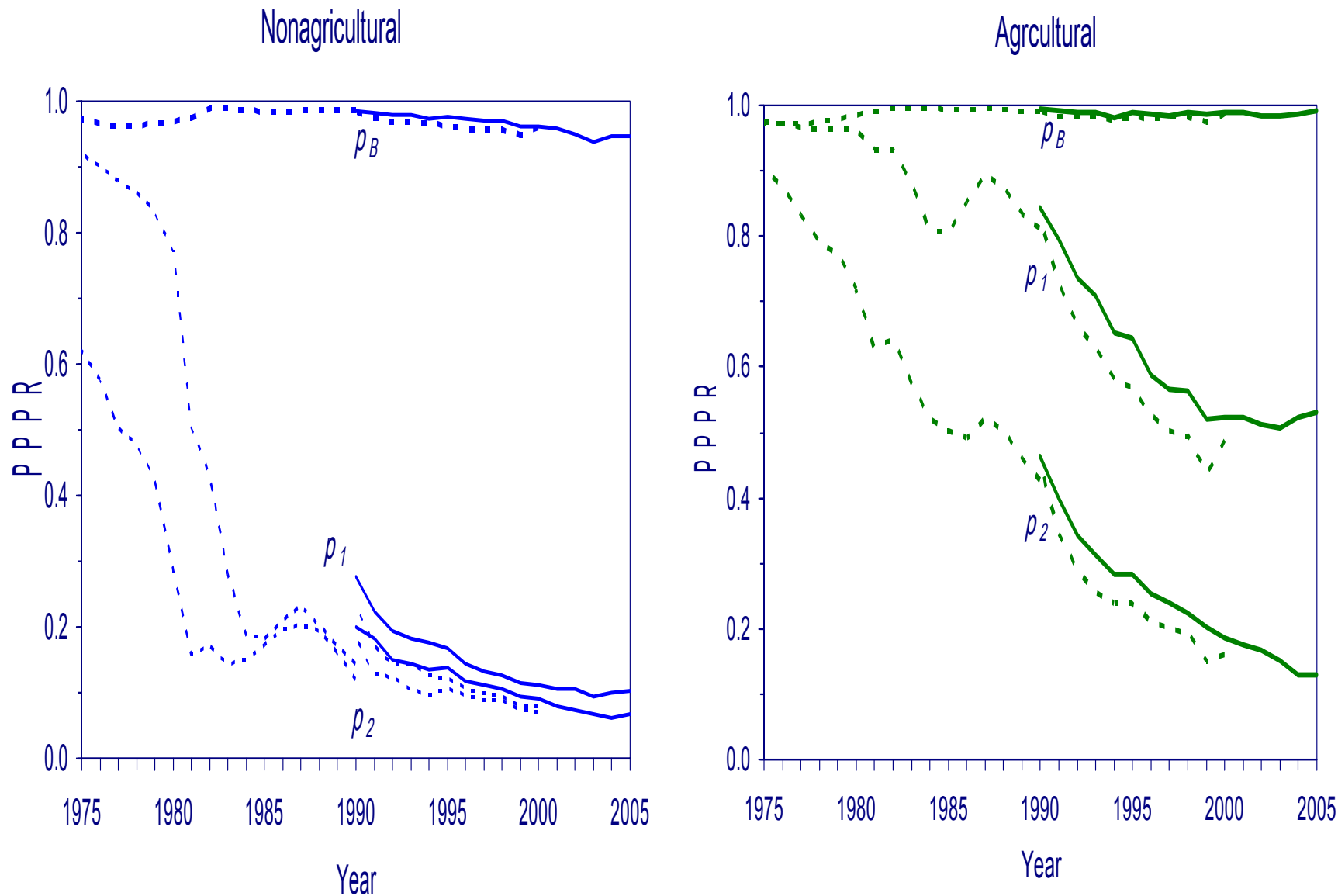
Sources: 1990 and 2000 censuses , — 2005 mini-census.

Figure 2 Trends in TFR_{pppr} for all women in China and by *hukou* status 1975-2005



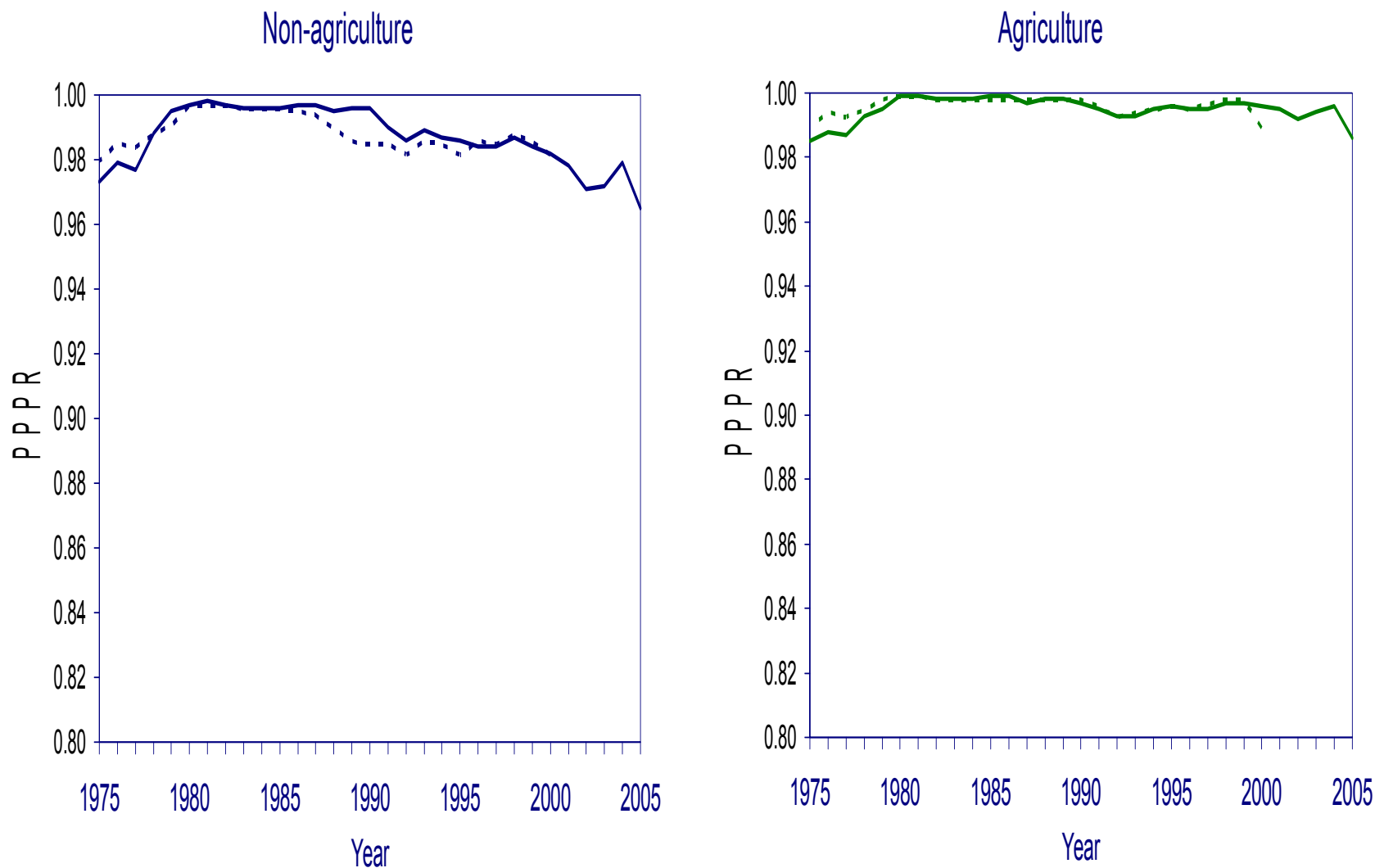
Sources: 1990 and 2000 censuses, 2005 mini-census.

Figure 3 Trends in period parity progression ratios for all women in China by *hukou* status, 1975-2005



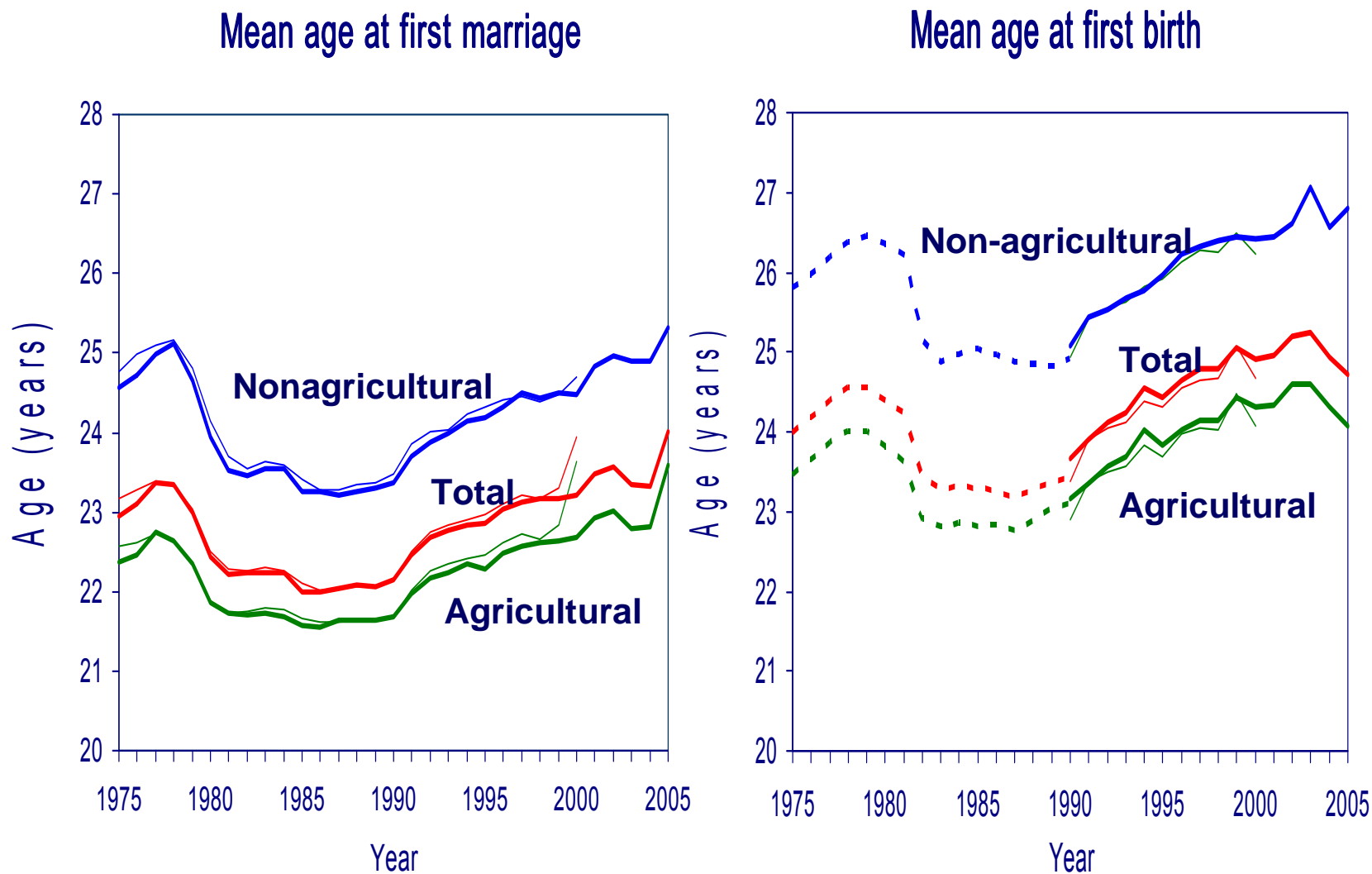
Sources: 1990 and 2000 censuses, — 2005 mini-census.

Figure 4 Trends in period parity progression ratio from birth to first marriage, ρ_M , for all women in China by *hukou* status, 1975-2005



Sources: 1990 and 2000 censuses, 2005 mini-census.

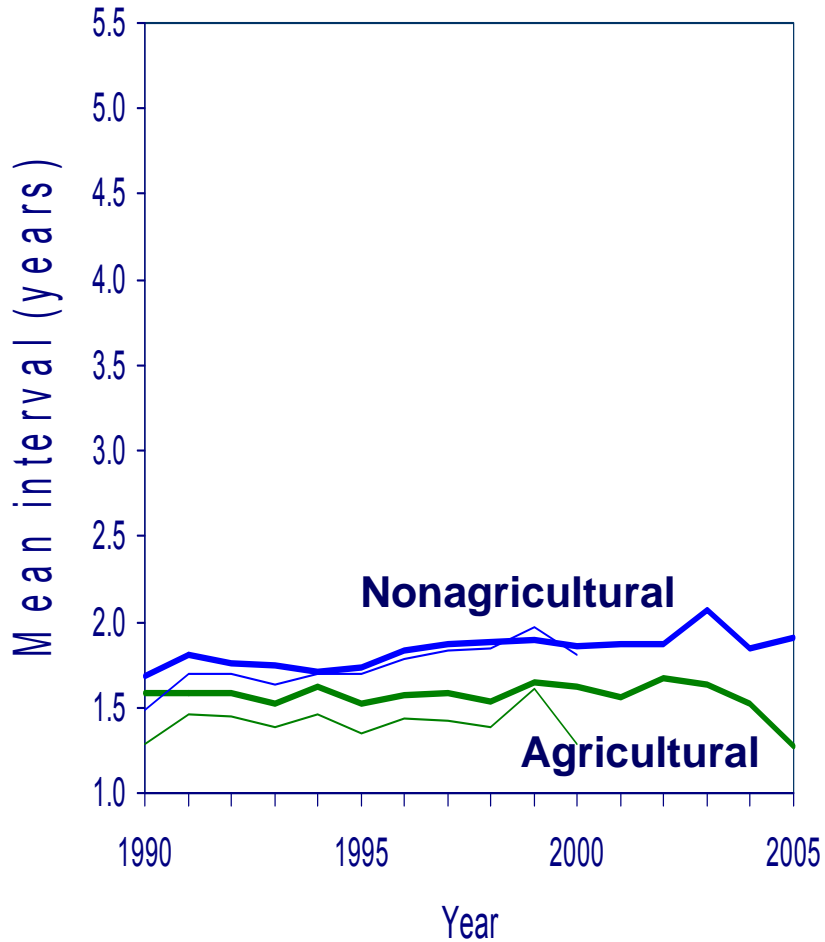
Figure 5 Trends in mean age at first marriage A_m and mean age at first birth A_b for all women in China by *hukou* status, 1975-2005



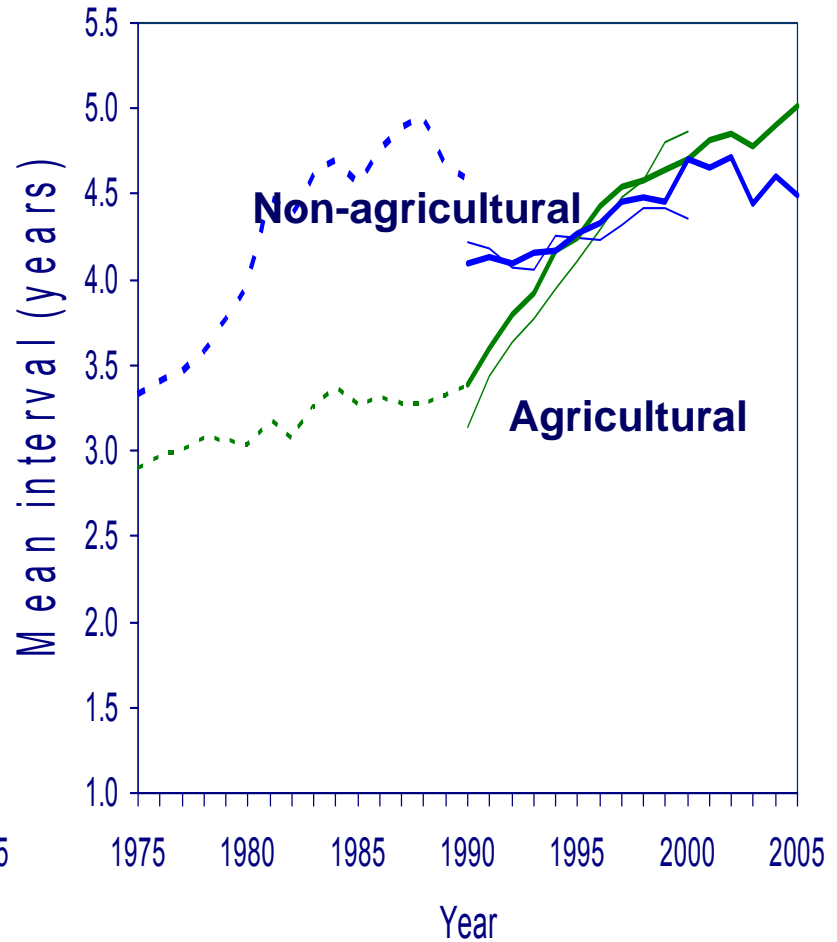
Sources: 1990 census, — 2000 censuses, and — 2005 mini-census.

Figure 6 Trends in mean first (CB1) and second birth (CB2) intervals for all women in China by *hukou* status, 1990-2005

Mean first birth interval



Mean second birth interval



Sources: 1990 census, — 2000 censuses, and — 2005 mini-census.

Table 1 Decomposition of the change in TFR_{asfr} into components by *hukou* status, China, 1990–2000

Year <i>Component due to change in</i>	Characteristics		
	Nonfarm employment	Education	Residence
1990			
<i>Composition</i>	64	22	25
<i>Proportion married</i>	18	21	10
<i>Marital fertility</i>	18	57	65
Total	100	100	100
2005			
<i>Composition</i>	58	40	35
<i>Proportion married</i>	38	16	28
<i>Marital fertility</i>	4	44	37
Total	100	100	100

Rural-urban difference in TFR in 1990 = 2.43 (agricultural) - 1.25 (non-agricultural) = 1.18 children;

Rural-urban difference in TFR in 2005 = 1.73 (agricultural) - 1.02 (non-agricultural) = 0.71 child.

Data source: 1990 census and 2005 mini-census.

Table 2 Decomposition of the *hukou* differences in TFR_{asfr} into components, China in 1990 and 2005

<i>Year</i> <i>Component due to change in</i>	Characteristics		
	Nonfarm employment	Education	Residence
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Conclusion

- Between 1990 and 2005, fertility policy has certainly contributed substantially to the decline in TFR_{asfr} from 2.4 to 1.7 for rural women and from 1.3 to 1.0 for urban women.
- Meanwhile, mean age at first marriage increased about 2 yrs from 21.7 years old to 23.6 for rural women and from 23.4 to 25.3 for urban women.
- While rural women remain to have a shorter first birth interval than urban women, both have second birth interval longer than 4-year, as required by the policy.

Conclusion (cont.)

- Decomposition analyses show that economic development has also contributed greatly to China's fertility decline in the following aspects:
 - About half of agricultural women's fertility decline during 1990-2005 was due to the increases in proportions of non-farm employment, education or urban residents and decrease in proportions of currently married;
 - The contributions of combined changes in proportion of urban residents and changes in proportion of currently married to the total *hukou* differences in TFR_{asfr} had increased from 35 percent in 1990 to 63 percent in 2005.