



# SEX RATIO AT BIRTH IMBALANCES IN VIET NAM:

Evidence from the 2009 Census



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# 1. Introduction



Sex ratio at birth (SRB) is the means of determining the number of boys being born per one hundred girls. In Viet Nam, since the year 2000, statistical data and research studies have identified a trend towards SRB imbalance, notably the expression of a disproportionate number of live male compared to live female births.

In 2006, the General Statistics Office (GSO), with technical support from the United Nations Population Fund (UNFPA), collected, analyzed and published essential data on SRB that was found to be at the significantly high level of 110/100. The information in this booklet is based on analysis conducted by Dr Christophe Z. Guilmoto, a demographer with substantive experience in SRB related research in China, India and Viet Nam, on 15% of the sample data extracted from the 2009 Population and Housing Census. The booklet represents the sixth in a series published by UNFPA in recent years. Dr Guilmoto's more comprehensive analysis of this data will be released in the coming months in the form of a census data monograph. However, in publishing this booklet, UNFPA hopes to update and inform readers on current demographic SRB trends in Viet Nam and to encourage better informed opinion on this crucial population issue.

## 2. Birth masculinity in Viet Nam and the 2009 census



In spite of an increasing array of quantitative and qualitative survey information, the decennial population census in Viet Nam remains the main tool for monitoring demographic trends not just in the country as a whole but also at the regional levels that exhibit wide variation in social and geographical constituents. One domain in which census statistics are eagerly awaited relates to the sex distribution of the population in a country that has long been numerically dominated by women, but where the proportion of male births is now known to have risen significantly since 1999.

In April 2009, initial data released from the census confirmed that women continue to represent the majority of Viet Nam's population, numbering 43.3 million against 42.5 million men. Yet, against this statistic, the sex ratio shows a steady rise in the

male proportion of the total population over the last 30 years, moving from 94 in 1979 to 96.7 in 1999, and finally 98.1 in 2009.

This gradual shift is a complex phenomenon, influenced by lower female mortality, changing age structures and international migration. However, of significance is the direct link to this shift found in the gradual increase in live male births recorded since the 1999 census. This increase relates to the prevalent practice of prenatal sex selection, particularly the widespread preference for boys over girls. As a manifestation of such gender bias, the elevated SRB is therefore of major concern for both social and demographic reasons.

In most populations across the world, the SRB oscillates around 105/100 with observed variations across different populations that range from 104 to 106. However, it should be noted that since the 1980s several countries in Asia have experienced an unusual proportional rise in live male births likely attributable to the practice of prenatal selection (Miller, 2001; Attané and Guilmoto, 2007). With the introduction of prenatal diagnostic tools such as ultrasonography, a modest but significant share of parents across Asia has opted for termination of pregnancy on discovering they were expecting a female child. This situation led to an increase in SRB levels that have exceeded 110 in several countries and even above 120 in specific regions.

In Viet Nam, returns from the 1999 census failed to identify any significant SRB imbalance (Bélanger et al., 2003). Subsequently, however, a slight excess in the number of live male births over female has gradually been detected in sample surveys conducted annually by the General Statistics Office.<sup>1</sup> This rising masculinity trend is now viewed as one of the most important demographic issues elucidated through the census data.

1 The annual Population Change Surveys are conducted in all provinces based on a census subsample. A detailed analysis of their results in relation to birth masculinity can be found in UNFPA (2009).

### 3. Sex Ratio at Birth in Viet Nam: levels, comparisons, and trends



Since the census enumeration in April 2009, the GSO has gradually released data as they complete processing and analysis. A complete set of age and sex disaggregated data, covering 100% of the population, is expected to be released in the coming months providing an exhaustive picture of the sex ratio imbalances among the child population. The data applied in this booklet stem from a census sample that represents 15% of the entire population thus facilitating in-depth analysis of the major dimensions of social and economic changes based

on responses to the detailed census questionnaire including additional individual and household information.<sup>2</sup>

The census provided information on population distribution extending to individual demographic features and household characteristics. Importantly, the questionnaire also included items on women's reproductive history, thus shedding light on recent fertility behaviour. In addition to noting the total number of children in their families, all interviewed women in the age group 15 to 49, provided specific information on their most recent childbirth, noting sex and date of occurrence. Such information is extremely valuable given the existing lack of reliable birth registration statistics in Viet Nam. By singling out births that had occurred during the twelve months preceding 1st of April 2009 (the census reference day), census sample data provided an exceptionally precise picture of recent SRB trends.

Based on the 247,603 births reported by mothers in the census sample, SRB is estimated at 110.6 during the one year period from April 2008 to March 2009. Taking into account random fluctuations in sample size, actual SRB is estimated to lie narrowly within a range from 109.7 to 111.5 (95% confidence interval). As Table 1 indicates, this value matches previous estimates derived from other sources. However, it is important to keep in mind that, given its large sample size, the GSO census is the most representative data source available for estimating SRB values.

<sup>2</sup> For technical reasons, minor variations exist with figures published by the census (Central Population and Housing Census Steering Committee. 2010). See Appendix A for details on the sample data.

**Table 1: Sex Ratio at Birth estimates by source**

Nature of data	Sex ratio at birth	Period	Number of live births	Source
<b>Census 2009: births during the previous 12 months</b>	110.6	01/04/08 to 31/03/09	247,603	2009 Census
<b>Births reported by health facilities</b>	110.8	2008	1,458,537	Ministry of Health
<b>Annual survey: births during the previous year</b>	112	01/04/07-31/03/08	23,475	2008 Population survey

The current SRB level in Viet Nam of 110.6 significantly exceeds the standard biological value of 105. The gap between the observed and standard biological values is 5.6 per 100 and corresponds to 2.6% of the total number of births, or 5.3% of all male births. This shows that it only takes a small increase in the number of male births to disrupt significantly male/female birth proportions. It is also of interest to compare the SRB estimates for Viet Nam with similar estimates recently observed in other countries and regions (Table 2). SRB values are often found significantly higher elsewhere in Asia, starting with China where the SRB was estimated at 121 for 2008 by the Chinese Bureau of Statistics.<sup>3</sup> Results from the Chinese 2005 survey also pointed to several provinces where birth masculinity rose above

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