Research Report

Closing the Gender Gap in Vietnam: An Analysis based on the Vietnam Censuses

1989, 1999, and 2009

Danièle BÉLANGER

NGUYEN Thi Ngoc Lan

NGUYEN Thi Thuy Oanh

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ABOUT AUTHORS

Danièle Bélanger (PhD. in Demography) is a professor of sociology at The University of Western Ontario where she holds the Canada Research Chair in Population, Gender and Development. She is the Director of the Collaborative Graduate Program in Migration and Ethnic Relations.

Thi Ngoc Lan Nguyen is an analyst at the General Statistical Office (GSO) of Vietnam in Hanoi in the Population and Labour Statistics Division.

Thi Thuy Oanh Nguyen is an analyst at the General Statistical Office (GSO) of Vietnam in Hanoi in the Population and Labour Statistics Division.

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Sơn La
Phú Thọ
HÀ NỘI
Quảng Ninh
Hải Dương
Hoà Bình
Hải Phòng
Hà Nam
Thái Bình
Ninh Bình
Nam Định

LÀO

Thanh Hoá

Nghệ An

Hà Tĩnh

Đảo Hải Nam
(Trung Quốc)

Quảng Bình

Quảng Trị

Thừa Thiên - Huế
Đà Nẵng

Qd. Hoàng Sa
(h. Hoàng Sa, TP. Đà Nẵng)

THÁI-LAN

Quảng Nam

Quảng Ngãi

Kon Tum

Bình Định

Gia Lai

Phú Yên

CAM-PU-CHIA

Đắk Lắk

Đắk Nông
Khánh Hoà

Bình Phước
Lâm Đồng
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Tây Ninh
Bình Dương
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Đồng Nai

TP. Hồ Chí Minh
Đồng Tháp
Long An
An Giang
Tiền Giang
Bà Rịa - Vũng Tàu
Cần Thơ
Bến Tre
Kiên Giang
Trà Vinh
Sóc Trăng
Bạc Liêu
Ca Mau

Qd. Trường Sa
(h. Trường Sa, tỉnh Khánh Hoà)

INTRODUCTION

For the first time since Vietnam's reunification in 1975, statistical data are available to allow us to take stock of two decades of change in the realm of gender equality in Vietnam. The main objective of this report is to provide an overall picture of how Vietnam has progressed towards achieving equal opportunities for men and women in society. Micro-data obtained from three national population and housing censuses, conducted in 1989, 1999, and 2009, allow us to estimate the progress made by women and men in Vietnam and to statistically document achievements made in closing the gender gap. We provide results for ten variables that fall under three fundamental domains of men's and women's lives: economic participation opportunities, educational attainment, and health and mortality.

The main findings of this analysis show remarkable progress. Girls' and women's place in Vietnamese society has significantly improved in the last twenty years. Achievements in the realm of education are particularly striking: census results for 2009 indicate higher enrolments of girls than boys at the secondary and tertiary levels. Economic participation and opportunities have continued to improve for women, relative to men, over the past twenty years. The proportion of females holding positions of power remains low, but has increased dramatically. With respect to health and mortality, we see that the life expectancy for both males and females has increased. In contrast, however, there is clear evidence of increasing sex ratios at birth, which indicates accrued prenatal sex discrimination towards girls.

Overall, we find clear evidence that the numerous initiatives, programs, and policies put in place by the government of Vietnam have paved the way for a very significant narrowing of the gender gap in many aspects of women's and men's lives. Nevertheless, continued efforts are required to improve women's opportunities for professional advancement and to promote the value of daughters.

Despite this very positive picture painted by census data, our analysis has limitations. We do not capture change among the most vulnerable groups, such as people living below the poverty level or ethnic minority groups. In addition, gender equality cannot be exclusively measured with quantitative indicators, such as the ones provided by census data. Many aspects of gender-based discrimination in employment or education, for instance, are not captured by the type of analysis we present here. Other domains of life, such as domestic violence and sexual

harassment, are important indicators of progress in achieving gender equality that cannot be addressed with census data.

CONTRIBUTION OF THIS REPORT

Numerous monographs and reports have been published based on Vietnam census data. This report, however, provides the first thorough analysis on any topic that makes use of the three most recent censuses. In addition, it is the first analysis to assess progress in closing the gender gap over the past twenty years. To sum up, this report contributes to knowledge by providing the following:

1. The first comparison of a series of indicators by gender over three censuses for the country, by rural and urban areas.

2. The first comparison of a series of indicators by gender over three censuses by region for Vietnam's six socio-economic regions (with regions recoded to allow comparisons between three censuses).

3. The first comparison of sex ratios at birth based on analyses of fertility histories collected in each census.[1]

DATA AND METHODOLOGY

The present analysis relies on the census sample survey data (long form of the questionnaire) administered to a sample of the total population as part of the National Population and Housing Census of Vietnam for the years 1989, 1999, and 2009. The data sets included the 1989 five percent census sample survey data, the 1999 three percent census sample survey data, and the 2009 fifteen percent census sample survey data (General Statistical Office, 1991; Central Steering Committee for the Population Census, 1990; Central Steering Committee of the Population and Housing Census, 2000 and 2010).

Following the approach of the World Economic Forum presented in *The Global Gender Gap Report 2010* (Hausman, Tyson and Zahidi, 2010), we estimate levels and ratios for three fundamental domains: economic opportunities and participation, educational attainment, and

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[1] This method offers more precise results than the ratio of boys to girls obtained from the census population below age 1.

health and mortality. For each domain, we estimate variables used by the World Economic Forum (Hausman, Tyson and Zahidi, 2010) for their calculation of the gender gap index. In total, we provide results on ten variables.[2] Results are expressed for men and women separately, with the exception of two variables showing the male/female distribution in percent (Legislators, senior officials, and managers and Professional and technical workers) and the sex ratio at birth, which is a single indicator of the ratio of male to female births. Life expectancy at birth and infant mortality rates are standard indicators.

Variables analysed in this report[3]

Economic participation and opportunity

  1. Labour force participation rate

  2. Legislators, seniors officials, and managers (distribution by gender)

  3. Professional and technical workers (distribution by gender)

Education attainment

  4. Literacy rate

  5. Net enrolment rate at the primary level

  6. Net enrolment rate at the secondary level

  7. Gross enrolment rate at the tertiary level

Health and mortality

  8. Life expectancy at birth

  9. Sex ratio at birth

  10. Infant mortality rate

All results are presented in appendices 1 to 3. The report provides results to assess progress in the realm of gender on both *levels* and *gaps*. First, we assess levels achieved from each census for men and women separately (see Appendix 1, Tables A1.1 to A1.9). For variables on economic possibilities (percent legislators, senior officials and managers; percent professional and technical workers), results indicate the proportion of women and of men over the total number of individuals in these occupations. Data on sex ratios at birth are presented in two

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[2] The World Economic Forum uses a total of 14 variables to calculate the gender gap index. We do not have data for two of them (wage equality for similar work and estimated earned income) and, therefore, could not include them to our analysis. Census data does not provide any information on variables to measure political participation (the forth domain used in the gender gap index). We added the infant mortality rate to our analysis. This variable is not included in *The Global Gender Gap Report* of The World Economic Forum (Hausman, Tyson and Zahidi, 2010).

[3] See annex 5 for details on the method used to calculate each variable.

different ways: the ratio of girls to boys is included in Tables A1.1 to A1.9 (all ratios in these tables are women/men), while figure A2.6 presents the standard boys to girls sex ratio at birth. For levels achieved for the entire population (men and women combined), please refer to Appendix 3 (Figure A2.1 to A2.8). We also provide results on absolute change in *levels* (levels expressed in percent) achieved between 1989 and 2009 (see Appendix 3, Table A3.1).

Second, we examine the gender gap for each census and the progress made in closing that gap between 1989 and 1999 by calculating a ratio of the level of females over males (female to male ratio) for each variable (for ratios on all variables for all three census years, by urban and rural areas and by region, see Appendix 1, Table A1.1 to A1.9). The ratios represent the number of women per 100 men. The equality benchmark is 1, which would mean that men and women are equally represented in the labour force. In other words, the closer to 1, the closer to equality. In some cases, ratios are above 1, indicating that women have greater representation or are doing better than men.

RESULTS

Economic participation and opportunity

Labour force participation rate

> → Vietnam's high labour force participation rates remain relatively stable between 1989 and 2009, with approximately three quarters of the population active in the labour force.
>
> → There is near equality in labour force participation rates between men and women in all regions of Vietnam except the Central Highlands and the Southeast where women are significantly less likely than men to be in the labour force. This difference is maintained over the three census years.
>
> → The largest increase in the point calculation is seen for women in the Southeast (3.9 points), while women in the Red River Delta saw a decline of 6.2 points over three censuses.

Results on the labour force participation of men and women show that levels are high in 1989 and are maintained over the next two decades. Overall, in 2009, women are less likely than men to be in the labour force, but their participation rate (71.4%) is high relative to international standards. Between 1989 and 1999, we observe a slight decline for both men and women that we attribute mostly to differences in how labour force participation is measured in the censuses.[4]

Between 1989 and 2009, results show a slight decline in rural areas for women and an increase for men in urban areas. Women in urban areas have lower levels of labour force participation than women in rural areas. Results by region show that the lowest participation rates for women were in the Southeast, a pattern that is maintained over the two decades.

The censuses show near equality in labour force participation rates for women and men in Vietnam. In *The Global Gender Gap Report 2010*, Vietnam ranked 12th (over 134 countries) in the world for its progress towards closing the gender gap in labour force participation. The ratio is closer to 1 in rural than in urban areas. By region, we note that equality declines as we move

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[4] In 1999, the method used is likely to lead to lower estimates than the one used for the two other census years, see appendix 6 and 7 for details.

from north to south: the Northern Midlands and Moutains, Red River Delta, North and South Central Coast, and Central Highlands have ratios above 0.9, but ratios drop below 0.8 for the Southeast and the Mekong River Delta. This indicates a more gendered division of labour and differing opportunities for economic participation for women living in the two most southern regions of Vietnam.

Legislators, senior officials, and managers

→ As of 2009, women represent about one quarter of legislators, senior officials, and managers.

→ The ratio improves significantly after 1989 in all regions and the country overall (from 16 women for 100 men to 30 women for 100 men).

→ Results indicate excellent progress and the need for further improvement.

→ Among all variables studied in this report, it is in this domain that women do the worse relative to men in Vietnam.

The proportion of women relative to men in powerful positions is an excellent measure of the gender gap. *The Global Gender Gap Report* uses this indicator to explore the gap between men and women in opportunities for professional advancement. Results indicate that 77 percent of these positions are held by men in 2009, but women have made significant progress between 1989 and 2009. For the entire country, only one worker in six in these professions is a woman in 1989, but nearly one worker in four is a woman by 2009. There are slightly more women in these professions, relative to men, in urban areas than in rural areas, although the difference remains small. We note improvements in all regions of Vietnam, with the largest gains made in the Northern Midlands and Moutains (from 13.8% to 25.1%) and the Central Highlands (from 9.8% to 21.7%).

The gender gap is the smallest in the Southeast, where we see the largest number of women, relative to men, in these professions (close to 4 women for every 10 men, a ratio of 0.38). Other regions have ratios ranging between 0.24 and 0.34. It is interesting to note that, while women have low labour force participation rates in the Southeast compared to other regions, it is also in this region that the largest proportion of women in positions of power is found. More work is required to increase women's opportunities for professional advancement throughout the

country. Among all variables studied in this report, it is in this domain that women do the worse relative to men in Vietnam.

Professional and technical workers

→ In 2009, there is a slight reverse gender gap (in favour of women) in the distribution of men and women who are professional and technical workers in Vietnam (ratio of 1.09).

→ The reverse gender gap diminished over the two decades for the entire country, in all regions, in both urban and rural areas.

→ These results indicate that women have plenty of opportunities for employment as professional and technical workers, except in the Southeast and Mekong River Delta where women are less represented than men.

The distribution of female, relative to male, professional or technical workers is also a measure of opportunities in the labour force. In the case of Vietnam, we note a reverse gender gap, with women being represented more than men in these categories. Interestingly, the reverse gender gap is particularly pronounced in 1989, but then declined. In 2009, the distribution between men and women is close to equal, with women still slightly overrepresented. Trends over time by urban and rural areas resemble those of the entire country. In rural areas, women continue to outnumber men, while there is near equality in urban areas.

By region, the most noteworthy change over time is the reversal of the gender distribution in the two southern regions of Vietnam between 1989 and 1999. As of 1999, men outnumber women in these occupations, while it is the opposite in 1989 (for the Southeast the ratio was 1.24 in 1989 and 0.98 in 1999; for the Mekong River Delta, the ratio was 1.09 in 1989 and 0.80 in 1999). In 2009, ratios were still above one except for in the Southeast and Mekong River Delta regions where they were respectively 0.93 and 0.91. In brief, gender equality is attained in all regions of Vietnam, except in the two regions of the South, where men are more represented than women among professional and technical workers.

Educational attainment

Literacy rate

→ Vietnam's literacy rate improved between 1989 and 2009, from a total of 87.3 percent to 93.5 percent.

→ Women made more gains than men with a national increase over two decades of 8.7 points for women and 3.1 for men.

→ The gender ratio in literacy is closing and reached 0.95 in 2009, up from 0.89 in 1989.

Results clearly show that Vietnam's literacy rates are very high and that the gender gap has nearly closed. The Central Highlands region made the most progress between 1989 and 2009 with the literacy rates increasing by 9.5 points for men and 15.3 points for women. As of 2009, women in the Northern Midland and Mountains region have the highest illiteracy rate in the country with 17.2 percent of women being illiterate (or 82.8% literate). There is little variation in literacy rates between regions in Vietnam. The gender ratios for 2009 were above 0.90 for all regions. The remaining gap is mostly attributable to higher illiteracy among women, relative to men, in older age groups. As we will see below with results on educational attainment, Vietnam's gender gap in literacy will disappear in the coming years. Continued efforts should be made to promote literacy in the Central Highlands region and the Northern Midlands and Moutains region.

Enrolment in primary education

→ Vietnam increased its primary education enrolment by 30.3 points with an increase from 65.2 percent in 1989 to 95.6 percent in 2009.

→ There has been equality in primary education enrolment between girls and boys since 1989.

→ Enrolments are the lowest for girls and boys in the Northern Midlands and Unplands region, the Central Highlands region, and the Mekong River Delta region.

→ The largest improvements are seen in the Central Highlands region with an increase of nearly 40 points in enrolment rates for boys and girls (from 54.5% to 93.3% in two decades).

> → Even in the regions with the lowest enrolments, there is equality between girls and boys.

Vietnam's progress in closing the primary education gender gap had been noted shortly after publication of the 1989 census data (Knodel and Jones, 1996). The present analysis shows that this equality has remained stable. Moreover, we note impressive overall improvements in all regions. Our analysis does not, however, capture progress in closing the gender gap within the most vulnerable groups, such as the lowest socioeconomic strata and some ethnic minority groups.

Enrolment in secondary education

> → Approximately 75 percent of children are enrolled in secondary school in 2009, an increase of 38.2 points, from only 36.5 percent in 1989.
>
> → Girls made more improvement than boys between 1989 and 2009 (gain of 41.9 points for girls compared to 34.8 for boys).
>
> → The gender gap in favour of boys observed for 1989 no longer exists, and a slight reverse gender gap in favour of girls began in 2009, with 76.7 percent of girls enrolled in secondary school, as opposed to 72.8 percent of boys.

Increases in net enrolment rates at the secondary level are impressive. In both urban and rural areas there have been significant improvements, but girls in the rural areas have made the largest leap from an enrolment of 29.5 percent in 1989 to 74.3 percent in 2009. By region, the largest gains have been made by girls in the North and South Central Coast region, the Central Highlands, and the Red River Delta (a gain of 45 points in 20 years in all areas). In 2009, the female to male ratio was above 1 in all six regions of Vietnam. The highest ratio (1.12) was found in the Central Highlands. While the gender gap has closed, there is room for increasing enrolment of both girls and boys. The above 1 ratios reflect a worldwide trend already documented (United Nations, 2010).

Enrolment in tertiary education (1999 and 2009[5])

→ About one quarter of men and women are enrolled in tertiary level education in 2009.

→ Enrolment rates increased by 15 points between 1999 and 2009, with women having made more gains than men (16.3 points versus 13.6 points).

→ The gender gap of 1999, with 84 women for 100 men, reversed with slightly more women than men enrolled in tertiary level education in 2009, with 109 women for 100 men.

→ Increases in enrolment rates are concentrated in urban areas and in regions with large urban centers.

Vietnam has a long tradition of post-secondary education, but it remains difficult to access tertiary level education outside the large urban centers. Rapid progress in enrolment rates is seen in the Red River Delta (24.87 points), in the Southeast (14.38 points), and in the North and South Central Coast region (14.82). More modest change is noted in the three remaining regions (Northern Midlands and Moutains region, Central Highlands, and Mekong River Delta). In all regions, except for the Central Highlands region, women have gained more points than men between 1999 and 2009. In 2009, the largest gap is found in the Southeast (ratio of 0.89), while the ratio equals 0.99 and above in all other regions.

Health and survival

The variables examined below capture differences between men and women in survival before birth, in early life, and throughout the life course.

Sex ratios at birth

→ The sex ratio at birth has been increasing steadily between 1989 and 2009.

→ This increase indicates increasing prenatal gender-based discrimination.

→ The highest sex ratio at birth is in the Red River Delta region for 2009 (115.3).

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[5] Enrolment rates at the tertiary level are not available from the 1989 census.

Sex ratios at birth provide a good indication of the status of daughters relative to the status of sons. A higher than normal sex ratio at birth (105 is the normal SRB) indicates that families resort to sex selection strategies in favour of sons. The most widespread way of intervening on the sex of children born is to use sex identification through ultrasound technology followed by sex selective abortion. Recent reports have indicated a steady increase in the sex ratio at birth since the mid 2000s in Vietnam (Guilmoto, Hoang and Ngo, 2009; UNFPA, 2010).[6]

In the present analysis, we compare sex ratios at birth using information from birth histories obtained in each census. We estimate the sex ratio at birth by using information from married women (15 to 49 years old) on the number of live births they had, by sex, in the year preceding the census. This approach yields better results than the ratio of males to females at age 0 provided by the census. Previous analyses of the 1989 census data use population at age 0 to study the sex ratio at birth (see Bélanger *et al.*, 2003).

Our analysis provides a clear picture of the increase in sex ratios at birth over a twenty year period. Data clearly show a normal sex ratio at birth in 1989 followed by a gradual increase to a SRB of 110.5 in 2009 (see Figure A2.6). The Red River Delta has the highest SRB in 2009 (115.3). Results indicate an increase beginning in 1999 in urban areas, in the Southeast region, and in the Mekong River Delta region. In other regions, the sex ratio is still normal in 1999, but increases by 2009.

Infant mortality rate

> → Infant mortality rates decline significantly between 1989 and 2009 with national rates of 46 to 16 infant deaths per thousand live births.
>
> → Between 1989 and 2009, the gap between girls and boys increases over time with boys having higher risks of dying, relative to girls. This trend indicates more equal treatment of boys and girls over time since, in populations where no gender-based discrimination is practiced, boys are more likely to die than girls during the first year of life.
>
> → All regions show improvements, but more efforts are required to decrease infant mortality in the rural areas, in the Northern Midlands and Moutains, and in the Central Highlands.

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[6] In Vietnam, son preference has clearly been identified in qualitative research. Sons are desired for various reasons including economic security, social status, and to continue the male family line (Belanger, 2002). In addition, funeral and ancestors worship rituals are supposed to be performed by a male heir.

Infant mortality is a good indicator of differentials in life chances in the first year of life. 'Normal' ratios of boys to girls who die in early life are above 1 (M/F deaths), with infant boys being more vulnerable to early death than girls.[7] This signifies that a ratio of 1 does not mean equality in the sense of a goal, since an expected difference exists in the absence of differential treatment based on gender. In line with other analyses based on survey data, our results show that there is no evidence of discrimination against girls in infancy (Bélanger, 2004). As expected, boys have higher infant mortality rates than girls. For the whole country, we note that the gap between girls and boys increases between 1989 and 2009. Important differences exist between regions, with the highest risk of dying before age 1 found in the Central Highlands, particularly among boys (27.4 deaths per 1,000 live births).

The ratio of the infant mortality rates between girls and boys is nearly 1 in 1989 and declines to 0.76, indicating a widening gender gap. The decline in the ratio of female to male infant mortality rates could be attributable to a higher frequency of differential treatment between boys and girls in favour of boys in the 1980s. It could also be the result of advances in prenatal, delivery, and postnatal care, from which girls would have benefited more than boys because of an expected advantage. For all regions, the ratio for 2009 is between 0.74 and 0.79, showing homogeneity between regions.

Life expectancy at birth

> → There are significant increases in life expectancy at birth for both men and women between 1989 and 2009. Men gain 7.2 years and women 8.1 years over the two decades.
>
> → The gap between men and women increases slightly between 1989 and 2009.

Results show that life expectancy at birth reaches above 70 for men and above 75 for women by 2009. The gender gap between men and women increases in favour of women over the two decades. The highest life expectancy is found in the urban areas of Vietnam (78 for women and 73 for men).

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[7] The standard sex ratio among deaths in the first year of life is of approximately of 128 boys per 100 girls, or 78 girls for 100 boys. We use the girls to boys ratios in this study.

Expressed in terms of ratios (life expectancy of women over men), we note small differences between the three census years, but a consistent increase in the gender gap indicating that the female advantage is deepening. This trend shows that Vietnam's gendered mortality patterns are close to the ones observed in developed countries.

CONCLUSION

The present analysis has highlighted domains of progress, domains of equality, and setbacks.

With respect to economic participation, women play an important role in Vietnam's labour force, but opportunities to occupy positions of power remain limited, despite some progress between 1989 and 2009. Economic participation is a domain where more initiatives are required to provide women with more opportunities to contribute economically. The World Gender Gap Report shows a clear correlation between women's economic opportunities and average income. The narrower the gender gap in economic participation, the higher the incomes.

Regarding education, Vietnam is following an international trend of not only closing the gender gap, but of having more girls and women enrolled at higher levels of schooling. This reverse gender gap raises questions with respect to boys' educational attainment. Education is a domain of equality and also a reverse gender gap.

The largest setback in gender equality between 1989 and 2009 is the increasing and currently high sex ratio at birth. Vietnam joins other countries where the phenomenon appeared earlier: China, India, and South Korea. Perhaps Vietnam will be in a strong position to act promptly and effectively to reverse the trend and not suffer as much from its long term consequences as China and India. Other indicators of mortality show that women and men, once they are born, have equal chances. Women's expected advantage during the first year of life and in life expectancy are in line with indicators found in more economically advanced countries of the world.

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APPENDICES

Appendix 1 – Vietnam gender gaps, 1989–2009

Tables A1.1 à A1.9 present results for the 10 variables and the 3 Census, for the whole country, for urban and rural areas, and for the 6 socio-economic regions of 2009. We used the model of the World Economic Forum, as presented in the *Global Gender Gap Report 2010*.

We assess levels achieved from each census for men and women separately. For variables on economic possibilities (percent legislators, senior officials and managers; percent professional and technical workers), results indicate the proportion of women and of men over the total number of individuals in these occupations. Data on sex ratios at birth are presented in two different ways: the ratio of girls to boys is included in these Tables (all ratios in these tables are women/men), while figure A2.6 and the text presents the standard boys to girls sex ratio at birth.

We examine the gender gap for each census and the progress made in closing that gap between 1989 and 1999 by calculating a ratio of the level of females over males (female to male ratio) for each variable. The ratios represent the number of women per 100 men. In 2009, for instance, labour force participation rates are 71.4 percent among women and 81.8 percent among men. The ratio of women to men equals 0.87 (71.4/81.8), indicating that for every 100 men in the labour force there are 87 women.

The equality benchmark is 1, which would mean that men and women are equally represented in the labour force. In other words, the closer to 1, the closer to equality. In some cases, ratios are above 1, indicating that women have greater representation or are doing better than men. For instance, this is the case for enrolment in secondary schools (girls are more likely to be enrolled than boys) and life expectancy at birth (women live longer than men).

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TABLE A1.1 Vietnam gender gaps, 1989–2009
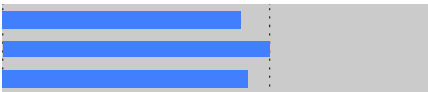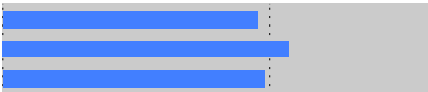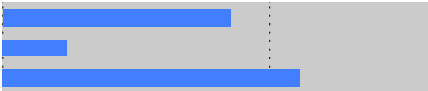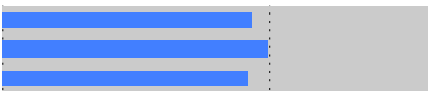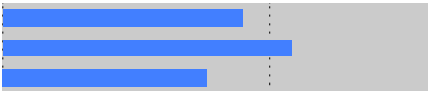
A. GENDER GAP SUBINDEXES 1989	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	73,5	81,5	0,90	
2. Legislators, senior officials, and managers	14,1	85,9	0,16	
3. Professional and technical workers	56,9	43,1	1,32	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	82,7	92,7	0,89	
5. Net enrolment in primary education	65,3	65,1	1,00	
6. Net enrolment in secondary education	34,9	38,0	0,92	
7. Gross enrolment in tertiary education	-	-	-	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,95	
9. Life expectancy at birth	67,5	63,0	1,07	
10. Infant mortality rate	45,5	46,3	0,98	
				0.00 = INEQUALITY 1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	67,8	79,8	0,85	
2. Legislators, senior officials, and managers	19,0	81,0	0,24	
3. Professional and technical workers	52,6	47,4	1,11	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	87,1	94,0	0,93	
5. Net enrolment in primary education	91,2	92,2	0,99	
6. Net enrolment in secondary education	52,6	57,1	0,92	
7. Gross enrolment in tertiary education	9,1	10,7	0,84	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,91	
9. Life expectancy at birth	70,1	66,5	1,05	
10. Infant mortality rate	32,9	40,2	0,82	
				0.00 = INEQUALITY 1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	71,4	81,8	0,87	
2. Legislators, senior officials, and managers	23,0	77,0	0,30	
3. Professional and technical workers	52,3	47,7	1,09	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	91,4	95,8	0,95	
5. Net enrolment in primary education	95,5	95,6	1,00	
6. Net enrolment in secondary education	76,7	72,8	1,05	
7. Gross enrolment in tertiary education	25,3	24,4	1,04	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,90	
9. Life expectancy at birth	75,6	70,2	1,08	
10. Infant mortality rate	13,8	18,1	0,76	
				0.00 = INEQUALITY 1.00 = EQUALITY

TABLE A1.2 Gender gaps, urban areas, 1989–2009
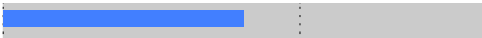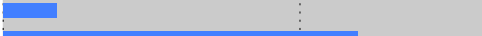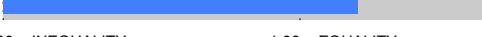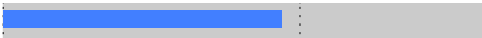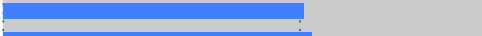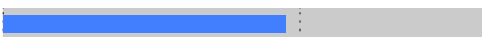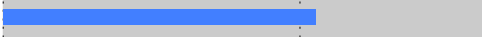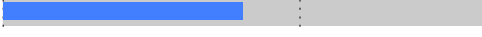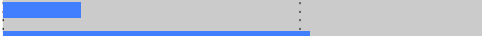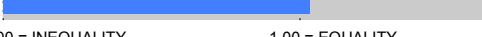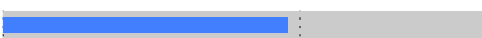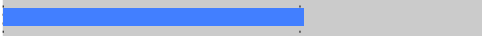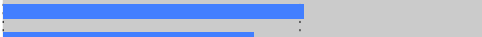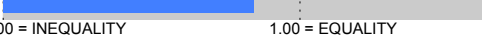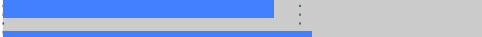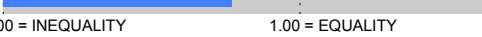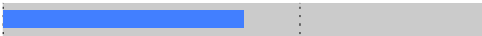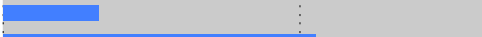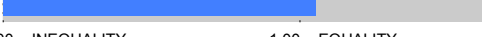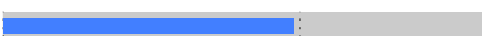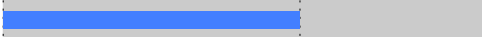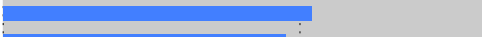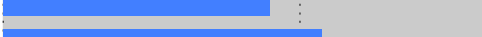
A. GENDER GAP SUBINDEXES 1989

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	62,8	77,3	0,81
2. Legislators, senior officials, and managers	15,2	84,8	0,18
3. Professional and technical workers	54,3	45,7	1,19

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	91,0	97,1	0,94
5. Net enrolment in primary education	74,1	73,7	1,01
6. Net enrolment in secondary education	57,8	55,5	1,04
7. Gross enrolment in tertiary education	-	-	-

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,95
9. Life expectancy at birth	71,7	68,1	1,05
10. Infant mortality rate	27,8	35,0	0,80

0.00 = INEQUALITY   1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	56,4	74,5	0,76
2. Legislators, senior officials, and managers	20,4	79,6	0,26
3. Professional and technical workers	50,8	49,2	1,03

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	92,9	97,0	0,96
5. Net enrolment in primary education	95,1	94,5	1,01
6. Net enrolment in secondary education	71,9	71,4	1,01
7. Gross enrolment in tertiary education	30,7	36,4	0,84

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,91
9. Life expectancy at birth	76,3	73,1	1,04
10. Infant mortality rate	15,9	20,6	0,77

0.00 = INEQUALITY   1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	60,4	74,4	0,81
2. Legislators, senior officials, and managers	24,2	75,8	0,32
3. Professional and technical workers	51,2	48,8	1,05

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	95,9	98,0	0,98
5. Net enrolment in primary education	96,4	96,4	1,00
6. Net enrolment in secondary education	84,0	81,1	1,04
7. Gross enrolment in tertiary education	53,1	55,7	0,95

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,90
9. Life expectancy at birth	78,1	73,2	1,07
10. Infant mortality rate	8,0	10,8	0,74

0.00 = INEQUALITY   1.00 = EQUALITY

TABLE A1.3. Gender gaps, rural areas, 1989–2009
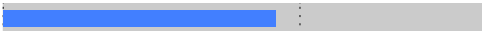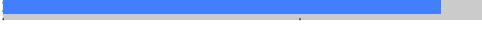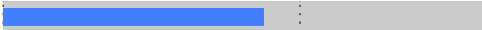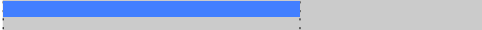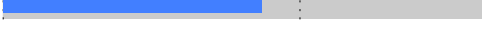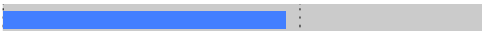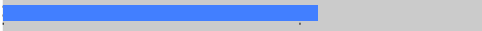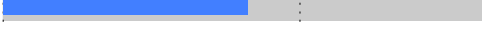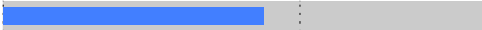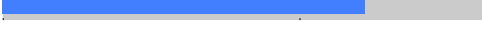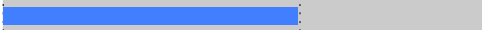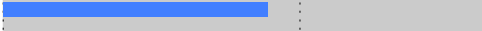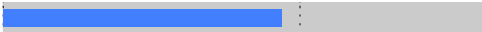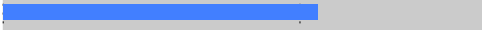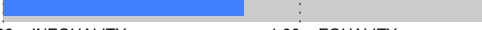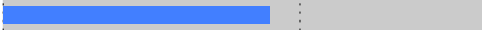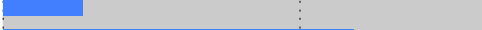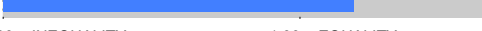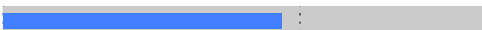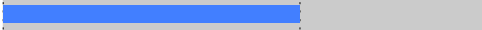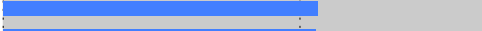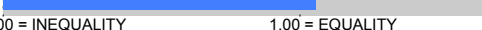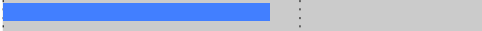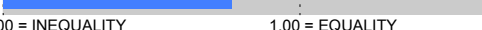
A. GENDER GAP SUBINDEXES 1989	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	76,4	82,7	0,92
2. Legislators, senior officials, and managers	12,5	87,5	0,14
3. Professional and technical workers	59,5	40,5	1,47

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	80,4	91,4	0,88
5. Net enrolment in primary education	63,5	63,3	1,00
6. Net enrolment in secondary education	29,5	33,8	0,87
7. Gross enrolment in tertiary education	-	-	-

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,95
9. Life expectancy at birth	67,7	64,0	1,06
10. Infant mortality rate	40,3	49,4	0,82

0.00 = INEQUALITY   1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	71,7	81,6	0,88
2. Legislators, senior officials, and managers	17,5	82,5	0,21
3. Professional and technical workers	54,9	45,1	1,22

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	85,1	93,0	0,92
5. Net enrolment in primary education	90,3	91,7	0,99
6. Net enrolment in secondary education	47,8	53,5	0,89
7. Gross enrolment in tertiary education	1,7	2,3	0,75

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,94
9. Life expectancy at birth	68,9	65,2	1,06
10. Infant mortality rate	36,6	45,1	0,81

0.00 = INEQUALITY   1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	76,3	85,0	0,90
2. Legislators, senior officials, and managers	21,0	79,0	0,27
3. Professional and technical workers	54,0	46,0	1,18

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	89,3	94,8	0,94
5. Net enrolment in primary education	95,2	95,3	1,00
6. Net enrolment in secondary education	74,3	70,0	1,06
7. Gross enrolment in tertiary education	11,2	10,7	1,05

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,90
9. Life expectancy at birth	74,7	69,2	1,08
10. Infant mortality rate	16,2	21,0	0,77

0.00 = INEQUALITY   1.00 = EQUALITY

TABLE A1.4 Gender gaps, Northern Midlands and Mountains, 1989–2009
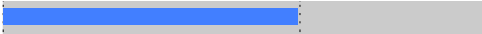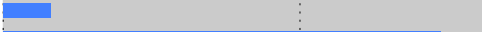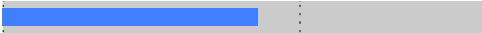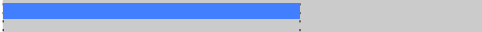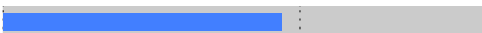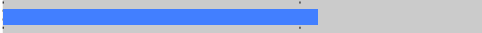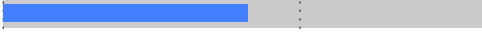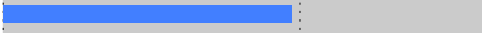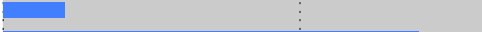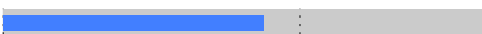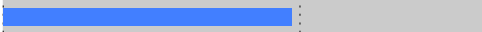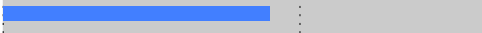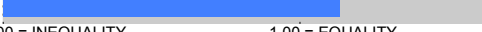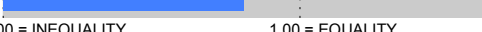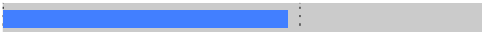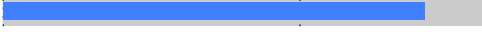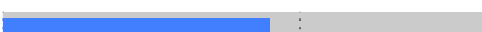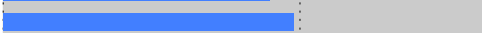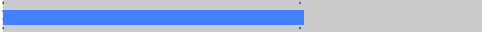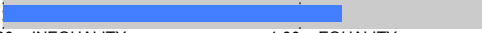
A. GENDER GAP SUBINDEXES 1989

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	81,6	82,3	0,99	
2. Legislators, senior officials, and managers	13,8	86,2	0,16	
3. Professional and technical workers	59,5	40,5	1,47	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	75,9	88,4	0,86	
5. Net enrolment in primary education	61,7	61,7	1,00	
6. Net enrolment in secondary education	33,4	33,2	1,01	
7. Gross enrolment in tertiary education	-	-	-	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,94	
9. Life expectancy at birth	66,8	62,9	1,06	
10. Infant mortality rate	44,9	54,8	0,82	
				0.00 = INEQUALITY 1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	78,2	80,4	0,97	
2. Legislators, senior officials, and managers	17,5	82,5	0,21	
3. Professional and technical workers	58,4	41,6	1,40	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	79,6	90,0	0,88	
5. Net enrolment in primary education	86,1	89,2	0,97	
6. Net enrolment in secondary education	45,9	50,8	0,90	
7. Gross enrolment in tertiary education	3,1	2,7	1,13	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,94	
9. Life expectancy at birth	68,0	64,3	1,06	
10. Infant mortality rate	39,2	48,2	0,81	
				0.00 = INEQUALITY 1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	82,9	85,9	0,96	
2. Legislators, senior officials, and managers	25,1	74,9	0,34	
3. Professional and technical workers	58,7	41,3	1,42	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	82,8	92,0	0,90	
5. Net enrolment in primary education	91,5	93,8	0,98	
6. Net enrolment in secondary education	69,9	69,2	1,01	
7. Gross enrolment in tertiary education	13,0	11,4	1,14	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,92	
9. Life expectancy at birth	73,0	67,2	1,09	
10. Infant mortality rate	21,4	27,4	0,78	
				0.00 = INEQUALITY 1.00 = EQUALITY

TABLE A1.5 Gender gaps, Red River Delta, 1989–2009
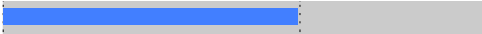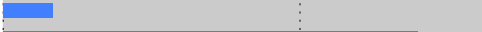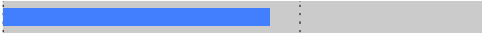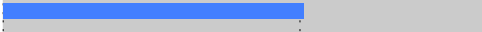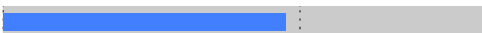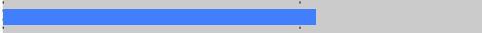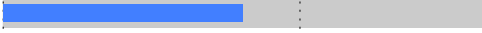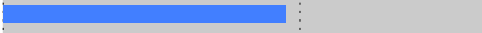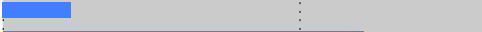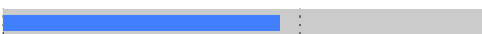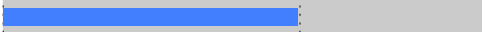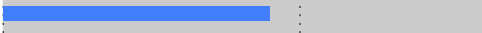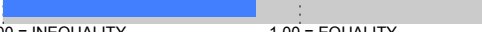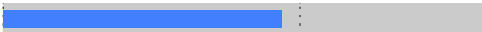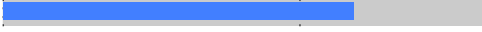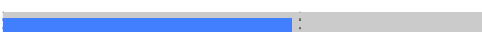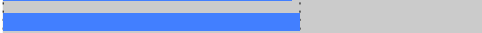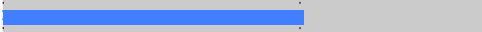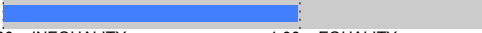
A. GENDER GAP SUBINDEXES 1989

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	77,8	78,5	0,99
2. Legislators, senior officials, and managers	14,4	85,6	0,17
3. Professional and technical workers	58,2	41,8	1,39

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	87,5	96,9	0,90
5. Net enrolment in primary education	76,4	75,3	1,01
6. Net enrolment in secondary education	33,4	33,2	1,01
7. Gross enrolment in tertiary education	-	-	-

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,95
9. Life expectancy at birth	71,6	68,0	1,05
10. Infant mortality rate	28,3	35,5	0,80

0.00 = INEQUALITY   1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	71,1	74,7	0,95
2. Legislators, senior officials, and managers	19,0	81,0	0,23
3. Professional and technical workers	54,8	45,2	1,21

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	91,4	97,8	0,93
5. Net enrolment in primary education	96,5	97,5	0,99
6. Net enrolment in secondary education	45,9	50,8	0,90
7. Gross enrolment in tertiary education	14,8	17,4	0,85

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,95
9. Life expectancy at birth	73,4	69,8	1,05
10. Infant mortality rate	23,2	29,6	0,79

0.00 = INEQUALITY   1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	71,6	76,2	0,94
2. Legislators, senior officials, and managers	22,2	77,8	0,29
3. Professional and technical workers	54,2	45,8	1,18

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	95,6	98,7	0,97
5. Net enrolment in primary education	98,4	98,4	1,00
6. Net enrolment in secondary education	69,9	69,2	1,01
7. Gross enrolment in tertiary education	40,7	41,1	0,99

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,87
9. Life expectancy at birth	76,9	71,7	1,07
10. Infant mortality rate	10,7	14,1	0,75

0.00 = INEQUALITY   1.00 = EQUALITY

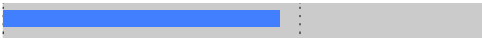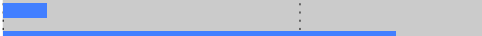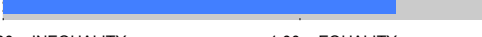## TABLE A1.6 Gender gaps, North and South Central Coast, 1989–2009
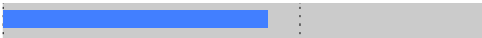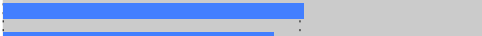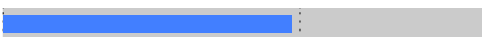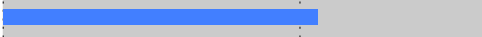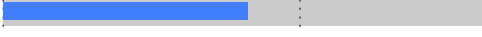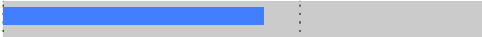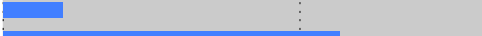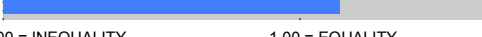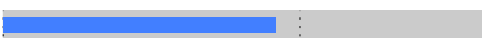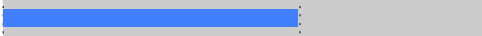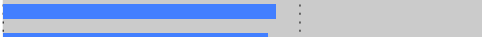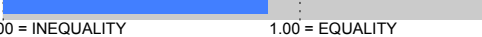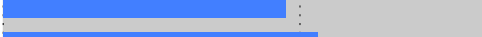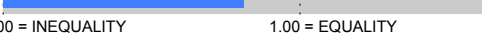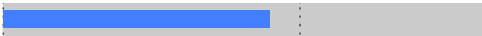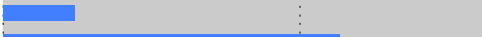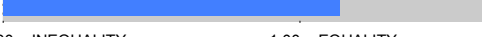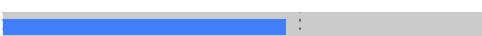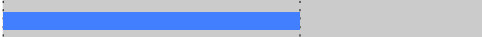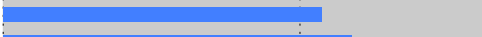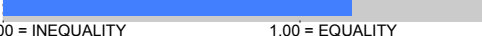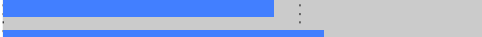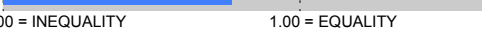
A. GENDER GAP SUBINDEXES 1989

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	74,4	80,3	0,93
2. Legislators, senior officials, and managers	12,8	87,2	0,15
3. Professional and technical workers	56,9	43,1	1,32

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	83,3	93,4	0,89
5. Net enrolment in primary education	67,5	66,8	1,01
6. Net enrolment in secondary education	33,9	37,1	0,91
7. Gross enrolment in tertiary education	-	-	-

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,97
9. Life expectancy at birth	67,3	63,6	1,06
10. Infant mortality rate	41,5	50,8	0,82

0.00 = INEQUALITY   1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	69,2	78,2	0,88
2. Legislators, senior officials, and managers	16,7	83,3	0,20
3. Professional and technical workers	53,1	46,9	1,13

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	87,2	94,8	0,92
5. Net enrolment in primary education	91,5	92,3	0,99
6. Net enrolment in secondary education	56,6	61,9	0,92
7. Gross enrolment in tertiary education	6,9	7,8	0,89

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,95
9. Life expectancy at birth	69,6	66,0	1,06
10. Infant mortality rate	34,3	42,4	0,81

0.00 = INEQUALITY   1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009

	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	72,1	80,1	0,90
2. Legislators, senior officials, and managers	19,7	80,3	0,24
3. Professional and technical workers	53,0	47,0	1,13

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Education attaintment			
4. Literacy rate	91,6	96,3	0,95
5. Net enrolment in primary education	97,4	97,1	1,00
6. Net enrolment in secondary education	81,9	76,7	1,07
7. Gross enrolment in tertiary education	23,9	20,5	1,17

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,91
9. Life expectancy at birth	75,2	69,8	1,08
10. Infant mortality rate	14,8	19,3	0,77

0.00 = INEQUALITY   1.00 = EQUALITY

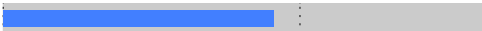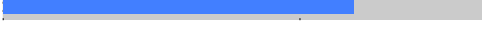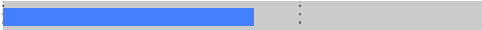## TABLE A1.7 Gender gaps, Central Highlands, 1989–2009
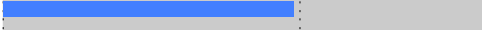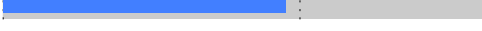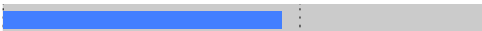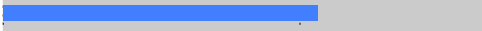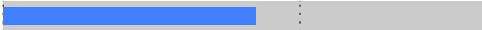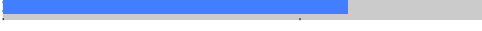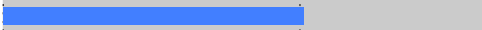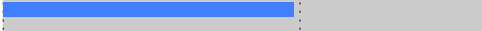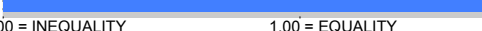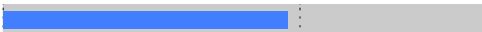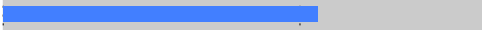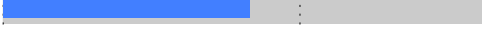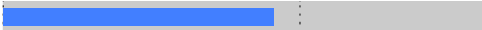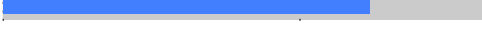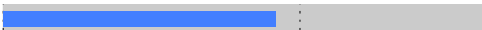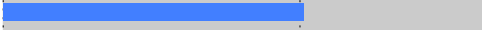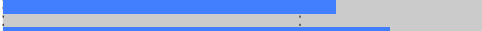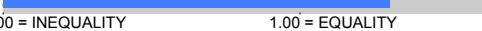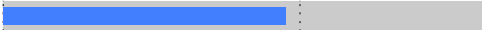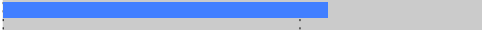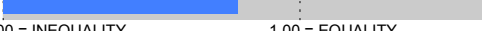
A. GENDER GAP SUBINDEXES 1989	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	77,7	85,2	0,91
2. Legislators, senior officials, and managers	9,8	90,2	0,11
3. Professional and technical workers	54,1	45,9	1,18
			0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment			
4. Literacy rate	69,8	82,8	0,84
5. Net enrolment in primary education	53,8	55,1	0,98
6. Net enrolment in secondary education	26,9	28,3	0,95
7. Gross enrolment in tertiary education	-	-	-
			0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,94
9. Life expectancy at birth	60,3	56,7	1,06
10. Infant mortality rate	70,9	84,8	0,84
			0.00 = INEQUALITY 1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	71,0	83,7	0,85
2. Legislators, senior officials, and managers	19,9	80,1	0,25
3. Professional and technical workers	53,6	46,4	1,16
			0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment			
4. Literacy rate	80,6	90,0	0,89
5. Net enrolment in primary education	87,1	86,5	1,01
6. Net enrolment in secondary education	46,6	47,4	0,98
7. Gross enrolment in tertiary education	14,0	8,5	1,64
			0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,96
9. Life expectancy at birth	62,3	58,6	1,06
10. Infant mortality rate	58,3	70,2	0,83
			0.00 = INEQUALITY 1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009	Female	Male	Female to male ratio
Economic participation and opportunity			
1. Labour force participation	78,9	86,8	0,91
2. Legislators, senior officials, and managers	21,7	78,3	0,28
3. Professional and technical workers	55,1	44,9	1,23
			0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment			
4. Literacy rate	85,1	92,3	0,92
5. Net enrolment in primary education	93,7	92,9	1,01
6. Net enrolment in secondary education	72,6	64,7	1,12
7. Gross enrolment in tertiary education	15,5	12,0	1,30
			0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival			
8. Sex ratio at birth (female/male)	-	-	0,95
9. Life expectancy at birth	72,2	66,3	1,09
10. Infant mortality rate	23,9	30,5	0,79
			0.00 = INEQUALITY 1.00 = EQUALITY

TABLE A1.8 Gender gaps, Southeast, 1989–2009
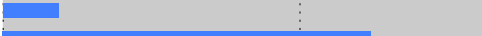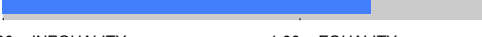
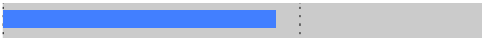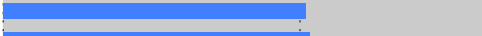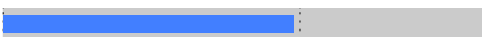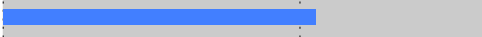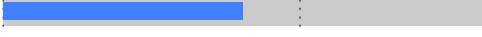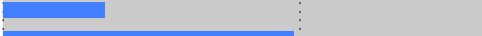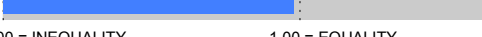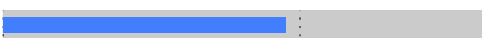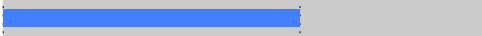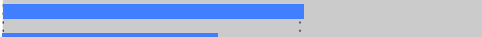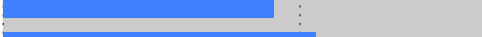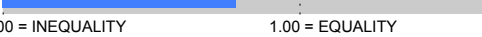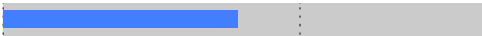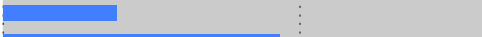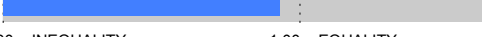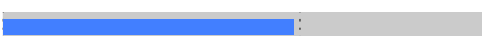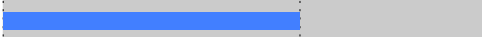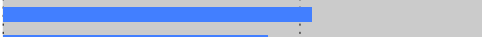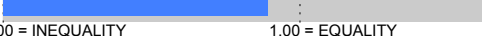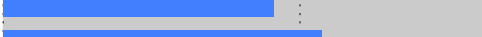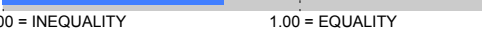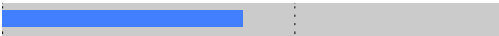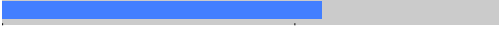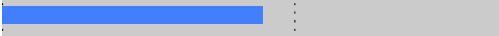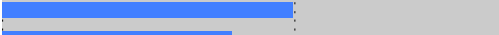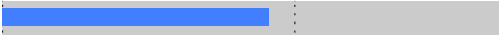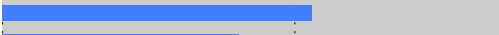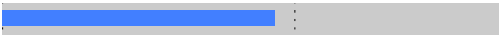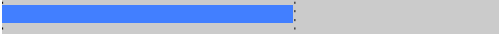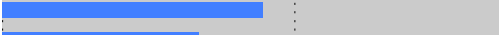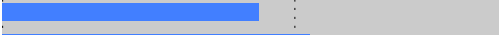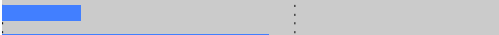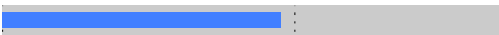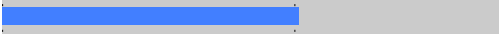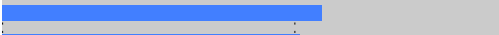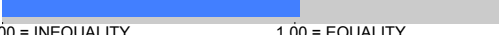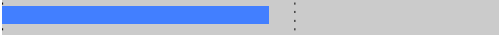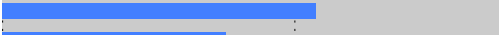## A. GENDER GAP SUBINDEXES 1989

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	60,0	80,8	0,74	
2. Legislators, senior officials, and managers	16,2	83,8	0,19	
3. Professional and technical workers	55,4	44,6	1,24	

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio	
Education attaintment				
4. Literacy rate	87,4	94,8	0,92	
5. Net enrolment in primary education	74,8	73,0	1,02	
6. Net enrolment in secondary education	44,4	42,9	1,03	
7. Gross enrolment in tertiary education	-	-	-	

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio	
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,98	
9. Life expectancy at birth	71,0	67,4	1,05	
10. Infant mortality rate	30,2	37,6	0,80	

0.00 = INEQUALITY   1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	56,8	80,0	0,71	
2. Legislators, senior officials, and managers	25,6	74,4	0,34	
3. Professional and technical workers	49,4	50,6	0,98	

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio	
Education attaintment				
4. Literacy rate	90,8	95,3	0,95	
5. Net enrolment in primary education	93,8	93,4	1,00	
6. Net enrolment in secondary education	58,1	57,4	1,01	
7. Gross enrolment in tertiary education	18,3	25,5	0,72	

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio	
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,91	
9. Life expectancy at birth	74,4	71,0	1,05	
10. Infant mortality rate	20,6	26,4	0,78	

0.00 = INEQUALITY   1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	64,0	81,0	0,79	
2. Legislators, senior officials, and managers	27,3	72,7	0,38	
3. Professional and technical workers	48,2	51,8	0,93	

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio	
Education attaintment				
4. Literacy rate	95,4	97,3	0,98	
5. Net enrolment in primary education	95,8	95,8	1,00	
6. Net enrolment in secondary education	74,1	71,2	1,04	
7. Gross enrolment in tertiary education	34,1	38,5	0,89	

0.00 = INEQUALITY   1.00 = EQUALITY

	Female	Male	Female to male ratio	
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,91	
9. Life expectancy at birth	77,8	72,9	1,07	
10. Infant mortality rate	8,5	11,5	0,74	

0.00 = INEQUALITY   1.00 = EQUALITY

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TABLE A1.9 Gender gaps, Mekong River Delta, 1989–2009

A. GENDER GAP SUBINDEXES 1989

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	70,25	85,29	0,82	
2. Legislators, senior officials, and managers	15,94	84,06	0,19	
3. Professional and technical workers	52,15	47,85	1,09	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	80,20	90,43	0,89	
5. Net enrolment in primary education	67,95	68,87	0,99	
6. Net enrolment in secondary education	25,16	32,10	0,78	
7. Gross enrolment in tertiary education	-	-	-	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,91	
9. Life expectancy at birth	68,20	64,60	1,06	
10. Infant mortality rate	38,48	47,29	0,81	
				0.00 = INEQUALITY 1.00 = EQUALITY

B. GENDER GAP SUBINDEXES 1999

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	63,25	85,65	0,74	
2. Legislators, senior officials, and managers	16,81	83,19	0,20	
3. Professional and technical workers	44,54	55,46	0,80	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	85,30	91,40	0,93	
5. Net enrolment in primary education	88,93	89,78	0,99	
6. Net enrolment in secondary education	35,32	39,84	0,89	
7. Gross enrolment in tertiary education	2,44	3,62	0,67	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,88	
9. Life expectancy at birth	70,50	66,90	1,05	
10. Infant mortality rate	33,87	41,93	0,81	
				0.00 = INEQUALITY 1.00 = EQUALITY

C. GENDER GAP SUBINDEXES 2009

	Female	Male	Female to male ratio	
Economic participation and opportunity				
1. Labour force participation	67,64	86,96	0,78	
2. Legislators, senior officials, and managers	21,26	78,74	0,27	
3. Professional and technical workers	47,73	52,27	0,91	
				0.00 = INEQUALITY 1.00 = EQUALITY
Education attaintment				
4. Literacy rate	89,46	93,85	0,95	
5. Net enrolment in primary education	93,78	93,29	1,01	
6. Net enrolment in secondary education	64,26	59,00	1,09	
7. Gross enrolment in tertiary education	13,61	13,32	1,02	
				0.00 = INEQUALITY 1.00 = EQUALITY
Health and survival				
8. Sex ratio at birth (female/male)	-	-	0,91	
9. Life expectancy at birth	76,55	71,27	1,07	
10. Infant mortality rate	11,45	15,14	0,76	
				0.00 = INEQUALITY 1.00 = EQUALITY

Appendix 2 – Results on selected variables for the entire population, 1989-2009

FIGURE A2.1 Labour force participation, Vietnam, 1989-2009
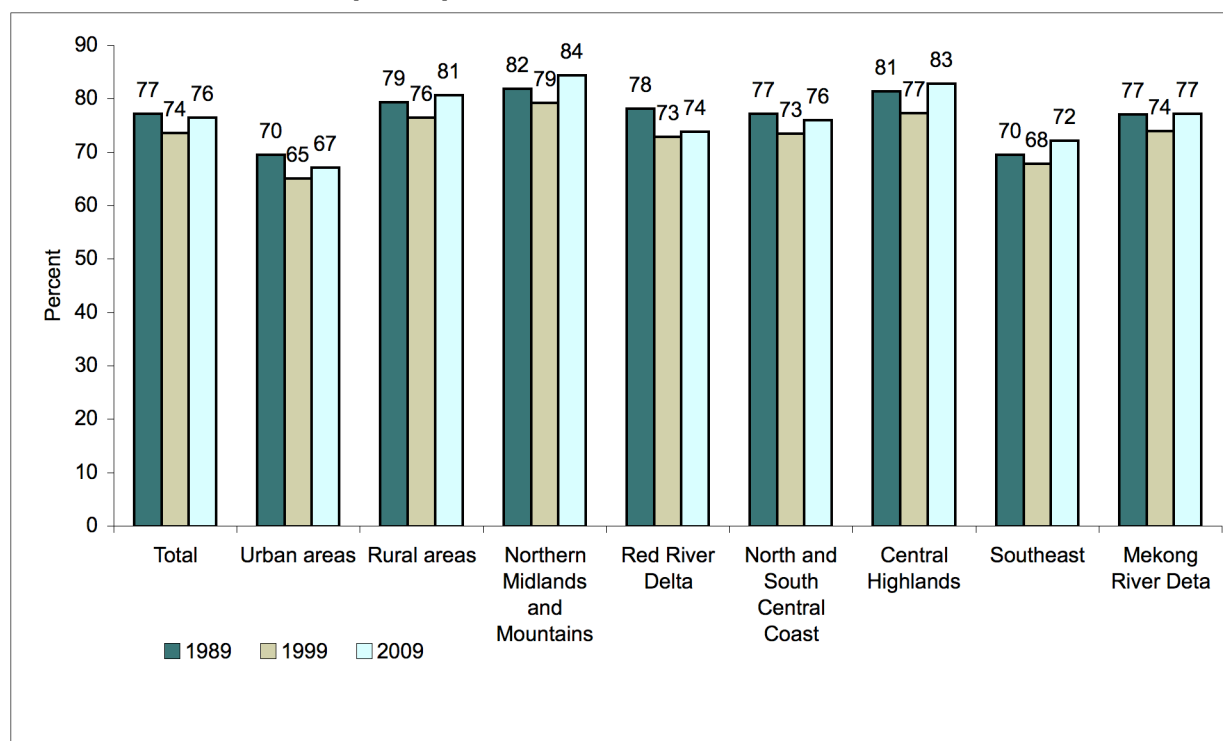
FIGURE A2.2 Literacy rate of population 15 and older, Vietnam, 1989-2009
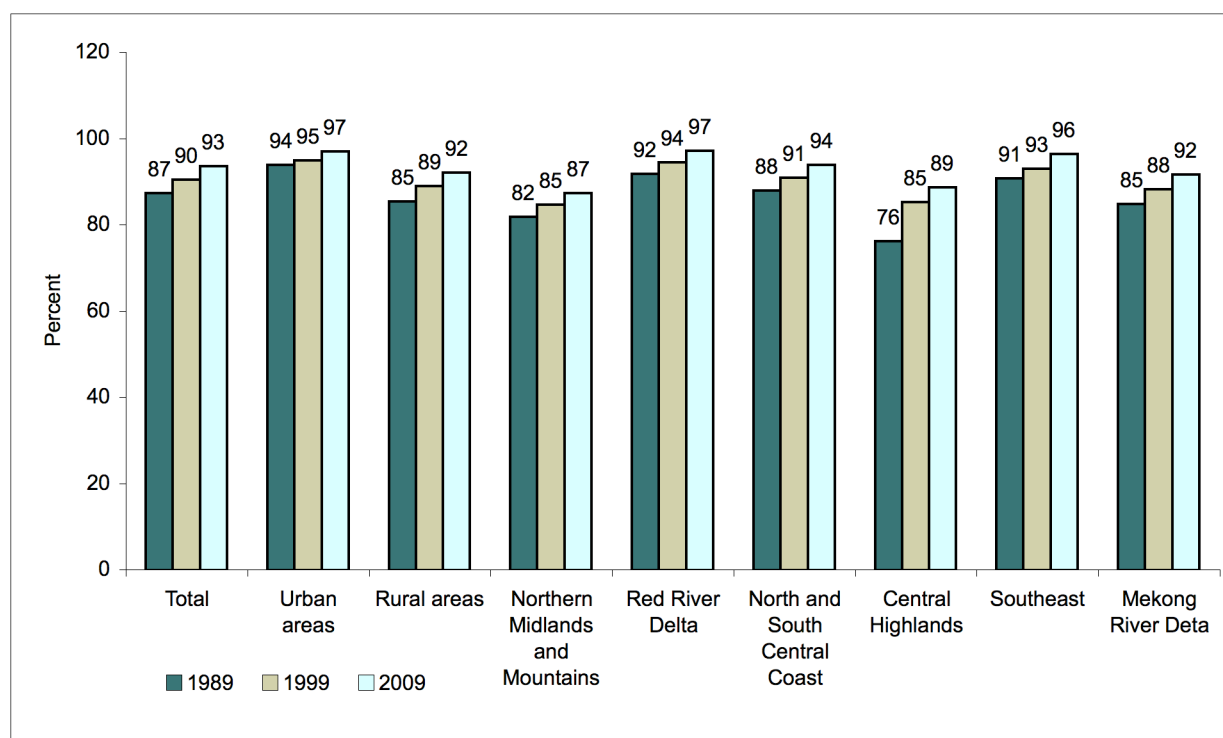
FIGURE A2.3 Net enrolment in primary education, Vietnam, 1989-2009
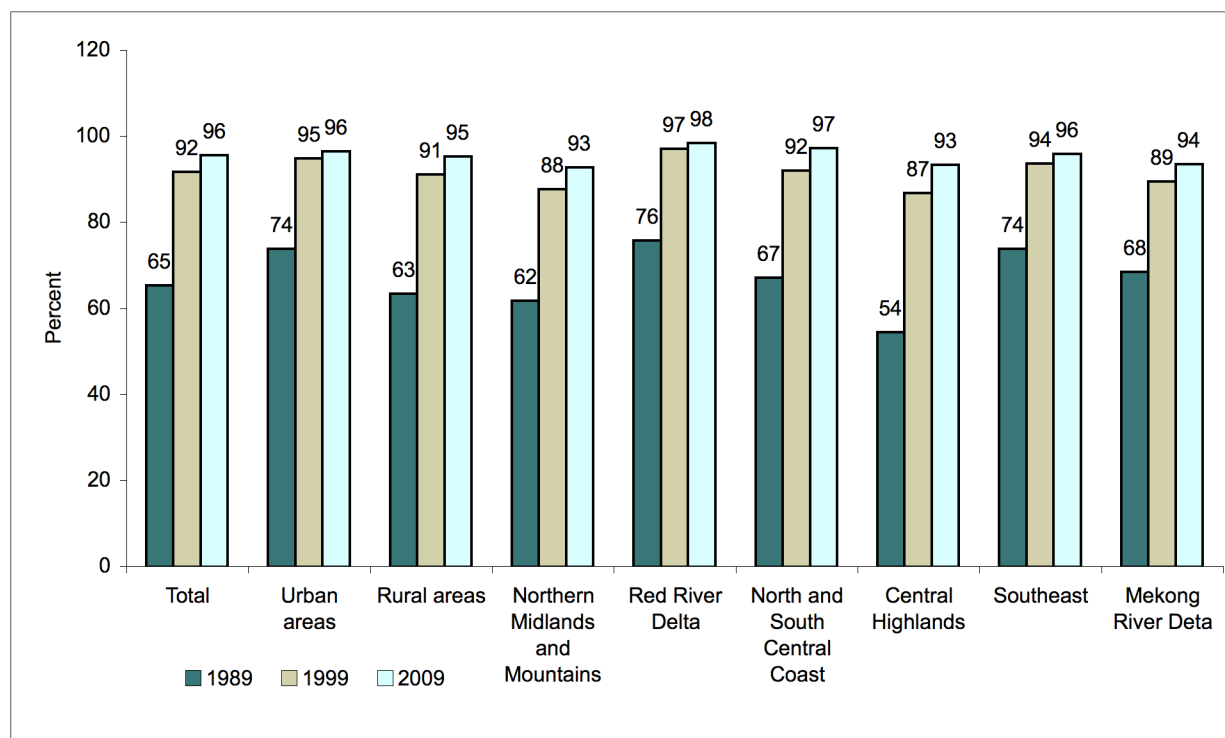
FIGURE A2.4 Net enrolment in secondary education, Vietnam, 1989-2009
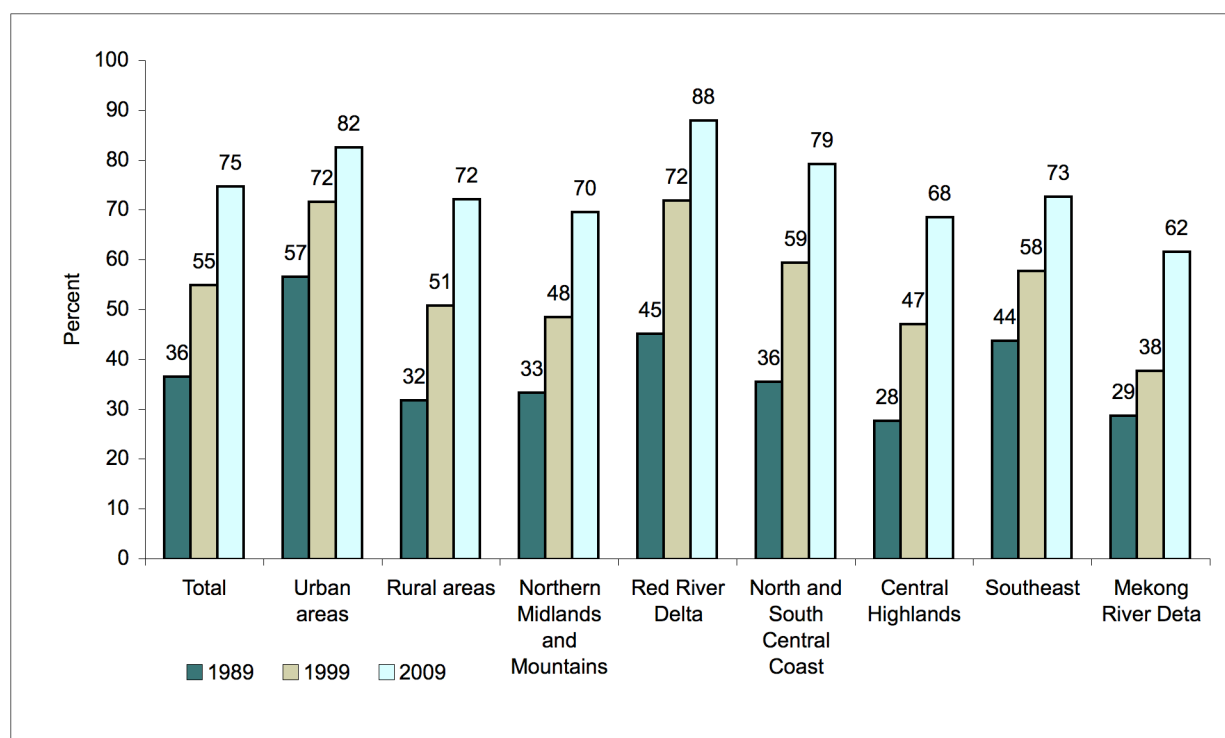
FIGURE A2.5 Gross enrolment in tertiary education, Vietnam, 1999 and 2009
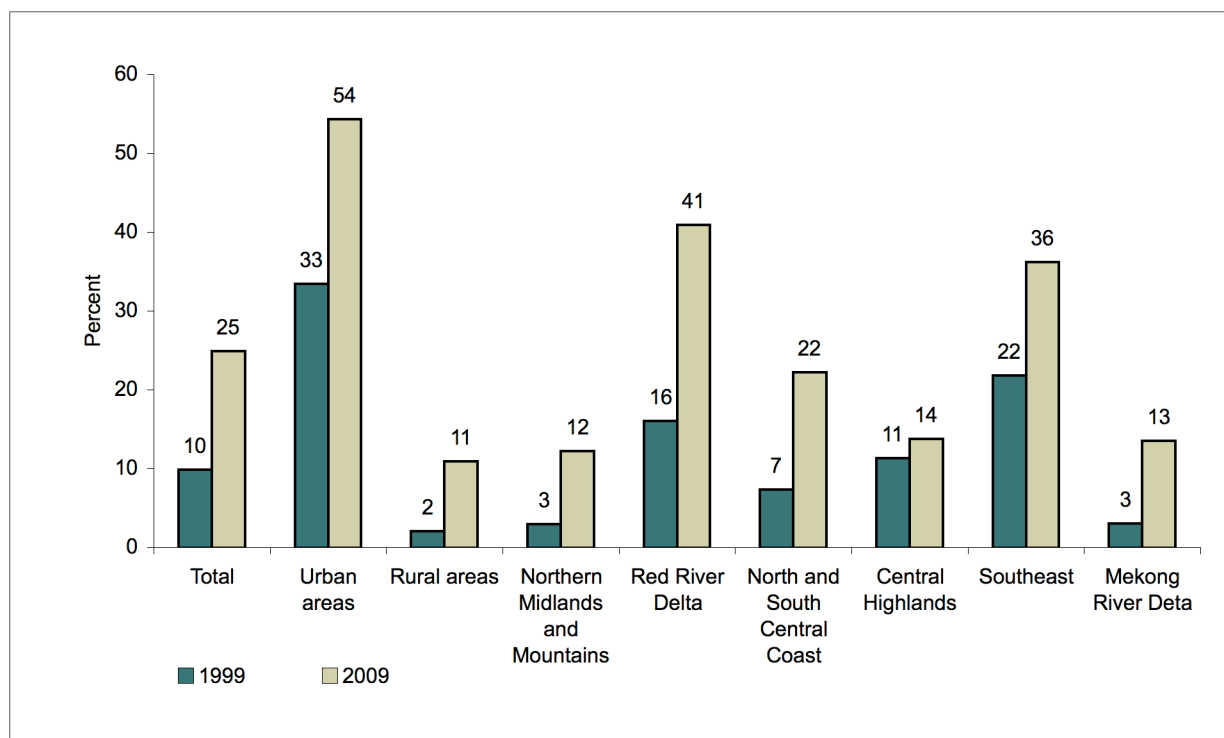
FIGURE A2.6 Sex ratio at birth, Vietnam, 1989-2009
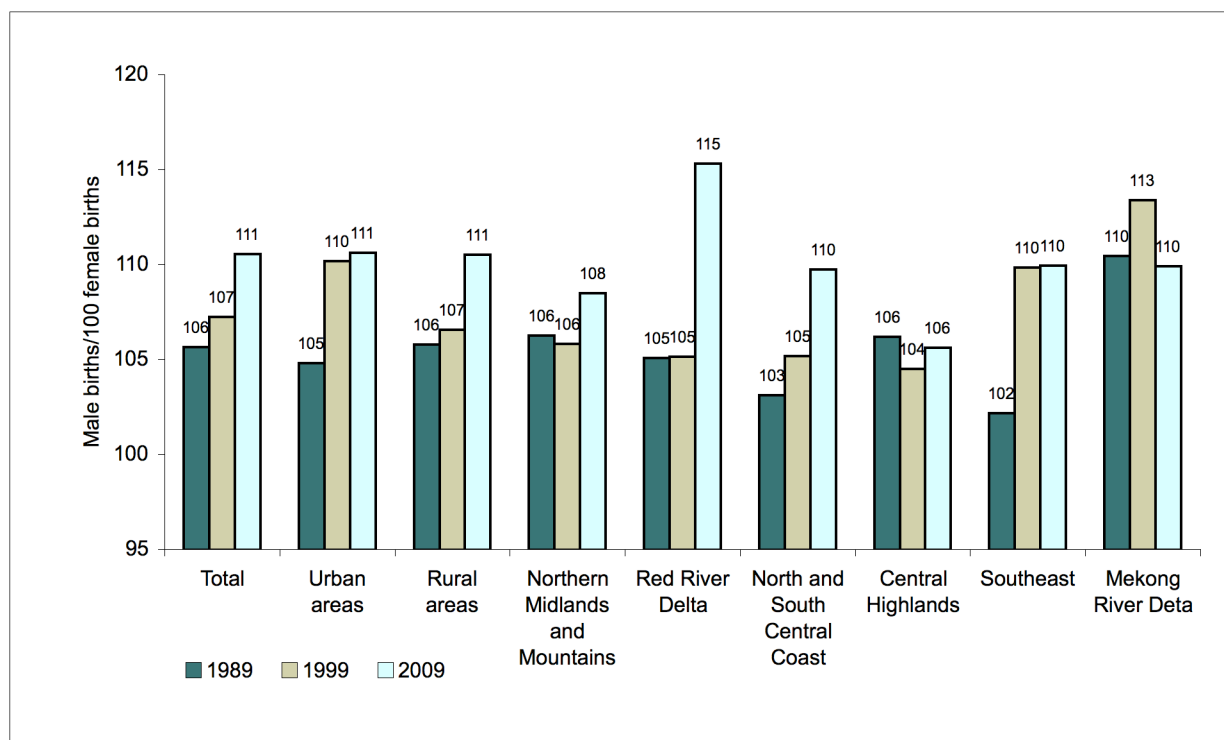
FIGURE A2.7 Life expectancy at birth, Vietnam, 1989-2009
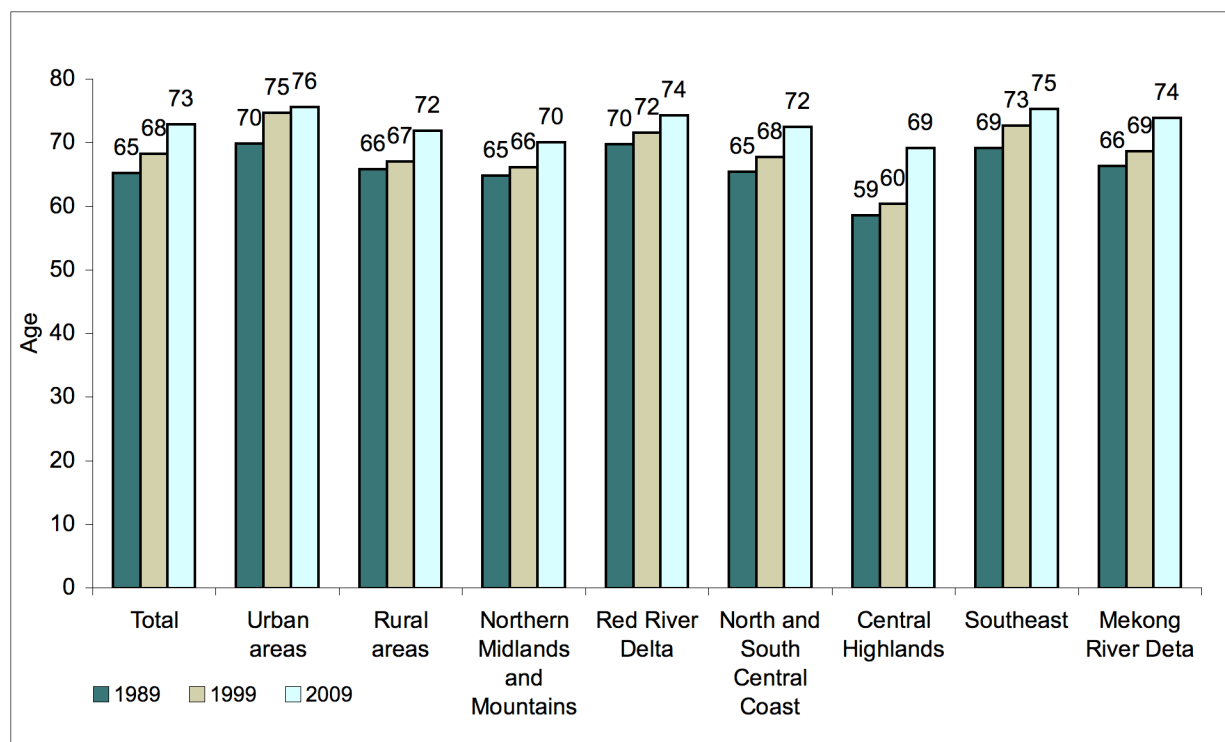
FIGURE A2.8 Infant mortality rate, Vietnam, 1989-2009
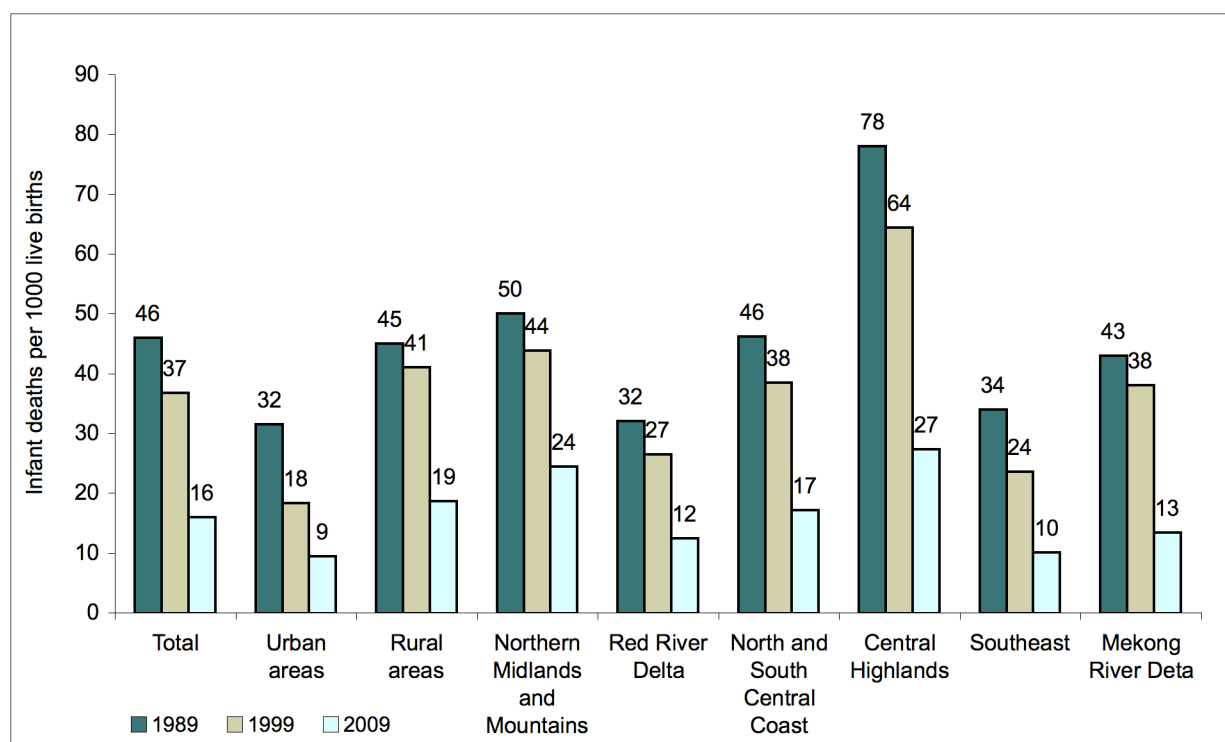
Appendix 3 – Absolute changes in gender indicators, Vietnam, 1989-2009

TABLE A3.1 Absolute change of gender indicators, Vietnam, 1989-2009

Administration	Sex	Labour force participa-tion	Literacy rate	Net enrolment in primary education	Net enrolment in secondary education	Gross enrolment in tertiary education	Sex ratio at birth (M/F)	Life expectan-cy at birth	Infant mortality rate
Whole country	Total	-0.7	6.2	30.3	38.2	15.0	4.9	7.6	-29.9
	M.	0.4	3.1	30.2	34.8	13.6	-	7.2	-28.2
	F.	-2.1	8.7	30.5	41.9	16.3	-	8.1	-31.7
Urban areas	Total	-2.4	3.1	22.5	25.9	20.9	5.8	5.8	-22.1
	M.	-2.8	0.9	22.7	25.6	19.3	-	5.1	-24.2
	F.	-2.4	4.9	22.3	26.2	22.4	-	6.4	-19.9
Rural areas	Total	1.3	6.6	31.9	40.4	8.9	4.7	6.1	-26.3
	M.	2.4	3.4	32.0	36.2	8.3	-	5.2	-28.4
	F.	-0.1	8.9	31.8	44.8	9.4	-	7.0	-24.1
R1. Northern Midlands and Moutains	Total	2.5	5.5	31.0	36.2	9.3	2.2	5.2	-25.5
	M.	3.7	3.6	32.1	36.0	8.7	-	4.3	-27.4
	F.	1.3	6.9	29.8	36.4	10.0	-	6.2	-23.5
R2. Red River Delta	Total	-4.3	5.3	22.6	42.8	24.9	10.3	4.5	-19.6
	M.	-2.3	1.8	23.1	39.6	23.7	-	3.7	-21.4
	F.	-6.2	8.1	22.0	46.3	25.9	-	5.3	-17.7
R3. North and South Central Coast	Total	-1.1	6.0	30.1	43.7	14.8	6.6	7.0	-29.1
	M.	-0.2	2.9	30.3	39.7	12.7	-	6.2	-31.4
	F.	-2.3	8.3	29.9	48.0	17.0	-	7.9	-26.6
R4. Central Highlands	Total	1.5	12.6	38.8	40.9	2.4	-0.6	10.6	-50.7
	M.	1.6	9.5	37.8	36.4	3.5	-	9.6	-54.3
	F.	1.2	15.3	39.9	45.7	1.5	-	11.9	-46.9
R5. Southeast	Total	2.6	5.5	22.0	29.0	14.4	7.8	6.2	-24.0
	M.	0.2	2.6	22.8	28.2	12.9	-	5.5	-26.2
	F.	3.9	8.0	21.1	29.7	15.7	-	6.8	-21.6
R6. Mekong River Delta	Total	0.1	6.8	25.1	32.8	10.5	-0.6	7.5	-29.7
	M.	1.7	3.4	24.4	26.9	9.7	-	6.7	-32.2
	F.	-2.6	9.3	25.8	39.1	11.2	-	8.4	-27.0

(*): Absolute change for the period 1999-2009.

Appendix 4 – Description of regions

The lists below provide the names of provinces that are included in each region from each census in the process of recoding to harmonize all three census data sets (also see the map at the beginning of this report).

We recoded the seven regions of 1989 into six. For 1999, we harmonized eight regions into six. We used the six regions of 2009 as our reference so did not do any recoding for 2009. For all censuses, we used the 2009 region names. Regions 1 and 3 had their name changed by the Government of Vietnam.

According to regulations in Government Decree No. 92/ND-CP dated September 7, 2006, the Northeast and Northwest regions are merged to form the Northern Midlands and Moutains; the North Central and South Central Coast have been combined to form the new region named the North and South Central Coast; Quang Ninh has been moved from the Northeast region to the Red River Delta; and Ninh Thuan and Binh Thuan provinces have been moved from the Southeast to the North and South Central Coast region.

TABLE A4.1 Recoding of regions for Census 1989

R1. Northern Midlands and Moutains

1. Cao Bang
2. Ha Tuyen
3. Lang Son
4. Lai Chau
5. Hoang Lien Son
6. Bac Thai
7. Son La
8. Vinh Phu
9. Ha Son Binh

R2. Red River Delta

10. Ha Noi
11. Hai Phong
12. Ha Bac
13. Quang Ninh
14. Hai Hung
15. Thai Binh
16. Ha Nam Ninh

R3. North and South Central Coast

17. Thanh Hoa
18. Nghe Tinh
19. Quang Binh
20. Quang Nam – Da Nang
21. Quang Ngai
22. Phu Yen
23. Binh Dinh
24. Khanh Hoa
25. Thuan Hai
26. Quang Tri
27. Thua Thien Hue

R4. Central Highlands

28. Gia Lai – Kon Tum
29. Dac Lac
30. Lam Dong

R5. Southeast

31. Ho Chi Minh City
32. Song Be
33. Tay Ninh
34. Dong Nai
35. Vung Tau – Con Dao

R6. Mekong River Delta

36. Long An
37. Dong Thap
38. An Giang
39. Tien Giang
40. Ben Tre
41. Cuu Long
42. Hau Giang
43. Kien Giang
44. Minh Hai

TABLE A4.2 Recoding of regions for Census 1999

R1. Northern Midlands and Moutains

1. Ha Giang	8. Thai Nguyen
2. Cao Bang	9. Phu Tho
3. Lao Cai	10. Bac Giang
4. Bac Kan	11. Lai Chau
5. Lang Son	12. Son La
6. Tuyen Quang	13. Hoa Binh
7. Yen Bai	

R2. Red River Delta

14. Ha Noi	20. Nam Dinh
15. Hai Phong	21. Thai Binh
16. Ha Tay	22. Ninh Binh
17. Hai Duong	23. Vinh Phuc
18. Hung Yen	24. Bac Ninh
19. Ha Nam	25. Quang Ninh

R3. North and South Central Coast

26. Thanh Hoa	33. Quang Nam
27. Nghe An	34. Quang Ngai
28. Ha Tinh	35. Binh Dinh
29. Quang Binh	36. Phu Yen
30. Quang Tri	37. Khanh Hoa
31. Thua Thien Hue	38. Ninh Thuan
32. Da Nang	39. Binh Thuan

R4. Central Highlands

40. Kon Tum	42. Dac Lac
41. Gia Lai	43. Lam Dong

R5. Southeast

44. Ho Chi Minh City	47. Binh Duong
45. Binh Phuoc	48. Dong Nai
46. Tay Ninh	49. Ba Ria – Vung Tau

R6. Mekong River Delta

50. Long An	56. Kien Giang
51. Dong Thap	57. Can Tho
52. An Giang	58. Tra Vinh
53. Tien Giang	59. Soc Trang
54. Vinh Long	60. Bac Lieu
55. Ben Tre	61. Ca Mau

TABLE A4.3 Recoding of regions for Census 2009

R1. Northern Midlands and Moutains

1. Ha Giang	8. Son La
2. Cao Bang	9. Yen Bai
3. Bac Kan	10. Hoa Binh
4. Tuyen Quang	11. Thai Nguyen
5. Lao Cai	12. Lang Son
6. Dien Bien	13. Bac Giang
7. Lai Chau	14. Phu Tho

R2. Red River Delta

15. Ha Noi	21. Hung Yen
16. Quang Ninh	22. Thai Binh
17. Vinh Phuc	23. Ha Nam
18. Bac Ninh	24. Nam Dinh
19. Hai Duong	25. Ninh Binh
20. Hai Phong	

R3. North and South Central Coast

26. Thanh Hoa	33. Quang Nam
27. Nghe An	34. Quang Ngai
28. Ha Tinh	35. Binh Dinh
29. Quang Binh	36. Phu Yen
30. Quang Tri	37. Khanh Hoa
31. Thua Thien Hue	38. Ninh Thuan
32. Da Nang	39. Binh Thuan

R4 Central Highlands

40. Kon Tum	43. Dak Nong
41. Gia Lai	44. Lam Dong
42. Dak Lak	

R5. Southeast

45. Binh Phuoc	48. Dong Nai
46. Tay Ninh	49. Ba Ria -Vung Tau
47. Binh Duong	50. Ho Chi Minh City

R6. Mekong River Delta

51. Long An	58. Kien Giang
52. Tien Giang	59. Can Tho
53. Ben Tre	60. Hau Giang
54. Tra Vinh	61. Soc Trang
55. Vinh Long	62. Bac Lieu
56. Dong Thap	63. Ca Mau
57. An Giang	

Appendix 5 – Definition of variables

1. **Labour force participation** is defined as the total number of of persons in the labour force to the total population in the reference group (15 and above), expressed in percent.

2. **Legislators, senior officials, and managers** represent the total number of individuals working in these professions by sex over the total number of individuals working in these professions, expressed in percent.

3. **Professional and technical workers** represent the total number of individuals working in these professions by sex over the total number of individuals working in these professions, expressed in percent.

4. **Literacy rate** is the total number of persons aged 15 and over who are literate over the total population aged 15 and over, expressed in percent.

5. The **net enrolment rate in primary school** is the number of pupils/students of the official age for a given level of schooling who are enrolled in that level as a percentage of the total population of the official age for that educational level, expressed in percent.

6. The **net enrolment rate in secondary school** is the number of pupils/students of the official age for a given level of schooling who are enrolled in that level as a percentage of the total population of the official age for that educational level, expressed in percent.

7. The **gross enrolment rate in tertiary education** is the number of pupils/students of any age who are enrolled in that level as a percentage of the total population in the official age for that education level, expressed in percent.

8. **Sex ratio at birth** is expressed as the number of male births for every 100 female births among the total births in the 12 months prior to the census (we use the inverse ratio – F/M- in the tables A1.1 to A1.9).

9. **Life expectancy at birth** is an estimate of the average number of years that a newborn would live under mortality conditions prevailing at that time.

10. **Infant mortality rate** indicates the number of deaths of infants under age 1 per 1000 live births in the 12 months prior to the census, expressed in per thousand

Appendix 6 – Issues of comparability between the three censuses

1. Economic participation and opportunity

Labour force participation

The labour force (economically active population) is defined as the total number of employed and unemployed people aged 15 years and above. Between the three censuses, the measurement of the economically active population changed.

In the 2009 Population and Housing Census, people 15 years and older were asked about their economic activities through questions on work ('work' defined as economic activity generating income) in the 7 days prior to the enumeration or interview date. This approach is based on the concept of 'current economic activity'. It differs from the one used in the 1989 and 1999 censuses, which determined economically active status based on the concept of 'usual economic activity' through questions on the main activity (the activity that accounted for the most time spent) in the 12 months prior to the survey.

In the 1989 census, the following individuals were classified as 'permanently economically active': (1) persons who worked for 6 months and over in the reference year in any job and (2) persons who had worked less than 6 months during the reference year but stated that they would continue at their jobs on a permanent basis. Individuals classified as 'temporarily economically active' included the following: (1) those who worked less than 6 months during the reference year; (2) persons who were working at the time of the census in a temporary job; and (3) persons who had been without work for less than one month. The 'unemployed' population included the following: (1) persons who were not working at the time of the census; (2) those who had not worked during the month preceding the census; and (3) individuals who had worked less than 6 months during the reference year but were available for work.

When comparing the data in the 1989 census, one should note that results do not include special enumeration groups, such as diplomatic personnel, military personnel, and policemen, while the 1999 and 2009 census estimates do include them through the use of expansion factors in making tabulations.

In the 1999 census, the 'employed' population included those who had worked 6 months or more in the 12 months prior to the census. The 'unemployed' population included persons who were available for work but did not work more than 6 months in the 12 months prior to the census.

In the 2009 census, the 'employed' population included persons who were working in the week prior to the census enumeration. The 'unemployed' population included persons who did not work but were actively looking for a job and were available for work during the week preceding the census enumeration.

Legislators, senior officials, and managers and Professional and technical workers

The classification of occupations in the 1999 and 2009 censuses were similar; both were developed based on the ISCO (International Standard Classification of Occupation). Occupations were classified based on two main concepts: the job held or type of work performed and skill.

The 1989 census used a different classification of occupations. Here the classification was based on one main concept: the jobs held or the type of work performed. The concept of skills was not included.

For the 1999 and 2009 censuses, we used the Group 1 of occupations (Leader/manager in branches, levels, and agency) to code our variable Legislators, senior officials, and managers. We used Group 2 (High-level professionals) and Group 3 (Mid-level professionals) to code our variable Professional and technical workers.

From the 1989 census, we reclassified occupations for Groups 1, 2, and 3 based on the classification used in the 1999 and 2009 censuses (see Table A6.1).

TABLE A6.1 Classification of occupations (groups) for coding variables

Group 1 in the classification of occupations used in the 1989 population census	Classification of occupations used in the 1999 and 2009 censuses
Legislators, senior officials, and managers	
(1) Leaders in the Party, government institutions, and its sub-units	(1) Leaders/managers in branches, levels, and agencies
(2) Leaders of establishments and factories	
Professional and technical workers	
With graduate qualifications and higher (03) Economic, planning, statistics, and accounting staff	(2) High-level professionals
With graduate qualifications and higher (04) Technical staff (05) Technical staff on agriculture and forestry (06) Science, education, and training staff (07) Culture and art staff (08) Health staff (09) Law and court of investigation staff (10) Secretary staff and other staff leaning towards white-collar labourer	(2) High-level professionals (3) Mid-level professionals

2. Educational attainment

Literacy rate

Literacy is defined as the ability to read and write a simple passage on everyday activities using the Vietnamese national language, an ethnic minority language, or a foreign language. The 1989 census asked the literacy question to all people who were 5 years and older. The questions on literacy in the 1999 and 2009 censuses, however, were only given those who had not completed primary schooling (i.e. not completed grade 5), the assumption being that all people who had been educated beyond primary school would be literate.

Net and gross enrolment rates

According to Vietnam's Education Law, the general education system in Vietnam is divided into three levels, with varying requirements on duration and ages as follows: (1) primary school (grades 1 to 5; pupils starting grade 1 at age 6); (2) lower secondary school (grades 6 to 9, pupils starting grade 6 must have completed primary school and be at least 11 years of age); (3) upper secondary school (grades 10 to 12, pupils starting grade 10 must have completed lower secondary school and be at least 15 years of age). Besides general schooling, there is also tertiary education including junior college, university, Masters programs, and PhD programs. In this analysis, tertiary education includes 3 to 4 years at a junior college or university beginning at the age of 18 years. According to international standards, secondary education includes both lower and upper secondary levels. Our variable on secondary enrolment rates includes both lower and upper secondary levels in Vietnam. In the 1989 census, the question about tertiary level education was not included. For this variable, we can only compare results for 1999 and 2009.

Appendix 7– Information on data sources and methodology

In this report, 8 of the 10 indicators were calculated by the authors from the 3 micro data sets. Measures of life expectancy at birth and infant mortality rate were taken from data published by the *Vietnam Central Population and Housing Census Steering Committee* in census monographs for each census.

The data for the 1989 census were taken from the *Vietnam Population Census 1989: Estimating the Fertility and Mortality of Provinces and Ethnic Groups: Vietnam, 1989.* Infant mortality rate for males and females and life expectancy at birth by sex, by country, by urban and rural areas, and by region (there were 7 regions in 1989, see appendix 4 for more details on recoding of regions) were taken from the *Statistical Publishing House, 1994* (page 58). We based our mortality estimates and the proportion of the population to re-adjust the infant mortality rate for the new region (mean region 3). The published results only provided data on mortality by sex for the whole country. We used Coal – Demeny, North family to separate the infant mortality rate by sex for urban and rural areas and for regions. To calculate the life expectancy at birth for region 3, we used the MortPak 4 software and MATCH procedure published by the United Nations.

Data for the 1999 census were taken from *Vietnam Population Census 1999: Marriage, Fertility, and Mortality in Viet Nam: Levels, Trends, and Differentials: Vietnam, 1999*. The *Statistical Publishing House, 2001* was used for infant mortality rate (page 99) and for life expectancy at birth (page 103). We had to adjust data from 8 regions to 6.

The data for the 2009 census on infant mortality rate and life expectancy at birth were taken from the *Vietnam Population Census 2009: The 2009 Vietnam Population and Housing Census: Major Findings, 2010* (page 148). The data for the infant mortality rates by sex utilized Coal – Demeny, North family.