



MINISTRY OF PLANNING AND INVESTMENT  
GENERAL STATISTICS OFFICE



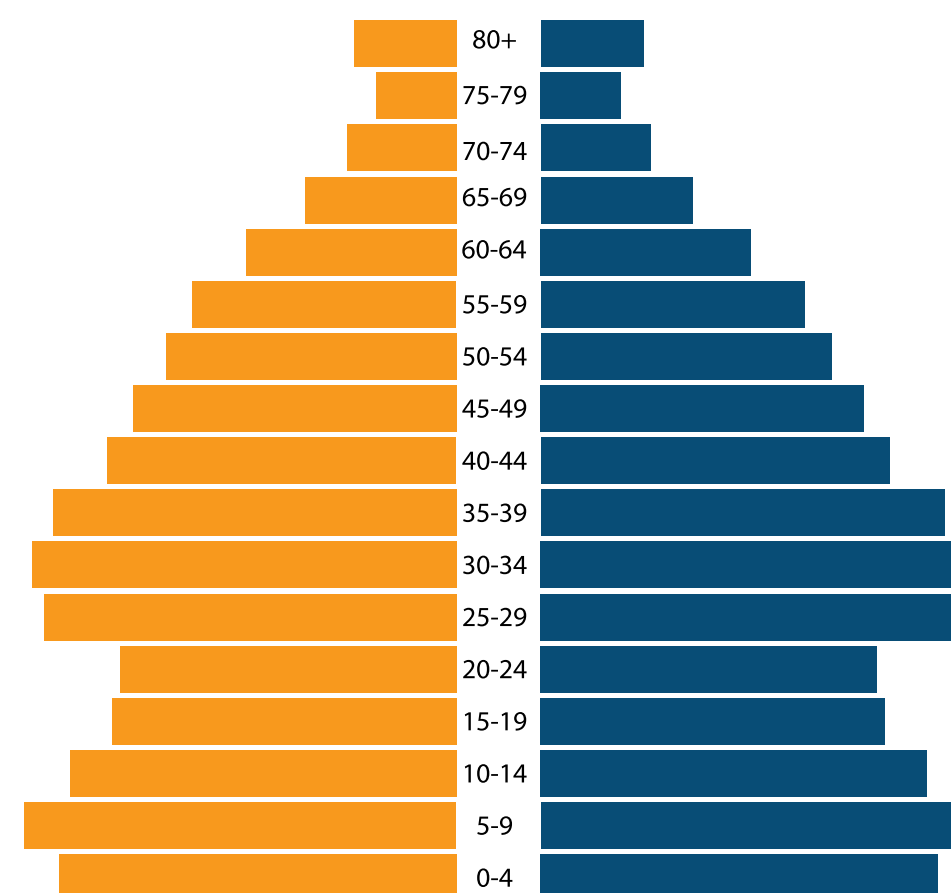
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GENERAL STATISTICS OFFICE

VIET NAM POPULATION PROJECTION FOR THE PERIOD 2019 - 2069

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GENERAL STATISTICS OFFICE

# **VIET NAM POPULATION PROJECTION FOR THE PERIOD 2019 -2069**

## FOREWORD

The 2019 Population and Housing Census was implemented at 0:00 a.m. on 01 April 2019 in accordance with the Decision No. 772/QĐ-TTg of the Prime Minister dated 26 June 2018. This is the fifth Population and Housing Census in Viet Nam since its reunification in 1975. The 2019 Population and Housing Census collected basic information on population and housing throughout the territory of the Socialist Republic of Viet Nam for the purpose of planning socio-economic development policies and monitoring the Sustainable Development Goals to which the Government of Viet Nam is committed.

In order to continue provision of the 2019 Population and Housing Census's data, and prediction of future trends in population change and structure as a basis on which to formulate socio-economic development policies and plans, and to serve for management and research at both national and local levels, the General Statistics Office (GSO) developed the Report entitled **Viet Nam Population Projection for the period 2019-2069**.

The Report presents data on population size based on the results of the 2019 Population and Housing Census and uses this information and assumption on changes in demographic indicators in the future to project population size at national level and for the 6 socio-economic regions, 63 provinces and centrally-run cities for the period 2020-2069. The software DAPPS 3.2 developed by US Census Bureau was used to carry out the population projections.

The Report was primarily compiled by the GSO in coordination with experts with the technical assistance of the United Nations Population Fund (UNFPA). The GSO would like to express its sincere thanks to the UNFPA for its cooperation and support in the implementation of the 2019 Population and Housing Census in general and for the compilation of this Report in particular. Gratitude is extended to experts and staff of the UNFPA office in Viet Nam for their valuable contribution to the compilation and finalization of this publication and to Mr. Tim Miller, Global Adviser on Population and Development from the United Nations Department of Economic and Social Affairs, for providing software and instruction.

The GSO takes pleasure in introducing the Report on **"Viet Nam Population Projection for the period 2019 - 2069"**.

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# LIST OF ACRONYMS/ ABBREVIATIONS

ASFR	Age Specific Fertility Rate
Census	Population and Housing Census
DAPPS	Demographic Analysis and Population Projection System
GFR	General Fertility Rate
GSO	General Statistics Office
TFR	Total Fertility Rate
UNFPA	United Nations Population Fund
UN	United Nations
URGD	Urban and Rural Growth Difference

PART I  
**METHODOLOGY FOR  
POPULATION PROJECTION**

## I. PURPOSE OF POPULATION PROJECTIONS

People are the target and driving force for national development policies, both directly and indirectly, in the service of human interests and livelihoods. Adequate, timely and accurate population information is necessary to properly and effectively formulate future development policies that are based on population data from the past, present, and projected for the future.

Population projections aim to provide data on population size and structure across the country for the period 2019-2069 including for the whole nation; 6 socio-economic regions; provinces and centrally-run cities (hereinafter referred as provinces); urban and rural areas; and by gender. Population projections provide information for the process of making national and local policies; formulating and implementing development plans for economic industries and business production plans of enterprises and individuals, and meeting the needs of research and other purposes.

Population projections in Viet Nam have been carried out by the General Statistics Office (GSO) for many years based on data from the Population and Housing Censuses (hereinafter referred to the Census) in 1979, 1989, 1999, and 2009. Population data from socio-economic regions including provinces and urban and rural areas with different age groups contribute to the process of policy making, management, administration and implementation of monitoring, evaluation and other data requirements. The GSO has projected population size and structure up to the year 2069 based on the data from the 2019 Census and assumptions on population changes.

## II. DATA SOURCE, PROJECTION SCOPE AND METHOD

### 1. Data source

This Report uses data from the 2019 Census to predict population size and structure by age and sex at the national, urban, rural and regional levels in 63 provinces. The Report provides quality assessment of different age groups as reported in the 2019 Census and analyses the potential for using this source as input data to implement population projections.

### 2. Projection scope and period

Population projections are designed to meet the needs of the nation as a whole, as well as urban and rural areas, socio-economic regions and provinces.

Projection period:

- For the nation as a whole urban and rural areas: projection period is 50 years, from 2019 to 2069, divided into ten 5-year periods: 2019-2024, 2025-2029, ... and 2065-2069.
- For 6 socio-economic regions and 63 provinces: projection period is 25 years, from 2020 to 2045, including the following periods: 2019-2024, 2025-2029, 2030-2034, 2035-2039, and 2039-2045.

### 3. Projection method

Population projections require the application of mathematical models based on current population data to identify future trends of fertility and mortality rates and migration. Demographers provide variants of low, medium, and high population projections based on different assumptions about how those rates will change in the future. The projections primarily depend on the accuracy of current baseline data. Census data facilitate more reliable projection results than less detailed data sources. An extended period of projection will result in a higher rate of errors in the projection results because assumptions may lose accuracy over time.

The accuracy of the population projections also depends significantly on the relevance of assumptions made. Additionally, the population projection for the nation as a whole will be more accurate than for specific localities. Thus, it is necessary to project the national population independently from the local populations. This sequence allows for adjustment of projection results between national and local populations.

For the population projections of Viet Nam in the period 2019-2069, the GSO uses the component method (Appendix 2) by each age group and by 5-year age group with the open age group aged 80 and over (80 +). As the 2019 Census was conducted on April 1, the “year” mentioned in this projection begins on April 1 of the projection year and ends on March 31 of the following year.

DAPPS 3.2 software (Demographic Analysis and Population Projection System 3.2) developed by the US Census Bureau is used for Viet Nam population projections for the period 2019-2069. Population projections are conducted in 2 phases: initially, for the whole country including all urban and rural areas; then, for the 6 socio-economic regions and 63 provinces. The results of national population projection by age and sex are used as the basis to forecast the population of smaller groups to ensure that the total urban and rural projected population or 6 socio-economic regions equate with national projections. Moreover, the projected population of the provinces must equal the forecasted population of the respective socio-economic regions.

4. Population projection variants

Population projections by 3 variants (medium, low, high) are based on 3 scenarios of fertility change, mortality and migration.

The development of population projection variants is based on the trend in components of population dynamics (birth, death, and migration) from the past, to extrapolate projections for the future.

5. Report’s limitations

As mentioned above, assumptions used for population projections are built on trends identified in present and past demographic data. Many social and economic factors influence population change, including policies applied at both central and local levels. The relationships among different factors are complex and largely unknown. In developing assumptions, the GSO considers the objectives of existing population-related policies and interventions (for example, maintaining replacement level fertility) to predict trends. However, that does not mean it will reflect all the factors affecting future population change.

In addition, GSO projections are based on the assumption that the socio-economic situation

1. Evaluation of the accuracy of information on population size in the 2019 Census

The Censuses in Viet Nam identify population size based on the concept of usual resident<sup>1</sup>. At 0:00 am on April 1, 2019, the population size of Viet Nam was 96.2 million persons.

Immediately following completion of the information collection period in the enumeration areas, post-enumeration work was carried out to determine the coverage error (to determine the completeness of the Census), thus each usual resident in the post-enumeration areas was asked to respond to four questions: (1) full name, (2) relationship with household head, (3) sex, and (4) month and year of birth or round age. The information collected by these questions was then compared with the Census results to identify duplicate or omitted cases.

The post-enumeration results show that the net error rate of the Census is 0.2%, equivalent to about 143,000 persons, which is within the permitted range. Compared with an error rate of 1.5% to 4.5% of the total population commonly found in the Population and Housing Censuses in other countries, the completeness rate of the 2019 Census in Viet Nam is relatively high.

Table 1.1: Post-enumeration results of the 2019 Census

Unit: %

	Percentage of duplicated enumeration	Percentage of omitted enumeration	Net error (Omitting rate - duplicating rate)
WHOLE COUNTRY	3.4	3.6	0.2
Northern Midlands and Mountain	3.2	2.4	-0.8
Red River Delta	2.3	2.9	0.6
North Central and Central Coast	2.9	2.3	-0.6
Central Highlands	4.1	5.4	1.3
South East	3.0	3.9	0.9
Mekong River Delta	5.6	6.0	0.4

The total population of 96.2 million persons from the 2019 Census is consistent with the prediction of the Population Division of the United Nations (UN) for Viet Nam’s population by mid-2019 as noted in its report “World Population Prospects in 2019” (96.5 million persons). Moreover,

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