

COD-PS Viet Nam

Update Year 2023 / Reference Year 2023

Objective of This Explanatory Technical Note

This explanatory technical note provides supplementary notes on the strengths and limitations of each Common Operational Dataset on Population Statistics (COD-PS) against the projections by the WPP 2022 Revision of the UN to enable informed humanitarian decision-making.

Structure of Supplementary Note

This supplementary note is organized into the following sections:

1. Metadata
2. Methodological Documentation
3. Intrinsic Population Growth Rates (ADM-0 & 1)
4. Population counts by age and sex (ADM-0)
5. Relative population size by age and sex (ADM-1)

1. Metadata

Item	Metadata
Country	Viet Nam
Source(s)	General Statistics Office Viet Nam
Source(s) Link(s)	https://vietnam.unfpa.org/sites/default/files/pub-pdf/final_population_projection_eng_to_upload.pdf
Population Data Type (Census enumeration, Direct estimate, or Population projection)	Population projection
Year of the Baseline Population	2019
Reference year of this COD-PS	2023
Publication year of this COD-PS	2023
ADM-1 Name	Tinh (province), Thanh Pho truc thuoc uong (TP: cities under direct central administration)
ADM-1 Number of Units	58 provinces, 5 centrally administered cities (TPs)

Item	Metadata
ADM-1 Sex and Age Disaggregation	Sex and age disaggregated by 5-year age groups
ADM-1 Open-ended Age Group	80+
General Notes	The respondents of the 2019 census are Vietnamese citizens, including those working or studying for extended periods abroad within the permitted period of time, are reported as part of their households. This means that, despite living overseas, they are still counted as usual residents in Viet Nam.
Data Limitations	The projections, on which this COD-PS is based, may be overestimating population growth by a small margin because the Viet Nam NSO counts Vietnamese citizens living overseas for an extended period of time as the 2019 census respondents, and in turn, includes them in the projections.
COD-PS Demographic Data Quality Assessment	The COD-PS was assessed against ADM-0 estimates and projections published in the World Population Prospects (2022 Revision) by the United Nations Department of Economic and Social Affairs (UN-DESA).

2. Methodological Documentation

Item	Methodological Documentation
Methodology Used	Cohort component method was applied to the 2019 census results to construct the projections on which this COD-PS is based.
Baseline Population	2019 census
Post-enumeration survey (PES)	The post enumeration survey (PES) results showed that the net coverage error of the 2019 census was 0.2%.
Assessment and Adjustment of the Baseline Population	The total population count of the 2019 census was found to be close to the UN Population Division's mid-2019 population estimate for Viet Nam (WPP 2019 Revision) and the Viet Nam NSO projection for 2019 based on the 2009 census. The quality of age information from the 2019 census (age heaping, index of age preference, age-sex accuracy) were found to be in good standing. The 2019 census also found that 98.8% of under-5 children were registered at birth; particularly, 95.6% of children were registered during the first 6 months after birth.
Fertility (births)	Fertility assumptions were constructed primarily based on the future total fertility rate (TFR) trend assumptions outlined in the WPP 2010 Revision in accordance with the Bi-Logistic Fertility Decline Model. The 2019 TFR of the whole country (2.09), urban area (1.83), and rural area (2.26) were taken as the starting point to extrapolate up to 2069, with the assumption that by 2069 Viet Nam will reach the total fertility rate of 2.01 children per woman (medium variant).

Item	Methodological Documentation
Mortality (deaths)	Mortality assumptions were constructed based on the increasing average life expectancy at birth, from 68.2 years (1999) to 72.8 years (2009) and 73.6 years (2019), and this trend was in accordance with the UN predictions published in the WPP 2010 Revision. Therefore the projections, on which this COD-PS is based, assume continuing increase in life expectancy for men and women across the country.
International migration (net migration)	The projections, on which this COD-PS is based, assume zero net international migration because the respondents of the census are Vietnamese citizens. Vietnamese citizens who are working, studying for extended periods abroad within the permitted period of time are reported as part of their households. This means that, despite living overseas, they are still counted as usual residents in Viet Nam. The data on international migration from the 2019 Census results suggests that the number of foreigners residing as nationals in Viet Nam is too small to affect the population size of the country.
Internal migration (migration within country)	Internal migration is expected to occur at a high rate, but mainly at the intraprovincial level. In comparison, interprovincial migration is expected occur at a lower rate during the projection period (2019-2069). Accordingly, internal migration scenarios were based on the 5 groups of migration patterns of the provinces, classified by the net migration of each province from the 2019 census results.

3. Intrinsic Population Growth Rates (ADM-0 & 1)

At ADM-0, the implied postcensal population growth rates of this COD-PS (0.95% per year: female 0.87%, male 1.03%) are generally consistent with the implied growth rates of the World Population Prospects (WPP) 2022 Revision (2019: 0.89%, 2020: 0.92%, 2021: 0.77%, 2022: 0.70%).

At ADM-1, the NSO predicts a relatively wide variation of postcensal population growth rates across the 63 ADM-1 units (58 provinces and 5 central municipalities). The NSO predicts the highest postcensal population growth rates for the country's economic and industrial centres with focused inflow of foreign investment: Binh Duong (4.48% per year: female 4.34%, male 4.63%), Bac Ninh (2.65% per year: female 2.54%, male 2.76%), TP Da Nang (2.50% per year: female 2.40%, male 2.59%), TP Ho Chi Minh (1.96% per year: female 1.84%, male 2.07%), and TP Ha Noi (1.89% per year: female 1.87%, male 1.91%). In contrast, the NSO predicts the lowest population growth rates for the provinces in the Mekong River Delta Region with least economic development and recurring annual flooding: Ca Mau (-0.31% per year: female -0.36%, male -0.26%), Dong Thap (-0.35% per year: female -0.34%, male -0.36%), Hau Giang (-0.38% per year: female -0.34%, male -0.42%), Soc Trang (-0.44% per year: female -0.46%, male -0.43%), and An Giang (-0.74% per year: female -0.69%, male -0.79%).

ADM-1	Last Census, Female	Last Census, Male	COGFS, Female	COGFS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
An Giang	960,782	947,570	934,736	918,014	-0.69	-0.79	-0.74
Ba Ria-Vung Tau	572,085	576,228	587,038	594,074	0.65	0.76	0.71
Bac Giang	898,798	905,152	932,159	943,337	0.91	1.03	0.97
Bac Kan	153,869	160,036	153,556	162,153	-0.05	0.33	0.14
Bac Lieu	453,264	453,972	461,733	463,364	0.46	0.51	0.48
Bac Ninh	692,780	676,060	766,868	754,859	2.54	2.76	2.65
Ben Tre	657,971	630,492	654,042	632,575	-0.15	0.08	-0.03
Binh Dinh	754,831	732,087	748,726	732,637	-0.20	0.02	-0.09
Binh Duong	1,206,555	1,220,006	1,435,216	1,468,158	4.34	4.63	4.48
Binh Phuoc	493,206	501,473	506,394	516,957	0.66	0.76	0.71
Binh Thuan	612,424	618,384	620,962	632,066	0.35	0.55	0.45
Ca Mau	589,575	604,901	581,159	598,692	-0.36	-0.26	-0.31
Cao Bang	264,721	265,620	265,947	272,457	0.12	0.64	0.38
Dak Lak	926,744	942,578	948,782	969,788	0.59	0.71	0.65
Dak Nong	301,455	320,713	318,819	338,909	1.40	1.38	1.39
Dien Bien	295,420	303,436	311,892	322,290	1.36	1.51	1.44
Dong Nai	1,543,765	1,553,342	1,641,110	1,665,416	1.53	1.74	1.64
Dong Thap	800,274	799,230	789,340	787,855	-0.34	-0.36	-0.35
Gia Lai	755,258	758,589	791,168	797,236	1.16	1.24	1.20
Ha Giang	422,908	431,771	439,591	452,235	0.97	1.16	1.06

ADM-1	Last Census, Female	Last Census, Male	CGDPS, Female	CGDPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Ha Nam	433,049	419,751	439,012	430,082	0.34	0.61	0.48
Ha Tinh	648,157	640,709	650,256	649,969	0.08	0.36	0.22
Hai Duong	952,210	940,044	977,295	969,593	0.65	0.77	0.71
Hau Giang	366,811	366,206	361,829	360,035	-0.34	-0.42	-0.38
Hoa Binh	427,208	426,923	436,432	440,042	0.53	0.76	0.64
Hung Yen	625,914	626,817	644,574	651,962	0.73	0.98	0.86
Khanh Hoa	618,594	612,513	630,093	626,553	0.46	0.57	0.52
Kien Giang	849,831	873,236	855,629	883,944	0.17	0.30	0.23
Kon Tum	268,819	271,619	284,939	288,541	1.46	1.51	1.48
Lai Chau	227,099	233,097	241,752	249,221	1.56	1.67	1.61
Lam Dong	643,832	653,074	662,878	674,096	0.73	0.79	0.76
Lang Son	382,245	399,410	387,549	409,591	0.34	0.63	0.48
Lao Cai	359,114	371,306	375,843	391,372	1.14	1.32	1.23
Long An	846,473	842,074	882,434	883,453	1.04	1.20	1.12
Nam Dinh	908,358	872,035	902,408	872,209	-0.16	0.00	-0.08
Nghe An	1,654,890	1,672,901	1,702,749	1,736,471	0.71	0.93	0.82
Ninh Binh	493,153	489,334	501,061	500,825	0.40	0.58	0.49
Ninh Thuan	294,441	296,026	296,637	300,515	0.19	0.38	0.29
Phu Tho	736,817	726,909	755,264	751,823	0.62	0.84	0.73

ADM-1	Last Census, Female	Last Census, Male	CGDPS, Female	CGDPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Phu Yen	433,886	439,078	432,265	439,247	-0.09	0.01	-0.04
Quang Binh	446,134	449,296	450,660	456,923	0.25	0.42	0.33
Quang Nam	760,226	735,586	761,494	746,566	0.04	0.37	0.20
Quang Ngai	619,783	611,914	612,051	609,860	-0.31	-0.08	-0.20
Quang Ninh	648,802	671,522	668,888	692,129	0.76	0.76	0.76
Quang Tri	318,882	313,493	315,611	313,303	-0.26	-0.02	-0.14
Soc Trang	601,731	597,922	590,796	587,817	-0.46	-0.43	-0.44
Son La	615,817	632,598	645,481	666,175	1.18	1.29	1.23
Tay Ninh	584,985	584,180	583,135	585,480	-0.08	0.06	-0.01
Thai Binh	955,039	905,408	962,135	920,200	0.19	0.41	0.30
Thai Nguyen	657,554	629,197	689,207	663,995	1.18	1.35	1.27
Thanh Hoa	1,824,127	1,816,001	1,852,419	1,861,626	0.38	0.62	0.50
Thua Thien Hue	570,132	558,488	575,751	564,875	0.25	0.28	0.26
Tien Giang	898,364	865,821	911,629	880,024	0.37	0.41	0.39
TP Can Tho	622,628	612,543	650,872	642,001	1.11	1.17	1.14
TP Da Nang	575,328	558,982	633,255	620,090	2.40	2.59	2.50
TP Ha Noi	4,061,744	3,991,919	4,376,452	4,308,012	1.87	1.91	1.89
TP Hai Phong	1,020,747	1,007,767	1,053,141	1,044,921	0.78	0.91	0.84
TP Ho Chi	4,611,840	4,381,242	4,964,102	4,758,987	1.84	2.07	1.96

ADM-1	Last Census, Female	Last Census, Male	CODPS, Female	CODPS, Male	PGR(%), Female	PGR(%), Male	PGR(%), Both
Minh							
Tra Vinh	512,310	496,858	510,847	499,576	-0.07	0.14	0.04
Tuyen Quang	389,665	395,146	395,543	404,878	0.37	0.61	0.49
Vinh Long	518,913	503,878	516,389	503,224	-0.12	-0.03	-0.07
Vinh Phuc	577,533	573,621	595,353	594,231	0.76	0.88	0.82
Yen Bai	408,053	412,977	423,457	431,627	0.93	1.10	1.02
Total	48,327,923	47,881,061	50,048,805	49,889,136	0.87	1.03	0.95

4. Population Counts by age and sex (ADM-0)

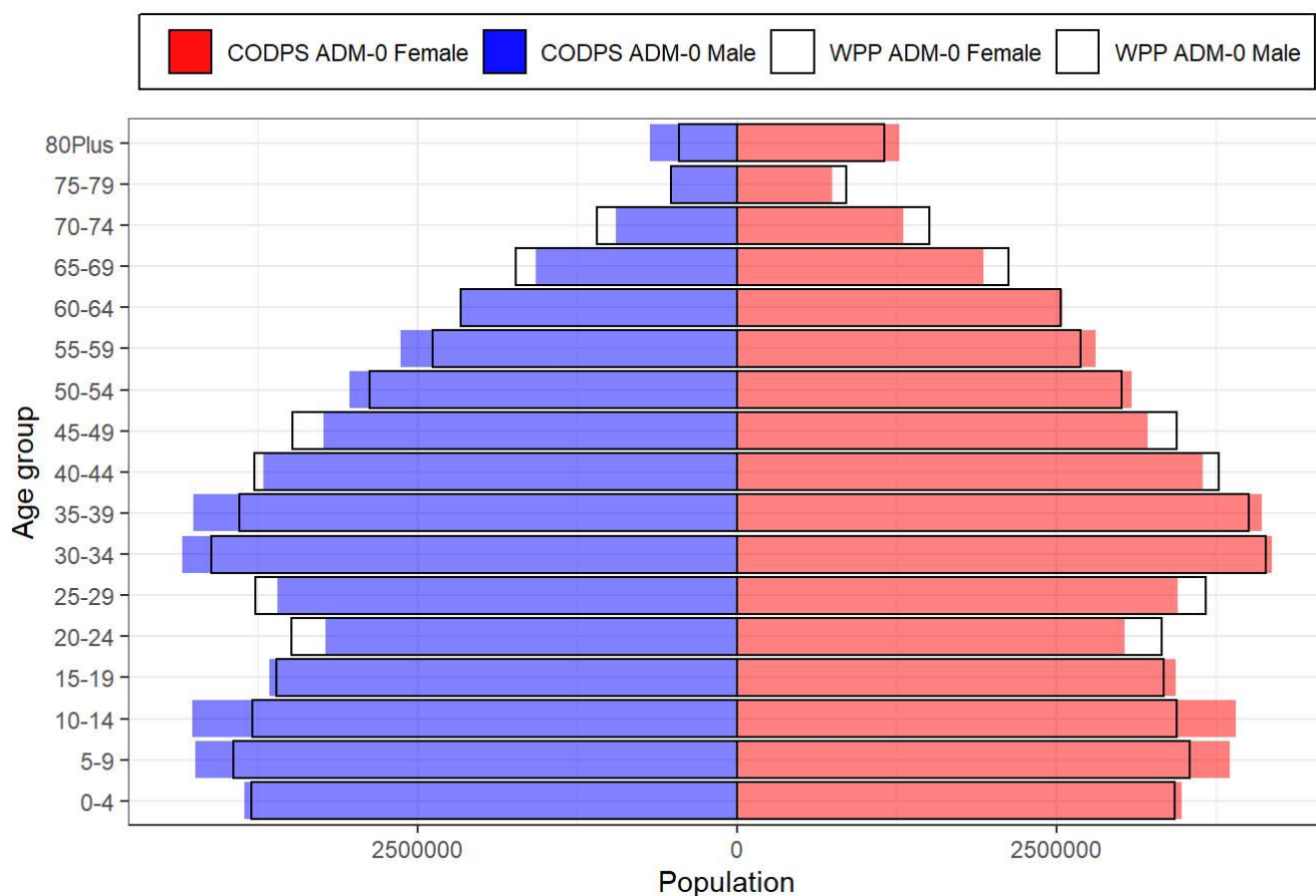
Below, we compare the population structure across sex and age groups between the NSO and WPP projections at the national level. At ADM-0, the age- and sex-specific population counts of this COD-PS at the national level are generally consistent with the WPP 2022 Revision projection with the differences falling within 5% for most age groups.

The greatest differences are found among the 5-9 years and 10-14 years, where the NSO predicts higher population than WPP 2022. Among 10-14 years, the NSO projects greater number of females (by 464,326, or 13.50%) and males (by 465,328, or 12.27%) than WPP. Similarly, among 5-9 years, the NSO projects greater number of females (by 314,596, or 8.88%) and males (by 295,390, or 7.50%) than WPP.

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
0-4	59,488	1.74	50,851	1.34
5-9	314,596	8.88	295,390	7.50
10-14	464,326	13.50	465,328	12.27
15-19	88,828	2.66	57,956	1.61
20-24	-292,162	-8.78	-263,418	-7.56
25-29	-217,312	-5.92	-171,632	-4.56
30-34	51,188	1.24	228,092	5.55
35-39	103,078	2.57	355,915	9.14
40-44	-125,441	-3.33	-63,113	-1.67
45-49	-225,005	-6.53	-243,240	-6.99
50-54	75,696	2.51	157,312	5.48

	CODPS-WPP, Female	Difference(%)	CODPS-WPP, Male	Difference(%)
55-59	114,265	4.24	244,006	10.24
60-64	16,172	0.64	2,197	0.10
65-69	-191,202	-9.00	-158,843	-9.20
70-74	-202,124	-13.42	-146,326	-13.37
75-79	-108,836	-12.73	1,621	0.31
80Plus	114,549	9.89	226,794	49.85

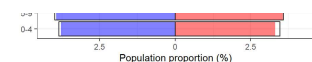
WPP ADM-0 vs CODPS ADM-0



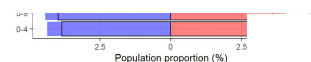
5. Relative population size by age and sex (ADM-1)

Below compares relative population proportions by sex and age between NSO ADM-1 and WPP ADM-0 projections. Reflecting the geographic and economic diversity of Viet Nam, the NSO predicts a wide variation of relative population proportions across the 63 ADM-1 units. From the NSO's predictions, two distinct patterns emerge. The NSO predicts relatively higher fertility but lower proportions of adults (especially older adults) compared to the WPP 2022 ADM-0 projection's population proportions for the following ADM-1 units: Dak Nong, Dien Bien, Gia Lai, Ha Giang, Kon Tum, Lai Chau, and Lao Cai. The NSO also predicts relatively higher proportions of young working adults than the WPP for the following ADM-1 units: Bac Lieu, Bac Ninh, Binh Duong, TP Da Nang, TP Ho Chi Minh, Son La, Quang Tri, and Tai Ninh. Interestingly, the population proportions of the capital city, TP Ha Noi, most closely follow the population proportions of the WPP ADM-0 projection.

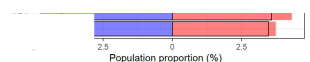




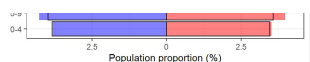
Tien Giang



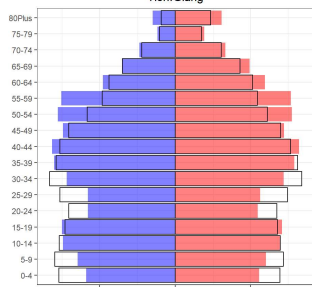
TP.Can.Tho



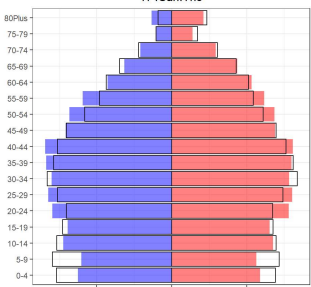
TP.Da.Nang



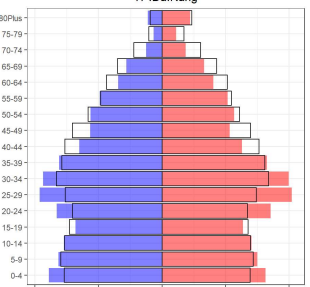
TP.Ha.Noi



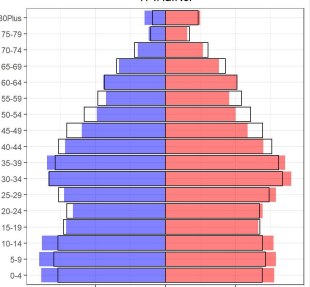
TP.Hai.Phong



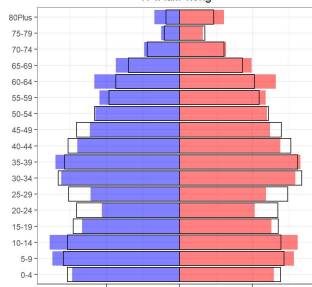
TP.Ho.Chi.Minh



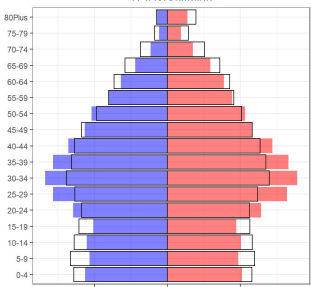
Tra.Vinh



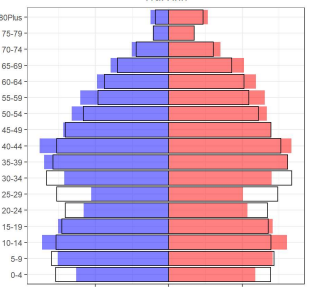
Tuyen.Quang



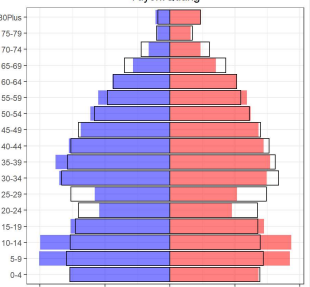
Vinh.Long



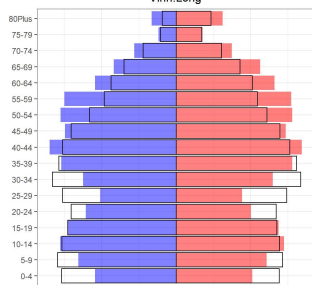
Vinh.Phuc



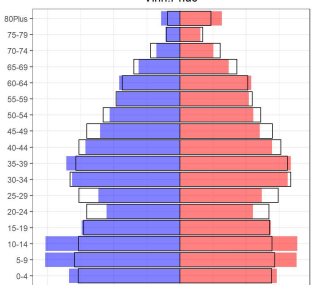
Yen.Bai



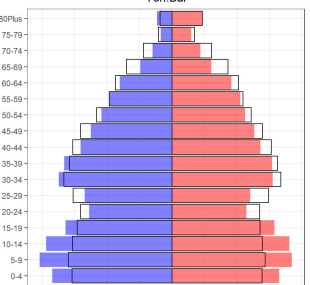
Tuyen.Quang



Vinh.Long



Vinh.Phuc



Yen.Bai



Yen.Bai

