

## TECHNICAL NOTES

# Household Conveniences and Internet Access/Use in the Philippines (2020 Census of Population and Housing)

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## I. Introduction

The Philippine Statistics Authority (PSA) conducted the 2020 Census of Population and Housing (2020 CPH) in September 2020, with 01 May 2020 as the reference date.

The 2020 CPH was the 15<sup>th</sup> census of population and 7<sup>th</sup> census of housing that was undertaken in the Philippines since the first census in 1903. It was designed to take an inventory of the total population and housing units in the country and collect information about their characteristics.

The Philippine Standard Geographic Codes as of April 2022 was used for the disaggregation of geographic levels of the 2020 CPH.

## II. Data Limitation

The number of households in this report may not be equal to the reported number in Report No. 1, as the Special Release on Household Conveniences excludes households found in temporary relocation areas, households found as homeless, and households living in other types of non-conventional housing units or buildings. In Report No. 1, the total number of households is 26,393,906 while the coverage of this Special Release includes only 26,374,653 households.

The statistics presented in this report were based on the information provided by the respondent or any responsible household member who may provide accurate answers to the questions and give correct information about all the household members. Likewise, the statistics presented are based on responses from a sample of around 5.22 million households in the entire country, which represents about 20 percent of the total households based on the 2020 CPH.

## III. Methodology

### III.1 Method of Enumeration

The population and housing censuses in the Philippines are conducted on a “de jure” basis, wherein a person is counted in the usual place of residence or the place where the person usually resides. The enumeration of the population and collection of pertinent data in the 2020 CPH referred to all living persons as of 01 May 2020.

Information on household characteristics contained in this release are based on the information provided by the household respondents and by observation of the enumerator during the data collection of the 2020 CPH.

The data were collected using CPH Form 3 (Sample Household Questionnaire) and CPH Form 7 (Self-Administered Questionnaire for Sample Household).

The items for the sample household questionnaire were administered through questions asked by the enumerator, which are as follows:

1. Household Conveniences/ICT Devices/Vehicles (*“Does this household have the following household conveniences/devices/vehicles in working condition?”*)

#### Household conveniences

- a) Refrigerator/freezer
- b) Stove with oven/gas range
- c) Microwave oven
- d) Washing machine
- e) Air conditioner
- f) Electric fan and other cooling equipment

#### ICT Devices

- g) Radio/radio cassette (AM, FM, and transistor)
- h) Television
- i) CD/VCD/DVD player
- j) Audio component/stereo set/karaoke/videoke
- k) Landline/wireless telephone
- l) Mobile phone
- m) Tablet
- n) Personal computer (desktop, laptop, notebook, netbook,

#### Vehicles

- o) Car/van/jeep/truck
- p) Motorcycle/motor scooter/tricycle
- q) Bicycle/pedicab
- r) Motorized boat/banca
- s) Nonmotorized boat/banca

2. Internet Access and Use (*“What type/s of Internet access is/are available at home?”*)
  - a. Fixed (wired) narrowband/broadband network
  - b. Fixed (wireless) broadband network
  - c. Satellite broadband network
  - d. Mobile broadband network
  
3. For Internet Use, the respondents were asked (*“Where did this household member/s use the Internet in the last three (3) months?”*)
  - a. Home
  - b. Work
  - c. School
  - d. Another person’s home
  - e. Public place
  - f. Private establishment
  - g. Internet cafe/computer shop
  - h. In mobility

### **III.2 Sampling Scheme**

The 2020 CPH was carried out using a combination of complete enumeration and sampling. The sampling rate or the proportion of households selected as sample households was 20 percent.

The sampling rate for the city/municipality is applied to all enumeration areas (EAs) in the city/municipality. Each city/municipality was treated as a domain to obtain efficient and accurate population and housing estimates at the city/municipality level. A 20 percent systematic cluster sampling rate was adopted to minimize the enumerator’s selection bias.

In this sampling scheme, an EA was divided into clusters composed of five households each. Clusters were formed by grouping five households, assigned with consecutive numbers as they were listed. A

sample selection of one in every five clusters of households was carried out, with the first cluster selected randomly. A random start was pre-determined for each EA.

### III.3 Estimation Procedure

The estimation procedure produces a set of household weights. The weights for each sample household corresponds to the number of households that the total household represents. These weights are applied to the sample data to produce estimates from the sample questionnaire. Estimates are summary measures calculated from the sample for various characteristics of interest.

Household weight is computed at the city/municipal level. Compute the household weight as the inverse of probability of inclusion at the city/municipality level. This can be done by determining the probability of inclusion for each city/municipality and then taking the inverse of this probability.

The inverse of probability of inclusion is computed:

$$HHwgt_i = \frac{N_i}{n_{ij}}$$

where:

$N_{ij}$  = total number of households in the  $i^{\text{th}}$  city/municipality

$n_{ij}$  = total number of sample households in the  $i^{\text{th}}$  city/municipality

$HHwgt_i$  = household weight for all households in the  $i^{\text{th}}$  city/municipality

The computed household weight at the city/municipality level was further calibrated to ensure that the resulting tables will conform to that of the household distribution in terms of tenure status of the housing unit/lot.

## IV. Concepts and Definition of Terms

### Household

A social unit consists of a person or a group of persons who sleep in the same housing unit and have a common arrangement in preparing and consuming food.

## Homeless

Homeless refers to individuals or households living in the streets or public spaces (such as parks and sidewalks) and all without shelter.

For 2020 CPH, those homeless or persons living in the street or public spaces who have no usual place of residence or are not certain to be enumerated elsewhere listed where they were found.

## Presence of Household Conveniences/Information and Communication Technology (ICT) Devices/Vehicles

This item provides information on selected housing conveniences, information, and communications technology (ICT) devices, and vehicles, the presence of which in the household indicates the means of communication through which the population can be most easily reached. This also provides a basis for leisure statistics. The presence of vehicles in the household provides data about access to private transport. It can also provide information for the construction of roads/bridges and solution to traffic problems.

In general, the presence of household conveniences/devices can be used as proxy indicators in determining the socio-economic status of the household.

Excluded are household items which have not been in working condition for six months or longer (although intended to be repaired).

Also excluded are vehicles (car/jeep/van/truck, motorcycle/motor scooter/ tricycle, bicycle/pedicab, motorized banca/boat or nonmotorized banca/boat) which are used exclusively for business purposes.

## Internet Access and Use

Information on this item could be used by the government and the private sector for planning purposes, that is, to enable wider and improved delivery of services and to assess its impact on the society. This item is concerned with determining the access and use of internet by households.

The **internet** is a worldwide public computer network. It provides access to a number of communication services, including the World Wide Web and carries e-mail, news, entertainment, and data files, irrespective of the device used.

**Internet access** refers to *the ability of the household to connect to the public Internet*. The internet connection(s) should be working at the time of visit. The types of internet connection are the following:

a. Fixed (wired) narrowband/broadband network

This includes internet connection via Digital Subscriber Line (DSL), cable modem, high speed leased lines, fiber-to-the-home/building, powerline, and other fixed (wired) broadband. It also includes analogue modem (dial-up via standard telephone line) and Integrated Services Digital Network (ISDN).

This kind of network access is commonly provided by Internet Service Providers (ISP) such as Smart/Globe Telecommunications, PLDT Home, BayanDSL, SKYBroadband, Cablelink, and others.

If there is a WiFi access available inside the home to redistribute a fixed (wired) broadband signal, the answer in this item should be “Yes”.

b. Fixed (wireless) broadband network

This includes WiMAX and fixed Code Division Multiple Access (CDMA).

c. Satellite broadband network

The main medium of transmission is a broadband two-way satellite transfer system which provides good access to the internet in even the least accessible areas.

Some of the common Satellite Broadband Service Provider are We Are IT Philippines Inc., WIT Philippines, Inc. (WIT), AZ Communications Network, Inc., TS2 SPACE, Bell Telecommunication Philippines, Inc. (BellTel), Jason Electronics Philippines Co., Inc. and others.

d. Mobile broadband network

This includes internet connection via a handset, a card (for example, integrated Subscriber Identity Module or SIM card in a computer) or USB modem.

## Internet Use

The members should have used the Internet from any of the following locations in the last three months.

a. Home

The Internet should be generally available for use by all members of the household at any time, regardless of whether it is actually used.

b. Work

If the member/s' workplace is located at home, then the answer should be "Yes" to the home category only.

c. School

This only applies to students. Teachers and others who work at school should report "Work" as the place of internet use. If a school is also made available as a location for general public internet use, such use should be reported in the category "Public place".

d. Another person's home

Refers to internet use at the home of a friend, relative or neighbor.

e. Public place

Refers to internet use at community facilities such as public library, publicly provided internet kiosks, non-commercial telecentres, digital community centres, post offices and other government agencies, MRT, and others

f. Private establishment

Refers to internet use at publicly available commercial facilities such as hotel, coffee/tea shop, restaurant, and others.

g. Internet cafe/computer shop

h. In mobility

Use of the Internet while mobile, via a mobile cellular telephone (including devices with mobile telephone functionality) or other mobile access devices, for example, a laptop computer, tablet or other handheld device connected to a mobile phone network.

## V. Dissemination of Results

The 2020 CPH special release and statistical tables are publicly available at the PSA website, <https://psa.gov.ph/population-and-housing>.

## VI. Citation

Philippine Statistics Authority. Technical Notes, 2020 Census of Population and Housing, <https://psa.gov.ph/population-and-housing/technical-notes>.

## VII. Contact Information

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