

## The International Comparison Program: An Overview and the Latest Results

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### Introduction

The International Comparison Program (ICP) is a global statistical initiative conducted under the auspices of the United Nations Statistical Commission (UNSC). It collects price and expenditure data with the objective of estimating Purchasing Power Parities (PPPs) to facilitate international comparisons of macroeconomic aggregates such as Gross Domestic Product (GDP) and its components. The ICP is led and coordinated by the ICP Global Office at the World Bank in partnership with regional agencies overseeing activities in their regions. Incepted in 1968, the 2017 and 2021 ICP mark the 9<sup>th</sup> and 10<sup>th</sup> cycle conducted.

This article presents the concept of PPP, the work that the Singapore Department of Statistics (DOS) was involved in for the latest 2021 ICP, and highlights the results from the 2017 ICP.

### Purchasing Power Parity (PPP)

For comparisons of economic output across economies, market exchange rates are traditionally used to convert national accounts aggregate based on a reference currency. However, market exchange rates are volatile and do not account for differences in price levels across economies and hence may not accurately reflect the real value of an economy's output.

On the other hand, PPP refers to the number of currency units required to purchase a comparable basket of goods and services that can be bought with one unit of the currency of the reference economy.

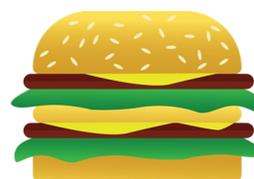
PPPs for GDP and its various components are generally less volatile as they are estimated based on the comparison of actual prices across economies of a standard basket of items suitably weighted by relevant GDP expenditures. Compared to market exchange rates, PPPs adjust for the differences in the purchasing powers of the different currencies by eliminating price level differences. Hence, they can better estimate the volume of output across economies in real terms.

Apart from GDP expenditure broken down by detailed categories, national annual average prices for a comparable basket of well-defined goods and services across economies are required to compute PPPs.

#### BOX 1 AN EXAMPLE OF PPP BASED ON A SINGLE COMMODITY

To illustrate, the Big Mac, an item available in most economies and is generally similar in terms of quality and specifications is used.

Suppose a Big Mac costs S\$5.90 in Singapore and US\$5.65 in the United States (US). The PPP for Big Mac (S\$ per US\$) is computed by taking the ratio of the price of a Big Mac in Singapore to the price of a Big Mac in the US, i.e.,  $5.90/5.65 = 1.04$ . The resulting value of 1.04 implies that S\$1.04 has the same purchasing power as US\$1 for 1 unit of Big Mac.



Singapore : S\$5.90

USA : US\$5.65

PPP =  $5.90/5.65$   
= 1.04 S\$ per US\$

In the example, the Big Mac is a single, standard product and is not representative of the typical consumption basket of many economies.

The aim of the ICP is to produce PPPs that take into account the relative prices among the different economies for a broad range of goods and services, including consumer products, capital and government expenditures, which together make up the GDP.

## Price Level Index (PLI)

Another indicator produced by the ICP is the Price Level Index (PLI). It is used to assess how price levels of economies compare against one another.

The PLI is computed as the ratio of PPP to the market exchange rate of the currency of a given economy relative to the currency of the reference economy, multiplied by 100.

A PLI above 100 points implies that the price level of the economy is higher than that of the reference economy.

### BOX 2 ILLUSTRATION OF PLI

Continuing from the example in Box 1, suppose the prevailing exchange rate is S\$1.37 to US\$1. A tourist from the US visiting Singapore exchanges US\$5.65 (price of a Big Mac in the US) to S\$7.74 at a bank upon arrival (based on the prevailing exchange rate). He will be able to buy a Big Mac in Singapore with S\$1.84 left to spare.

The PLI for Big Mac in Singapore is thus  $1.04/1.37 \times 100 = 76$  points. This means that the price level of Big Mac in Singapore is about three-quarters of that in the US.

#### Computation of PPP and PLI

	US *	Singapore
Cost of Big Mac in local currency	US\$5.65	S\$5.90
PPP	1.00	1.04
Market Exchange Rate	1.00	1.37
PLI for Big Mac	100	76

\* Reference Economy

## 2021 ICP Cycle

Similar to the last ICP in 2017, close to 180 economies participated in the 2021 ICP.

They are classified into 6 regions, namely Africa, Asia and the Pacific, Commonwealth of Independent States, Eurostats-OECD PPP Program, Latin America and Caribbean as well as Western Asia. Activities in each region were coordinated by a Regional Implementing Agency (RIA).

Singapore participated in the 2021 ICP, along with other 20 economies under the Asia and the Pacific region, with the Asian Development Bank (ADB) as the RIA.

## Coverage of ICP Price Surveys

ICP price surveys comprise final goods and services in the GDP and its expenditure components. Data collected for the 2021 ICP covered household consumption items, machinery and equipment, construction items, housing rental and volume as well as government compensation (Table 1).

The conduct of the different price surveys spanned across the whole year of 2021.

## Expenditure Data from National Accounts

Under the ICP, GDP is compiled using the expenditure approach and comprises six main aggregates, including "individual consumption expenditure by households", "individual and collective consumption expenditure by government" and "gross fixed capital formation" (Table 2).

These main aggregates are further broken down into 155 basic headings. PPPs are calculated for each basic heading using the item level price data or the reference PPPs for certain basic headings.

These PPPs for the basic headings are then aggregated upward using the GDP expenditure data associated with the corresponding basic headings.

**TABLE 1 2021 ICP PRICE SURVEYS \***

Survey Coverage	Data Collected	Survey Period
Household Consumption	<ul style="list-style-type: none"> <li>National annual average prices of 990 household consumption goods / services</li> </ul>	Monthly from Jan to Dec 2021
Machinery and Equipment	<ul style="list-style-type: none"> <li>National annual average prices of 182 machinery and equipment</li> </ul>	One-time price collection in Q3 2021
Construction	<ul style="list-style-type: none"> <li>National average price of 52 construction materials / machines and workers compensation</li> </ul>	One-time price collection in July 2021
Housing Rent Survey	<ul style="list-style-type: none"> <li>Rent information by dwelling size / usable surface on 20 dwelling types</li> </ul>	Price collection in Jun and Dec 2021
Housing Volume Indicators	<ul style="list-style-type: none"> <li>Housing volume quantity indicators include number of dwelling units, total population, number of occupants, number of households, number of rooms, and useful floor space</li> <li>Housing volume quality indicators include access to electricity, water, toilet, and housing material</li> </ul>	One-time data collection for 2021
Government Compensation	<ul style="list-style-type: none"> <li>National annual average compensation for 35 government occupations, including base information on work hours, work days, holidays and leave</li> </ul>	One-time price collection for 2021

\* Information refers to survey conducted by the ADB for the Asia and the Pacific region. The schedule for surveys was made flexible for economies to begin the conduct of price surveys at a later month due to COVID-19.

**TABLE 2 NUMBER OF ITEMS PRICED, NUMBER OF BASIC HEADINGS, AND GROSS DOMESTIC PRODUCT BY MAIN AGGREGATES / CATEGORIES, 2021 ICP**

Main Aggregate / Category	Number of Basic Headings	Number of Items Priced
Individual consumption expenditure by households	110	1,010
Food and Non-Alcoholic Beverages	29	295
Alcoholic Beverages, Tobacco and Narcotics	5	18
Clothing and Footwear	5	95
Housing, Water, Electricity, Gas and Other Fuels	8	39
Furnishings, Household Equipment and Routine Maintenance of the House	13	121
Health	7	160
Transport	13	91
Communication	3	33
Recreation and Culture	13	74
Education	1	7
Restaurants and Hotels	2	29
Miscellaneous Goods and Services	10	48
Net Purchases Abroad	1	0*
Individual consumption expenditure by non-profit institutions serving households (NPISHs)	5	0*
Individual consumption expenditure by government	21	14
Health	12	9
Education	6	5
Others	3	0*
Collective consumption expenditure by government	5	21
Gross capital formation	12	234
Machinery and Equipment	6	182
Construction	3	52
Others	3	0*
Balance of exports and imports	2	0*
GDP	155	1,279

\* Not collected; PPPs of closely related basic headings or a group of basic headings are used as reference PPPs.

## Household Consumption Price Survey 2021

The household consumption product list for 2021 ICP for Asia and the Pacific comprised 990 items commonly consumed by households in their day-to-day basic needs and other necessities, e.g. food items, garments, transport, etc.

To ensure that the PPPs derived are meaningful, the products priced are "like-for-like" across economies.

Detailed product specifications are provided for every price-determining characteristics for each item in the product list, such as brand, quantity, unit of measure and material. Economies were to strictly follow the listed product specifications for the price collection.

### BOX 3

#### EXAMPLE OF STRUCTURED PRODUCT DESCRIPTIONS OF "BOY'S DRESS SHIRT, WKB-M"

Item Name	Structured Product Descriptions
Boy's dress shirt, WKB-M	<b>Brand:</b> Well known <b>Brand stratum:</b> Medium <b>Quantity:</b> 1 <b>Unit of measurement:</b> Piece <b>Material:</b> 50-80% cotton <b>Sleeve length:</b> Long <b>Collar:</b> Yes <b>Color:</b> No design; solid color <b>Size:</b> Boys (6-12)

*With reference to the catalogue of household products for the 2021 ICP for Asia and the Pacific*

In Singapore, prices for available household consumption items are primarily sourced from DOS's retail price survey where the prices collected are used for the compilation of the Consumer Price Index (CPI).

For the 2021 ICP price survey, the prices of around 46 per cent of household consumption items were available from the retail price survey. For those not available from the retail price survey, their prices are collected specifically for ICP purposes through the conduct of additional price surveys or obtained from prices online. These made up about 25 per cent of items in the household consumption product list.

The remaining items were not priced as they are not commonly available in Singapore. Examples include:

- Flight, domestic, return ticket, 500-800km,
- Internet connection, 1 - 4 Mbps, and
- Cut up watermelon from street vendor

As of Apr 2022, Q1 – Q3 2021 data from Singapore have been submitted and Q4 2021 data will be submitted before the next workshop in 2H 2022. Regional price data validation will continue for the whole year of 2022. Results of the 2021 ICP are expected to be released in Q4 2023.

## Impact of COVID-19 on 2021 ICP

Due to COVID-19, the ICP benchmark year was postponed from 2020 to 2021. Price collection of items for the household consumption price survey was initially scheduled to start from January 2021. Depending on economies' circumstances, the option to begin the conduct of price collection at a later month while maintaining a 12-month coverage was provided to participating economies. In addition, regional meetings and workshops meant to be held at physical venues, were conducted virtually.

On price collection, new COVID-19 related items such as "COVID-19 RT-PCR test", "Alcohol-based hand sanitizer" and "Respirator masks," were added to the household consumption price survey. Mobility restrictions and low demand for leisure travel affected the price collection of air travel related items such as "Flight, international, return tickets" and "Package holiday by air" in several economies including Singapore.

As a result of the tightening of safe management measures in Singapore to manage COVID-19 over various periods in 2021, price collection activities had to be adjusted accordingly. For example, during Phase 2 Heightened Alert and the closure of wet markets due to the outbreak of COVID-19 clusters, ICP field collection activities were scaled back or halted temporarily. Where available and assessed representative, alternative data collection modes such as online prices and email surveys were adopted in place of ICP field collections.

## Results from the 2017 ICP

### Relative Price Levels

PLI tends to exhibit a positive relationship with income (i.e. PPP-based per capita GDP) (Chart 1). For example, high-income economies such as Iceland, Norway and Switzerland were the most expensive places to live and work in 2017, with their relative price levels about 1.8 to 2 times the world average (i.e., World =100). In comparison, lower middle-income economies such as Egypt, Arab Republic and Sudan had the lowest PLIs in 2017.

Singapore’s PLI was 96.2, slightly lower than the world average and comparable to Qatar’s. Against other high-income economies in Asia and the Pacific, Singapore’s price level was 17 per cent lower than Hong Kong’s and 24 per cent and 37 per cent higher than Taiwan’s and Brunei Darussalam’s respectively.

### PPP-based GDP

On the basis of PPP-based GDP, the world economy was valued at US\$119.5 trillion in 2017. Mainland China and the United States were the two largest economies, each accounting for around 16 per cent of world GDP shares. This was followed by India with a world share of 7 per cent, Japan and Germany each with 4 per cent.

These five economies had a collective PPP-based GDP of US\$56.7 trillion in 2017, accounting for nearly half of the world’s GDP.

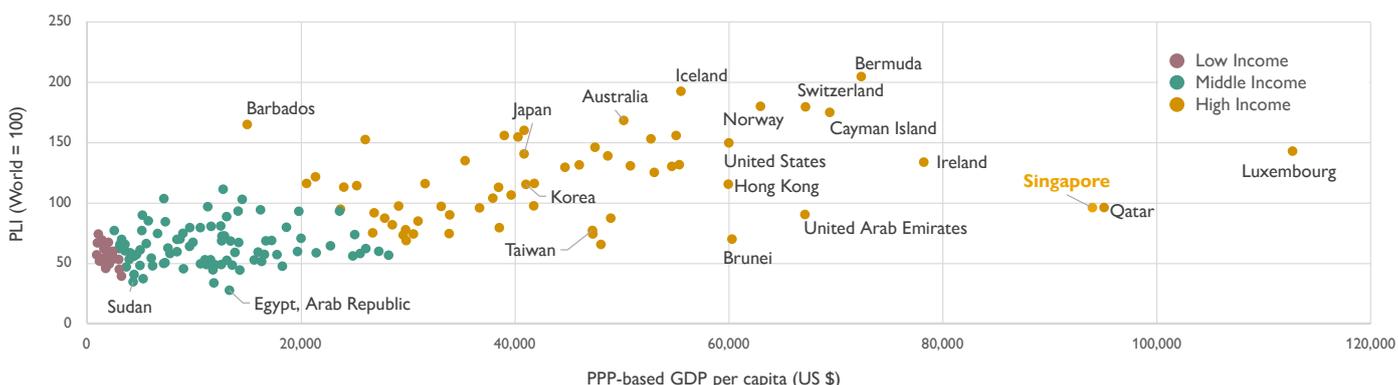
In contrast, measuring GDP using market exchange rates tend to understate the relative sizes of economies with low domestic price levels, and vice versa (Table 3). For example, based on market exchange rates, the sizes of economies such as India and Indonesia (with low domestic price levels) were largely understated relative to other high-income economies.

Singapore’s GDP at PPP and at market exchange rates each accounted for 0.4 per cent of the global output in 2017.

### Conclusion

Apart from producing internationally comparable volume measure of GDP and its expenditure components, PPPs provide a common basis to assess the progress of economies towards meeting the Sustainable Development Goals (SDGs). The ICP program also serves as a platform for building statistical capacity in price statistics and national accounts through the undertaking of ICP activities as well as the sharing of experiences among participating economies.

**CHART 1** RELATIVE PRICE LEVELS (WORLD=100) AND PER CAPITA GDP BY ECONOMY, 2017



Source: 2017 International Comparison Program

**TABLE 3** RELATIVE SIZES OF ECONOMIES, 2017

Economies	GDP at PPP			GDP at Market Exchange Rates		
	US\$Bil	Share (World=100)	Rank	US\$Bil	Share (World=100)	Rank
Mainland China	19,617.4	16.41	1	12,143.6	15.23	2
United States	19,519.4	16.33	2	19,519.4	24.49	1
India	8,050.5	6.73	3	2,552.5	3.20	7
Japan	5,173.0	4.33	4	4,860.0	6.10	3
Germany	4,381.8	3.67	5	3,665.9	4.60	4
Singapore	527.4	0.44	39	338.4	0.43	34

Source: 2017 International Comparison Program

# Demographic Profile of Seniors in Singapore

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## Introduction

Released in June 2021, the results of the Census of Population 2020 offered good insights into specific aspects of the Singapore population, including their education profile, and difficulties in performing particular activities, etc. This article provides insights on the changing demographic characteristics of senior residents<sup>1</sup> aged 65 years and over ("seniors") in Singapore over the past ten years.

## Age Group

The number of seniors grew from 338,000 in 2010 to 614,000 in 2020. The increase over the past decade is due mainly to the ageing of residents within the age groups of 55-64 years in 2010 who aged to 65-74 years in 2020 (Chart 1).

As of 2020, seniors formed 15.2 per cent of the resident population, an increase from 9.0 per cent in 2010.

## Sex Ratio

Females generally outlive males. The sex ratio of seniors declined with age, from 964 males per thousand females for residents aged 65-69 years to 433 for those aged 90 years and over in 2020 (Chart 2).

Nonetheless, life expectancy for male seniors continued to improve. The sex ratio for seniors increased from 792 males per thousand females in 2010 to 848 in 2020.

## Marital Status

The proportion of widowed female seniors shrank from 50.3 per cent in 2010 to 36.2 per cent in 2020 (Chart 3), in line with the increasing life expectancy of males. The proportion of married male seniors remained high over the decade at over 80 per cent.

CHART 1

AGE PYRAMID OF THE RESIDENT POPULATION

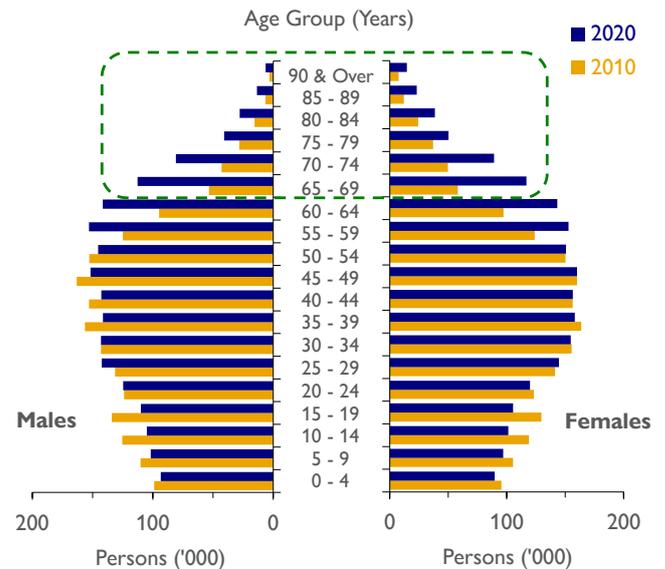


CHART 2

SEX RATIO OF THE RESIDENT POPULATION AGED 65 YEARS AND OVER

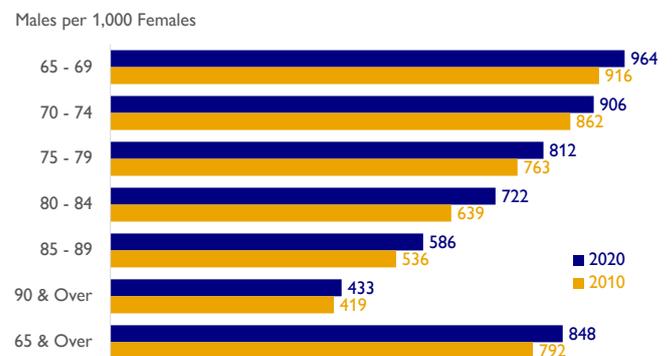
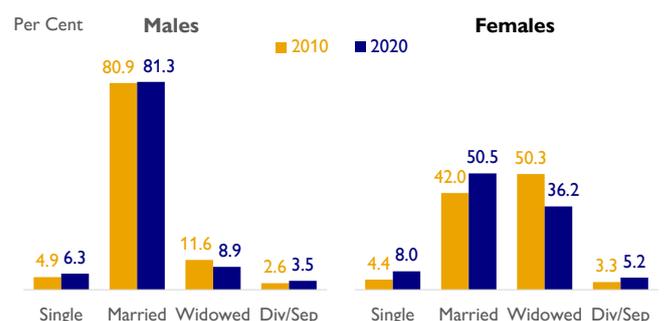


CHART 3

RESIDENT POPULATION AGED 65 YEARS AND OVER BY MARITAL STATUS



<sup>1</sup> Residents comprise Singapore citizens and permanent residents.

## Type of Dwelling

Majority of seniors lived in HDB flats, with 4-room flats being the most common type of dwelling. The proportion of seniors living in HDB 4-room flats increased from 29.5 per cent in 2010 to 30.6 per cent in 2020 (Chart 4).

In 2020, one in five seniors lived in HDB 3-room flats, a decrease from one in four a decade ago. Concomitantly, the number of seniors living in HDB 5-room flats increased from 19.9 per cent in 2010 to 22.1 per cent in 2020.

## Highest Qualification Attained

The educational profile of seniors improved between 2010 and 2020. The proportion of seniors with

qualifications that were below Secondary decreased significantly from 79.6 per cent in 2010 to 61.7 per cent in 2020 (Chart 5).

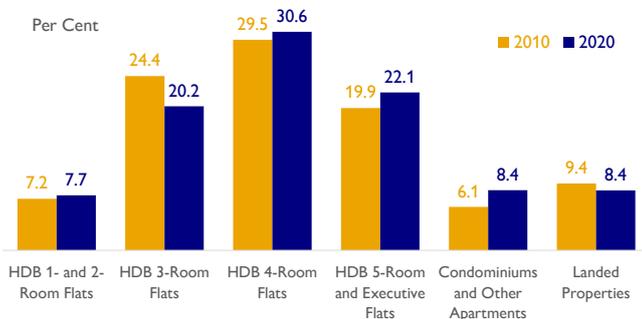
Correspondingly, the proportions of seniors with Secondary or higher qualifications increased.

## Religious Affiliation

Most seniors had religious affiliations, though the proportion with no religious affiliation had increased to 15.1 per cent in 2020, from 12.1 per cent in 2010. Over the same period, the share of Buddhists or Taoists among seniors decreased, from 36.9 per cent in 2010 to 35.2 per cent in 2020 for Buddhists and 19.0 per cent to 15.7 per cent for Taoists (Chart 6). In contrast, the proportion who identified themselves as Muslims, Hindus and Christians increased.

**CHART 4**

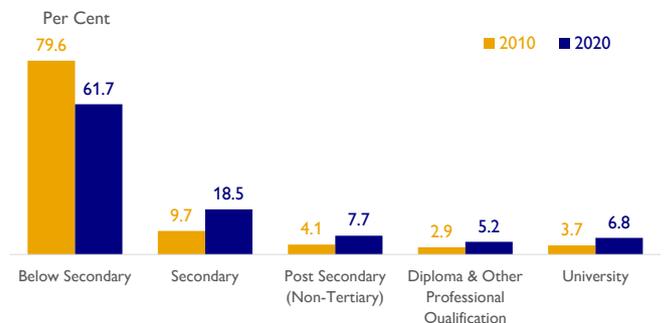
**RESIDENT POPULATION AGED 65 YEARS AND OVER BY TYPE OF DWELLING**



Note: Other types of dwelling not shown in chart.

**CHART 5**

**RESIDENT POPULATION AGED 65 YEARS AND OVER BY HIGHEST QUALIFICATION ATTAINED**



**CHART 6**

**RESIDENT POPULATION AGED 65 YEARS AND OVER BY RELIGION**

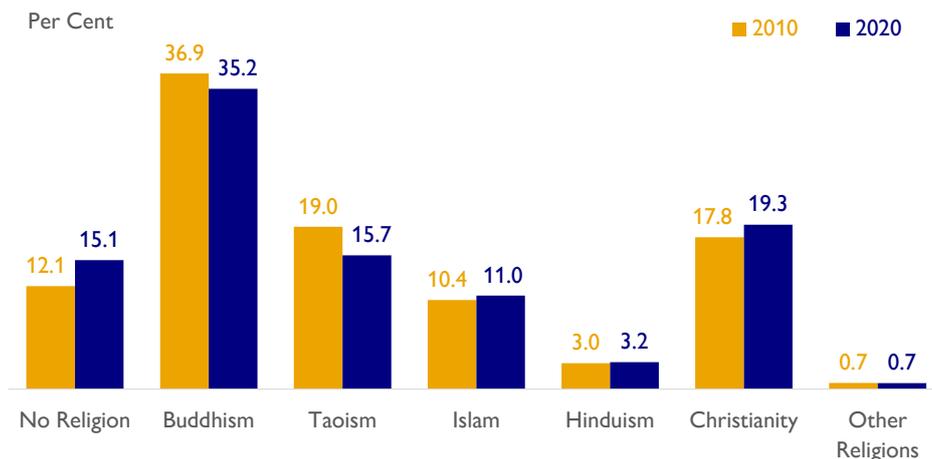


CHART 7

### RESIDENT POPULATION AGED 65 YEARS AND OVER IN RESIDENT HOUSEHOLDS BY LIVING ARRANGEMENT

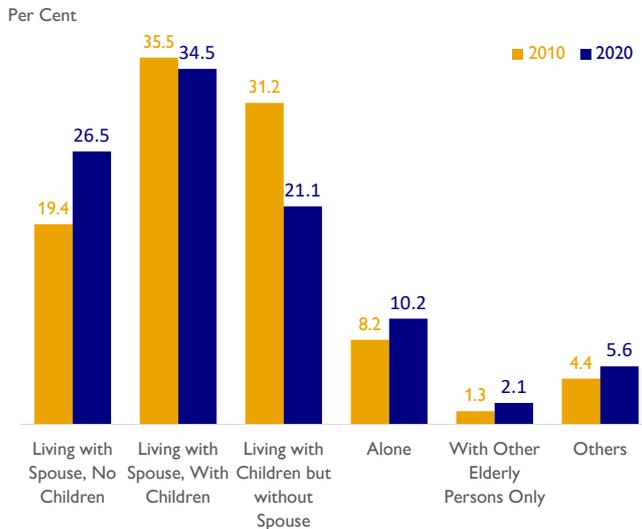
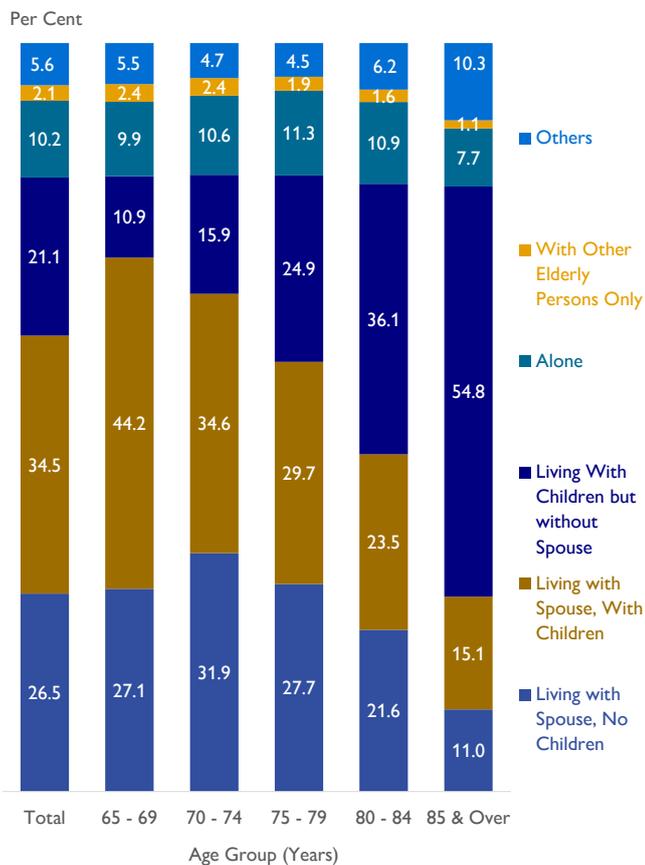


CHART 8

### RESIDENT POPULATION AGED 65 YEARS AND OVER IN RESIDENT HOUSEHOLDS BY LIVING ARRANGEMENT AND AGE GROUP, 2020



## Living Arrangements<sup>2</sup>

Most seniors lived with their spouses and children, although the proportion decreased slightly from 35.5 per cent in 2010 to 34.5 per cent in 2020 (Chart 7). Those living with their spouses and without children increased from 19.4 per cent a decade ago to 26.5 per cent in 2020, forming the second most common living arrangement. Seniors living alone accounted for 10.2 per cent in 2020, an increase from 8.2 per cent in 2010.

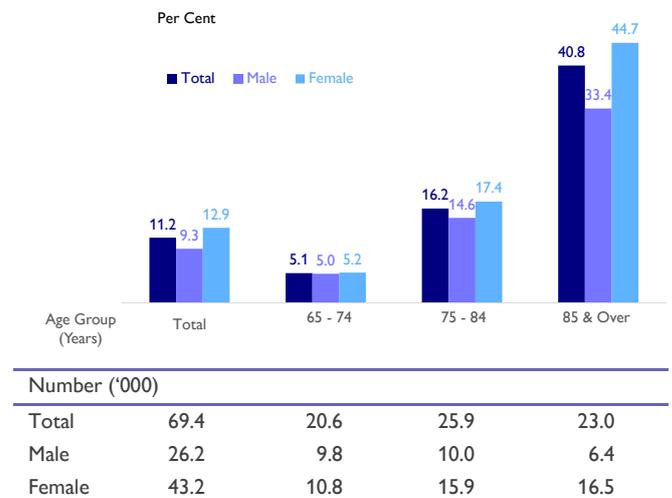
In 2020, seniors who were living with their spouses and children made up the largest proportion among the age groups of 65-79 years (Chart 8). At the older ages, seniors were most commonly living with children but without spouse.

## Difficulty Performing Basic Activities by Age Group and Sex

In 2020, some 69,400 or 11.2 per cent of residents aged 65 years and over who stayed in residential dwellings were unable to perform or had a lot of difficulty in at least one basic activity<sup>3</sup> (Chart 9).

CHART 9

### PROPORTION OF RESIDENT POPULATION AGED 65 YEARS AND OVER UNABLE TO PERFORM/ WITH A LOT OF DIFFICULTY IN AT LEAST ONE BASIC ACTIVITY BY AGE GROUP AND SEX, 2020

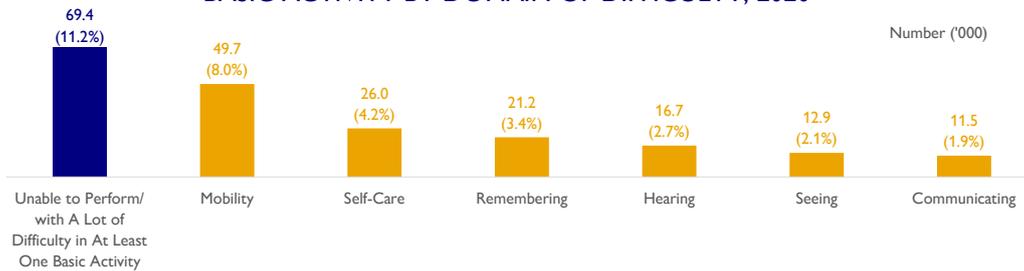


<sup>2</sup> Living arrangements of seniors are classified according to their co-residence with their spouse or children within the same household. For example, "Living with Spouse, No Children" may refer to seniors who were childless or have children who were not residing with them. Data on Resident Population Aged 65 Years and Over in Resident Households by Living Arrangement has been updated in April 2024.

<sup>3</sup> Basic Activities refer to seeing, hearing, mobility (walking or climbing steps), remembering or concentrating, self-care (such as washing all over or dressing), and communicating (for example understanding or being understood).

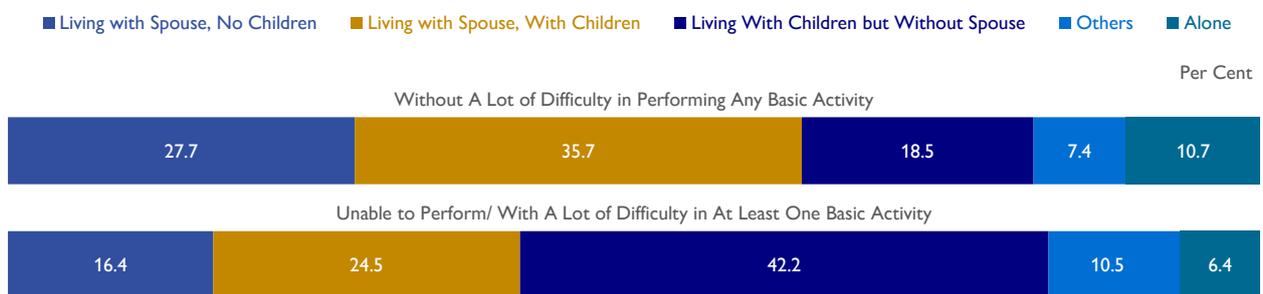
**CHART 10**

**RESIDENT POPULATION AGED 65 YEARS AND OVER UNABLE TO PERFORM / WITH A LOT OF DIFFICULTY IN BASIC ACTIVITY BY DOMAIN OF DIFFICULTY, 2020**



**CHART 11**

**RESIDENT POPULATION AGED 65 YEARS AND OVER IN RESIDENT HOUSEHOLDS BY DIFFICULTY IN PERFORMING BASIC ACTIVITIES AND LIVING ARRANGEMENT, 2020**



The proportion of those who were unable to perform or had a lot of difficulty performing at least one basic activity increased with age. A higher proportion of females (12.9 per cent) than males (9.3 per cent) were unable to perform or had a lot of difficulty performing at least one basic activity, due partly to the longer life expectancy of females.

Among those aged 65 - 74 years, the proportions with difficulty performing basic activities were similar for males and females.

**Difficulty by Domain**

In 2020, seniors who were unable to perform or had a lot of difficulty performing at least one basic activity faced the most difficulty with basic activities related to mobility. Some 49,700 (or 8.0 per cent of) residents aged 65 years and over were unable to perform or had a lot of difficulty performing activities relating to mobility (Chart 10)<sup>4</sup>. Seniors who had difficulty performing self-care activities formed the next largest group (about 26,000 seniors, or 4.2 per cent).

**Difficulty Performing Basic Activities by Living Arrangement**

In 2020, 93.6 per cent of seniors in resident households who were unable to perform or had a lot of difficulty performing at least one basic activity were living with other people. Most (83.1 per cent) were living with their spouses and/ or children. In comparison, a higher proportion of seniors who did not have a lot of difficulty performing basic activities (10.7 per cent) lived alone (Chart 11).

**Conclusion**

With advancements in medical science among several other factors, seniors living in Singapore enjoy longer life expectancies today. In 2020, seniors can expect to live for another 21.5 years on average, compared to the 19.8 additional years for seniors in 2010. In addition, baby boomers and post-baby boomers have entered the elderly age groups. In 2010, about one in eleven residents were seniors. This ratio increased to one in seven in 2020. By 2030, about one in five residents is expected to be a senior. This makes it important to understand the changing profiles of our seniors, so that their evolving needs may be better met.

<sup>4</sup> For Chart 10, the number of residents unable to perform or with a lot of difficulty in specific basic activities do not add up to the overall figure, as there are residents who were unable to perform or had a lot of difficulty performing multiple basic activities.

# Key Highlights from the National Population Health Survey 2020

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## Introduction

The National Population Health Survey (NPHS) is a cross-sectional population health survey series that tracks health and risk factors, and lifestyle practices of Singapore residents. Conducted annually, the NPHS provides timely information on the prevalence of behavioural risk factors such as smoking and alcohol consumption, chronic diseases such as diabetes mellitus and hypertension, as well as preventive health behaviour such as the practice of regular health screening.

The survey findings are used by the Ministry of Health (MOH) and the Health Promotion Board (HPB) for planning and evaluation of health policies, programmes and health care services to improve the health of Singapore residents.

This article highlights some of the key findings and key trends observed from the NPHS 2020, conducted from July 2019 to March 2020<sup>1</sup>. The survey findings represent those of Singapore residents, aged 18 to 74 years<sup>2</sup>.

## Prevalence and Trends of Health Behavioural Risk Factors in Singapore

Behavioural risk factors associated with health outcomes include physical activity levels, consumption of alcohol, smoking practices, and mental health.

Both MOH and HPB implement policies and programmes designed to nudge Singapore residents towards better health outcomes through

healthier choices and lifestyle improvements in the following areas.

### Physical Activity

Physical activity is important for achieving and maintaining good health. For adults, it has been shown to reduce the risk of premature death and development of cardiovascular disease, hypertension, and diabetes mellitus. In addition, physical activity improves the quality of sleep, mental and cognitive health, and prevents unhealthy weight gain.

Older adults aged 65 years and over who are physically active are less likely to experience falls and fall-related injuries and have better functional capacity and mobility to live longer independently<sup>3</sup>.

The World Health Organization (WHO) recognises that participation in physical activity can be achieved across three domains: work-related activity, transportation-related activity, and leisure-time physical activity. WHO recommends that adults should do at least 150 minutes of moderate-intensity physical activity or at least 75 minutes of vigorous-intensity physical activity or an equivalent combination of moderate- and vigorous-intensity physical activity per week<sup>4</sup>.

Among Singapore residents, 76.4 per cent met the WHO-recommended guidelines. This, however, represented a decline compared to 80.1 per cent in 2019 and 80.9 per cent in 2017 (Chart 1). On the other hand, the proportion of Singapore residents who engaged in regular leisure time exercise<sup>5</sup> had increased from 29.4 per cent in 2017 to 33.4 per cent in 2020.

1 The last quarter of fieldwork from April to June 2020 for NPHS 2020 was suspended due to the implementation of measures to mitigate the spread of COVID-19 during Singapore's Circuit Breaker period.

2 Findings on chronic disease screenings are limited to the age groups that are recommended for the respective screenings.

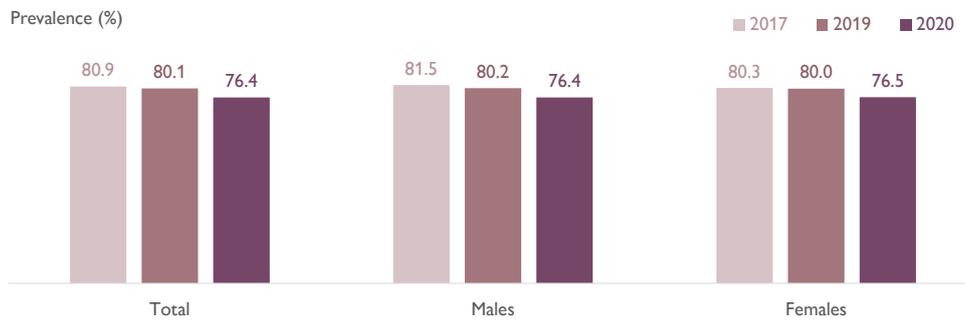
3 *Global action plan on physical activity 2018–2030: more active people for a healthier world*. Geneva: World Health Organization; 2018.

4 *WHO guidelines on physical activity and sedentary behaviour*. Geneva: World Health Organization; 2020.

5 Regular leisure time exercise refers to participation in any form of sports or exercise for at least 20 minutes per occasion, for three or more days a week.

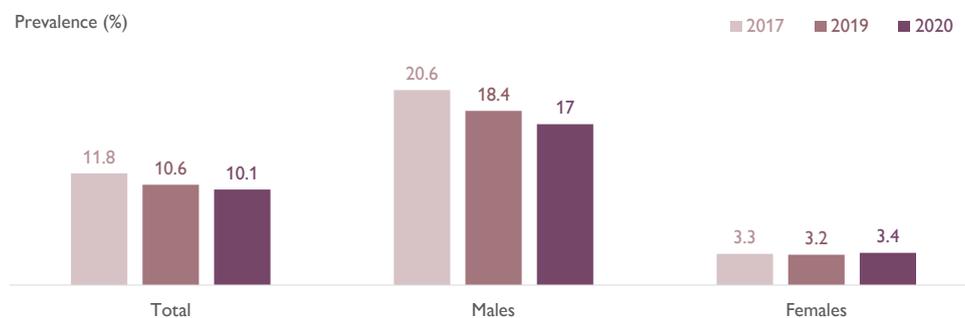
**CHART 1**

**PROPORTION OF SINGAPORE RESIDENTS WHO MET THE WHO-RECOMMENDED PHYSICAL ACTIVITY GUIDELINES, 2017, 2019 AND 2020**



**CHART 2**

**PREVALENCE OF DAILY SMOKING AMONG SINGAPORE RESIDENTS, 2017, 2019 AND 2020**



In addition to the recommendations for aerobic physical activity, WHO recommends that adults should do muscle strengthening activities involving the major muscle groups on at least two days or more in a week<sup>6</sup>. In 2020, one in three (33.8 per cent) Singapore residents reported having sufficient muscle strengthening activities and met these recommendations.

**Smoking**

Tobacco use is the single greatest cause of preventable death globally. It typically leads to diseases affecting the heart and lungs, with cigarette smoking being a major risk factor for heart attack, stroke, chronic obstructive pulmonary disease and cancer. It also causes peripheral vascular disease and hypertension. Tobacco kills up to half of all smokers, and more than eight million people each year die from tobacco use<sup>7</sup>.

Among Singapore residents, the prevalence of daily cigarette smoking had declined from 11.8 per cent

in 2017 to 10.1 per cent in 2020. This decline was more pronounced among males than females, with the females’ prevalence remaining relatively constant at around three per cent in recent years (Chart 2).

Prevalence of daily smoking remained significantly higher among males than females.

**Alcohol Consumption**

Excessive alcohol consumption is associated with an increased risk of hypertension, stroke and certain cancers. It may lead to liver cirrhosis, inflammation of the pancreas and damage to the brain and heart. Excessive alcohol intake can also cause mental disorders such as alcohol dependence and other alcohol-induced disorders such as amnesia.

Globally, alcohol consumption contributes to three million deaths annually and the harmful use of alcohol accounts for 5.1 per cent of the global burden of disease<sup>8</sup>.

6 Muscle strengthening activity refers to activity or exercise that increases skeletal muscle strength, power, endurance and mass.

7 *Global Burden of Disease*. Washington, DC: Institute of Health Metrics; 2019.

8 *Global status report on alcohol and health 2018*. Geneva: World Health Organization; 2018.

In 2020, the prevalence of regular alcohol consumption<sup>9</sup> among Singapore residents remained low at 2.2 per cent, with 3.4 per cent of the male residents and 1.0 per cent of the female residents reporting themselves as regular drinkers.

On the contrary, the prevalence of binge drinking increased from 8.8 per cent in 2017 to 10.5 per cent in 2020. Similar to the prevalence of daily smoking, binge drinking is more prevalent among males compared to females (Chart 3).

## Mental Health

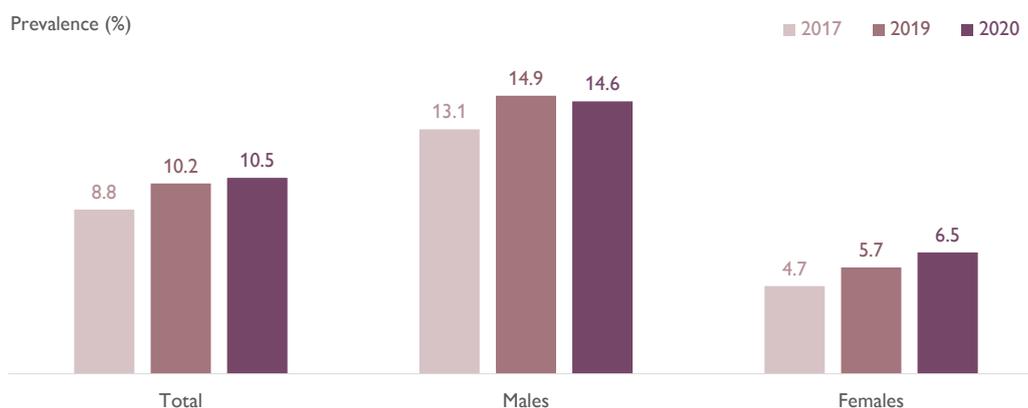
WHO defines mental health as a state of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to

his or her community. The level of mental health of a person may be affected by multiple interrelated social, psychological, and biological factors. Unemployment, stressful work conditions, gender discrimination, family violence, social exclusion, unhealthy lifestyles could result in poor mental health<sup>10</sup>.

In 2020, the prevalence of poor mental health among Singapore residents, measured by the 12-item General Health Questionnaire (GHQ-12), was 13.4 per cent, an increase from 2017 (12.5 per cent). Poor mental health was more prevalent among females (14.8 per cent) compared to males (12.0 per cent) in 2020. Compared to 2017, the increase in prevalence of poor mental health was more pronounced in the females (13.5 per cent) than males (11.4 per cent) (Chart 4).

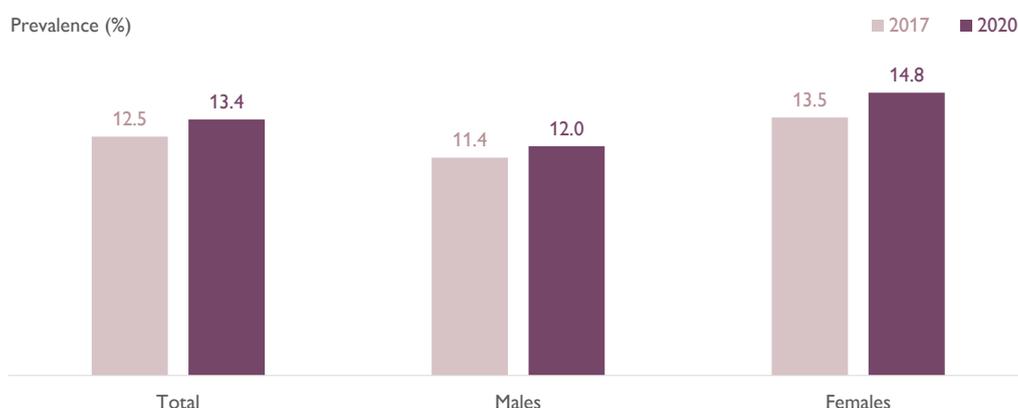
**CHART 3**

PREVALENCE OF BINGE DRINKING AMONG SINGAPORE RESIDENTS, 2017, 2019 AND 2020



**CHART 4**

PREVALENCE OF POOR MENTAL HEALTH AMONG SINGAPORE RESIDENTS, 2017 AND 2020



<sup>9</sup> Regular alcohol consumption refers to the consumption of alcohol on more than 4 days in a week.

<sup>10</sup> WHO. *Mental Health: Strengthening Mental Health Promotion*. Fact sheet No. 220. September 2007. Geneva: World Health Organization; 2007.

## Prevalence and Trends of Chronic Diseases<sup>11</sup> in Singapore

Non-communicable diseases (NCDs) tend to be chronic in nature, often requiring long-term treatment and care with long-term health consequences. They arise from a combination of genetic, physiological, environmental and behavioural factors.

The main types of NCD are cardiovascular diseases, cancers, chronic respiratory diseases and diabetes. Metabolic risk factors contribute to four key metabolic changes that increase the risk of NCDs. These include elevated blood pressure, hyperglycemia (high blood glucose levels), hyperlipidemia (high levels of fat or cholesterol in the blood), and overweight/ obesity<sup>12</sup>.

### High Blood Pressure

Hypertension or high blood pressure is a condition in which the blood vessels have persistently raised pressure. It is a serious medical condition that significantly increases the risk of diseases of the heart, brain, kidneys and other organs. Most people with hypertension are unaware of the problem as there may

be no warning signs or symptoms. An estimated 1.4 billion people worldwide suffer from high blood pressure, and only 14 per cent have it under control<sup>13</sup>.

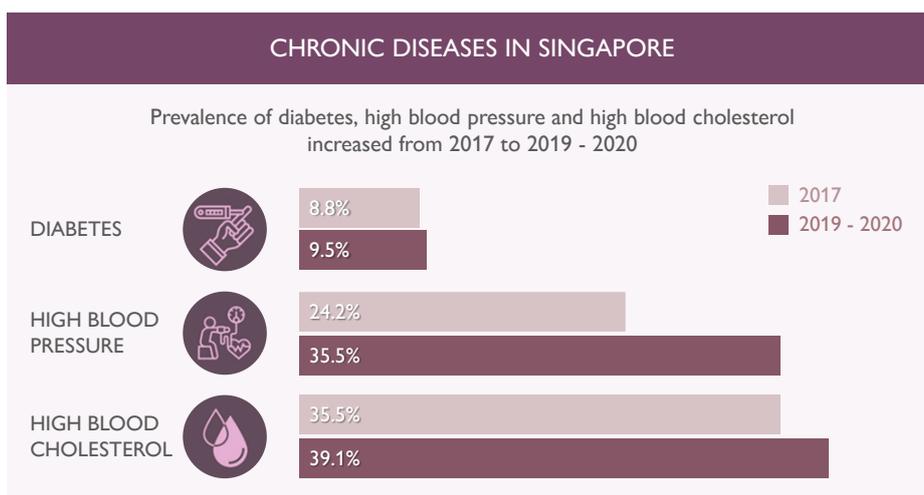
In Singapore, the prevalence of hypertension<sup>14</sup> for the period 2019-2020 was 35.5 per cent, an increase from 2017 (24.2 per cent) (Chart 5), with the prevalence among males (41.0 per cent) higher than females (30.2 per cent).

### Diabetes

Diabetes mellitus represents a group of metabolic disorders characterised by high blood sugar (hyperglycemia) resulting from defects in insulin secretion, insulin action, or both. Diabetes mellitus can lead to death and disability through long-term complications including blindness, kidney failure, coronary heart disease and stroke<sup>15</sup>.

For the period 2019-2020, the prevalence of diabetes<sup>16</sup> among Singapore residents was 9.5 per cent, an increase from 2017 (8.8 per cent) and was more prevalent in males (10.6 per cent) than in females (8.4 per cent).

**CHART 5**  
PREVALENCE OF CHRONIC DISEASES AMONG SINGAPORE RESIDENTS, 2017 AND 2019 - 2020



11 Prevalence of chronic diseases is aggregated over a period of two survey cycles (i.e., NPHS 2019 and NPHS 2020) to ensure that there are enough data for a detailed analysis. These indicators are based on self-reported doctor diagnosed chronic disease or chronic disease diagnosed during health examination/screening which requires more efforts and longer duration for completion.

12 WHO. *Noncommunicable Diseases*. Fact sheet. 13 April 2021. Geneva: World Health Organization; 2021.

13 *Guideline for the pharmacological treatment of hypertension in adults*. Geneva: World Health Organization; 2021.

14 Hypertension was defined as a systolic blood pressure equal to or above 140 mmHg or a diastolic blood pressure equal to or above 90 mmHg. (*A Global Brief on Hypertension*. Geneva: World Health Organization; 2013).

15 Ministry of Health, Singapore. *Diabetes Mellitus MOH Clinical Practice Guidelines 1/2014*. Ministry of Health, Singapore 2014.

16 Diabetes mellitus was defined as a fasting plasma glucose level equal to or above 7.0 mmol/l or equal to or above 126mg/dl. (*Definition and Diagnosis of Diabetes Mellitus and Intermediate Hyperglycaemia: Report of a WHO/IDF Consultation*. Geneva: World Health Organization; 2006).

## High Blood Cholesterol

Hyperlipidaemia or high blood cholesterol is a major risk factor for coronary heart disease. Elevated blood cholesterol causes atherosclerosis and increases the risk for coronary heart disease. High LDL-cholesterol is an important independent risk factor for the development of coronary heart disease. Population-based approach through the adoption of healthier lifestyle behaviours such as reduced intake of saturated fats and cholesterol, being more physically active, and better weight control as well as clinical management of those persons at increased risk are important factors in lowering the LDL-cholesterol levels in the population.

The prevalence of high blood cholesterol<sup>17</sup> among Singapore residents was 39.1 per cent, an increase from 2017 (35.5 per cent). Although the prevalence of high blood cholesterol was higher among males than females, the prevalence in males remained stable from 2017 to 2019-2020, while the prevalence in females increased from 28.5 per cent in 2017 to 35.8 per cent in 2020.

## Obesity

Obesity<sup>18</sup> increases the risk of chronic diseases such as diabetes mellitus, hypertension and hyperlipidaemia, cardiovascular diseases and certain cancers. Aside from genetic factors, obesity can also result from modifiable lifestyle factors such as excessive food intake that are high in fats and sugars, as well as the lack of physical activity<sup>19</sup>. For 2019-2020, the prevalence of obesity had returned to the previous level seen in 2010 (10.5 per cent) after a decrease in 2013 (8.6 per cent) and 2017 (8.6 per cent), with obesity being more common among males (11.9 per cent) than females (9.3 per cent).

Recognising that the risk for cardiovascular diseases and diabetes mellitus starts from a lower BMI for Asian populations, the WHO expert consultation recommended an additional classification of BMI for public health action among Asians<sup>20</sup>. Based on this classification, Singapore residents having a BMI equal to or greater than 27.5 kg/m<sup>2</sup> are considered as having

high risk BMI. For 2019-2020, 20.7 per cent of Singapore residents had high risk BMI, an increase from 18.7 per cent in 2017, nearing the prevalence observed in 2010 (22.7 per cent).

## Chronic Disease Screening

Health screening is an effective strategy for disease prevention in the population. It is important to go for appropriate and regular health screening as it helps to detect risk factors or diseases early even when there are no symptoms. Early detection of diabetes mellitus, high blood pressure and high blood cholesterol could result in better treatment, fewer complications and increased chances of better outcomes<sup>21</sup>.

Health screening practice was relatively common among Singapore residents aged 40 to 74 years who were not diagnosed by a doctor to be suffering from any chronic diseases (diabetes, high blood pressure and high blood cholesterol (DHL)). In 2020, screening participation was at 63.0 per cent, a slight decline from 66.4 per cent in 2017. The decrease in screening participation was more pronounced in females than males, from 66.8 per cent and 65.9 per cent for females and males respectively in 2017, to 62.2 per cent and 63.9 per cent for females and males respectively in 2020.

## Conclusion

The results from NPHS 2020 showed that, compared to 2017, more Singapore residents had been diagnosed with chronic diseases especially hypertension and hyperlipidaemia; and more were obese. Fewer residents screened for chronic diseases. In terms of risk factors, the proportion of Singapore residents who engaged in regular exercise had increased. Smoking prevalence continued to decline, while the prevalence of binge drinking increased slightly. These findings help MOH and HPB develop and evaluate policies and programmes to improve the health of Singapore residents.

For more information and detailed reports on the NPHS, please visit [www.go.gov.sg/nphs](http://www.go.gov.sg/nphs).

17 High blood cholesterol was defined as a LDL-cholesterol level equal or above 4.1 mmol/l or equal or above 160mg/dl. (*Lipids MOH Clinical Practice Guidelines 2/2016*. Ministry of Health, Singapore 2016).

18 A person who is obese is defined as having a Body Mass Index (BMI) of 30 kg/m<sup>2</sup> and above. Data on measured height and weight collected during health examination/screening and are aggregated over a period of two survey cycles (i.e. NPHS 2019 and NPHS 2020) to ensure that there are enough data for a detailed analysis.

19 Hruby A, Hu F.B. *The epidemiology of obesity: A big picture*. Pharmacoeconomics. 2015.

20 WHO. *Appropriate body-mass index for Asian populations and its implications for policy and intervention strategies*. Lancet 2004; 363: 157-163.

21 Health Promotion Board, Singapore. *Screen for Life Booklet*, October 2019.

# SINGAPORE 2021

## ECONOMY

<p><b>Real Gross Domestic Product Growth was 7.6%</b></p>	<p><b>Gross National Savings reached S\$226.5 bil</b></p>
<p><b>Per Capita Gross National Income was S\$86,015</b></p>	<p><b>Labour Force Participation Rate was 70.5%</b></p>
<p><b>International Visitor Arrivals was 0.3 mil</b></p>	<p><b>Nominal Value Added for the Manufacturing Sector was S\$112.7 bil</b></p>
<p><b>Inflation Rate was 2.3%</b></p>	<p><b>Air Cargo Handled was 1.9 mil tonnes</b></p>
<p><b>Price Changes &amp; the CPI Video</b></p>	<p><b>Sea Cargo Handled reached 599.6 mil tonnes</b></p>
	<p><b>Investment Commitments in Manufacturing and Services (Fixed Assets Investments) amounted to S\$11.8 bil</b></p>
	<p><b>Total Merchandise Trade was S\$1,160.0 bil</b></p>
	<p><b>International Trade in Services Dashboard</b></p>

## SOCIO-DEMOGRAPHY

<p><b>Total Population was 5.5 mil as at end-Jun 2021</b></p>	<p><b>Mean Years of Schooling was 12.0 years for male residents aged 25 years and over</b></p>	<p><b>11.3 years for female residents aged 25 years and over</b></p>	
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### Population Trends Dashboard



Proportion of Owner-Occupied Resident Households\* was **88.9%**



Total Marriages was **28,325<sup>P</sup>**



Resident Total Fertility Rate was **1.12<sup>P</sup> per female**

Mobile Population Penetration Rate reached **158.8%**



Residential Wired Broadband Household Penetration Rate was **92.2%**



<sup>P</sup>: Preliminary  
\* Refers to the proportion of households where the household reference person or any other member owns the house, and is as reported by respondents.

**Median Monthly Household Income from Work Per Household Member was S\$3,027**

**Crime Rate was 847 per 100,000 population**



Explore the Census 2020 Infographics

Statistical Release 1

Statistical Release 2



Find out more: **Singapore Economy Infographic**



Find out more: **Singapore Population Infographic**



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# Data Tools for Businesses

Based on curated and contextualised content for the Retail Trade Industry (with more to come), a suite of data tools are now available to address firms' questions on their customers, the industry and business performance.

Be empowered to make data driven business decisions with these data insights. Explore the one-stop data site for businesses at [www.singstat.gov.sg/data-for-businesses/](http://www.singstat.gov.sg/data-for-businesses/)!

## One-Stop Data Site for Businesses

**Key Indicators**

- Business Outlook for the Next 6 Months: **14.0%** (Services Sector) Net Weighted Balance, 1Q2022
- Employment Forecast for the Next Quarter: **9.0%** (Services Sector) Net Weighted Balance, 1Q2022
- Operating Receipts Forecast for the Next Quarter: **12.0%** (Services Sector) Net Weighted Balance, 1Q2022
- Wholesale Trade: **4.6%** Operating Receipts CAGR, 2014-2019
- Retail Trade: **1.4%** Operating Receipts CAGR, 2014-2019
- Transportation & Storage: **8.6%** Operating Receipts CAGR, 2014-2019

CAGR refers to Compound Annual Growth Rate.

**Check Out Key Indicators**

**Discover Business Insights with Interactive Tools**

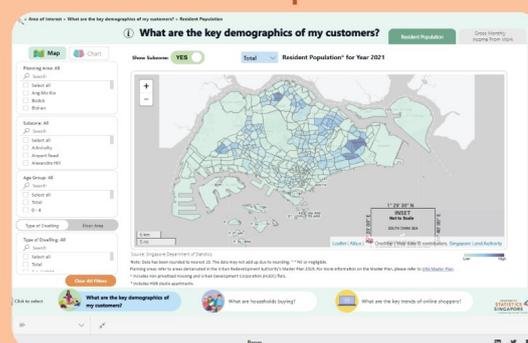
**Watch Video Tutorial!**

## Know My Customers

Browse the list of Commonly Asked Questions to gain insights into the profile and trends of customers and market.

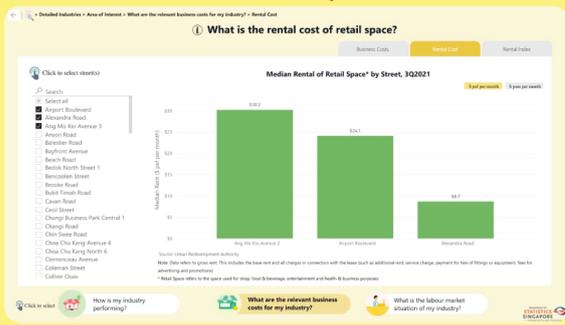
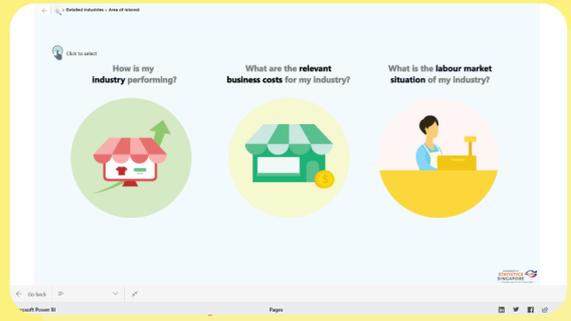
Click to select a topic of interest

- What are the **key demographics** of my customers?
- What are **households** buying?
- What are the key trends of **online shoppers**?



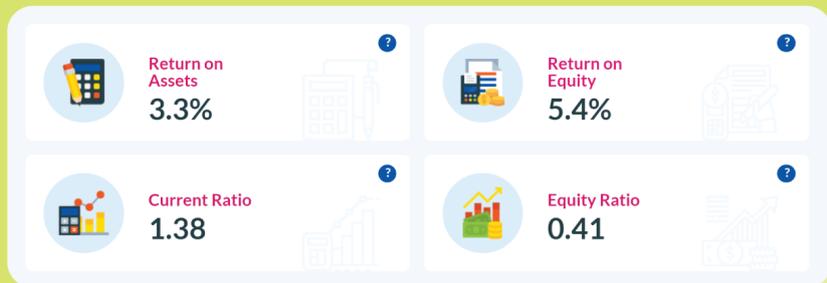
# Know My Industry

Browse the list of Commonly Asked Questions to gain insights into industry trends, business outlook, business costs and labour market situation.



# Benchmark My Business Performance

Find out how your business compares to the industry and peers.



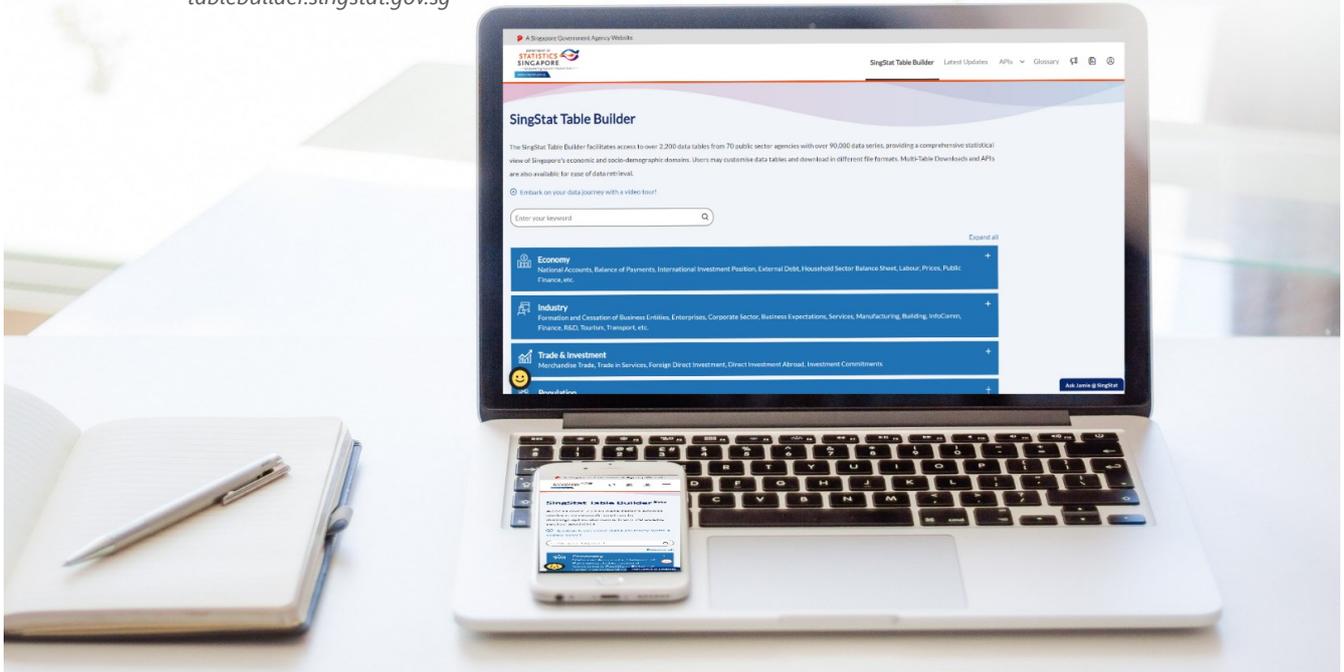
View your industry's financial ratios



Benchmark against firms of similar size

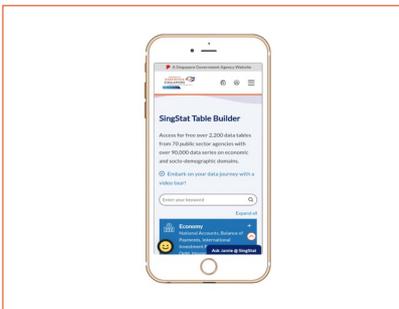
# Enhanced SingStat Table Builder Unveiled!

[tablebuilder.singstat.gov.sg](http://tablebuilder.singstat.gov.sg)

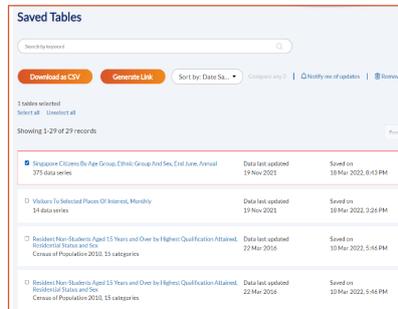


The SingStat Table Builder has been enhanced to provide users with easy access to over 2,200 data tables from 70 public sector agencies with over 90,000 data series! Use this e-service today to enjoy the new and improved user-friendly features and gain insights on Singapore's economic and socio-demographic characteristics.

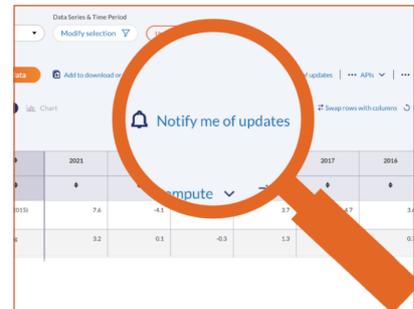
## New and Improved Features at a Glance



Mobile Responsiveness to Access while You are On-the-Go



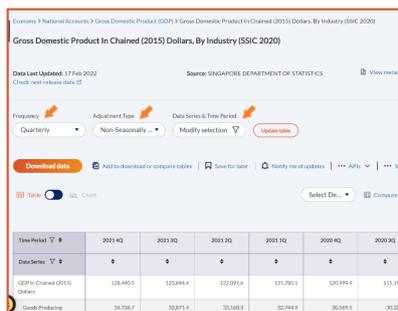
Personalised Page with Your Frequently Accessed Tables



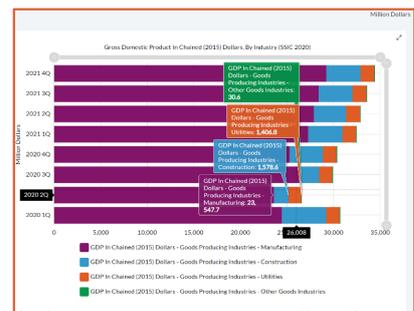
Notifications via Email on Updates to Your Commonly Used Data



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## Singapore Standard Classification of Individual Consumption According to Purpose (S-COICOP) 2022

Released!



The S-COICOP is designed for use in the collection and compilation of data that require classifying the purpose of individual consumption expenditure. This includes the Household Expenditure Survey, Consumer Price Index and Private and Government Consumption Expenditure in the National Accounts.

The revised S-COICOP 2022 incorporates changes from the international standard classification (UN-COICOP), provides greater clarity on the classification principles and better reflects the common consumption items in recent years.

Check out the new release of S-COICOP 2022 at <https://www.singstat.gov.sg/standards/standards-and-classifications/s-coicop/>

## Appointment of New Chief Statistician



We are pleased to announce the appointment of Dr Koh Eng Chuan as the Chief Statistician of the Singapore Department of Statistics with effect from 1 April 2022. He succeeded Ms Wong Wee Kim, who is now an Advisor (Statistics & Special Projects) at the Ministry of Trade and Industry.

Dr Koh held various leadership positions in the Department prior to his appointment as Chief Statistician. He had been the Deputy Chief Statistician since 1 April 2015.

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