



# NEWSLETTER

## INTERNATIONAL COMPARISON PROGRAM (ICP)

### HIGHLIGHT OF ICP FINAL RESULT 2021

### PURCHASING POWER PARITIES (PPPs)

#### WHAT IS ICP?

The International Comparison Program (ICP) is one of the world's largest and most impactful statistical initiatives, designed to produce Purchasing Power Parity (PPP) exchange rates and PPP-based GDP expenditure indicators. By providing a reliable framework for comparing economic data across countries, the ICP helps to measure and understand differences in price levels and living standards worldwide. Its results are essential for accurate international economic analysis, offering insights into the relative value of currencies and enabling more informed policy decisions on a global scale.

#### OBJECTIVES OF THE ICP

- ❑ **Measure Price Level Differences**  
To provide statistically and economically measures of price level differences through Purchasing Power Parities (PPPs) of currencies.
- ❑ **Compile Comparable GDP Data**  
To compile and disseminate internationally comparable measures of real Gross Domestic Products (GDP) and its components.
- ❑ **Estimate PPPs for Economic Comparisons**  
It estimates PPPs and compare economic outputs, standards of living, and relative price levels across economies.

#### GLOBAL GOVERNANCE

<b>ICP Governing Board</b>	<ul style="list-style-type: none"> <li>❖ Strategic and policy-making body</li> <li>❖ Sets policies and protocols for PPP production</li> <li>❖ Ensures that ICP results consistent with agrees policies, protocols and methodology</li> <li>❖ Advocated, conducts outreach, promotes openness, raises funding</li> <li>❖ Meets usually once in a year</li> </ul>
<b>ICP Global Office at the World Bank</b>	<ul style="list-style-type: none"> <li>❖ Coordinates and manages the ICP globally</li> <li>❖ Provides secretariat functions for governance bodies</li> <li>❖ Delivers technical support to regions and Calculates and disseminates global results</li> <li>❖ Implements the ICP dissemination and access policy</li> </ul>
<b>Inter-Agency Coordination Group</b>	<ul style="list-style-type: none"> <li>❖ Body of Regional Coordinators and World Bank</li> <li>❖ Coordinating body for program implementation</li> <li>❖ Establishes data collection, validation, calculation and dissemination work plans</li> <li>❖ Develops common standards and protocols to ensure comparability across regions and countries</li> </ul>
<b>Technical Advisory Group and task force(s)</b>	<ul style="list-style-type: none"> <li>❖ Technical body</li> <li>❖ Assures methodological soundness and overall quality of the PPP estimates</li> <li>❖ Ensure transparency of the PPP estimation process</li> <li>❖ Supports the establishment of a permanent and more frequent ICP</li> </ul>
<b>Regional Implementation Agencies (RIA's)</b>	<ul style="list-style-type: none"> <li>❖ Coordinate and manage regional comparisons</li> <li>❖ Carry out regional capacity-building and technical assistance activities</li> <li>❖ Ensure adequate national and regional data and metadata quality as per the agreed standard</li> <li>❖ Calculate and disseminate regional results</li> </ul>

Figure 1: Governance Structure of International Comparison Program



#### THE COLLABORATIVE STATISTICAL PARTNERSHIP

The collaborative statistical partnership led by **The World Bank** involves more than 175 countries spanning six global regions (AFR, CIS, ASI, LAC, EUO, and WAS). These results, which are crucial for global economic analysis and policy, are generated every three years, providing valuable insights into international price levels and purchasing power across countries.

#### THE IMPLEMENTATION OF ICP

The ICP launched in **1968**, has been a key global statistical initiative. The latest round (2024) is the 11<sup>th</sup> cycle covering almost 176 economies globally. **Malaysia's participation in the ICP began in 1973**, highlighting its commitment to international economic analysis. Since **2005**, the **Asian Development Bank (ADB)** has taken the lead in coordinating participation for the **Asia-Pacific region (including Malaysia)**, ensuring its continuous contribution to global price and purchasing power analyses. In 2024, Malaysia participated in the 10<sup>th</sup> round of the ICP cycle.



## FOUR (4) ICP OUTPUTS:

1. **PURCHASING POWER PARITIES (PPPs)** - PPPs are exchange rates that equalize the purchasing power of different currencies by eliminating the differences in price levels between countries.
2. **PRICE LEVEL INDICES (PLIs)** - a PLI compares the price level of a economy relative to a reference economy .
3. **GROSS DOMESTIC PRODUCT (GDP)** - Based on PPPs adjusts a economy's GDP by considering price level differences across countries. This provides a more accurate representation of the economic output, accounting for the fact that the same goods and services may cost different amounts in different countries.
4. **PER-CAPITA GDP** is the total GDP of a economy divided by its population. When adjusted by PPPs, this gives a more accurate measure of the average standard of living or income across different countries, accounting for differences in the cost of living.

## THREE (3) MAJOR COMPONENTS OF ICP



### Prices of Goods and Services

Participating economies collect prices for a selection of goods and services that make up final consumption expenditure and gross capital formation.



### The Actual Methodology To Compute PPPs

The ICP estimates purchasing power parity (PPP) values for each participating economy. The PPPs are relevant to the entire GDP and its components, such as individual consumption expenditure by households, government final consumption expenditure, and gross fixed capital formation.



### Expenditures

As defined by the system of National Accounts; total amount of money spent on goods and services in an economy within a given period, typically a year or a quarter. It is an important component of the calculation of a economy's **Gross Domestic Product (GDP)** and is used to assess economic activity and living standards.

## INDICATOR OF ICP OUTPUTS:

There are **two major indicator of ICP output** which consist (PPPs and PLIs) :

### a) PURCHASING POWER PARITIES (PPPs)

PPPs are both currency conversion factors and spatial price indexes. They convert different currencies to a common currency and, in the process of conversion, equalize their purchasing power by eliminating the differences in price levels between economies. They show, with reference to a base economy, the relative price of a given basket of goods and services in each of the economies being compared. In contrast, consumer price indexes (CPIs) are temporal price indexes that show, with reference to a base period, the price of a given basket of goods and services at different points in time for a given economy.

## FOUR (4) MAIN COMPONENTS OF PPPs :

1. **ICEH** - Individual Consumption Expenditure by Households
2. **AICH** - Actual Individual Consumption by Households
3. **GFCE** - Government Final Consumption Expenditure
4. **GFCF** - Gross Fixed Capital Formation

## PURPOSE

- ❑ To **convert economies' national accounts expenditures on GDP into a common currency unit** after accounting for price level differences; and
- ❑ Allow **comparisons of real expenditure levels of GDP** and its component expenditures across economies.

### b) PRICE LEVEL INDICES (PLIs)

These are standardised indexes obtained by dividing an economy's PPP by its market exchange rate with a base economy. They express the price level of a given economy relative to another.

## USES OF PLIs :

### (1) COMPARISON OF PRICE LEVEL

Provide insight into **how expensive or cheap good and services in one economy as compared to others**. When a economy's PLI is greater than 100, it indicates that the economy's general price level is higher than the world average. Conversely, a PLI lower than 100 indicates that the economy's price level is below the world average.

### (2) ECONOMIC INDICATORS

PLIs are **useful for comparing the cost of living and price competitiveness** between different regions or economies. Higher-income economies generally have higher PLIs, reflecting higher general price levels, while lower-income economies tend to have lower PLIs.

## ECONOMIES IN ASIA-PACIFIC REGION

**21 Economies/Country under Asia and the Pacific region** are grouped into **four categories** :

1. **Mekong**: Cambodia, Myanmar, Thailand, Vietnam
2. **South Asia**: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka
3. **Southeast Asia and Others**: Fiji, Indonesia, Malaysia, Mongolia, the People's Republic of China, the Philippines
4. **High-income economies**: Brunei; Hong Kong, China; Singapore; Taipei, China

Geographically determined

Determined by level of development

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# WHAT IS THE BIG MAC INDEX?

- The **Big Mac Index** is a tool created by *The Economist* magazine to measure whether the exchange rates of different currencies are overvalued or undervalued compared to one another. It is based on the idea of **Purchasing Power Parity (PPP)**, a theory that suggests that in the absence of transportation costs and trade barriers, identical goods should cost the same in different countries when expressed in a common currency.
- The most celebrated example of a PPPs based on a single commodity is the **Big Mac Index** published by *The Economist* magazine. Suppose the **price in Baht (B) for Big Mac in Thailand is Baht 128.00** and in **Hong Kong, China is HK\$21.00**. Figure 2 below illustrate the Big Mac Index measure for Thailand PPPs.

Figure 2: Big Mac Index Measure Illustrative



$$\text{Big Mac PPP}_{B, HK\$} = \frac{B128.00}{HK\$21.00} = B6.10 \text{ per HK\$1}$$






Based on Figure 2, **Baht 6.10** has the same purchasing power as one unit of Hong Kong dollar in Big Mac terms. Being a ratio of two currency units, PPPs acts as a currency converter; unlike exchange rate, PPPs accounts for relative price levels of commodities. Hence, an expenditure converted to a reference currency using **PPPs becomes a measure of the volume of commodities that can be purchased**—hence, called **real expenditure**.

Table 1 : Present Purchasing Power Parities, Exchange Rates, and Price Levels-An Illustrative Big Mac Example, 2021

Economy	Local Currency Unit (LCU)	Price of Big Mac in LCU	PPP (HK= 1.00)	Exchange Rate (LCU per HK\$)	PLI (HKG = 100) PPP/ Exchange Rate X 100
China, People Republic	Yuan	22.40	1.07	0.83	128.53
Hong Kong, China	Hong Kong Dollar	21.00	1.00	1.00	100.00
Indonesia	Rupiah	34,000.00	1,619.05	1,840.51	87.97
Thailand	Baht	128.00	6.10	4.11	148.17
Malaysia	Ringgit Malaysia	11.39	0.54	0.53	101.28

## LCU : Local Currency Unit

As indicated on Table 1 below are the findings:

 <p><b>Thailand</b></p>	<p><b>HK\$1.00 fetches Baht 4.11 in 2021 from a currency exchange</b>, one would need Baht 6.10 to buy a Big Mac, indicating that the price level of the Big Mac is about <b>48% higher</b> in Thailand, compared to that in Hong Kong, China.</p>
 <p><b>Malaysia</b></p>	<p><b>HK\$1.00 could be exchanged for RM0.53</b> but only RM1.28 is needed to buy an equivalent of what HK\$1.00 buys in Hong Kong, China. This means that the price level of the Big Mac in Malaysia is marginally <b>higher by 1.28%</b> than in Hong Kong, China.</p>
 <p><b>Indonesia</b></p>	<p><b>HK\$1.00 could be exchanged for Rp1,840.51</b> but only Rp1,619.05 is needed to buy an equivalent of what HK\$1.00 buys in Hong Kong, China. This means that the price level of the Big Mac in Indonesia is <b>lower</b> than that in Hong Kong, China.</p>

Source :

- 2005 International Comparison Program in Asia and the Pacific; Purchasing Power Parity Preliminary Report, Economics and Research Department July 2007 ADB;
- Big Mac prices in LCU as of July 2021 were obtained from The Economist. 2024.
- Burgernomics—The Big Mac Index. <https://www.economist.com/big-mac-index> (accessed 06 May 2024). a The currency is the renminbi, while the currency unit is yuan.
- Asian Development Bank estimates.

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2016 - 2030

# FINDINGS RESULT FOR ICP2021

The key indicator and description are shown below :

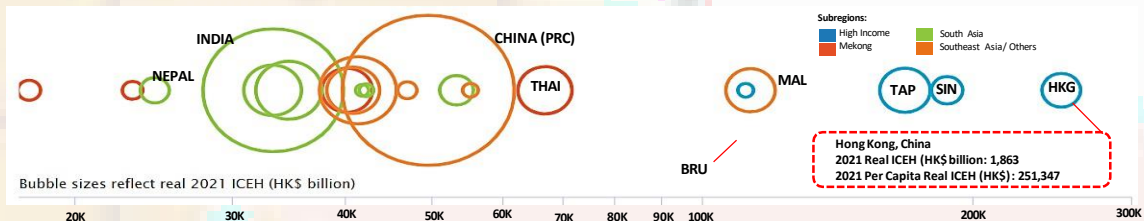
Indicator	Description
<b>Gross Domestic Product (GDP)</b>	Measures the total size of an economy, including individual consumption expenditure by households (ICEH), government final consumption expenditure (GFCE), gross capital formation, and net exports.
<b>Individual Consumption Expenditure by Households (ICEH)</b>	Represents household consumption expenditure and spending by nonprofit institutions serving households (NPISH) on behalf of households.
<b>Actual Individual Consumption by Households (AICH)</b>	A broader measure that includes ICEH, NPISH expenditures, and government consumption on behalf of households (ICEG). It provides a more accurate reflection of material well-being.
<b>Government Final Consumption Expenditure (GFCE)</b>	Includes government expenditures on behalf of households (ICEG), especially in education and health, as well as collective consumption expenditure (CEG) on services like defense, public order, and safety.
<b>Gross Fixed Capital Formation (GFCF)</b>	Measures the total value of fixed assets acquired by an economy, including investments in construction, machinery, equipment, and other fixed assets.

In this edition of the newsletter, the focus is on the findings for **ICP2021 ICEH** and **AICH** concept.

## FINDINGS INDIVIDUAL CONSUMPTION EXPENDITURE BY HOUSEHOLDS (ICEH) IN ASIA AND THE PACIFIC

Individual Consumption Expenditure by Households (ICEH) **includes imputed expenditure, incurred by resident households on individual consumption goods and services**, including those sold at prices that are not economically significant. Also includes the individual consumption expenditure by nonprofit institutions serving households (NPISH).

**Figure 3 : ICP2021 Findings of ICEH by Households In All Subregion (Asia and The Pacific)**



**Figure 4 : ICP2021 Findings of ICEH by Households In Southeast Asia/Others Region (Asia and The Pacific)**



Notes: Bubble sizes represent the population size a each economy

**Figure 3** shows ICP2021 findings of ICEH by households in all subregion in Asia and the Pacific. The bubble sizes represent the population size a each economy and reflect Real 2021 ICEH (HK\$ billion). Findings shows that **Hong Kong, China has the highest Per Capita Real ICEH (HK\$) in Asia and the Pacific region with 251,347**, followed by Singapore (187,411), Taipei, China (168,267), Malaysia (113,199). **Malaysia ranked 4<sup>th</sup> economy with highest Per Capita Real ICEH (HK\$) in all Asia and the Pacific region.**

While **Figure 4** shows ICP2021 findings of ICEH by households in Southeast Asia/Others (Asia and The Pacific) **Malaysia ranked 1<sup>st</sup> economy with the highest Per Capita Real ICEH (HK\$) in the Southeast Asia Region (excluding high-income regions) with 113,199** followed by Fiji (55,233), China (49,543), Mongolia (46,902), Indonesia (41,328), and Philippines (40,823).

The detail findings can be access through:

**2021 International Comparison Program for Asia and the Pacific: Purchasing Power Parities and Real Expenditures—A Summary Report**

Sources : <https://icp.adb.org/overview>

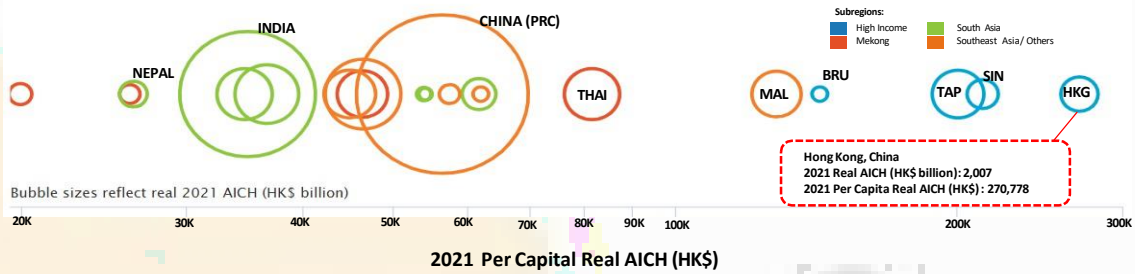
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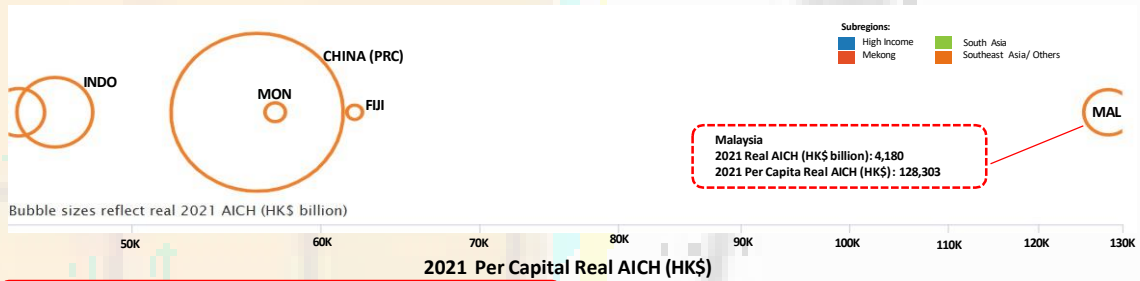
# ACTUAL INDIVIDUAL CONSUMPTION BY HOUSEHOLDS AICH

Actual Individual Consumption By Households (AICH) is **the total value of household final consumption expenditure including nonprofit institutions serving households (NPISH), and of expenditures by government on services provided to household.**

**Figure 5 : ICP2021 Findings of AICH by Households In All Subregion (Asia and The Pacific)**



**Figure 6 : ICP2021 Findings of AICH by Households In Southeast Asia/Others (Asia and The Pacific)**

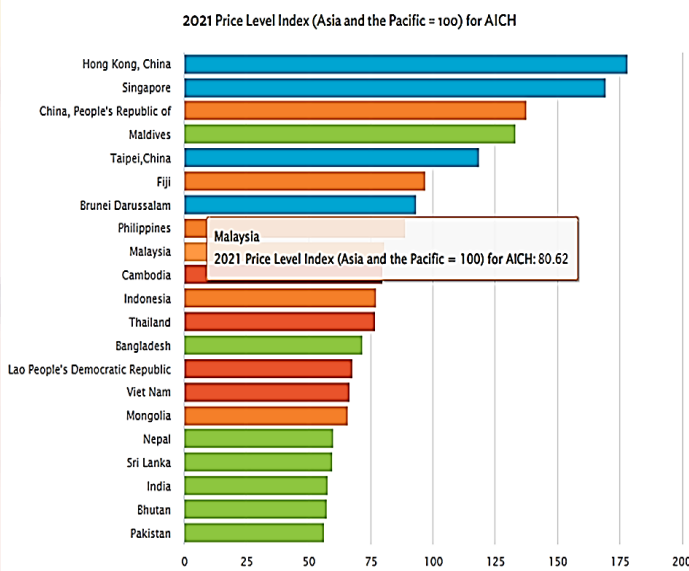


Note: Bubble sizes represent the population size a each economy

Figure 5 shows ICP2021 findings of AICH by households in all subregion in Asia and the Pacific. The bubble sizes represent the population size a each economy and real 2021 AICH (HK\$ billion). Findings shows that **Hong Kong, China has the highest Per Capita Real AICH (HK\$) in Asia and the Pacific with 270,778** followed by Singapore (213,002), Taipei, China (200,823), Brunei (142,700) and Malaysia at the 5<sup>th</sup> highest Per Capita Real AICH (HK\$) with (128,303).

Meanwhile, Figure 6 shows ICP2021 findings of AICH by households in Southeast Asia/Others (Asia and The Pacific), **Malaysia ranked 1st economy with the highest Per Capita Real AICH (HK\$) in the Southeast Asia Region (excluding high-income regions) with 128,303** followed by Fiji (62,029), Mongolia (57,434), People’s Republic of China (56,404) , Indonesia (46,418), and Philippines (44,835).

**Figure 7 : 2021 Price Level Index (Asia and The Pacific = 100) For AICH**



**Figure 8 : 2021 Purchasing Power Parity (Hong Kong, China = 1.00)**

Bangladesh	4.42
Bhutan	3.06
Brunei Darussalam	0.09
Cambodia	235.72
China, People's Republic of	0.64
Fiji	0.15
Hong Kong, China	1.00
India	3.09
Indonesia	798.84
Lao People's Democratic Republic	474.32
<b>Malaysia</b>	<b>0.24</b>
Maldives	1.48
Mongolia	135.75
Nepal	5.12
Pakistan	6.60
Philippines	3.17
Singapore	0.16
Sri Lanka	8.54
Taipei, China	2.40
Thailand	1.78
Viet Nam	1,110.77

- Figures 7 and 8 showed **Malaysia rank 9<sup>th</sup> in Price level Index of 80.62** which the cost of goods and services is below the regional average, making it more affordable for consumers. Since **MYR 0.24** equals the purchasing power of **HK\$ 1**, it shows that **consumer goods and services are generally cheaper in Malaysia as compared to Hong Kong.**



# HOUSEHOLD FINAL CONSUMPTION: ACTUAL INDIVIDUAL CONSUMPTION BY HOUSEHOLDS (AICH)

## Bread and Cereals



## Meat and Fish



## Fruits and Vegetables



Economy (Top 5)	Food
<b>Malaysia</b>	<b>268</b>
Hong Kong, China	223
Fiji	185
Taipei, China	183
Singapore	175

The following food consumption under the categories of bread and cereals, meat and fish, fruits and vegetables:

- Malaysia has the highest index of 268 on food, followed by Hong Kong, China (223), Fiji (185), Taipei, China (183) and Singapore (175).
- Hong Kong, China remain the highest index in the group Meat & fish (426), Malaysia ranked as 2<sup>nd</sup> (315)
- Bangladesh is the highest index in group Bread & cereals (227), Malaysia ranked as 3<sup>rd</sup> (214)
- Thailand is the highest index in group Fruits & vegetables (209), Malaysia ranked 3<sup>rd</sup> (205)
- Overall, Malaysia has the highest per capita real expenditure on food in 2021.

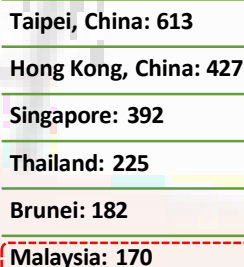
## Per Capita Real Expenditure Indexes on Education, Health, Transportation and Communication, Recreation and Culture, and Restaurants and Hotels, 2021 (Asia and Pacific=100)



### EDUCATION



### HEALTH



### TRANSPORTATION AND COMMUNICATION



### RECREATION & CULTURE



### RESTAURANTS & HOTELS



Education	Singapore has the highest value at 420, followed by Brunei (419), Hong Kong, China (346), Taipei, China (320) and Malaysia (170).
Health	Taipei, China has the highest value (613) followed by Hong Kong, China (427), Singapore (392), Thailand (225), Brunei (182) and Malaysia (170).
Transport And Communication	Taipei, China (399) has the highest index values, followed by Hong Kong, China (380), Brunei (346), Singapore (327) and Malaysia (315).
Recreation And Culture	The highest values with Hong Kong, China at 2354; Singapore at 1898, Taipei, China (934), Brunei (487) and Malaysia (251).
Restaurants And Hotels	The highest values with Singapore at 970; and Hong Kong, China at 927, followed by Malaysia at 632, relatively higher than Thailand (291).

Prepared by: Prices, Income and Expenditure Statistics Division, Department of Statistics Malaysia

