



PRIME MINISTER'S DEPARTMENT
DEPARTMENT OF STATISTICS MALAYSIA

STATISTICAL, ECONOMIC AND SOCIAL
RESEARCH AND TRAINING CENTRE
FOR ISLAMIC COUNTRIES (SESRIC)
TRAINING COURSE ON BIG DATA
APPLICATIONS ON PRICE STATISTICS

THE COMPILATION OF CONSUMER PRICE INDEX IN MALAYSIA



14 JUNE 2022 (TUESDAY)



15:30 – 17:30 (MYT)



ONLINE



20 OCT



2016 - 2030



Ms. Maslina Samsudin
Department of Statistics Malaysia



- 01 Overview of Price Index
- 02 Introduction of CPI
- 03 Main Concept & Methodology
- 04 Dissemination of CPI

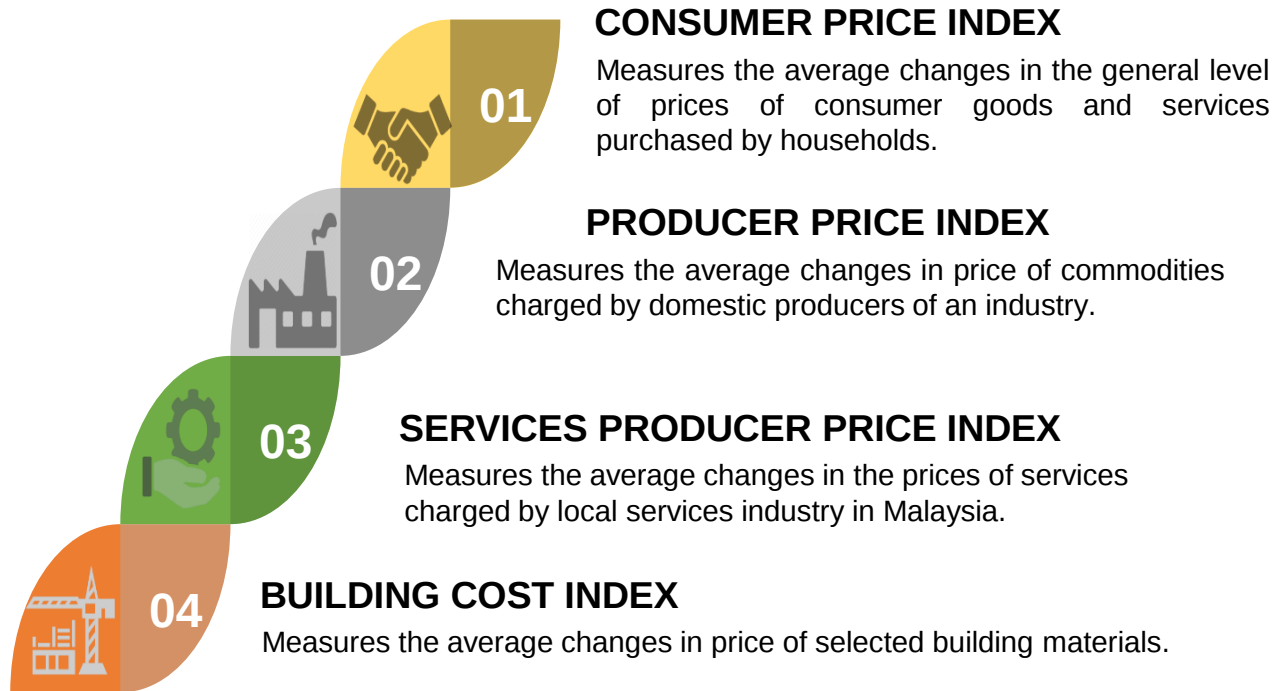


OVERVIEW

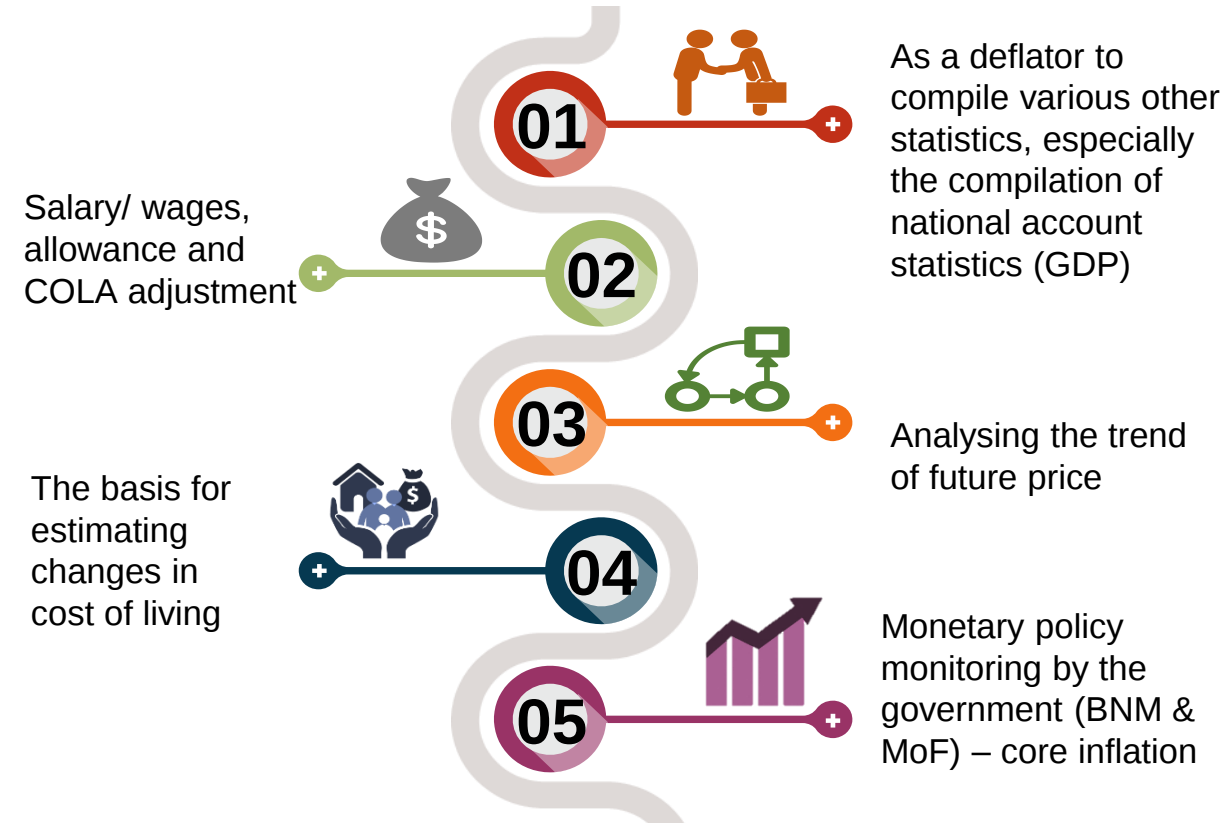




Introduction to Price Index



Use of CPI



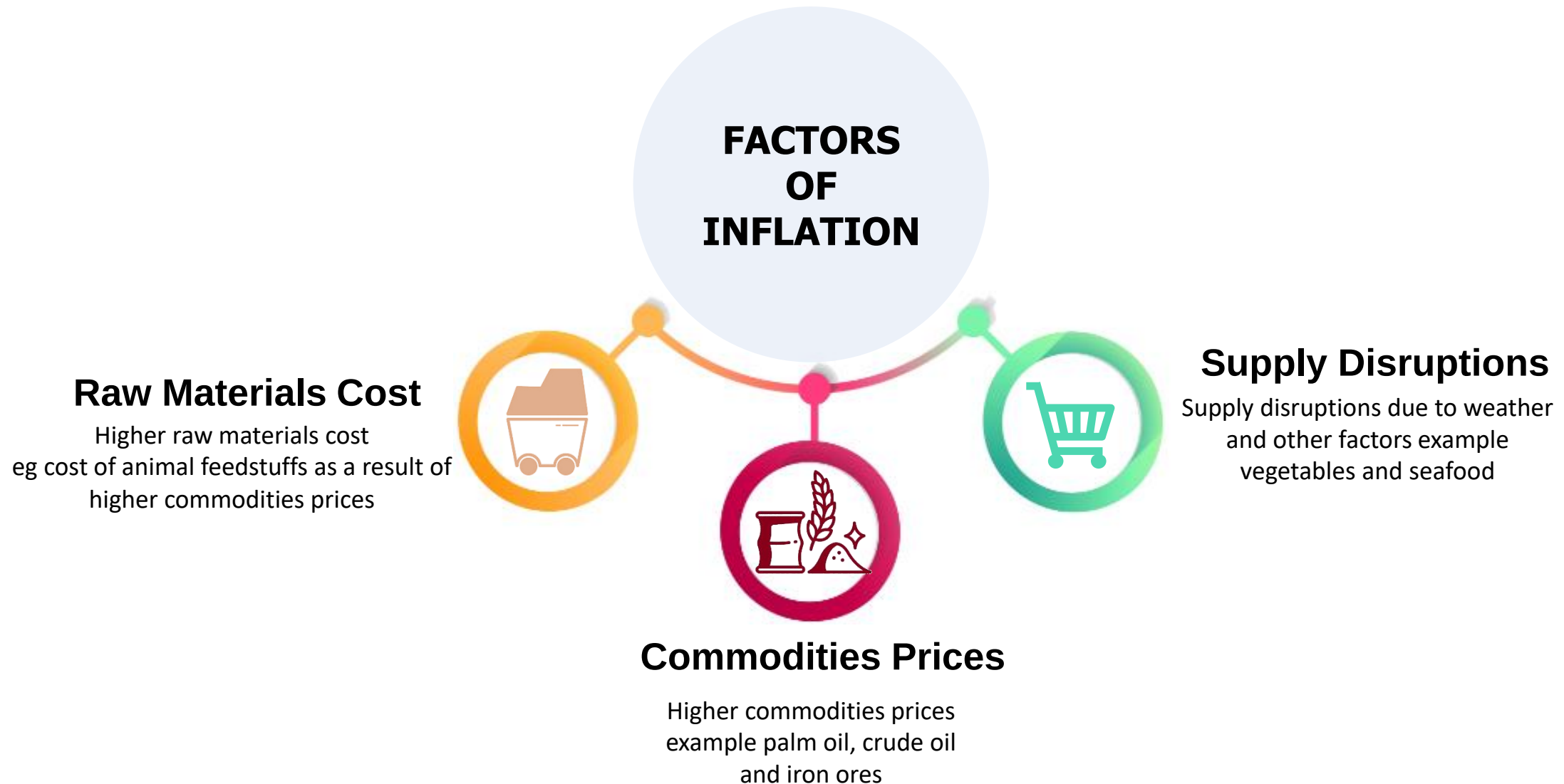


INTRODUCTION OF CPI





- ☐ The CPI is relevant to all persons who earn and spend money. When prices rise the purchasing power of money is reduced and consequently, people are able to buy less with the same amount of money. It is therefore used extensively in collective bargaining by labour unions and employers for the adjustment of wages and salaries
- ☐ In its many applications, it directly or indirectly affects all residents in Malaysia
- ☐ The CPI is an indicator of macroeconomic performance, and it does not reflect individual's spending behavior





MAIN CONCEPT & METHODOLOGY





The Consumer Price Index measures changes in the general level of prices of consumer goods and services purchased by households.



"Basket" refers to goods and services used by households in Malaysia



The price used for CPI is the retail price or transaction price including all taxes imposed on goods and services

The CPI is compiled based on the 'Consumer Price Index Manual, Concepts and Methods', 2020 issued by the International Labor Organization (ILO), in line with international standards

Structure of a “Basket”



Applying the Classification of
Individual Consumption
According to Purpose
(COICOP)

1

2

Divided into **twelve (12)** major expenditure Division that are based on a consumption classification system developed by the United Nations:

12

- 01 Food and Non-Alcoholic Beverages
- 02 Alcoholic Beverages and Tobacco
- 03 Clothing and Footwear
- 04 Housing, Water, Electricity, Gas and Other Fuels
- 05 Furnishings, Household Equipment and Routine Household Maintenance
- 06 Health
- 07 Transport
- 08 Communication
- 09 Recreation and Culture
- 10 Education
- 11 Restaurants and Hotels
- 12 Miscellaneous Goods and Services



CONSTRUCTION OF CPI

The selection
and updating of
basket and weights



Price collection in
the field on a
weekly/monthly
basis



*Laspeyers
Chain Linked*

CPI WEIGHTS AND ITEMS



Obtained from
Household
Expenditure Survey
(HES) conducted
every 2 years

Selection of items
based on
expenditure value



**552 items with
833 detailed
specification
goods/services
(item)**

Goods selected stays and
always in the market

Selection of items consisting of
durable goods, semi durable
goods, non durable goods and
services



CATEGORY

Durable goods

Semi durable
goods

Non durable goods

Services

CLASS

Specific Item
Contain a unique
description
(brand,size,model,quantity,
weight)

Non specific item

(Does not have
unique description)

ITEM SELECTION

Items/product with a brand
name

Type of item– *market/ non
market*

Specifications good &
service– size/ shape/
volume/ specifications

Classification of Items



- ❑ Selection of items are based on the concept of *Probability Proportionate to Size* (PPS). The code of the items are using the digit code item based on HES, consistent with Classification of Individual Consumption by Purpose (COICOP, UN)

- ❑ The Items in the CPI basket are categorized as follows:
 - 2 digit (Main Group)
 - 3 digit (Sub group)
 - 4 digit (Expenditure Class)
 - 6 & 7 digit (Specific Item)

Classification of Items (contd)



Example:	Seafood	
Main Group:	01	Food & Non Alcoholic Beverages
Sub Group :	013	Fish & Seafood
Expenditure Class:	0132	Fresh Seafood
Item Specification	013202	Crabs Sea Fresh, 1 kg
	013203	Prawns
	0132031	Prawns Sea-water(13-15cm) 1 kg
	0132032	Prawns Sea-water(8- 12cm) 1 kg

The Importance Of Updating The Basket

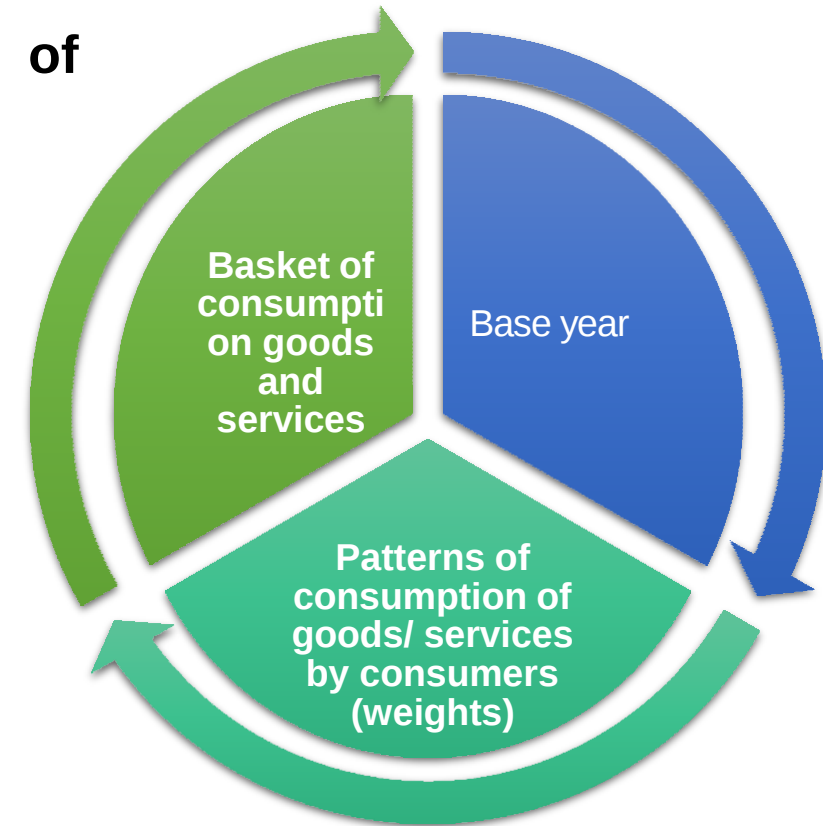


The updating of the CPI basket needs to be done to provide **an overview of the current structure of** Malaysian society's expenditure as a result of:

- Improvement of the living standards of the community;
- Changes in the lifestyle; and
- Changes in societal spending patterns.

The new structure is illustrated through:

- Items covered in the CPI basket; and
- Item weights / spending patterns.



Derivation of Weights



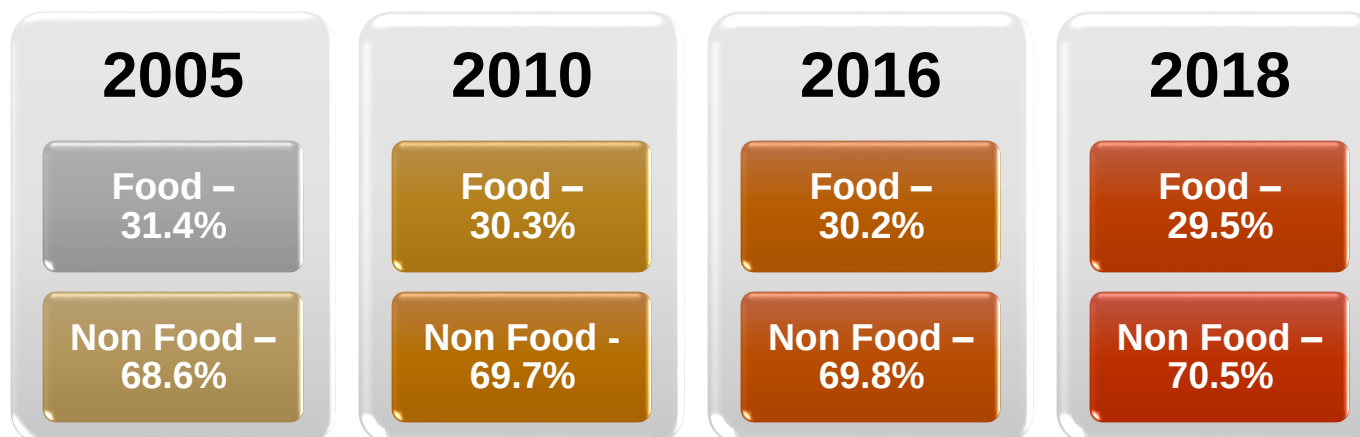
- The amount of money spent on each item in the CPI “basket” is compared to total household spending to obtain the relative importance or “weight” of the commodities in the “basket”.
- The weights reflect the importance of each item consumed/ spent by households.
- The weights were obtained from Household Expenditure Survey (HES).
- HES provides the expenditure of households of different income groups.
- The weights were constructed at Malaysia, States and Stratum (Urban & Rural).
- The weights used in the calculation of CPI are periodically updated to better reflect the changes in consumer expenditure pattern.

Effective with release of data for January 2016, the Laspeyres chain index method is used in the calculation of the CPI. It employs the December 2015 = 100 reference base. The same method will be used in the calculation of the January 2018 CPI publication using the reference base December 2017 = 100.

Weights (cont'd)



MAIN GROUP		2005=100	2010=100		
			2010	2016	2018
01	Food & Non-Alcoholic Beverages	31.4	30.3	30.2	29.5
02	Alcoholic Beverages & Tobacco	1.9	2.2	2.9	2.4
03	Clothing & Footwear	3.1	3.4	3.3	3.2
04	Housing, Water, Electricity, Gas & Other Fuels	21.4	22.6	23.8	23.8
05	Furnishings, Household Equipment & Routine Household Maintenance	4.3	4.1	3.8	4.1
06	Health	1.4	1.3	1.7	1.9
07	Transport	15.9	14.9	13.7	14.6
08	Communication	5.1	5.7	5.2	4.8
09	Recreation Services & Culture	4.6	4.6	4.9	4.8
10	Education	1.9	1.4	1.1	1.3
11	Restaurants & Hotels	3.0	3.2	2.9	2.9
12	Miscellaneous Goods & Services	6.0	6.3	6.5	6.7
TOTAL		100.0	100.0	100.0	100.0



Weights (cont'd)



Food & Non Alcoholic Beverages

29.5

2018

Food away from home	11.5
Rice, bread & other cereals	3.5
Meat	2.5
Fish & seafood	4.0
Milk, cheese & eggs	1.5
Oils & fats	0.6
Fruits	1.2
Vegetables	2.1
Sugar, jam, honey, chocolate & confectionery	0.6
Food products n.e.c.	1.0
Coffee, tea, cocoa & non-alcoholic beverages	1.1



Alcoholic Beverages & Tobacco

2.4

2018

Alcoholic Beverages	0.6
Tobacco	1.8



Clothing & Footwear

3.2

2018

Clothing	2.6
Footwear	0.6

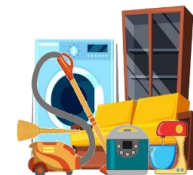


Housing, Water, Electricity, Gas & Other Fuels

23.8

2018

Actual rental for housing	18.1
Maintenance & repair	1.3
Water supply	1.2
Electricity, gas & other fuels	3.2



Furnishings, Household Equipment & Routine Household Maintenance

4.1

2018

Furniture/ furnishing/ carpet	1.2
Household textiles	0.2
Household appliances	0.7
Glassware, tableware	0.1
Tools & equipment	0.0
Goods & services maintenance	1.9



Health

1.9

2018

Medical products, appliances & equipment	1.4
Outpatient	0.3
Inpatient/ hospital	0.2

Weights (cont'd)



Transport

14.6

2018

Purchase of vehicles	1.5
Operation of personal transport equipment	12.3
Transport services	0.8



Communication

4.8

2018

Telephone/ telefax equipment	0.7
Telephone/ telefax services	4.1



Recreation & Culture

4.8

2018

Audio-visual, photographic & information processing equipment	0.6
Other major durables recreation & culture	0.0
Other recreational items & equipment, garden & pets	0.6
Entertainment, recreational & cultural services	2.6
Newspapers, books & stationery	0.6
Packaged tour	0.4



Education

1.3

2018

Pre-primary & primary education	0.7
Secondary education	0.3
Post-secondary non-tertiary education	0.1
Tertiary education diploma level & above	0.1
Education n.e.c.	0.1



Restaurants & Hotels

2.9

2018

Restaurants & cafes	2.3
Accommodation	0.6



Miscellaneous Goods & Services

6.7

2018

Personal care	3.3
Personal effects n.e.c.	1.1
Insurance	1.8
Financial services	0.2
Other services n.e.c.	0.3

Weights of Selected Countries



Main Group	Malaysia	Singapore	South Korea	Thailand	Philippines	India	United Kingdom	Canada
Food & Non-Alcoholic Beverages	29.5	21.1	15.5	40.4	37.8	45.9	8.1	16.6
Alcoholic Beverages & Tobacco	2.4		1.7	1.4	2.2	2.4	3.4	2.8
Clothing & Footwear	3.2	2.1	4.9	2.2	3.1	6.5	5.8	5.8
Housing, Water, Electricity, Gas & Other Fuels	23.8	24.8	17.2	23.2	21.4	16.9	29.4	26.3
Furnishings, Household Equipment & Routine Household Maintenance	4.1	4.9	5.4		3.2	28.3	4.9	12.7
Health	1.9	6.6	8.7	5.7	2.9		2.1	4.9
Transport	14.6	17.1	10.6	22.7	9.0		12.6	20.0
Communication	4.8	4.1	4.8		3.4		2.1	
Recreation Services & Culture	4.8	7.9	5.8	4.5	1.0		12.1	11.0
Education	1.3	6.6	7.0		2.0		1.7	
Restaurants & Hotels	2.9		13.1		9.6		10.1	
Miscellaneous Goods & Services	6.7	4.8	5.4	Included in Health (Medical and Personal Care)	4.5		7.7	Included in Health (Health and Personal Care)

Selection of Outlet (cont'd)



Prices for CPI 552 item used in the calculation are obtained from approximately 17,000 outlets in Peninsular Malaysia, 2,500 outlets in Sabah and 2,300 outlets in Sarawak.



Outlets are selected in each state and are deemed to be popular



97 Price Collection Centre (PCP) in Peninsular Malaysia, 21 in Sabah and 19 in Sarawak make a total of 137 PCP that covered urban and rural.



Prices should be collected from the same source every month for the purpose of consistency and price comparison.



This price collection is implemented every month for all items, while the price collection is done weekly & monthly for market items & perishable items such as fresh fish, fresh chicken and vegetables.

Outlet characteristics:

- Popular
- Highest sales value by category of outlet and location (urban & rural)
- Types of outlet

4 outlet categories:

- Market (Meat stalls, Chicken stalls, Fish stalls, Fruit stalls and Vegetable stalls)
- Hyper market / Supermarket / Grocery etc.
- Outlets in the Capital City (Hospitals, Postal services, Phone / internet services, TV network services etc.)
- Housing Rental

Outlet selection:

- Outlet selection by the type of outlet, volume of sales and location of urban and rural.
- By Item

Base year



- ☐ The year is used as the comparison year
- ☐ The year in which the economic situation is stable for the comparison purposes. The year did not experience extreme inflation and economic recession
- ☐ Depends on the **implementation of Economic Census/Surveys**
- ☐ The index for the base year is valued at 100.

2010 = 100

2005 = 100

2000 = 100

1994 = 100

1990 = 100

1980 = 100

1967 = 100

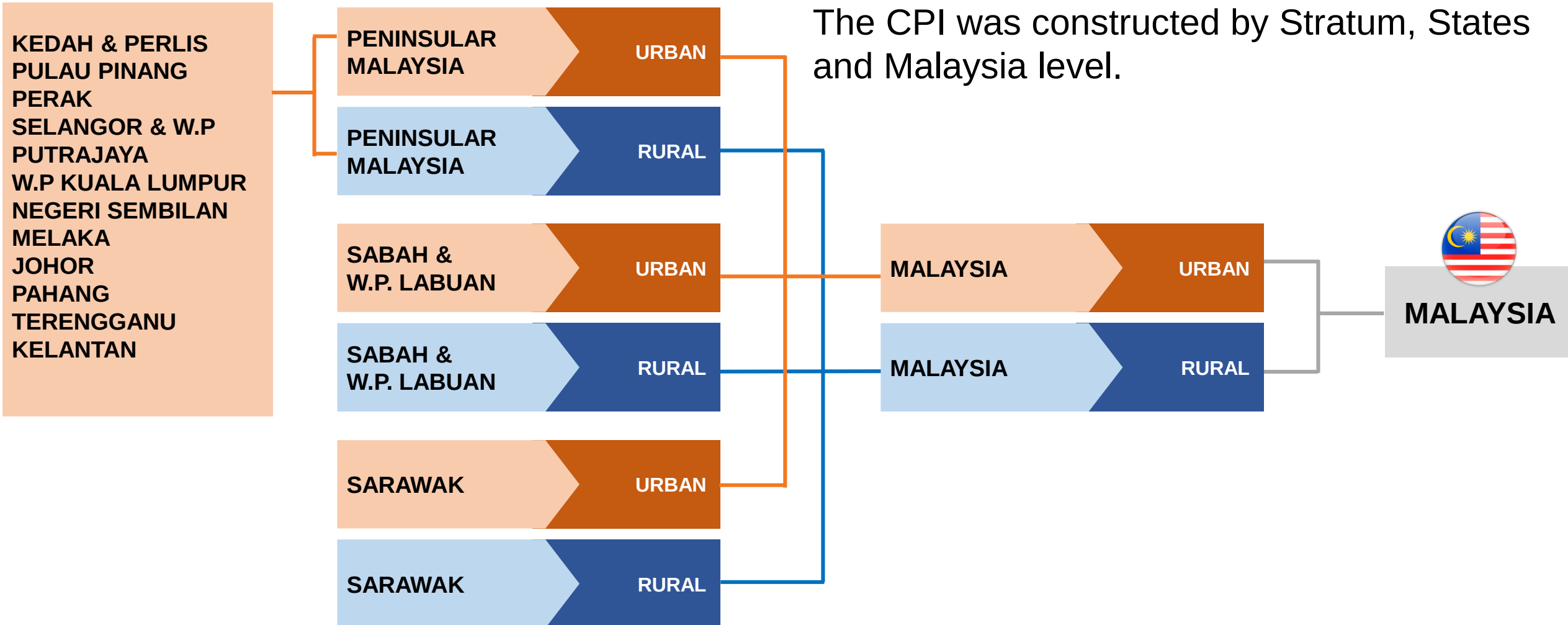


Why base year is 2010?

- ❑ Indexes can be out-of-date or not reflect reality for two main reasons:
 - Weights no longer reflect actual spending patterns;
 - The presence of new products in the market that did not exist before.
- ❑ Through traditional methods, the index is updated through a process of “rebasing”. This process involves revising the weights, adding new products in the data collection process and resetting the index to 100 in a new “base year”
- ❑ Currently, updating the weights and reference periods of the index at the same time (identical) is no longer considered important. In fact, some countries update the weights and items / products covered in the CPI each year, to ensure that the index always reflects the latest spending patterns.
- ❑ To avoid confusion, if the reference period is changed annually, then the reference period is kept the same, while the index with updated weights is linked to the old index through the index chaining.



The CPI was constructed by Stratum, States and Malaysia level.





- Laspeyres Index
- Base Year 2010
- Basket of goods & services 2016

Laspeyre's formula is being used for the computation of Price Indices which is as follows:

$$I_n = \frac{\sum(P_n/P_o) \times W_i}{\sum W_i} \times 100$$

Where	I_n	=	Index for the nth period
	P_n	=	Price of an item in the nth period
	P_o	=	Price of an item in the base period
	W_i	=	Weight of the ith item in the base period
	$\sum W_i$	=	Total weight of all items
	$\sum(P_n/P_o) \times W_i$	=	Total of weighted price relatives

Inflation rate:

$$= \frac{CPI_t - CPI_{t-1}}{CPI_{t-1}} \times 100$$



☐ Data collection by states

- biweekly collection for perishable goods
- monthly collections for durables and semi-durable items
- quarterly for rent

☐ Central Price Collection by HQ through online searches -

- Government controlled items such as:
 - Fuels prices (RON97,95 & Diesel)
 - Cigarettes prices
 - Electricity charges
 - Other items (airfares, gambling)





Due to increasing cases of Covid 19 , Movement Control Order was imposed effective 18th March 2020 and posed challenges for price collection for April.

- ❑ Behavior analysis of prices for all items from Jan 2011 to March 2020 (123 time period data) and categorised into:

Price	Method
Sticky	Carry Forward
Stable	Carry Forward
Weak Volatile	Imputation
Strong Volatile	Imputation

- ❑ Online prices – prices as a mover for imputation for items with weak & strong volatile



Missing items

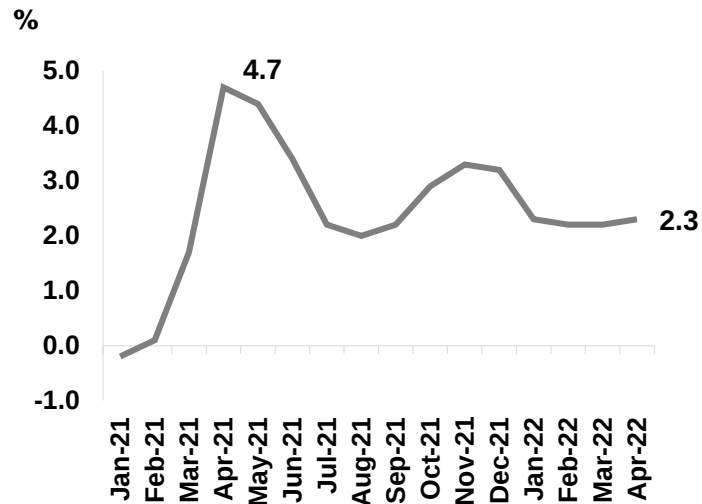
Reason	Options	Method
Temporary	Omit/Estimate prices	Omit, carry forward, imputation
Seasonal	Estimate prices	carry forward, imputation
Permanent	Replacement	Find a substitute/Quality Adjustment
Shop Closed	Sampling issues	Replace the shop, Follow the new location

The aim of missing items is to obtain a balanced number of prices in compilation

Various Dimensions of CPI (cont'd)

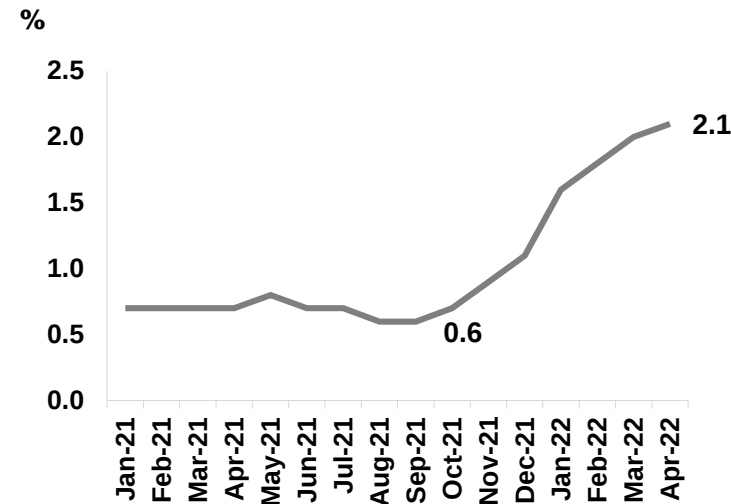


1 Headline CPI



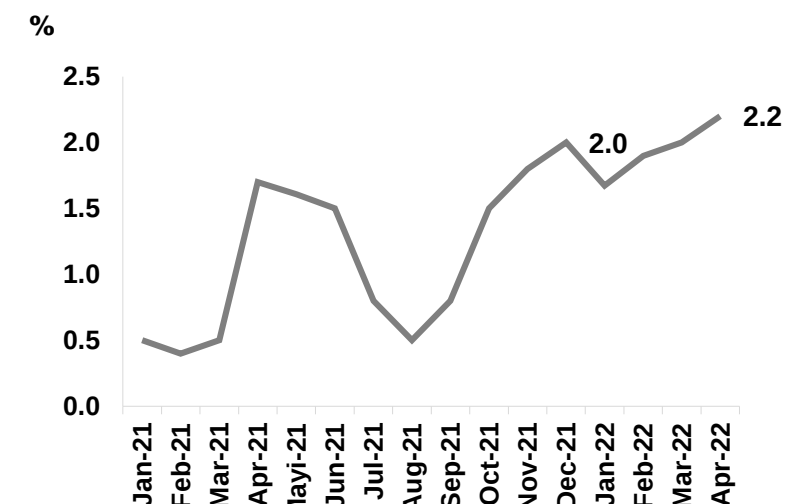
The CPI increased in April mainly due to an increase in food inflation

2 Core Inflation



Core inflation refers to inflation without volatile items (such as vegetables) and administered prices

3 CPI Without Fuel

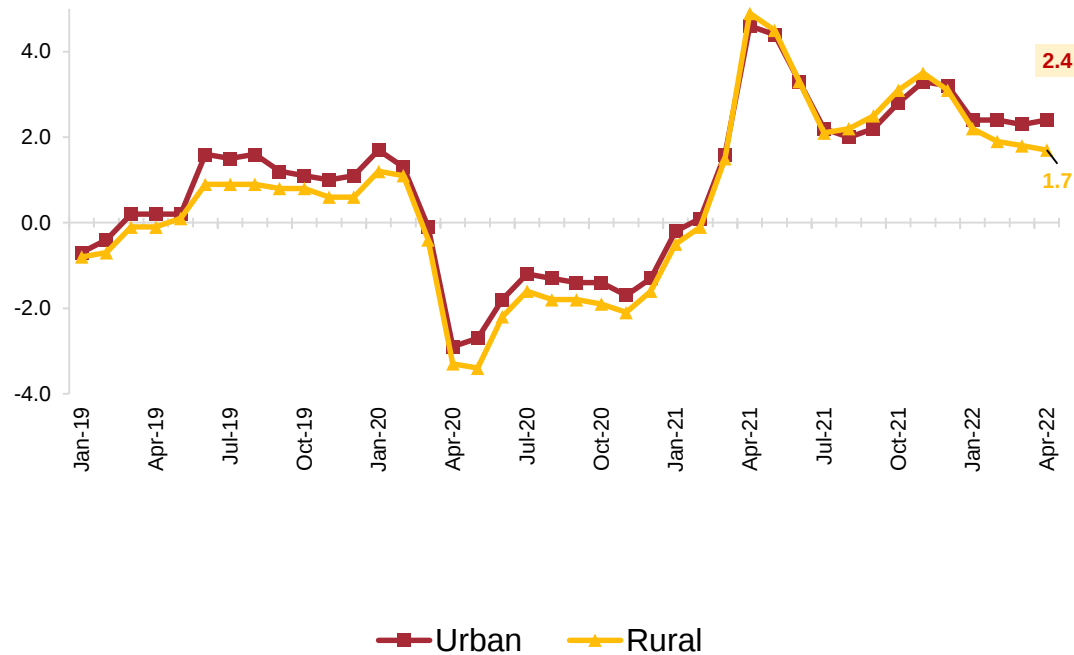


CPI without fuel increased in April 2022

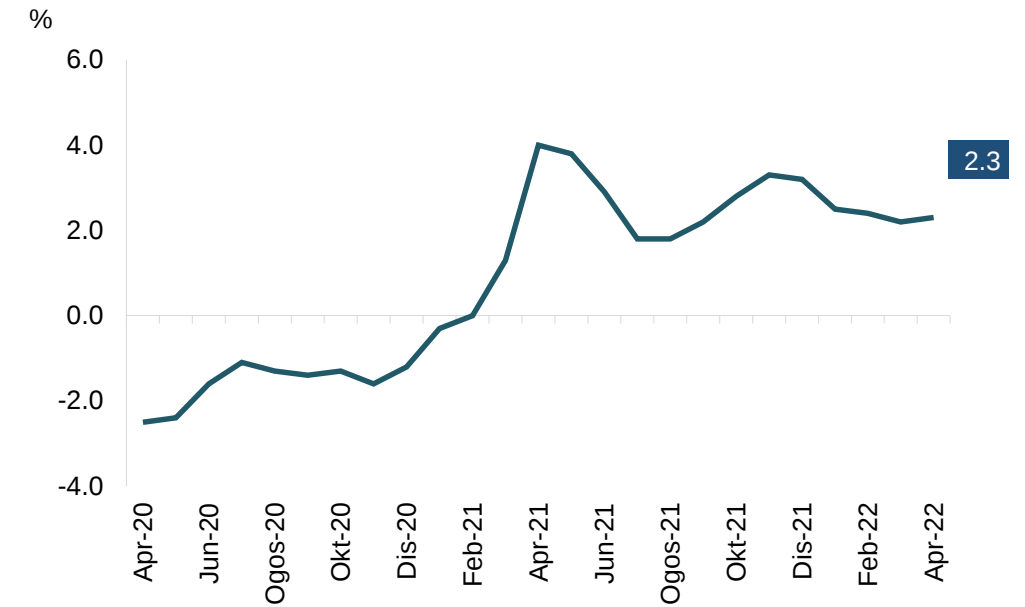
Various Dimensions of CPI (cont'd)



Urban & Rural Inflation



CPI for Income Below RM 3,000





DISSEMINATION OF CPI



Other Development in CPI in Malaysia – MyPrice Dashboard



- Collaboration with the Ministry of Domestic Trade and Consumer Affairs to assist in monitoring daily price changes of selected essential goods
- Consists of 36 selected essential goods including 12 goods under the Skim Harga Maksimum Keluarga Malaysia (SHMKM)
- Contains four main categories of selected essential goods:
 - chicken, beef & egg
 - vegetables
 - fish & seafood
 - fruits.
- Data based from three sources
 - prices obtained from KPDNHEP's monitoring
 - data crawling
 - price collection by DOSM's staff at selected outlets







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Thursday, 19 May 2022

Classic View

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 - Agricultural Analytical System
 - Malaysia Economic Recovery Dashboard
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 - Job Market Insights
 - My Job Profile
 - Malaysia Labour Market Interactive Data (MyLMID)
 - MyPrice Dashboard**
 - OpenDOSM
 - Population and Housing Census of Malaysia Dashboard (MyCenDash)
 - MalaysiaInfo
 - STATS Geoportal
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 - Average Prices for Selected Food

MyPrice Dashboard

Home » Online Services » Statistics » MyPrice Dashboard



PRIME MINISTER'S DEPARTMENT
DEPARTMENT OF STATISTICS MALAYSIA



MINISTRY OF DOMESTIC TRADE
AND CONSUMER AFFAIRS

MyPrice Dashboard



MyPrice Dashboard is an initiative to assist the government in monitoring daily price changes of selected essential goods. MyPrice Dashboard provides daily prices starting from 7 December 2021 for those goods and allows the government in monitoring and observing any uncertain changes in prices. MyPrice Dashboard contains four main categories of essential goods which are chicken, beef & egg; fish & seafood; vegetables and fruits.

MyPrice Dashboard

Languages

W3C

32



Main page of MyPrice Dashboard



JABATAN PERDANA MENTERI
JABATAN PERANGKAAAN MALAYSIA



KEMENTERIAN PERDAGANGAN DALAM NEGERI DAN HAL EHWAL
PENGGUNA

MyPrice

Dashboard ini memaparkan harga bagi barangan terpilih di lokasi terpilih seluruh negara

Nota:

- Dashboard MyPrice merupakan inisiatif Kerajaan untuk memaparkan trend pergerakan harga bagi barangan di outlet terpilih untuk pemantauan oleh pihak Kerajaan. Namun, Dashboard MyPrice ini tidak menggambarkan trend purata harga bagi seluruh Negara.
- Harga yang dipaparkan adalah berdasarkan spesifikasi yang sama bagi setiap barangan. Sekiranya barangan tidak mengikut spesifikasi, harga akan disesuaikan mengikut spesifikasi yang ditetapkan.
- Harga yang dipaparkan adalah harga yang dikutip pada 9.00 pagi hingga 11.00 pagi.
- Kekerapan harga barangan dikutip berbeza mengikut lokasi iaitu secara harian, 3 kali seminggu dan mingguan.
- Dashboard MyPrice akan dikemaskini pada setiap hari sebelum jam 9.00 pagi yang memaparkan harga pada hari sebelumnya.
- DOSM juga menerbitkan harga purata 100 item terpilih mengikut Negeri. Laporan penuh boleh di muat turun di <https://tinyurl.com/100itemterpilihdosm>



Muat turun Price Catcher KPDNHEP



www.fama.gov.my



AYAM, DAGING & TELUR



IKAN & MAKANAN LAUT



SAYUR-SAYURAN



BUAH-BUAHAN

Layout of MyPrice Dashboard

main categories



JADUAL HARGA HARIAN

CARTA HARGA HARIAN

ITEM
All

NEGERI
All

OUTLET
AllSEKTOR
RUNCIT

Ikan & Makanan Laut

➤ IKAN CENCARU JOHOR
(1KG)

KEDAH

KELANTAN

LAIN-LAIN

MELAKA

daily prices



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Malaysia CPI Inflation Calculator

In Malaysia, basket of goods and services that costing

RM:

100.00

Select Month:

January

Select Year:

1980

would cost

RM:

310.70

Select Month:

January

Select Year:

2022

RM100.00 in January 1980 would cost RM310.70 in January 2022

Calculate

Reset

THANK YOU



StatsMalaysia

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2022



2012-2022



20 OKT



2016-2030

