THE UNGKU AZIZ DEVELOPMENT FORUM ON INEQUALITY

MEASUREMENT OF POVERTY AND INEQUALITY DATA USING SAMPLING SURVEY APPROACHES

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POVERTY & INEQUALITY

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Definition

The World Bank defines poverty in absolute terms. The bank defines extreme poverty as living on less than US$1.90 per day (PPP), and moderate poverty as less than $3.10 a day. It has been estimated that in 2008, 1.4 billion people had consumption levels below US$1.25 a day and 2.7 billion lived on less than $2 a day.

Three concepts of poverty:

- **Absolute poverty** refers to a condition where a person does not have the minimum amount of income (poverty line income) needed to meet the minimum requirements for one or more basic living needs over an extended period of time.

- **Relative poverty** is the condition in which people lack the minimum amount of income needed in order to maintain the average standard of living in the society in which they live.

- **Multidimensional Poverty Index (MPI)** was developed in 2010 by the Oxford Poverty & Human Development Initiative (OPHI) and the United Nations Development Programme and uses health, education and standard of living indicators to determine the degree of poverty experienced by a population.

Currently Malaysia are using the absolute poverty approaches in measuring poverty.

Measuring poverty based on the Household Income and Household Expenditure Survey Data (HIES/BA).
HIES/BA is one of the instruments to support implementation, assessing and measuring government initiative/programme performance

- addressing socioeconomic disparities
- enhancing inclusive development and people wellbeing
- Result/output HIES/BA such as mean/median income; Gini coefficient; incidence of poverty and consumption of household were identified to support the selected outcomes:
  - improving overall income inequality
  - uplifting the B40 households towards a middle-class society
  - accelerating regional growth for better geographic balance

HIS & BA

Household income structure and income distribution

Low income and poverty statistics:
- determine target group
- poverty incidence
- relative poverty

Income inequality indicator: Gini Coefficient

Accessibility of basic amenities by households

www.dosm.gov.my  @StatsMalaysia
HIES/BA SURVEY

HISTORY

- Main statistics are published:
  - Income (median & mean)
  - Mean consumption expenditure by 12 main group, demographic characteristic and income group
  - Poverty incidence and gini coefficient

COMPREHENSIVE INFORMATION

- A System of National Accounts 2008
- Classification of Individual Consumption According to Purpose (COICOP)

MANUAL

- Cover all district in Malaysia (include urban & rural strata) except for settlement of Orang Asli
- Cover households living in private living quarters only
- Estimated of living quarters was 33,208 (HIS) & 59,024(HIES) – 2019 (total sample : 92,232)

COVERAGE

- Statistics Act 1965 (Revised 1989)
- 5 year National Development Plan and Mid Term Review

BENCHMARKS

- HIS was first implemented in 1973 while HES in 1957/58. Basic Amenities Survey is carried out with the HIS in 1987
- HIS was carried out twice in 5 years and HES for every 5 years
- 3 survey were combined in 2014/15 and known as HIES/BA
- Now, DOSM is conducting HIES/BA 2019
**METHODOLOGY 1977**

- Uses the cost of basic need approach containing the food and non food item
- Taking consideration on minimum spending for three main expenditure component i.e. food and non food component consists of clothing & foot wear and other non food items. (Consists of food PLI and non food PLI)
- Only three PLI were produced i.e. PLI for Peninsular Malaysia (RM272), Sabah (RM352) and Sarawak (RM304)
- Source of data:
  - food calori intake (MOH & DOSM)
  - clothing & foot wear (JKM)
  - others non food item (DOSM-HES)
- PLI were updated accordingly to the CPI index

**METHODOLOGY 2005**

- In the 2005 methodology, a separate PLI is calculated for each household in the income survey—a PLI based on it size, composition, and location (state and stratum).
- As with the 1977 approach, the 2005 methodology distinguishes between food and non-food components of the PLI.
- The PLI will be updated based on the HIS survey data.
- Source of data: food calories intake (MOH) and Non food component derived from HES data

**FOOD COMPONENTS**

Experts from the Ministry of Health and institutions of higher learning have reviewed and set the minimum number of calories a person needs in order to stay healthy. The requirement based on their gender, age and location. The total calorie requirement for a size household of 5 is 8,725 kilo calorie per day

**NON FOOD COMPONENTS**

- Clothing and foot wear
- Rent
- Durables
- Transportation & Communication
- Other non food items

Formula for calculating the non-food PLI:

\[ PLi_{j,i} = \beta_i N_j P_{j,i} \]
<table>
<thead>
<tr>
<th>State</th>
<th>Incidence of Poverty (%)</th>
<th>Relative Poverty (%)</th>
<th>Gini Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>0.6 0.4</td>
<td>15.6 15.9</td>
<td>0.401 0.399</td>
</tr>
<tr>
<td>Johor</td>
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<td>10.2 13.5</td>
<td>0.324 0.354</td>
</tr>
<tr>
<td>Kedah</td>
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<td>12.1 15.9</td>
<td>0.365 0.393</td>
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<tr>
<td>Kelantan</td>
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<td>12.4 12.1</td>
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<td>Melaka</td>
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<tr>
<td>Negeri Sembilan</td>
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<td>13.0 15.5</td>
<td>0.361 0.380</td>
</tr>
<tr>
<td>Pahang</td>
<td>0.7 0.2</td>
<td>12.1 8.2</td>
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</tr>
<tr>
<td>Pulau Pinang</td>
<td>0.3 0.1</td>
<td>12.4 11.3</td>
<td>0.364 0.356</td>
</tr>
<tr>
<td>Perak</td>
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<td>16.0 14.1</td>
<td>0.366 0.362</td>
</tr>
<tr>
<td>Perlis</td>
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<td>10.1 12.0</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Terengganu</td>
<td>0.6 0.4</td>
<td>13.7 10.2</td>
<td>0.360 0.328</td>
</tr>
<tr>
<td>Sabah</td>
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<td>16.3 17.6</td>
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<tr>
<td>Sarawak</td>
<td>0.9 0.6</td>
<td>17.1 16.8</td>
<td>0.391 0.386</td>
</tr>
<tr>
<td>WP KL</td>
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<td>0.407 0.378</td>
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<td>WP Putrajaya</td>
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<td>7.9 6.8</td>
<td>0.374 0.369</td>
</tr>
</tbody>
</table>

Poverty Indicator and Gini Coefficient were in declining pattern except for relative poverty...
Mean PLI for Malaysia in 2016 was RM980 per month

The highest PLI was in Nabawan, Sabah (RM1,504)

The lowest PLI was in Song, Sarawak (RM735)

Relative poverty for Malaysia in 2016 was 15.9%

The highest relative poverty rate was in Pitas, Sabah (48.3%)

The lowest relative poverty rate was in Kuantan, Pahang (4.0%)
GINI COEFFICIENT FOR OTHER SELECTED COUNTRIES

United State 0.38
United Kingdom 0.341
Japan 0.336
Australia 0.334
Canada 0.32
Italy 0.319
Korea 0.311
France 0.303
Switzerland 0.298
Germany 0.286
China 0.465
Malaysia 0.399
Singapura 0.458
Thailand 0.379
Vietnam 0.376
Filipina 0.43

Source: OECD Country, Central Intelligence Agency dan World Bank

Note: some countries are using the Household Expenditure Data in measuring Gini Coefficient
a multi dimensional poverty measurement mechanism was developed by the Oxford Poverty and Human Development Initiative (OPHI);

an index that reflects the status of deprivation experienced by the household

taking into account the average intensity in measuring MPI

\[ MPI = H \times A \]

Value of MPI is between 0 and 1

If the score increases, it means that the level of multi dimensionality is increasing

Source: Mid Term Review of RMKe11
DATA SHARING HIES/BA

8 Government agencies, 4 Private sectors, 20 IPTs

Data Request 2019: 3,236
- Government agencies: 631
- Private sectors: 1,389
- IPTs / Researcher: 1,037
- Embassy: 43
- Non-Profit: 94
- Overseas: 42
Data Sciences Lab

- Data Science Lab is one of the initiatives under STATSBDA project.
- It will bring together Data Scientist, Statistician, Data Engineer and Researcher to collaborate in a DOSM’s Data Science Project.
- A Physical Data Science Lab is located on the seventh floor of DOSM Headquarters.
- It is a shared workspace equipped with the tools and software required for Big Data Analytics. Software for Data Mining, Statistical Analysis and Visualization are ready to be used.
- Facilities i.e. personal computer for analyzing microdata.
Statistics Data Warehouse (StatsDW) is an Enterprise Data Warehouse (EDW) of the Department of Statistics Malaysia (DOSM). It stores historical data from as early as 1974 from various censuses and surveys conducted by the DOSM as well as compiled data for economic indicators. StatsDW enable fast and easy access to data stored (eg: time series data) and facilitate wider access for users according to user requirements and level of access permitted.
Improving Poverty Measurement

DOSM are in the midst process of improving the new methodology for Poverty Line Income (PLI). The process involved various ministries and government agencies.

Household Income and Basic Amenities Survey Report, 2019

- The statistics will be presented in 15 publications i.e. at national level as well as by state and administrative district level
- The new Poverty Line Income will also be included in this publication
- The new statistics release: Relative poverty statistics & disposable income
- The report is expected to be released by end of April 2020

Household Expenditure Survey Report, 2019

- The statistics will be presented in 15 publications i.e. at national level as well as by state and administrative district level
- For the first time, the expenditure statistics will be presented at district level

Household Income Dashboard

In order to enlighten user on statistics, DOSM is in the process of making the income statistics more interactive. Thus, the selected income statistics will be added in the dashboard.

Multidimensional Poverty Index

- Multidimensional Poverty Index (MPI) at national level was released by the Government through the Mid Term Review of 11th Malaysia Plan.
- In accordance with the released, the DOSM is planning to produce MPI index at more small geography level i.e. state level.
- The MPI Index for 2019 is expected to be released by third quarter of 2020.
TERIMA KASIH & THANK YOU

20 OKT
JULAI 2019
(BANCI PERCUBAAN)

2016 - 2030
JULAI 2020
(BANCI SEBENAR)

#StatsMalaysia | #MyStatsDay | #MyCensus2020 | #HIES2019 | #LeaveNoOneBehind