THE UTILIZATION OF MPD ON MONITORING SDGs IN INDONESIA

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Current Situation on SDGs Data Provision

ASIA AND THE PACIFIC SDG PROGRESS REPORT 2022
Widening disparities amid COVID-19

Top five countries in the Asia-Pacific region with the most data available for SDG indicators, 2021

1. Philippines
2. Armenia
3. Thailand
4. Georgia
5. Indonesia

- Globally, there are still a number of SDGs indicators for which data are not yet available.
- For Indonesia, 61 data indicators are not available and 28 data indicators are insufficient.
BPS Commitment on Providing SDGs Indicators

114 (39.4%) from 289 National SDGs indicators become the direct responsibility of BPS-Statistics Indonesia

175 (60.6%) National SDGs Indicators become the responsibility of the Other Ministry/Institution

BPS's Role

innovative data production and application
- Indicators Improvement
- Statistical Model Improvement
- Utilizing of New Data Source

coordination
- Implementing the role of Statistical Data Advisor in the framework of Indonesia One Data (according to Presidential Regulation Number 39 of 2019)
Innovation on Utilizing New Data Source

**Big Data, what has Done by BPS:**

### SDGs Data Source

- Census
- Survey
- Administrative Data
- **Big Data**

#### SDGs

1. **Degree of Urbanization and Rural Access Index**
   - 9.1.1 Population of villagers living within 2 km of a proper road

2. **Harvested Area Estimation**
   - **Goal 2**: Eliminate hunger, achieve food security and good nutrition, and promote sustainable agriculture

### Mobile Phone Data

- 8.9.1 Proportion and Growth Rate of the Tourism Sector Contribution to GDP
  - 8.9.1.(a) Number of international visitors
  - 8.9.1.(b) Number of domestic tourism

### Satellite Imagery

- Census
- Survey
- Administrative Data
- **Big Data**

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*Note: The image contains a circular diagram with SDGs Data Source icons and icons for Census, Survey, Administrative Data, Mobile Phone Data, and Satellite Imagery. The text explains the utilization of new data sources for different SDGs indicators.*
Proxy for Indicator 8.9.1

Proportion and Growth Rate of the Tourism Sector Contribution to GDP

\[
\frac{C_{domestic\_tourist} + E_{outbound} + E_{gov} + I_{tourism} + NX_{trip}}{GDP} \times 100\%
\]

Note: 
- \(C_{domestic\_tourist}\) = Consumption of Domestic Tourists
- \(E_{outbound}\) = Expenditure of Outbound Tourism
- \(E_{gov}\) = Expenditure of Government for Tourism
- \(I_{tourism}\) = Investment on Tourism Sector
- \(NX_{trip}\) = Nett export of trip services (export of trip services - import of trip services)

**Definition: Tourist (8.9.1a and 8.9.1b)**
*(International Recommendation of Tourism Statistics, UNWTO)*

- Outbound Tourist: Traveling outside Indonesian territory, while
- Domestic Tourist: Traveling within Indonesia territory
- Travel Outside the usual environment
- Not done regularly/not classified as routine activities
- Length of the trip is not more than 12 months
- Main purpose of the trip is not to get wages/salaries from residents at the destination
The Use of MPD for Tourism Statistics

**Background**

BPS relies on the **Immigration Record and Border Survey** for Inbound & Outbound Tourism Data → *under coverage*

- **Not All Borders have border gates**
- **Not All Border Gates have 24/7 Immigration service**
- Border Survey is **too expensive** and can not be done in all unattended gates (remote area need special effort to be reached)

**Opportunity**

- **Change Paradigm**
  - Conventional survey to big data use

- **Increasing Cellphone Coverage**
  - 355 million cellular subscriptions in Indonesia vs 270 million population (2020), which is 131 percent

- **Accessibility and Method Of MPD**
  - MPD has recently use in many countries to measure urban mobility
The Use of MPD for Tourism Statistics

What has BPS done

Collaborate with Data Users
Ministry of Tourism and Creative Economy, Ministry of Development Planning, Central Bank

Cooperation with Mobile Network Operators (MNO) on Access Data

Development of MPD Algorithm
To determine home and work location

Monthly Press Release for Inbound Tourism
Scan qr-code to download the latest data or visit s.bps.go.id/tourism-01-10-2022

History

2017
Start using MPD for cross-border visitor to complete immigration administration data

2018
1. Cross-border visitor
2. Start using MPD for Domestic Tourism to produce monthly data at district/city level

2019
1. Cross-border visitor
2. Domestic tourism
3. Start using MPD for Outbound Tourism to produce outbound data by destination country

2020
1. Cross-border visitor
2. Domestic tourism
3. Outbound tourism (the traditional survey was still used in several districts)

2021
1. Cross-border visitor
2. Domestic tourism
3. Outbound tourism (the traditional survey was still used)

*Traditional surveys for domestic and outbound tourism completely stopped
One of the weaknesses of MPD is limited variables. For this reason, digital surveys are used to enrich information in the form of the characteristics of traveler.

**MOBILE POSITIONING DATA**

1. Number of Trips
2. Number of Traveler
3. District/city of origin
4. District/city of destination
5. Length of trip

**SURVEI DIGITAL**

- Economic-Social characteristics (Gender, Age, Main Occupation)
- Main purpose of trip
- Travel activities
- Transport mode
- Accommodation
- Expenditures during the trip
MPD for Tourism Statistics: With and Without MPD

*MPD covers inbound tourists from cross border*
CHALLENGES

- Concepts and methodology standardization
- Limited variable
- Data privacy issue
- Data access and sustainability of data
- Human resources and infrastructure

1. Regulation adjustment proposal
2. Periodic Improvement of MPD algorithm & Methods
3. Continuous Quality Assurance
4. Human resource and infrastructure improvement
Currently, Indonesia has used MPD as a supporting indicator for the SDGs

Opportunities to take advantage of MPD are still open

Through various studies, BPS continues to use Big Data to support the provision of SDGs indicators

However, the challenges in using big data must be considered
Thank you!

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General Work Flow