

Big Data for Official Statistics: Data Governance and Partnership Models

A view from Asia and the Pacific region

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Focus of the presentation

1. The use of big data for official statistics in Asia and the Pacific

2. Main challenges towards greater experimentation with big data

3. Data access models

4. ESCAP's big data efforts & activities in Asia-Pacific and the way forward

1. Use of big data for statistics in Asia-Pacific

Increasing use of big data

Growing use of alternative sources of data in the National Statistical Plans

Some NSOs actively building big data infrastructure

Many NSOs rely on international support

Most projects remain at experimental stage

Barriers of data access, legal frameworks, IT infrastructure, budgets

Challenges remain

Online price data and scanner data

- **Scanner data:** Japan, Australia, New Zealand, Georgia
- **Online price data:** Australia, New Zealand, Japan, Malaysia, Philippines, Viet Nam, Indonesia
- **Data access varies:** either direct negotiations with retail networks and online marketplace owners (for web scraping) or through market research companies
- **Challenges:** changing URLs, inconsistency among products and codes, COICOP classification
- **Opportunities:** captures high frequency price fluctuations



Mobile phone data

- Some countries use mobile phone data to generate statistics e.g. Indonesia, Georgia, Korea, New Zealand, China
- Mobile phone data is mostly used for migration, tourism, urbanization, commuting statistics, estimating resident population characteristics and SDG indicators
- Data access arrangements differ from access to anonymized data to access to insights
- Challenges: personal data protection, citizen's perception, contract negotiation with (MNOs), financial sustainability of data access



2. Main challenges with use of big data

- ❖ **Legal and regulatory framework**
- ❖ **Data privacy and citizen perception**
- ❖ **Data access, sustainability and partnerships**
- ❖ **Capacity and skills**
- ❖ **Technological infrastructure**
- ❖ **Data source-specific challenges**

3. Access to big data and partnership models



Data
Access
Levels

Pseudonymized data
Anonymous data – e.g. Indonesia

Data
Access
Models

Mandatory data provision e.g.
Oman, UK, EU
Voluntary data provision - Facebook
Commercial or partnership
arrangements e.g. Indonesia

4. Way forward for big data in Asia – Pacific



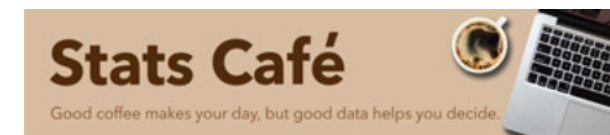
Called for facilitation of big data knowledge and experience sharing, support of training activities on the use of new data sources and the conducive institutional setup, and development of tools for the integration of traditional and non-traditional data sources



Decided to feature data governance in its future work with an emphasis on sharing country experiences and facilitating the provision of technical assistance

ESCAP's big data efforts and activities

- ❖ Stats Cafes [LINK](#) and Expert Dialogues [LINK](#)
- ❖ Membership in UN Committee of Experts on Big Data and Data Science for Official Statistics (**UN-CEBD**) and Task Teams
- ❖ Data Integration Community of Practice (DI-CoP) →
- ❖ Publications (Stats Briefs, Working Papers, Guidelines, blog posts)
- ❖ Technical assistance, tools and training (e.g. SIAP e-learning, mobile phone data workshop in Jakarta, hotspot mapping and use of QGIS)



Recent publications

- ❖ Big data for the SDGs: country examples [LINK](#)
- ❖ Big data for environment and agricultural statistics [LINK](#)
- ❖ Big data for population and social statistics [LINK](#)
- ❖ Big data for economic statistics [LINK](#)
- ❖ Geospatial information and the 2030 Agenda [LINK](#)
- ❖ Big data = Big ideas [LINK](#)
- ❖ Blog: Why is big data all the buzz for statisticians [LINK](#)
- ❖ Blog: Understanding human mobility with mobile phone data [LINK](#)
- ❖ Partnership for the Goals: Statisticians and Earth Observation communities unite for the SDGs [LINK](#)
- ❖ Guide on producing land cover change maps and statistics with QGIS and RStudio [LINK](#)

USING BIG DATA FOR OFFICIAL STATISTICS

KEY CONSIDERATIONS WHEN USING
MOBILE PHONE DATA



<https://bit.ly/3NFqZyw>



