



APES WEEK 2019

ASIA-PACIFIC ECONOMIC STATISTICS WEEK

Integrating economic statistics in monitoring the 2030 Agenda

Indonesia : Big data for market frame creation

Ignatius Aditya Setyadi, Azif Rifai, Laura Intan Fadilah

Problem

BPS needs a list of all markets in Indonesia to conduct surveys on prices and retail sales

Current process is to have BPS staff collect lists from administrative data sources.

Quality is questionable.

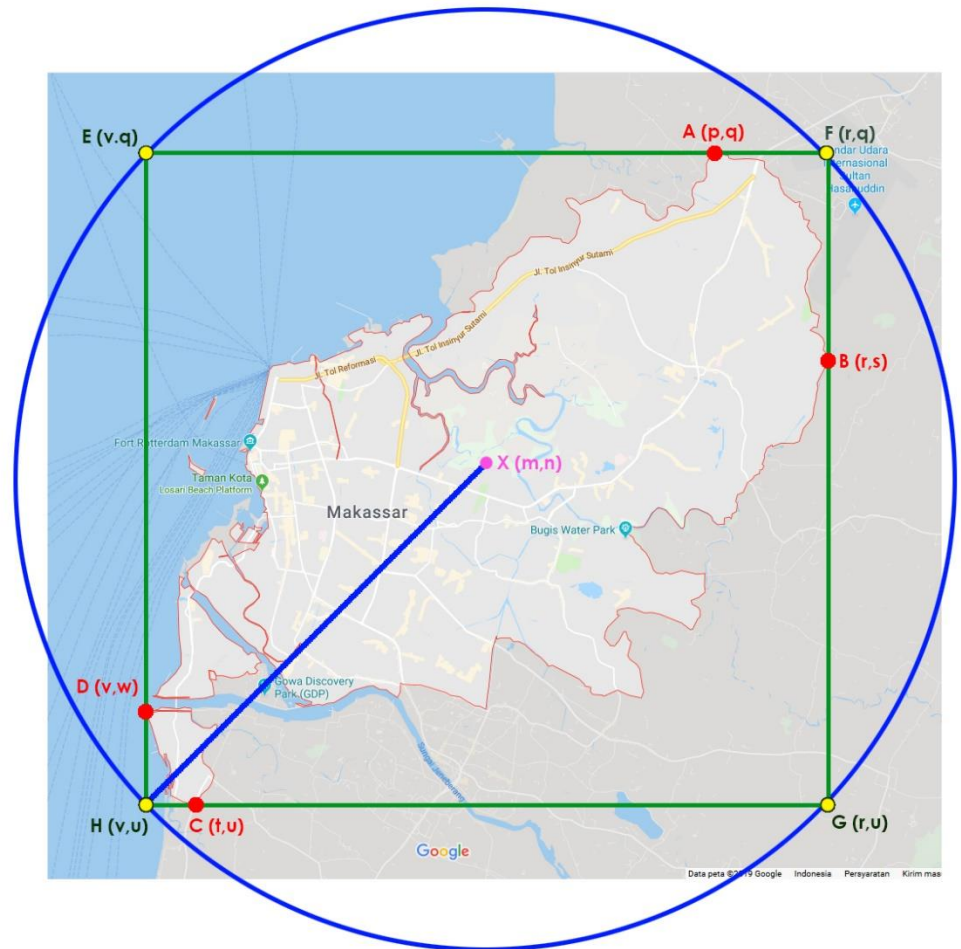
Can Big Data help?

- Google maps
- Is maintained by businesses & users

- Timely
- Accuracy
- Accessible

Technique – Acquire

- Keywords
- Coordinates and midpoint of each region
- extract market directory



Technique / Methodology

- Organize
 - importing
 - cleaning data
- Analyse and decide: matching two sets of market data

Results / Example

Bandung City



- Google Identified 27 markets for Bandung
- 5 false positives removed
- 9 markets already on frame
- 13 additional markets identified
- Google missed 8 on NSO frame.
- Best result is both combined

Conclusion

1. Best result is Big Data + Admin data
2. Not Free - needs resources
3. For a bigger scale of region, a program for matching process is needed

Group Discussion

- Can you think of other examples of where combining big data and admin data could work?
- What are the risks of this process?
- What are the costs?

- Questions for the author?