

USE OF GOOGLE STREET VIEW FOR TOBACCO ADVERTISING OBSERVATIONS IN DEPOK, INDONESIA

Google Street View might be effective for assessing tobacco advertising that is visible from outside vendors.

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Background

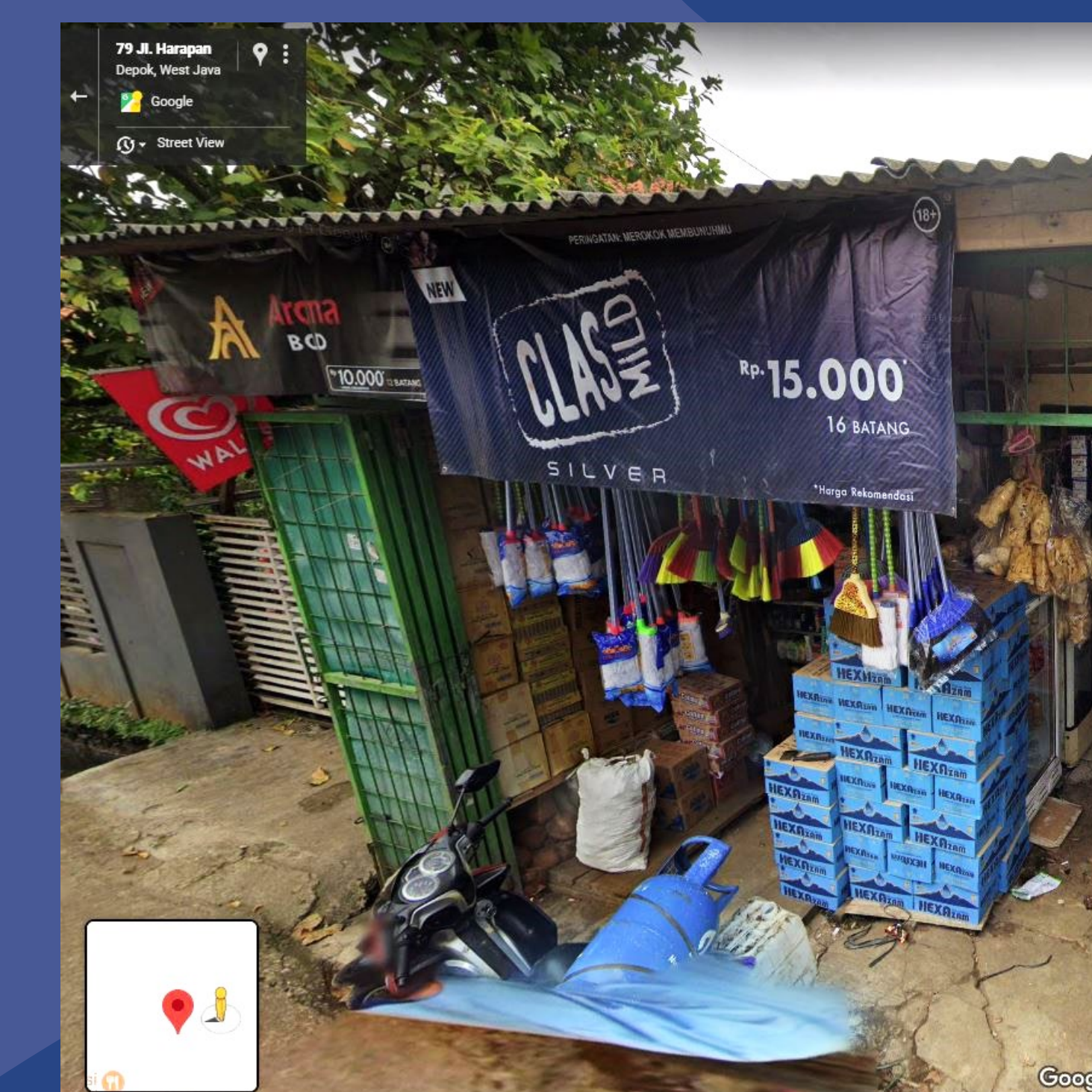
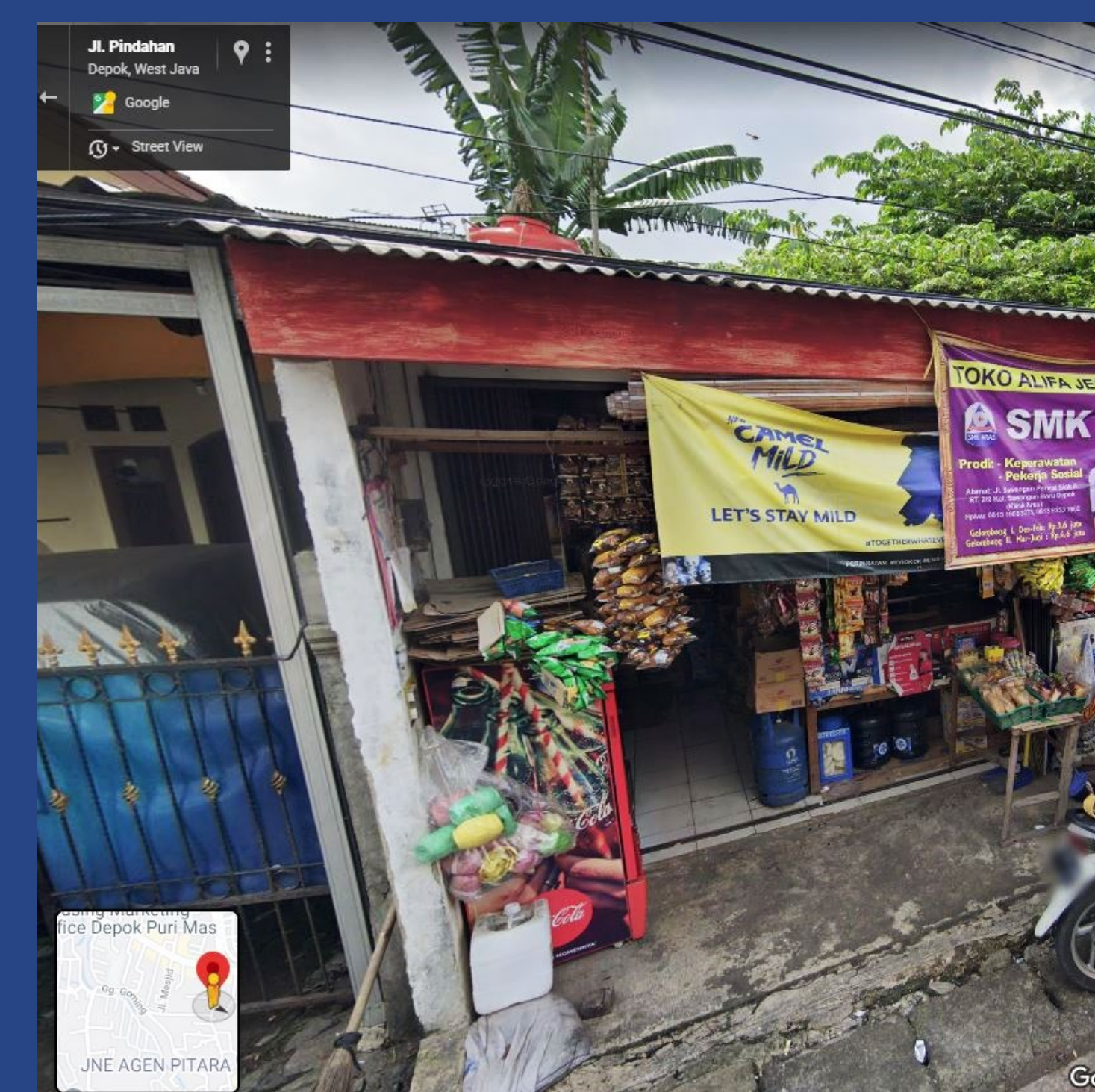
The use of Google Street View (GSV) is a possible data collection option for observable features in urban environments in LMICs.

In August 2019, we conducted in-person observations of exterior tobacco advertising and whether tobacco product displays were visible from the street in Depok, Indonesia.

We assessed GSV capability to accurately replicate in-person observations.

Methods

- GSV was used to find 391 locations with geographic data and venue photographs to confirm the correct venue
- GSV and in-person observations were compared to determine the following:
 - True positives and negatives (GSV matched in-person observations)
 - Accuracy to measure presence (sensitivity) or absence (specificity) of a feature
 - Probably of GSV positively (PPV) or negatively (NPV) assessing the features



Results

GSV Assessment	Venues (n=391)
Not in GSV	17 (4%)
Inconclusive/Unable to locate	31 (8%)
Completed	340 (87%)

Performance (GSV vs in-person)	Presence of Exterior Advertising	Tobacco Product Display Visible from Street
True positive [A]	102	21
True negative [B]	169	146
False positive [C]	10	6
False negative [D]	67	138
Total (number)	348	311
Sensitivity [A/(A+D)]	60%	13%
Specificity [B/(B+C)]	94%	96%
Positive predictive value [A/(A+C)]	91%	78%
Negative predictive value [B/(B+D)]	72%	51%

Conclusions

- GSV can be an effective alternative to in-person observations
- Pre-identified areas or venues with geographic coordinates aids in finding venues of interest
- Date of GSV capture and resolution of images should be considered

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www.globaltobaccocontrol.org

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