Study of Consumer Price Index based on E-Commerce in Indonesia

Ms Alifa Putri Wijaya

BPS - Statistics Indonesia - Katingan
Overview

1. Growth in E-Commerce
2. New data collection opportunity
3. New statistical production opportunity
4. Web Scraping
5. Experimental Web Scraped CPI
Results

• Once per week, 14 websites, over 20,000 products classified into 167 commodities.

<table>
<thead>
<tr>
<th>E-Commerce CPI v BPS CPI</th>
<th>Commodity count</th>
<th>% of count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Same direction</td>
<td>69</td>
<td>41%</td>
</tr>
<tr>
<td>Different direction (E-Com up)</td>
<td>24</td>
<td>14%</td>
</tr>
<tr>
<td>Different direction (E-Com down)</td>
<td>65</td>
<td>39%</td>
</tr>
<tr>
<td>Insufficient data</td>
<td>9</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>167</td>
<td>100%</td>
</tr>
</tbody>
</table>
Challenges for production

1. Accuracy
2. Classification
3. Quality Estimation
4. Quantity Estimation
5. Estimation by Region
Lessons learned

1. Need both classical and E-Commerce
   • Accuracy
   • Coverage

2. Best to work with E-Commerce sites
   • Reliable
   • More data items

3. More research into classification needed
Thank you