TASK FORCE 2
HOUSING: NOTE 2.1

2ND Meeting of the Technical Advisory Group

May 23, 2018
Washington, DC
Quality adjustments to the volume measures

1. Usual quality adjustment
   A) Stratifying rental units by type and features as in EU-OECD and ICP worksheets
   B) Estimating quantitative importance of various housing characteristics from hedonic regressions based upon rental surveys
   C) Some combination of A) and B), for example, the 1970 ICP2.

2. ICP default quality adjustment when data missing
   A) For example, used in the 2005 and 2011 benchmarks
   B) Linking of the regions for housing in 2011
   C) Quality Adjustments for CIS (Also including central heating)
Quantity approach (ICP 2011)

Quality Index (Average of electricity, water and toilet) (%)

in ascending order or per capita GDP

Source: K. Joshi, Asia and the Pacific Regional approaches, TF meeting, March 2018
**Table 1: Comparison of Quality Measures for Housing in 2011**

<table>
<thead>
<tr>
<th>Region</th>
<th>ICP2011</th>
<th>JMP2/3</th>
<th>EPI2/3</th>
<th>Qelecjmp</th>
<th>Qelecepi</th>
<th>%Dif 1-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFR</td>
<td>41.1</td>
<td>41.3</td>
<td>25.6</td>
<td>35.2</td>
<td>18.9</td>
<td>-54.0</td>
</tr>
<tr>
<td>AP</td>
<td>72.9</td>
<td>71.2</td>
<td>51.6</td>
<td>63.7</td>
<td>36.8</td>
<td>-49.5</td>
</tr>
<tr>
<td>LA</td>
<td>76.7</td>
<td>74.9</td>
<td>56.2</td>
<td>69.1</td>
<td>42.6</td>
<td>-44.4</td>
</tr>
<tr>
<td>EU-OECD</td>
<td>96.2</td>
<td>98.4</td>
<td>90.1</td>
<td>96.3</td>
<td>85.5</td>
<td>-11.1</td>
</tr>
<tr>
<td>WA</td>
<td>87.0</td>
<td>91.8</td>
<td>72.0</td>
<td>87.2</td>
<td>62.3</td>
<td>-28.4</td>
</tr>
</tbody>
</table>
Asian Development Bank concerns about the housing quality index for their members

1. Kaushal Joshi thought quality adjustment too small
   A) Some of the very low income countries had large adjustments
   B) But the adjustment for mid income countries was small
   C) So he proposed using international indexes of sanitation in place of the ICP shares of water and toilet

2. We tried the ADB approach on more countries and indices
   A) For share of water and toilet shares of housing we used two sanitation indexes, JMP and EPI
   B) We then paired the two sanitation measures with two electricity indices
   C) To replicate the 2011 ICP quality estimates, we gave a weight of 2/3 to sanitation and 1/3 to electricity.