 نحو بناء نموذج قياس موحد لمنطقة الإسكوا

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قسم تطبيقات تكنولوجيا المعلومات والاتصالات (الإسكوا)
EGM on Standardizing Information Society Measurement in the ESCWA Region

Towards a Common Benchmarking Model for the ESCWA Region

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Outline

- Specificities of the ESCWA Region
- Guidelines for a Suitable Model
- Evaluation of Measurement Models
- Pros/Cons of Composite Indicators
- IDI – Indicators & Weights
- Proposed Modifications to the IDI
- Price Basket and Proposed Modification
- Roundup of ITU’s Official Comment on the issue
- Recommendations
Specificities of the ESCWA Region

- Growing population;
- Young generation (45% under age of 15);
- Population related issues:
  - Influx of foreign workers (GCC)
  - Influx of domestic workers (1.5 million in KSA; 660,000 in Kuwait; 200,000 in Lebanon)
  - The plight of Palestinians and Iraqi refugees
  - “Labor-receiving” vs “Labor-sending” countries
- High ICT illiteracy rates in some member countries;

Comparison of ESCWA versus developed countries in selected areas

<table>
<thead>
<tr>
<th>Area of Interest</th>
<th>GCC</th>
<th>Non-GCC</th>
<th>Developed Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP Per Capita</td>
<td>High</td>
<td>Low to Moderate</td>
<td>High</td>
</tr>
<tr>
<td>Family Size</td>
<td>Large</td>
<td>Large</td>
<td>Small</td>
</tr>
<tr>
<td>Expatriates</td>
<td>Large</td>
<td>Small</td>
<td>Small</td>
</tr>
<tr>
<td>Digital Divide</td>
<td>Low to Moderate</td>
<td>Moderate to High</td>
<td>Low</td>
</tr>
<tr>
<td>Adult Illiteracy rate</td>
<td>Low to Moderate</td>
<td>Low to High</td>
<td>Low to Zero</td>
</tr>
</tbody>
</table>
Guidelines for a Suitable Model

In order to move towards a suitable model, the following steps should be taken:

• Identify what to benchmark;
• Determine the appropriate model (KPIs, Maturity level model, Composite index)
• Identify countries/regions to benchmark;
• Collect the data (raw, survey, opinion);
• Analyze the data;
• Set an action plan for improvement and monitoring process.

Evaluation of Current Models

• None has so far covered all dimensions of the IS; (what about digital content, enabling environment, building security & trust);
• Do not take into account different levels of development and national circumstances of our region;
• Not all Arab or ESCWA countries are covered (ex: NRI).
• What about the gender dimension?
Pros/Cons of Composite Indicators

<table>
<thead>
<tr>
<th>PROS</th>
<th>CONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Can summarize complex, multi-dimensional realities with a view to supporting decision makers.&lt;br&gt;• Are easier to interpret than a battery of many separate indicators.&lt;br&gt;• Can assess progress of countries over time.&lt;br&gt;• Reduce the visible size of a set of indicators without dropping the underlying information base.&lt;br&gt;• Place issues of country performance and progress at the center of the policy arena.&lt;br&gt;• Facilitate communication with general public and promote accountability.&lt;br&gt;• Enable users to compare complex dimensions effectively.</td>
<td>• May send misleading policy messages if poorly constructed or misinterpreted.&lt;br&gt;• May invite simplistic policy conclusions.&lt;br&gt;• The selection of indicators and weights could be the subject of political dispute.&lt;br&gt;• May be misused, e.g. to support a desired policy, if the construction process is not transparent and/or lacks sound statistical or conceptual principles.&lt;br&gt;• May lead to inappropriate policies if dimensions of performance that are difficult to measure are ignored.&lt;br&gt;• May disguise serious failings in some dimensions and increase the difficulty of identifying proper remedial action, if the construction process is not transparent.</td>
</tr>
</tbody>
</table>

IDI – Indicators & Weights

<table>
<thead>
<tr>
<th>ICT access</th>
<th>Ref. Value (%)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fixed telephone lines per 100 inhabitants</td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td>2. Mobile cellular telephone subscriptions per 100 inhabitants</td>
<td>170</td>
<td>20</td>
</tr>
<tr>
<td>3. Internet bandwidth (bit/s) per Internet user</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>4. Proportion of households with a computer</td>
<td>100</td>
<td>20</td>
</tr>
<tr>
<td>5. Proportion of households with Internet access at home</td>
<td>100</td>
<td>20</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICT use</th>
<th>Ref. Value (%)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Internet users per 100 inhabitants</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>7. Fixed broadband Internet subscribers per 100 inhabitants</td>
<td>60</td>
<td>33</td>
</tr>
<tr>
<td>8. Mobile broadband subscriptions per 100 inhabitants</td>
<td>100</td>
<td>33</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ICT site</th>
<th>Ref. Value (%)</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. Adult literacy rate</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>10. Secondary gross enrollment ratio</td>
<td>100</td>
<td>33</td>
</tr>
<tr>
<td>11. Tertiary gross enrollment ratio</td>
<td>100</td>
<td>33</td>
</tr>
</tbody>
</table>

Note: * This corresponds to the value of 6, which was used in the normalization step.
**Proposed Modifications to the IDI**

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Ideal value as per ITU</th>
<th>New proposed ideal value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ICT Access</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed telephone lines per 100 inhabitants</td>
<td>60</td>
<td>15 to 40 *</td>
</tr>
<tr>
<td>Mobile cellular telephone subscriptions per 100 inhabitants</td>
<td>170</td>
<td>No change</td>
</tr>
<tr>
<td>International Internet bandwidth per Internet user</td>
<td>100,000</td>
<td>No change</td>
</tr>
<tr>
<td>Proportion of households with a computer</td>
<td>100</td>
<td>No change</td>
</tr>
<tr>
<td>Proportion of households with Internet access at home</td>
<td>100</td>
<td>No change</td>
</tr>
<tr>
<td><strong>ICT Use</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Internet users per 100 inhabitants</td>
<td>100</td>
<td>No change</td>
</tr>
<tr>
<td>Fixed broadband Internet subscribers per 100 inhabitants</td>
<td>60</td>
<td>15 to 40 *</td>
</tr>
<tr>
<td>Mobile broadband subscriptions per 100 inhabitants</td>
<td>100</td>
<td>No change</td>
</tr>
<tr>
<td><strong>ICT Skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult literacy rate</td>
<td>100</td>
<td>**</td>
</tr>
<tr>
<td>Secondary gross enrolment ratio</td>
<td>100</td>
<td>***</td>
</tr>
<tr>
<td>Tertiary gross enrolment ratio</td>
<td>100</td>
<td>***</td>
</tr>
</tbody>
</table>

* Depending on the average family size in each ESCWA member country (See the table entitled: “New Proposed Ideal Values for Fixed telephone and Broadband lines”).

** Unskilled transitional foreign workers should be excluded from the total population.

*** Unskilled transitional foreign workers falling in the tertiary age group should be excluded from the total tertiary age population.

**IDI – ICT Price Basket**

- **Fixed telephone**
  - Monthly subscription: 30 local calls (15 peak and 15 off-peak calls) of three minutes each
  - National average monthly GNI per capita

- **Mobile cellular**
  - Monthly subscription: 25 outgoing calls (on-net, off-net, and to a fixed line, and for peak, off-peak, and weekend periods in predetermined ratios
  - 30 SMS messages
  - National average monthly GNI per capita

- **Fixed broadband Internet**
  - Monthly subscription to an entry broadband plan (based on 1 Gigabyte)
  - National average monthly GNI per capita
**Price Basket Proposed Modification**

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
<th>Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed telephone</strong></td>
<td>Monthly subscription + 30 local calls (15 peak and 15 off-peak calls) of three minutes each</td>
<td>Divided by Monthly minimum wage</td>
</tr>
<tr>
<td><strong>Mobile cellular</strong></td>
<td>25 outgoing calls (on-net, off-net and to a fixed line, and for peak, off-peak, and weekend periods) in predetermined ratios + 30 SMS messages</td>
<td>Divided by Monthly minimum wage</td>
</tr>
<tr>
<td><strong>Fixed broadband Internet</strong></td>
<td>Monthly subscription to an entry broadband plan (based on 1 Gigabyte)</td>
<td>+ 3 × 100</td>
</tr>
</tbody>
</table>

**ICT Price Basket (Minimum Wage-based)**

\[
\text{ICT Price Basket (ESCWA)} = \frac{(\text{ICT Price Basket (GNI-based)} + \text{ICT Price Basket (Minimum wage-based)})}{2}
\]

**ITU’s Official Comments**

**Population figures**

- Population data used by ITU are produced by UNPD;
- The use of mid-year vs end-year population data depends on decisions made by UNPD;
- Issues concerning national population statistics should be directly discussed with UNPD.
ITU’s Official Comments

Adult literacy rate and tertiary gross enrolment ratio

• ITU uses data from the UNESCO Institute of Statistics (UIS);
• Concerns about education statistics should be addressed to UIS directly;
• ITU will bring the special case of UAE (and other GCC countries) to the attention of UIS.

ITU’s Official Comments

Adjusting the ideal value for fixed telephone lines per 100 inhabitants

• ITU claims that this indicator includes not only residential lines, but also business lines and public phones, i.e. all fixed telephone lines in the country. Therefore, it is not appropriate to generate new values based on a calculation that refers to households only;
• For the time being, it therefore gives an advantage to developing countries in terms of progress made over time.
**ITU’s Official Comments**

*Adjusting the ideal value for fixed BB Internet subscriptions per 100 inhabitants*

- The ideal value of this indicator may be re-evaluated in the future in view of the emergence of mobile broadband;
- Fixed broadband is important for connecting businesses and organizations and therefore remains an important indicator for the time being.

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**ITU’s Official Comments**

*GNI per capita (GNI p.c.) data*

- Source of data used in the ICT Price Basket is the World Bank;
- Concerns about the data should be raised with the World Bank.
**ITU’s Official Comments**

**Calculating ICT Price Basket Minimum wage**

- Minimum wage is a raw measure which is not necessarily comparable across countries;
- It does not reflect the available resources of the individual, but rather an indication of the lowest salary the population could receive monthly;
- This does not reflect the average monthly income of all people in the country.

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**ITU’s Official Comments**

**Issues related to data discrepancy**

- International organizations harmonize data (applying international definitions and standards) to make statistics comparable across countries;
- Therefore, countries will always find slight differences with data reported at the national level and data published by international organizations.
ITU’s Official Comments

General Comments

• It is impossible to provide internationally comparable figures that reflect the exceptional circumstances of all countries regions;
• This includes countries with very large/small populations, with large/small household sizes, with large shares of young/old populations;
• ITU proposes to include a box on the special case of the GCC countries in their future MIS report.

Recommendations

• International comparability and benchmarking requires an International Framework;
• Regional benchmarking might adopt a different model;
• Adding new indicators is always costly especially if these indicators require surveys for data collection;
• When selecting indicators, focus on the list of Core ICT Indicators (Partnership);
Recommendations

• Frequency of conducting ICT related surveys should be increased;
• Metadata for all indicators should be harmonized;
• A close collaboration between NSOs and other government entities (TRAs/ministries) is required for conducting household surveys. This will ensure that the survey covers areas relevant for policy needs, and that statistical methods and survey methodologies are used properly.

Thank you

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