Application Mortpak-lite for life expectancy
Definition
The average year of life for someone reaching specific age x at specific year.

e0 is calculated by indirect method using computer program introduced by UN: Mortpak-Lite.

To estimate e0 BPS using CEBCS (Children Ever Born Child Survival) based on Trussell dan Palloni-Heligman method (UN, 1988).
Calculating Life Expectancy (e0)

- Basic data needed:
  - Average number of children ever born (ALH)
  - Average number of children survive (AMH) by mother 15 – 49 year
- *Trussel* provide one set coefficient for estimating mortality by 4 model life tables: west, east, north and south.
- West model life table is more appropriate for Indonesia and Malaysia
- The mortality estimation by Trussel Method gives time reference for all age group
• e0 estimated by $q_1$ (women age 15-19) give time reference closest to the census or survey date, then IMR estimated by $q_2$ (age 20-24) give time reference longer than $q_2$ and also for $q_3$, $q_5$, $q_{10}$, $q_{15}$ and $q_{20}$

• Based on that consideration that CEB and CS from women age 20-24, 25-29, and 30-34 are the most trusted data, then life expectancy estimated by $q_2$, $q_3$, and $q_5$
1. Open Mortpak
2. Calculate *Mean Age of Childbearing*
   - Close Box “Getting Started With Mortpak”, then click Application > FERTCB.
   - To calculate e0, click Application > QVIFE.
2. Calculating Mean Age of Childbearing
3. Calculating e0

• On screen FERTCB;
  • Fill in Title with 00 for Indonesia, 11 for Aceh and so on
  • Month = June, Year = 2015 (choosing month and year when data obtained)
  • *Copy* CEB from column “Children Ever Born” (using Ctrl+C, Ctrl+V). Making sure that all input has filled in.
  • then, click Run (Simbool), the data of *Mean Age at Childbearing will be appeared as* input for the next calculating process.
  • The results as follow:
3. Menghitung e0

![Software Screen](image)

**Estimation of age-specific fertility rates from data on children ever born at one or two points in time.**

<table>
<thead>
<tr>
<th>Month</th>
<th>Year</th>
<th>First Enumeration</th>
<th>Second Enumeration</th>
</tr>
</thead>
<tbody>
<tr>
<td>June</td>
<td>2010</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Children Ever Born</th>
<th>Fertility Consistent with C.E.B. (A.S.F.R)</th>
<th>Age Group</th>
<th>Children Ever Born</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 - 20</td>
<td>0.47</td>
<td>0.1725</td>
<td>15 - 20</td>
<td></td>
</tr>
<tr>
<td>20 - 25</td>
<td>0.92</td>
<td>0.0436</td>
<td>20 - 25</td>
<td></td>
</tr>
<tr>
<td>25 - 30</td>
<td>1.41</td>
<td>0.1368</td>
<td>25 - 30</td>
<td></td>
</tr>
<tr>
<td>30 - 35</td>
<td>2.05</td>
<td>0.1080</td>
<td>30 - 35</td>
<td></td>
</tr>
<tr>
<td>35 - 40</td>
<td>2.59</td>
<td>0.1132</td>
<td>35 - 40</td>
<td></td>
</tr>
<tr>
<td>40 - 45</td>
<td>3.04</td>
<td>0.0749</td>
<td>40 - 45</td>
<td></td>
</tr>
<tr>
<td>45 - 50</td>
<td>3.49</td>
<td>0.0274</td>
<td>45 - 50</td>
<td></td>
</tr>
</tbody>
</table>

**Mean Age of Childbearing:** 26.8118

**Total Fertility Rate:** 3.3821
4. Calculating IMR and $e_0$ with QVIFE application

- On QVIFE screen
  - Fill in Title with 00 for national measurement.
  - Month = June, Year = 2015 (projection 2015)
  - Sex = Both Sexes, for calculating $e_0$ Total, for calculating $e_0$ by sex chose “Male” or “Female”.
  - Sex Ratio at Birth = 1.05;
  - Fill in “Mean Age at Childbearing” from output FERTCB;
  - Data Definition, chose “Average number of children ever born and average number of children surviving”.

Using Package Program: Mortpak-Lite
• Copy average number of children ever born on input table or copy from input that already provided by FERTCB and fill in to column “Average Number of Children Ever Born” and copy Average number of children surviving and fill in to column “Average Number of Children Surviving” (use Ctrl+V)

• Click Run (Simbool).
• Then come output. As the screen limited then the result will be devided into 2 tables:
4. Menghitung e0 dengan aplikasi QVIFE

- QVIFE (1):
4. Menghitung e0 dengan aplikasi QVIFE

- QVIFE (2):

\[
\text{Hitung rata-rata untuk mendapatkan nilai } e_0
\]
4. Calculating IMR and e0 with QVIFE application

From the Output above (QVIFE(2)), the number of (e0) is obtained by average q2, q3, and q5 Coale-Demeny Model (Trussell Equations) model West q(x) for Life Expectancy at Birth.
Terima Kasih
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