Virtual Regional Workshop – Machinery and Equipment Survey for Latin America and the Caribbean

January 25-28, 2022
10:00 AM to 12:30 PM (Chilean time)

Session 4: Recommendations for data compilation – “Do’s” and “Don’t’s”
Acknowledgements

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Fourth Virtual Regional Workshop
22, 23 and 25 June 2021
International Comparison Program for Asia and the Pacific 2021

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Outline

• Data collection form
  – Index tab
  – Country data tab
  – Item tabs
  – Item-related PDF documents

• Recommendations
  – “Do”s
  – “Don’t”s

• Data Validation
### INDEX (Click the link below to access the sheet)

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Cover Page</td>
</tr>
<tr>
<td>1</td>
<td>Index</td>
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<tr>
<td>2</td>
<td>Instructions</td>
</tr>
<tr>
<td>3</td>
<td>Country Data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.01.11.1.020</td>
<td>Double skinned underground horizontal cylindrical storage tank - Unspecified - larger</td>
</tr>
<tr>
<td>15.01.11.1.030</td>
<td>Double skinned underground horizontal cylindrical storage tank - Unspecified - smaller</td>
</tr>
<tr>
<td>15.01.11.1.040</td>
<td>Stainless steel beer keg - Unspecified</td>
</tr>
<tr>
<td>15.01.11.1.050</td>
<td>Packaged steam boiler - Unspecified</td>
</tr>
<tr>
<td>15.01.11.1.060</td>
<td>Hacksaw - Unspecified</td>
</tr>
<tr>
<td>15.01.11.1.070</td>
<td>Hacksaw - Bahco (Sweden) - 325</td>
</tr>
<tr>
<td>15.01.11.1.080</td>
<td>Hacksaw - Unspecified</td>
</tr>
<tr>
<td>15.01.11.1.090</td>
<td>Hacksaw - Stanley (USA) - Turbocut (1-20-110)</td>
</tr>
<tr>
<td>15.01.11.1.100</td>
<td>Automotive tool set - Unspecified</td>
</tr>
<tr>
<td>15.01.11.1.110</td>
<td>Automotive tool set - Facom (France) - Tool set CM.138 without box</td>
</tr>
</tbody>
</table>

From the Index tab, the other tabs (Instructions, Country Data and the tabs for the items) can be selected by clicking on the associated hyperlink.
Data collection form – Country Data tab

Please fill in the country name, the three-letter ISO country code, the local currency and the reference year (2021).

Please remember: All prices should be reported in local currency units (LCU).
**Data collection form – Item tab (1)**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>15.01.11.5.01.240</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Name</td>
<td>Dry powder fire extinguisher</td>
</tr>
<tr>
<td>Make (and nationality)</td>
<td>Gloria (Germany)</td>
</tr>
<tr>
<td>Model</td>
<td>PD 6 GA with PG</td>
</tr>
</tbody>
</table>

| Metric | Imperial
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Extinguishing agent:</td>
<td>ABC powder</td>
</tr>
<tr>
<td>Propellant:</td>
<td>Nitrogen</td>
</tr>
<tr>
<td>Max. working pressure:</td>
<td>15 bar</td>
</tr>
<tr>
<td>Fire rating:</td>
<td>34A 233BC</td>
</tr>
<tr>
<td>Quantity of powder:</td>
<td>6 kg</td>
</tr>
<tr>
<td>Duration of discharge:</td>
<td>20 sec</td>
</tr>
<tr>
<td>Range of discharge:</td>
<td>6 m</td>
</tr>
<tr>
<td>With controllable discharge:</td>
<td>yes</td>
</tr>
<tr>
<td>Excluding maintenance contract:</td>
<td>yes</td>
</tr>
<tr>
<td>With pressure gauge:</td>
<td>yes</td>
</tr>
<tr>
<td>Diameter:</td>
<td>160 mm</td>
</tr>
<tr>
<td>Width:</td>
<td>295 mm</td>
</tr>
<tr>
<td>Height:</td>
<td>505 mm</td>
</tr>
<tr>
<td>Depth:</td>
<td>160 mm</td>
</tr>
<tr>
<td>Weight:</td>
<td>9.1 kg</td>
</tr>
</tbody>
</table>

**Company website:**
- www.gcria.de
- www.gloria.de

**Type of price information:**
- (1-4)

**Price from the Internet:**
- yes/no

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1. Please provide make (brand) and model
2. Please fill in the specifications of what was priced
3. The data is entered in the table.
Data collection form – Item tab (2)

3: Company website / Type of price information / Price from the internet

Company website: Provided for specified items only

Type of price information: 1: List price, discount separate.
2: List price, no discount offered.
3: The unit price includes the discount.
4: Unknown

Price from the internet: yes or no
4: Remember to report prices etc. in local currency units
5: The “Total unit price” is calculated automatically.
6: Check the notes for valuable hints (manufacturer IDs, …)
7: Use the extra input field for comments.
8: Indicate if the item is important (1) or less important (0).
9: Please record when the price was collected.
Data collection form – Additional information

For each of the specified items an item-related PDF document is available. These documents can be obtained from ECLAC.
Recommendations - “Do”s (1)

• **Used/new:** Please price new items only – used equipment must not be priced in the Machinery and Equipment survey.

• **Sources:** Use prices from reliable sources only. When using prices from a website, please make sure this is a popular website which commercial purchasers would use. Please also make sure to use the price a commercial purchaser would have to pay.

• **Item availability:** Check if the item priced is available in sufficient quantities. In some web-shops, putting 99 items in the shopping cart might help to see if the item is still well available.

• **Price an item at the “specified” item position** if you find the same make (brand) and model with the same specifications.

• **Notes/PDF:** When pricing an unspecified item, please check the notes and item-related PDF document of the counterpart specified item.

• **Documentation:** Please keep records of what was priced for validation purposes.
Recommendations - “Do”s (2)

• **Specifications**: When searching for an item on the internet, please make sure that what you found (and perhaps want to price) has the correct specifications. The item image in the survey catalogue may help.

15.01.11.2.01.660: Professional digital camera (body only) - Canon (Japan) - EOS 90 D

- Prescribed item – without lens
- Item with lens
Recommendations - “Do”s (3)

- **Item level validation:** When collecting more than one price observation for the same item, please check the Min-Max-Ratio (MMR) and the Coefficient of Variation of the prices.

- Prices are typically expected to be in a close range, in particular for specified items. Please double-check the prices if the MMR is less than 0.33 or if the CV is greater than 30.

- **Check of consistency with ICP 2017:** If the item has already been priced in ICP 2017, please check the ratio of the price reported in ICP 2021 and the price reported in ICP 2017. For the specified items also covered in ECP 2021, three quarters of the ratios $\frac{\text{GM}_{2021}}{\text{GM}_{2017}}$ are in the range 0.9 to 1.5.
Recommendations - “Do”s (4)

- **Item sequence**: When pricing more than one item within the same item group, data entry at the correct item position needs to be ensured (for example for vans, monitors and industrial engines). If you for example receive prices for several items in the same email reply, it is not guaranteed that the respondent provided the prices in the correct sequence.
Recommendations - “Don’t”s (1)

• Do not report prices for used or refurbished equipment; this is especially critical when obtaining price information from websites which offer used items as well as new ones (examples are agricultural equipment, textile machinery, baking equipment, construction equipment)

15.01.11.6.01.040: Diesel tractor: small - New Holland (Italy) - TD 5.95 Tier 4A
Recommendations - “Don’t”s (2)

- When the order quantity is not one, please do not report the prices for the “full” order quantity, but the unit price for one.

15.01.11.5.01.240: Dry powder fire extinguisher - Gloria (Germany) - PD 6 GA with PG

Price for 1 unit in an order of 10.  
Price for 10 units
Recommendations - “Don’t”s (3)

Please do not:

• report prices at which commercial buyers would not be allowed to make the purchase, for example special prices for government agencies or students/teachers only

• price DIY (do-it-yourself) level items in particular for tool sets, hand tools like hacksaws and cordless combis; only items suitable for professional use should be priced

• price items including deductible VAT (some internet pages may give the price including VAT only or show both prices, with and without VAT)

• price items which are labeled as “clearance” prices for the last few available items (i.e. not available in sufficient quantities)
Recommendations - “Don’t”s (4)

- Please do not by mistake price items which are additional accessories or incidentals for equipment like laser printers or photocopiers (for example toner cartridges); this is for example important when using price comparison pages.
Recommendations - “Don’t”s (5)

• Even if the Data collection form is not locked, please do not insert rows/columns in the item sheets or delete sheets. This would have an impact on the “Database” sheet and make semi-automatic processing of your data difficult or even impossible.
Data Validation (1)

1. Checks of the Data collection forms received
   - Are the forms filled in correctly?

2. “Initial cleaning”
   - Are the makes/models priced usable at the respective item position?
   - Are there any obvious typing errors that result in a “way off” price?
   => This may lead to (temporary) exclusion of prices from the calculation.

3. Quaranta Table calculation

4. Analysis of extreme prices
   - items with very low Min-Max-Ratio
   - items with high coefficients of variation
   - items with extreme XR-Index
Data Validation (2)

Example 1: Prices for wine kegs are excluded from the calculation

Please note:
Price indices are color-coded; grey bars correspond to the excluded prices
Data Validation (3)

Example 2: Reduction of extreme outliers (not yet finished)

Initial results:

Interim results:
Example 3: “Specified” item, Min-Max-Ratio = 0.37, VC = 23

The two highest prices are for the countries in Europe with the highest PLI, the results for this item are plausible. Only one reported price is for a different model and thus not included in the calculation.
THANK YOU !