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# Terms of Reference
ICP Tool Pack Testing

## I. Introduction

The primary objective of the Tool Pack is to improve national and international data collection and processing capacity. Its aim is to strengthen key areas of data development, including (a) supporting national price collection efforts; (b) standardizing price collection and gap filling methods within and across countries; (c) permitting data validation through a systematic procedure as the price data is moved back and forth through a hierarchy of processing to regional and global offices; and (d) ensuring data collection consistency over time and space.

The Tool Pack is an integrated system with two physically separate modules: Price Collection Module (PCM) and Price Administration and Analysis Module (PAM). The Tool Pack allows upload of product specifications from an Excel file generated from the Structured Product Description (SPD) software. This is an independent software developed to facilitate the preparation and the uploading of product specifications to the PAM.

The PCM and PAM are self-standing modules. Such modularity helps facilitate easy deployment of the PCM in the field, where only price collection is carried out, while reserving the more sophisticated administration and analysis module for the country management centers. If the country in question is a large country and regional price levels are of interest, the PAM can be installed in several centers.

## I.a. Price Administration Module

The PAM is a web based system, accessible using an Internet Explorer browser and a userid/password, over the intranet. It would normally be installed at the ICP country coordinator's office, and optionally, at any regional centers within a country, if the country is large and has a large number of data collection centers. The PAM has a number of integrated functionalities.

1. **Survey Set Up:** The PAM is instrumental in setting up surveys. Survey set-up consists of designing surveys, loading product specifications (PSs), setting up location hierarchies [country – regions – sub-regions – district – etc.], identifying price collectors, outlets, and finally creating "price collector – outlet – product list" mappings.

2. **Uploading Facilities:** This allows users to upload the product specifications, including product characteristics, attributes and parameters from Excel files generated by the SPD software, which is independent of the Tool Pack. It also allows users to set up their surveys outside of the Tool Pack using Excel files and to upload them to the PAM. Product images can also be uploaded. The facility also allows countries and regions to upload only average prices rather than individual price observations.

3. **Editing and Validation:** The primary focus is on non-sampling errors. There are two main types of non-sampling errors in ICP. First, a *price error* occurs when the product for which the price is to be collected is correctly identified in the right outlet, but the price actually collected is incorrect, or alternatively the price

collected is correct initially but an error is subsequently introduced into the price somewhere in the process of recording, transmitting or editing the price. Second, a *product error* occurs when the product for which the price is collected is not in fact the product specified on the ICP list. When the product is wrong, its price may be correctly recorded and processed, but it is still an incorrect price for ICP purposes.

First, the PCM can be used by the national coordinator to carry out the initial checks on the *individual* price observations for a single product within a single country. Second, the PAM can be used by the national coordinator to check the *average* prices of different products within the same basic heading in a single country. Third, the PAM can be used by the national coordinators and the regional coordinator working in collaboration to check the *average* prices of the same product in *different* countries when converted into a common currency using exchange rates or PPPs.

There are three diagnostic tables for validation. Tables 1 and 2 will be used by the countries. **Table 1** has two parts. The first part provides a summary of the number of products within each basic heading, number of products with price quotations, number of products with representative quotations, as well as the average prices for the basic heading. Users can pick any one of the basic headings for more detailed diagnostic information. This will lead to the second part of Table 1, which shows the number of price quotes for each item, the minimum and maximum prices, and *coefficient of variation,* defined as the standard deviation divided by the average price. There is one line in the table for each item in the basic heading. **Table 2** can be produced for each item in a basic heading. It provides a listing of the individual prices, the prices adjusted to a common/preferred measurement unit, the ratio of the price to the mean, and a t-value. T-value is the divergence between an individual price observation and the average price for that product divided by the standard deviation of the price observations. **Table 3** is what is known as the Quaranta tables in the Eurostat system and contains summary level data at the basic heading level, but for all countries in the region. Table 3 will be used by regional coordinating agencies and the global office.

4. **Analysis and Reporting:** The Analysis module provides various gap filling methods, including EKS and CPD for ICP, and a number of additional procedures for the CPI. It also allows calculation of PPPs and CPIs inclusive of all aggregation methods used in current practice. This is conducted at basic heading levels as well as total aggregate levels. Reports are generated at various levels using a combination of criteria. For example, reports of CPI can be generated by provinces, outlet types, urban and rural areas for any combination of baskets.

## I.b. Price Collection Module

The PCM is a stand-alone module that can be installed on a computer in any of the data collection centers. Price collection forms (generated from the PCM) are used for data collection. The price observations recorded by the collectors are then entered into the PCM. A preliminary validation of the data to correct data entry errors is performed in the PCM, and then the data are transferred to the regional or country PAM for further validation, aggregation, analysis and index calculation.

# II. Terms of Reference for Testing the PCM and PAM

These *terms-of-reference* (ToR) lay out the tasks that will be performed to test the ICP Tool Pack for the following functionalities, which are necessary at this stage in the price collection phase. The ICP surveys will be launched in October 2004 and modules of the Tool Pack that are needed for data collection will be provided to the countries by the end of May. Modules of the Tool Pack needed for analysis and reporting will be available for testing by end-June.

*1. ICP -- PAM and PCM installations*

In these tasks, the PCM and PAM should be separately tested for installation on "clean" machines. That is, these machines should have the operating systems (Windows 2000, XP or Windows 2003) installed on them afresh and Microsoft Excel, as described in the hardware/software requirements in the installation manuals. The hardware/software requirements are provided in the installation manuals **(Annexes 1 and 2)** and technical support is provided by Ms Ying Chi (202 473 3884) ychi@worldbank.org and Mr. Ramgopal Erabelly (202 458 5785) rerabelly@worldbank.org. Ms. Chi will be away from the office 5-9 April.

*2. ICP – PAM and PCM Modules*

User manuals for PAM and PCM are provided in **Annexes 3 and 4,** respectively, and technical support is also available. Please call Mr. Yuri Dikhanov (202 458 2667) ydikhanov@worldbank.org or Ms. Nada Hamadeh (202 473 3201) nhamadeh@worldbank.org. **Tool Pack Testing Steps are provided in Annex 5.** *Please be sure to follow the steps in the sequence they are outlined. For example, when setting up surveys, if location attributes are not defined, outlet profiles cannot be created. Similarly, if price attributes are not defined first in the PAM, the transfer of information from PAM to PCM will fail.* The recommended testing steps are particularly useful to upload the product list and associated characteristics, and to map files to the Tool Pack.

## II.a. What will be tested at this stage?

- **a.** Survey set up: All the survey set up functionalities should be tested.
- **b.** Uploading facilities: All the uploading facilities should be tested, with the exception of the uploading of average prices from other systems. This will be available for testing in May. A step-by-step guide for uploading the product list is provided in Annex 5.
- **c.** Transferring data from PAM to PCM: This is a two-stage process. The first step concerns exporting survey details from PAM. This involves creating XML files for the list of products, location hierarchy, data collectors' profiles, etc. The second step involves importing the XML files to the PCM.
- **d.** Setting options in the PCM: This includes setting an active survey, determining averaging methods and choosing time frames for the surveys.
- **e.** Printing Data Collection Forms and related Annexes.
- **f.** Entering price observations into the PCM, and checking and editing outliers.
- **g.** Transferring data from PCM back to PAM: This is for further data validation, processing, analysis, and reporting.
- **h.** Editing and validation in the PAM: Tables 1 and 2 should be tested. Table 3, which involves data validation at the regional level, will be available in June.

## II.b. What is NOT being tested at this stage?

1. Price data processing, including data aggregation for analysis and index computations.
2. Transfer of country level price averages, or country level raw prices data, to the Regional ICP Coordinators
3. Analysis and reporting functionalities.

## II.c. Documentations and software

The following documentations and software modules can be downloaded from our FTP site ftp://ftp.worldbank.org/pub/decftp/icp/toolpack. The package is also sent by DHL.

1. Price Collection Module Installation Guide **(Annex 1)**
2. Price Administration Module Installation Guide **(Annex 2)**
3. Installation software
4. PAM software
5. PCM software
6. User Manual for PAM **(Annex 3)**
7. User Manual for PCM **(Annex 4)**
8. Recommended Tool Pack Testing Steps for the PAM and PCM **(Annex 5)**
9. Sample Training Exercises for PAM **(Annex 6)**
10. Sample Training Exercises for PCM **(Annex 7)**
11. The 300 points Recommended Testing Procedures for PCM **(Annex 8)**
12. Sample product list files and the survey set up files, including locations, outlets and price collectors' profiles **(Folder for set up files)**
13. Sample Product Images **(Folder for image files)**.

## III. Expected outputs and time frame.

The proposed time frame for the testing is between **April 5 and April 23. We propose to divided the report into two sections.**

**Section 1:** The first section should focus on whether the Tool Pack delivers what is expected of it, in terms of facilitating data collection, verification and processing primarily for ICP. This should include the following.

- A short report on the user friendliness and usefulness of the software for the ICP surveys and for capacity building in developing countries.
- Test results for the installation package as well as for the PCM and PAM, including any problems/bugs found with the system.
- A short report on the manuals (though the manuals are in a draft form, we would appreciate any comments and suggestions) as well as on the training exercises for the PAM and PCM packages

**Section 2:** The second section should provide comments and recommendations for future improvement. This should include features or functions, if any, that the tester considers important for the software and that are not in the ICP Tool Pack.

**Thank You!**