Document Authorization

- **Project:** ICP Region Setup and Diagnostics Module
- **Revision History:**

<table>
<thead>
<tr>
<th>Date</th>
<th>Version</th>
<th>Description</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 11, 2010</td>
<td>1.0</td>
<td>Initial version</td>
<td>Abarnagayathri M.P</td>
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**Review:**

<table>
<thead>
<tr>
<th>Reviewer</th>
<th>Date</th>
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<tbody>
<tr>
<td>Lakshmikanthan Subramanian</td>
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<tr>
<td>Vilas Mandlekar</td>
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**Approval:**

<table>
<thead>
<tr>
<th>Approver</th>
<th>Date</th>
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<tr>
<td>Vilas Mandlekar</td>
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1. Introduction

Setup and Diagnostics module facilitates the following features.

- **Setup Region Master List**
  - Configures Region detail, Product list, Country list, Currency list etc.,

- **Export Country Master List to countries**
  - This list can be exported for the Household Consumption (HHC), Compensation, and National Accounts Country modules
  - This list becomes the input for country modules for their setup of the Country Master List.

- **Setup Nominal Expenditures, Population and Exchange rates data**

- **Upload Country average prices**
  - Average prices received from different countries will be imported in to the database using this module. If the countries choose to send raw price observations (individual price quotations collected by the price collectors from various product outlets), then the average prices can be calculated by using the ICP country modules, installed in the Regional Office. Once the average prices are calculated, these will have to be imported in to the Regional module.

- **Generate Quaranta and Dikhanov Diagnostics reports**
  - **Quaranta Tables** – These consist of a set of tables for a basic heading, one for each product within the basic heading. However, the first table in the set is different from the rest. It is an introductory summary table containing general information relating to the basic heading as a whole such as the exchange rate, basic heading PPP and price level. The purpose of the Quaranta Tables is to perform an inter-country average prices data validation. It screens the estimated national average prices for possible errors, by comparing the average prices for the same product in different countries, and also by examining the dispersion of the average prices. In Quaranta diagnostics PPP values are computed using an option of one of four gap-filling methods for the average prices -- CPD, CPRD, EKS - Simple and EKS *.

  - **Dikhanov Tables** – A second and complementary form of inter-country validation uses Dikhanov Tables. These are geared toward an analysis of the whole tableau of price data in a compact form. Both the Quaranta and the Dikhanov sets of tables use a similar approach and start off with similar concepts: studying product price deviations for each country in a two-dimensional space: that of products and countries. The Dikhanov Table can be processed at any level from total GDP down to the basic heading.

  The Dikhanov Table can also be processed for intermediate aggregates, such as goods, services etc.). It adds an emphasis on the between basic heading validation, adding
facilities to detect anomalies across both countries and basic headings. Dikhanov tables can also be generated for average prices over multiple periods.

This module supports English and other language (this can be configured at the first time launch of the application) to store the Master list names like product name, country name, currency name, etc., Regions will have to setup these data using Region Master list and language specific data can be exported to countries via country master list.

All the addition/modification of setup data can be done through Excel sheets using the export/import feature.

1.1 **About this Guide**

This guide acts as a training document for the user and features the following sections:

- Installation
- Overview of the features

1.2 **Scope**

The scope of this document covers only the installation process and step by step instructions to test the features of the Setup and diagnostics module of the ICP Region software.

1.3 **Software /Hardware Requirements**

**Software**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Software Name</th>
<th>Version Details</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Microsoft Windows</td>
<td>XP with SP3, Vista Professional</td>
<td>Operating System (It contains .Net Framework 2.0 and above versions)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>edition</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Adobe acrobat</td>
<td>9.0 and above</td>
<td>PDF export</td>
</tr>
</tbody>
</table>

**Hardware**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>RAM</th>
<th>Hard Disk Space</th>
<th>Processor</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.</td>
<td>Minimum 1GB RAM</td>
<td>Minimum 1 GB Hard Disk Space</td>
<td>1 GHz or higher</td>
</tr>
</tbody>
</table>
2. Steps for Testing Region Setup and Diagnostics Module

2.1 ICP HHC Region Setup and Diagnostics Module Installation

Installation requires admin rights. Please note that only users with Admin rights on their PCs can install this module.

Please follow the steps as mentioned below to install the Setup and Diagnostics module of the ICP Region software:

1. Uninstall previous version of the software if it was installed.
2. To begin the installation, click on the “Setup.exe” which will launch the screen shown below.

Note: Pre-requisites like SQL server will be installed first before the module is installed. After that, the following installation screen appears. Click on the next button.

3. Click on “I accept the terms in the license agreement” and click on the “Next” button.
4. Enter the User name and click “Next”. (The User name can be your computer user name or any other user name you may wish to assign)
5. The next screen will prompt you with the setup type. Always choose “Complete” and press “Next”.
6. Select the Folder/Directory where you want to install this software by clicking on the “Browse” and then click “Next”.

   Note: It is a good practice to install the application in C:\ or C:\temp. Ordinary users on the PC without Admin rights do have access to these folders, so that the ICP regional module has access to modify the configuration files as needed.

7. The next screen will display the installation ready message. Now click on the install button. The installation may take few minutes. It displays the installation completion message as shown in the screenshot below. Click on “Finish”.

   *Installation Screenshot - 4*
After the installation, you can see a Shortcut along with an icon for the Region Setup and Diagnostics module on the desktop. Additionally a link will be added under the Program Menu. User can click on the shortcut or click on the Start Menu->Programs/All Programs (in Vista)->ICP 2011 Region Modules->SetupandDiagnostics
Setup and Diagnostics on the Desktop
After Launching the Regional Module for the first time, it is important to setup the language while launching the application. The default language will be English and it cannot be changed. The other language option provided will be used for exporting that language specific data during the country setup export.

You will be prompted with a dialog box as shown below.
Click OK to open the application.
Click on the Setup tab on the top left corner of the launch screen. The setup tab looks as shown in the screen shot below.

Initially the application will be loaded with a blank database. For testing, Please restore the database attached below. The attached backup file “ICP_Region_samp.bak” contains some sample data.

The backup and Restore can be done by clicking on the Backup and Restore button on the bottom of the setup data screen.
Backup and Restore

The users can also restore an empty database and revert back to the initial stage of the application. If we go to the folder where the application is installed, you will see a folder called “Regional BlankDatabase”. Click on the folder and you will see a blank database with the name “ICP_Region_BlankDatabase.bak”.

The empty database can be restored by using the same “Backup and Restore” window shown above.
2.3 : Import/Export Regional Master list from the ExcelSheet

Once the sample database is restored, we can edit the master list by exporting the list. After exporting the region master list, we can edit the list and import it back into the system.

If the sample database is not restored then the users can still import the region master list.

The regional master list in Excel contains the following details.

1. Region details
2. Country list
3. Currency list
4. Products
5. Location Types
6. Outlet Types
7. Price Types
8. Unit Of Measure (UOM) List
9. ISCO Groups (for Compensation items only)
10. UOM Conversion
11. 2005 Product List (required for National Accounts Expenditure module only)

The above details can be edited in the Region master excel sheet and can be imported in to the system.
2.4 Import/Export Regional Master list received from countries

Data can be retrieved by exporting the country master list in the setup tab. This is the second tab in the setup data. Region will export and send the country master list (via email or by other means) only to countries to setup master list in the country modules.

Click on Export and Select the folder where you want to save the exported file, provide the file name and click on “Save”.

Data Export will start and system will display a “progress bar” as shown below:
Once the Export is completed, system will display “Exported Successfully” message as shown below:

![Export Completed](image)

After exporting, add new Records at the end of the worksheet or modify the existing records. Save the Excel file and import them into the application setup.

Please note that Region master list can be exported and imported within the region module. Country master list will be exported to countries from region to setup the country module master list.

The Setup data will allow you to retrieve the master list for individual countries for the product categories below.

1. HHC
2. Compensation
3. National Accounts
Step 2.5: Import/Export Exchange Rates, Nominal Expenditures and Population

As shown in the screen shot below, the system allows the users to export the Nominal Expenditures, Exchange Rates and Population.

This section will allow the users to export and edit the following data:

1. Nominal Expenditures
2. Population
3. Exchange Rates.

It also allows users to choose the time period and interval for which they wish to Import/Export the data.

The country filter allows the users the choice of one or more countries. Users can also select the Products, but this is to be used only for entering data on Nominal Expenditures.

Set Exchange Rate/Nominal Expenditures and population
System will display a message as shown below:

![Exported Successfully]

Export completed

2.6 View Average Prices

After the setup is complete, hide the setup tab and go to the Main window. The Main Screen looks as shown below.

![Average Price Screen]

Now After setting up the data in the setup tab, hide the tab. The Main Screen allows the users to filter the Products, Country, Interval and Time Period. After choosing the filters, click on Get Data to retrieve the Average Price for the products.
The main screen is provided with following filters.

1. Products - This will list down the products in a tree structure starting from the “All Groups” level.
2. Country – Country will list down all the countries. We can choose the countries for which we need the Average Prices.
3. Interval – Intervals define the time period for which the data has to be selected. There are four intervals that can be selected in the Setup & Diagnostics screen - Year, Half Year, Quarter, and Month.

For Yearly interval, the Time dropdown will be automatically populated with the list of years.

For Half Yearly interval, the Time dropdown will choose between two halves of the year.

For Quarterly Interval, choose between 4 quarters of a year.

For Monthly Interval, choose the month of the year.

Once the filters are selected, click on Get Data to retrieve the results. The system displays the data in the grid as shown in the screenshot below. Average Prices for individual products can be edited in this grid. The edited cells will be shown in red color to indicate that these have been changed manually.

After editing the Average Prices, Click on “save” button to save the changes to the database.
Apart from the listed columns, we can also see the other fields by right clicking on the grid header and clicking on the column chooser option. The required columns can then be dragged to the grid as shown in the screenshot below.
**Customize Grid**

### 2.6.1 Importing Average Prices

Users can also import the data from the country’s average price Excel sheet using the Import option on the Main screen.
After importing the data, it will be displayed in the grid. Clicking on save will save the records in the database as shown in the screenshot below.
2.6.2 Delete

Users can also select the required rows and then click on delete to delete them. The system prompts a dialog box as shown in the screenshot below. On clicking “Yes”, it will delete the selected rows.
Delete selected records from the application

To delete all records, Check the box “Select all rows” and click on “delete”.

Delete
2.7: Data Diagnostics

This Diagnostics feature helps to analyze and validate the country averages prices. The validated average prices are then ready for use in the index processing. There are two diagnostics reports.

1. Quaranta diagnostics
2. Dikhanov tables

2.7.1 Quaranta Diagnostics

The Quaranta Diagnostics provides the ability to filter the average prices to analyze using the criteria(s) mentioned below.
Country List
Product List
Time Interval
Time Period – Quaranta Table supports only a single time period
Year
Base Location – This is Base country. This will be any one of the country from the selected countries in the filter
Imputation Method

This diagnostics provides the ability to calculate and show diagnostics report based on selected basic headings. The report contains following three sections.

- Summary Information
  - No. Of items included in the Analysis
  - No. Of Countries included in the Analysis
  - Base Country
  - Average Weight of Basic Heading in Total Expenditure
  - Average Coefficient Variation

- Country Level Information
  - Country
  - XR
  - PPP
  - PLI (%)
  - Weight #
  - Items
  - Variation Coefficient
  - STD

- Product Level Information
  - Country
  - NC-Price
  - Quotations
  - Variation Coefficient
  - XR-pr
  - XR-Ratio
  - CUP-price
  - CUP-ratio
  - Pref. UOM
  - Mean (Geo. Mean)
Please refer to the screenshot below. Click on the “Diagnostics” tab and follow the steps provided in the screenshot.

1. Click on Diagnostics tab
2. The first step in the Diagnostics process is to select a base country
3. There are two diagnostic tables. By default, the system selects Quaranta
4. Choose the imputation method and click on Analyze.
5. On clicking the Analyze button, the system will process the data for the diagnostic table selected and display a message as shown here
6. After the diagnostic table is processed, the system provides a detailed report for the selected Basic Headings (BH) from this list. Select one or many BHs and then click on View Report. If no BH is selected, the system will display the report for all BH’s by default.

Quaranta Diagnostics Screen

If no basic heading is selected, by default the “View Report” will display the reports for all the countries.
A sample Quaranta report is displayed below

Quaranta Table screenshot.

2.1.2 Dikhanov Diagnostics

The Dikhanov Table is another diagnostic table used in validating the average prices submitted by the countries. Average prices are analyzed based on selections made by the user for each of the items below.

- Country List
- Product List
- Time Interval
The report contains the following sections:

- **Country Level Information**,  
  - PPP  
  - STD  
  - No. Of Priced Items  
  - ER (LCU/US$)  
  - Rebased_XR  
  - PLI  
  - Provide summary for STD, No. Of Priced Items across countries

- **Basic Heading Level Information**  
  - PPP  
  - STD  
  - PLI  
  - No. Of Priced Items  
  - Provide summary for STD, No. Of Priced Items across countries for all products

- **Product Level Information**  
  - PPP  
  - Average Price  
  - No. Of Observations  
  - Coefficient of Variation  
  - XR Ratio  
  - Provide summary for STD, No. Of Priced Items across countries for all products

Click on the Diagnostics tab, choose a Base Country, select the Dikhanov radio button and follow the steps explained in the screenshot below.
Once the “Analyze” operation is completed, select one or more BHs below and click on View Report to display the Dikhanov table.

If no Basic Heading is selected, System will display all the reports by default.

A common problem encountered in the Dikhanov diagnostics is the non-availability of exchange rates for the selected time periods. The following paragraphs describe how to enter the exchange rates data.
Dikhanav Error message if exchange rate is not defined for the selected year

In such a situation, the user should go to the setup screen and Export the data for the selected year, time interval (half year, quarter or month) and countries.
The exported Excel file is shown in the screenshot below. The exchange rates will be blank in the Excel by default. Enter the exchange rates for the countries and save the Excel file.
If two countries share the same currency, then if we enter different rates for them, then the import will show an error message as shown below.
Whenever the above error message appears, click on the “View Link” on the setup screen to view the error description as shown below.
Now click on the link “View error details” to see the error messages in Excel. The error screen also provides the record number where the error occurs.
Now correct the exchange rate and import back to the system. Now go to the Dikhanav Diagnostics method and click on analyse and the system will give a success message as shown below.

![Dikhanav Analysis screenshot](image)

Now click on the Basic Headings and then choose “View report”. If no countries are selected, View report by default will display all countries.

**A Sample Dikhanov Report**

A sample Dikhanov report screenshot is shown below.
Additional Options in the Data grid

The Data grid in the application contains some special features. This section will cover those features in detail.

1. **Filter**

   Filtering allows you to display a subset of records from a data source. When filtering is applied to a Grid View, only those records that meet the current filter criteria are displayed. You can filter data against a single or multiple columns.

   The following image shows the filter dropdown list invoked for a column in a Grid View:
After a filter has been applied to the current View the filter panel appears by default at the bottom of the View.

2. **Hiding Unused Columns**

The customization form provides facilities for adding and removing columns from a View at runtime by using drag & drop. Dragging the column by its header and dropping it within the customization form client area hides the column from the current View. The column reappears when the header is dragged from the customization form to the View’s client area. The Customization Form can be opened by:

- Selecting Column Chooser from the header panel context menu.

To hide a specific column/band, an end-user can do one of the following:

- Drag a column/band header onto the Customization Form.
- Drag a column/band header away from the Column Header Panel, even if the Customization Form is not visible
- Right-click a column header, and select Remove This Column from the Column Header Context Menu.
After columns/bands have been hidden, they can be restored by opening the Customization Form and dragging them from the Customization form onto the Column Header Panel.

3. **Resizing Nodes and Columns**

The following mouse operations can be performed by end-users to resize columns and nodes.

<table>
<thead>
<tr>
<th>Action</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dragging a column header's right edge</td>
<td>Changes the column's width.</td>
</tr>
<tr>
<td>Selecting the &quot;Best Fit&quot;/&quot;Best Fit (all columns)&quot; item from the column header's context menu</td>
<td>Modifies the column width to &quot;best fit&quot; to the corresponding column or all columns.</td>
</tr>
</tbody>
</table>

4. **Reordering Columns**

The following operations can be performed by end-users to rearrange columns and nodes.
 Dragging a column header and dropping it to a new position within the column header panel.

5. **Sorting**

The following operations can be performed by end-users to apply or cancel sorting by column values.

<table>
<thead>
<tr>
<th>Action</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clicking a column header</td>
<td>Toggles the column’s sort order. The previous sorting is removed.</td>
</tr>
<tr>
<td>Clicking a column header while holding the SHIFT key pressed</td>
<td>Toggles the column’s sort order. The previous sorting is preserved.</td>
</tr>
<tr>
<td>Clicking a column header while holding the CTRL key pressed</td>
<td>Removes sorting by this column. The previous sorting is preserved.</td>
</tr>
<tr>
<td>Selecting the &quot;Sort Ascending&quot; or &quot;Sort Descending&quot; items in the column header’s context menu</td>
<td>Applies the corresponding sort order to the column. The previous sorting is preserved.</td>
</tr>
</tbody>
</table>

******************************************************************************************