



[01.04]

Linking IRAN to the International Comparison Program 2011



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Background

2005 round of the International Comparison Program (ICP)

- ❑ Iran participated in the 2005 round of the ICP under the coordination of the **Asian Development Bank (ADB)**
- ❑ Iran was not a member country of the ADB

2011 round of the International Comparison Program (ICP)

- ❑ 2005 arrangement was not possible to follow for 2011 round of ICP
- ❑ Special agreement was sought by the **Global Office** to link Iran to the ICP via another country or region
- ❑ **Turkish Statistical Institute (TurkStat)**, National Coordinator for Turkey, accepted to be involved in a bilateral comparison aimed at linking Iran to the global results
- ❑ Turkey participates in the **European Comparison Program (ECP)**

Organizational Aspects

The ICP Global Office is coordinating the linking exercise by working in partnership with the **Central Bank of the Islamic Republic Iran (CBI)** and **TurkStat** and **Eurostat**. As such, the GO is responsible for:

- ☐ Development of the linking approach
- ☐ Overall project coordination
- ☐ Meeting arrangements
- ☐ Provision of survey materials (including item lists) and IT tools
- ☐ Data validation
- ☐ Calculation of PPPs

Household Consumption

Item List

- ❑ The common item list for the linking exercise is based on the Eurostat list for Household Consumption
- ❑ In Eurostat's rolling benchmark approach, Household Consumption price surveys are split into six surveys:

#	Code	Survey name	Item list availability	# ECP items	# Additional Items	Total
1	E10-1	House and Garden	End-March '10	296	18	314
2	E10-2	Transport, Restaurants and Hotels	End-Sept '10	174	8	182
3	E11-1	Services	End-March '11	170	0	170
4	E11-2	Furniture and Health	End-Sept '11	341	0	341
5	E12-1	Food, Beverages and Tobacco	End-March '12	319	1	320
6	E12-2	Personal Appearance	End-Sept '12	N/A	N/A	N/A
-	-	Total	-	1300	27	1327

- ❑ Each year two price surveys are conducted, hence two item lists are finalized
- ❑ In total the HHC item list includes approximately 2,000 items, of which around 300 are Global Core List (GCL) items
- ❑ For the 2011 ICP round ECP surveys from **2010 to 2012** are used for computing the global PPPs

Household Consumption

Price Surveys

- ❑ For **Turkey**, prices collected for the ECP exercise will be used for the linking, and in addition prices will be collected for the limited number of items introduced solely for the linking purposes
- ❑ For **Iran**, price collections are initialized as soon as the item lists are available for the given survey, with the objective to collect prices **for four quarters**, or when this is not possible, **cover as many quarters** as possible

#	Code	Survey name	2010			2011				2012			
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	E10-1	House and Garden	TR					IR	IR	IR	IR		
2	E10-2	Transport, Restaurants and Hotels			TR			IR	IR	IR	IR		
3	E11-1	Services					TR	IR	IR	IR	IR		
4	E11-2	Furniture and Health							TR	IR	IR	IR	IR
5	E12-1	Food, Beverages and Tobacco									TR	IR	IR
6	E12-2	Personal Appearance											IR
													TR

Household Consumption

Survey Frame

- ❑ **In Turkey**, prices are collected in 3 major cities (*Ankara, Istanbul and Izmir*). Spatial adjustment factors (SAFs) are used to adjust the survey level prices to reflect national average prices
- ❑ **In Iran**, the survey frame consists of 6 major cities (*Tehran, Mashhad, Esfahān, Tabriz, Karaj and Shiraz*) and covers approximately 60% of urban area total population. The survey frame does not include rural locations

Price Validation

- ❑ **Iranian** prices are validated against Turkish and Bulgarian prices
 - ❑ **Bulgaria**, whose price and per capita GDP levels are similar to Turkey, was included in the validation process in order to make it sounder and more effective
 - ❑ **Bulgarian** ECP price data is used exclusively for the price validation purposes, without being used in the linking of Iran to the ICP
- ❑ **Turkish and Bulgarian** prices are validated within the ECP frame, excluding the additional items

Household Consumption

Survey level prices are adjusted for two purposes:

1

**Price
validation**

- ❑ First 3 ECP Surveys: Average national prices for **Turkey** and **Bulgaria** are CPI adjusted to overlap with Iran's survey periods
- ❑ Last 3 ECP surveys: Adjustment is not needed, since the price collections overlap

2

Linking

- ❑ Treatment of **Turkey's** prices does not differ from any other ECP country
- ❑ For **Iran**, survey prices are adjusted solely for linking purposes

#	Code	Survey Name	2011			
			Q1	Q2	Q3	Q4
1	E10-1	House and Garden	Q1'12	Q2'12	Current	Current
2	E10-2	Transport, Restaurants and Hotels	Q1'12	Q2'12	Current	Current
3	E11-1	Services	Q1'12	Q2'12	Current	Current
4	E11-2	Furniture and Health	Q1'12	Q2'12	Q3'12	Current
5	E12-1	Food, Beverages and Tobacco	?	?	Q3'12	Q4'12
6	E12-2	Personal Appearance	Q4'12	Q4'12	Q4'12	Q4'12

National Accounts and Special Surveys

National Accounts

- ❑ Iran is reporting the National Accounts expenditure for the 155 ICP Basic Headings (BHs) using the Model Report on Expenditure Statistics (MORES) template

Special PPP Surveys

- ❑ For the Special PPP Surveys i.e., Housing, Government Compensation, Machinery and Equipment, Construction, and Education, Iran follows the standard ICP methodology as defined by the GO

Calculation of PPPs

In the calculation of PPPs for Iran, three aspects need to be considered:

- ❑ Calculation of **Household Consumption** BH PPPs
- ❑ Calculation of BH PPPs for the other **GDP components**
- ❑ **Aggregation** of BH PPPs

The following “Standard ICP approach” is assumed for the global PPPs:

- ❑ **Step 1:** Calculation of regional PPPs
- ❑ **Step 2:** Conversion of regional GCL prices into a regional numeraire, using regional PPPs
- ❑ **Step 3:** Calculation of the inter-regional linking factors based on GCL prices for all regions and countries
- ❑ **Step 4:** Ensuring fixity by multiplying each country's regional BH PPP resulting from Step 1 by the inter-regional linking factor resulting from Step 3

Further, it is assumed that the Country-Approach with Volume Redistribution (CAR-Volume) is used for linking at aggregate levels

Household Consumption BH PPPs

Household Consumption BH PPPs for Iran are calculated through a bilateral Turkey - Iran comparison, in which

- ☐ Iran will be linked to the World through Turkey's results in the World comparison
- ☐ Turkey's results are derived following the "Standard ICP approach"
- ☐ Specific linking factors to the World numeraire are not calculated for Iran

Step 1

- ☐ Reclassifying ECP items priced by Iran and Turkey to follow the ICP Classification

Step 2

- ☐ Calculation of bilateral PPPs for Iran and Turkey on the basis of annual national prices in national currencies from Step 1 using weighted CPD method
- ☐ Turkey's numeraire is 1 and Iran's PPPs relatively to Turkey are obtained from the CPD

Step 3

- ☐ Linking Iran's bilateral BH PPPs to the World comparison, using Turkey's BH PPPs in the World comparison as a bridge

Other GDP components – Number of Possibilities

1st Approach: Bilateral comparison “World – Iran”

2nd Approach: Bilateral comparison “Set of countries - Iran”

3rd Approach: Iran’s inclusion in the calculation of World PPPs

4th Approach: Iran’s inclusion in the Asia region

1st Approach: Bilateral comparison “World – Iran”

- ❑ This approach can be described as a *two stage CPD procedure*
- ❑ During **the first stage**, the Global BH PPPs are obtained following the “Standard ICP approach” for all countries, excluding Iran
- ❑ **The second stage** consists of the following steps:

Step 1

- ❑ Recalculation of all countries', excluding Iran, GCL item prices in national currency into the World numeraire

Step 2

- ❑ Calculation of average geometric prices for all GCL items, using prices derived from Step 1

Step 3

- ❑ Running weighted CPD for the two “Regions” – World and Iran – using average prices calculated in Step 2 and Iranian prices NC
- ❑ World numeraire is 1 and Iranian PPP relatively Word numeraire will be obtained from the CPD

1st Approach: Bilateral comparison “World – Iran”

Approach characteristics

- ❑ **Requires calculation** of average prices for all GCL items in World numeraire for all countries in the world
- ❑ If calculation of these averages is done using simple geometric mean, **all countries have an equal weight**
- ❑ **Fixity is kept** : All former World PPPs are not changed due to this procedure
- ❑ The problematic point is the allocation of **importance indicators** for the GM World prices

2nd Approach: “Set of countries – Iran”

2nd Approach: Bilateral comparison “Set of selected countries - Iran”

- ❑ The second approach is similar to the first one, but instead calculating average prices for GCL items based on **all world countries’ prices**, excluding Iran, only the set of selected countries would be included
- ❑ This allows selecting countries that are **most important** in the world comparison
- ❑ However, as the selection will have an impact on Iran’s results, the **countries** have to be **chosen carefully** with sound arguments

3rd Approach: “World, incl. Iran”

3rd Approach: Iran’s inclusion in the calculation of World PPPs

- ❑ The third option is to include Iran in the calculation of the World’s PPPs (*inter-regional linking factors*), **as any other ICP country**

Step 1

- ❑ Regional PPPs are calculated using both regional and GCL items
- ❑ **No PPPs** are calculated for **Iran** at this point

Step 2

- ❑ GCL item prices for each country are divided by the regional BH PPP of the country (a common regional numeraire)
- ❑ For **Iran** **no converting** is done as there are no regional PPPs

Step 3

- ❑ A single weighted CPD run including all prices in Regional numeraires
- ❑ **Iran’s** prices in NC are **included**

Step 4

- ❑ The PPPs for Iran in World comparison are obtained from CPD
- ❑ **No linking** factors will be applied to **Iran’s** PPPs

3rd Approach: “World, incl. Iran”

Approach characteristics

- ❑ Does **not require any additional steps** to be carried out solely for the purpose of linking Iran to the world comparison
- ❑ The linking factors of the Regions are affected to some extent by inclusion of Iran's prices in the calculation
 - ❑ Impact is expected to be very moderate (if the prices in regional numeraires of all countries, rather than Regional GM prices, are used)
 - ❑ Magnitude can be studied by running the calculations with and without Iran's prices

4th Approach: “Asia, Incl. Iran”

4th Approach: Iran’s inclusion in the Asia region

- ❑ The fourth possible approach is to include Iran’s prices in the Asian comparison for linking purposes
- ❑ All steps would follow the “Standard ICP approach”
- ❑ Asian results would be calculated **with and without** Iran
 - ❑ Official Asia results would not include Iran – no impact
 - ❑ Results for Iran would however be derived from the Asia comparison

Linking at the Aggregate Levels

Iran can be treated in the same way as all other countries in the World aggregation

- ☐ It is assumed that Iran has the same set of input data as all other countries for the aggregation
 - ☐ BH-PPPs (to a World numeraire); and
 - ☐ BH expenditure in the standard ICP Classification.
- ☐ The unrestricted GEKS is applied for all involved countries, including Iran

Points for Discussion

General approach

☐ Any comments?

Linking: HHC component

☐ Any comments?

Linking: Other GDP components

- ☐ **1st Approach:** Bilateral comparison “World – Iran”
- ☐ **2nd Approach:** Bilateral comparison “Set of countries - Iran”
- ☐ **3rd Approach:** [Iran’s inclusion in the calculation of World PPPs](#)
- ☐ **4th Approach:** Iran’s inclusion in the Asia region

Linking: Aggregation

☐ Any comments?



Thank you