

A world map composed of a grid of small dots, with the dots being more densely packed in some areas and more sparse in others, creating a textured effect.

# PPP Time Series Data

EXPENDITURES, DEFLATORS, CPIs,  
POPULATION & MARKET XRs

**6<sup>th</sup> Meeting of the ICP Inter-Agency Coordination Group**  
**September 25-26, 2018**  
**Washington, DC**

# Assessment of “PPP Time Series” data

## PPP TIME SERIES (2011-2017)

- Fill gap between ICP benchmarks (2011 and 2017)
- Data requirements (time series): expenditures, deflators, CPIs, population and market exchange rates
- Task Force 01 (PPP Computation) will build the PPP time series for the interim period
- Biannual submission of data requirements agreed at the 2nd IACG meeting
- *Task Team* on Data Quality Assurance for the PPP Time Series – UNSD + IMF + WB ICP GIU + WB WDI

# Assessment of “PPP Time Series” data

## STATUS OF SUBMISSIONS (AS OF SEPTEMBER 2018)

- All six regions (AFR, ASI, CIS, EUO, LAC, WAS) have reported or provided updated extrapolation data
- Not all regions sent PPP time series data over the summer; and some regions only submitted data for a subset of countries

## DATE OF LATEST EXTRAPOLATION DATA SUBMISSION (AS OF SEPTEMBER 2018)

AFR	ASI	CIS	EUO	LAC	WAS
Aug. 2018	Mar. 2018	Jul. 2018	Aug. 2018	Aug. 2018	Aug. 2018

# Time Series Data: Reporting Responsibility

Region	ICP 2017 Participation	Time Series Data	Notes for “Time Series Data” Column
Africa	50 <sup>1</sup>	50	-Includes Eritrea, Somalia, South Sudan -Excludes Egypt, Sudan, Morocco
Asia & the Pacific	22	22	
CIS	8	8	-Includes Russia
Eurostat-OECD	51	50	-Includes Colombia, Costa Rica, Georgia and Ukraine -Excludes Russia (reported by CIS)
LAC	37	37	-Excludes Cuba and Venezuela
Western Asia	12 <sup>2</sup>	12	-Excludes Libya and Iran

**Note:** (1) = Includes Egypt, Sudan and Morocco; but excludes Eritrea, Somalia and South Sudan  
 (2) = Excludes Iran and Libya



# **DATA REVIEW: CPIs for PPP TIME SERIES**

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# Data Availability: Detailed CPIs series

- At the request of ICP Task Force 01 (PPP Compilation and Computation) data submission forms were expanded to allow reporting of more detailed CPI data, i.e. below COICOP-12, but following ICP Classification
- First attempt at compiling and including detailed CPI series – hefty exercise for all involved (countries, RIAs, GIU)
- Only three regions submitted detailed CPI series
  - Differences in classification b/w Eurostat and ICP
  - LAC tied by (informal) data confidentiality agreement?

# CPI Series Availability: Headline & COICOP-12

<b>General CPI</b>		# of Country Submissions					
Region (# of countries)	2011	2012	2013	2014	2015	2016	2017
Africa (50)	45	45	45	45	42	26	11
Asia & the Pacific (22)	18	18	18	18	18	16	0
CIS (8)	8	8	8	8	8	8	8
Eurostat-OECD (50)	47	47	47	47	47	47	45
Latin America (14)	13	13	13	13	13	14	13
The Caribbean (23)	21	21	21	21	20	20	18
Western Asia (12)	12	12	12	12	12	12	12

<b>COICOP-12</b>		# of <u>Complete</u> Country Submissions (all 12 indicators)					
Region (# of countries)	2011	2012	2013	2014	2015	2016	2017
Africa (50)	40	41	41	41	38	27	13
Asia & the Pacific (22)	13	13	15	15	15	14	0
CIS (8)	5	5	5	5	6	6	6
Eurostat-OECD (50)	45	46	46	46	47	47	45
Latin America (14)	10	10	10	10	9	10	10
The Caribbean (23)	12	13	13	14	14	14	13
Western Asia (12)	11	11	11	11	11	11	11

# Coverage & Reporting

## CPIs SOURCED FROM ICP REGIONS

- Database completeness improving with each submission round, but gaps still remain for headline CPI (few) and COICOP-12 (many)
- CPI weights rarely reported by most regions
- Indices reported using a non-ICP classification (instead of COICOP-12 and ICP Classification)
- Fiscal year data reported (instead of calendar year)

# Task Team: Quality & other concerns

## CPIs SOURCED FROM ICP REGIONS

- Breaks in series
  - Due to new weights introduced, switch from national CPI classification to COICOP, changes in geographical coverage of CPI, etc.
- Consistency b/w General CPI and COICOP-12
- Geographic coverage of CPI: Urban, National, etc.
  - Does not matter if YoY price movements are the same
  - ‘Urban’ and ‘National’ may refer to expenditures, prices or both
- Other unknown differences across countries
  - Annual index calculation (harmonic mean, arithmetic mean, etc.), index number, sampling differences, geographical, etc. ?
  - Conceptual differences in CPI weights (HES are not harmonized) ?

# Task Team checks: ICP Gen vs. WB WDI Gen

Reported general CPI inflation rates: ICP RIAs versus WB WDI

Country	Year	ICP RIA	WB WDI	Difference
Azerbaijan	2016	12.40	4.18	8.22
Central African Rep.	2014	8.20	25.28	-17.08
Congo, Dem. Rep.	2012	3.70	9.72	-6.02
Comoros	2012	6.30	1.77	4.53
Comoros	2015	2.20	-8.12	10.32
Cambodia	2013	-2.25	2.94	-5.19
Myanmar	2013	8.88	5.52	3.35
Mongolia	2013	12.48	8.60	3.88
Mongolia	2015	1.88	5.78	-3.90
Mozambique	2016	19.85	9.97	9.89
Rwanda	2012	10.27	6.27	4.00
Sudan (AFR)	2013	36.50	29.96	6.54
Sudan (WAS)	2013	36.50	29.96	6.54
Sierra Leone	2012	12.09	6.59	5.50
Sierra Leone	2013	11.14	5.52	5.62
El Salvador	2014	5.03	1.11	3.92
El Salvador	2015	3.13	-0.73	3.86
El Salvador	2016	4.09	0.60	3.48
Suriname	2016	55.50	52.34	3.17
Chad	2012	7.51	14.02	-6.51

Explanation: The table shows those country series for which the general CPI inflation rate reported by the ICP Regional Implementing Agencies (RIAs) differs, by an absolute difference of 3 percentage points of inflation (or more), from the general CPI inflation rate reported by the World Bank World Development Indicators.

Note: World Bank WDI CPI information is sourced directly from the IMF International Financial Statistics database.

Similar checks for *General CPI* (2011-17) against:

- IMF WEO
- IMF (STA) COICOP-12

**Note:** only certain years within a series may be different, but still worth checking the entire series (2011-17)

# Task Team checks: ICP Gen vs ICP COICOP-12

## CPIs submitted by ICP RIAs (based on 2017 submissions)

Counterfactual General CPI (based on COICOP-12) minus Actual General CPI  
(% point difference in General CPI inflation, 2005-2016)

### Distribution of differences (all countries and years)

#### Percentiles Smallest

1%	-3.85	-75.58
5%	-1.84	-17.37
10%	-1.08	-11.05
25%	-0.40	-10.88

50% -0.01

#### Largest

75%	0.30	10.12
90%	0.67	12.24
95%	1.09	34.43
99%	3.42	48.41

Mean -0.11

Std. Dev. 2.95

Variance 8.73

Skewness -8.36

Kurtosis 400.51

### Results in % points of inflation

(+) difference indicates that Counterfactual inflation > Reported inflation

(-) difference indicates that Counterfactual inflation < Reported inflation points

# Task Team checks: CPI Availability

- Recall, TF01 needs a complete a database!
- RIA submitted extrapolation data will always be used when possible. However, if issues remain and/or incomplete then alternative sources will be required to augment and/or fill gaps in the database (we will notify you)

<b>General CPI:</b>							
Data Availability by Region and Source							
<b>Asia and the Pacific</b>							
<b>Number of countries (out of 22)</b>							
	2011	2012	2013	2014	2015	2016	2017
<i>ICP</i>	17	17	17	18	18	16	0
<i>WDI</i>	21	21	21	21	21	21	20
<i>IMF_STA</i>	19	19	19	21	21	21	21
<i>IMF_WEO</i>	22	22	22	22	22	22	22

**Note:** as of September 2018

# Looking ahead

- Please use the submission forms (and do not modify them!)
- If submitted data is being pulled from an internal organizational database and there's API access – let us know (saves us all time)
- Task Team will continue to assess and validate extrapolation database compiled by World Bank ICP GIA
- Hopefully, this can be a two-way process, whereby the Task Team learns from the RIAs; and RIAs used inputs from Task Team to strengthen their understanding of their countries data

