COVID-19 Impact on Macroeconomic Statistics

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Motivation

- The COVID-19 Pandemic and the associated lockdown in most countries impacted the National / International Statistical System in two ways:
  - First like any other business – statistical organizations experienced disruptions to their business model and had to adapt accordingly.
  - Second – the ability of statistical organizations to collect data from households and businesses was severely restricted.

- This survey was developed to measure the impact on the quality and quantity of the statistics produced and released during the COVID-19 pandemic.
Survey on Business Continuity

- **Survey Type**: Census
- **Format**: E-Questionnaire developed by STA and managed by Cvent. Average time to complete was 3 minutes.
- **Operations**: Launched June 8, 2020 and closed on August 8, 2020
- **Non-response follow-up**
  - RCDC RSS Advisors
  - Cvent general and targeted reminders
  - STARE targeted reminder

### Three areas of investigation

**COVID-19 Impact on Operations / Work Arrangements**
- Proportion of staff working remotely during and after lockdown
- Access to internal systems
- Technology used for communication and management
- Use of personal equipment, data plans, etc.

**COVID-19 Impact on Data Quality**
- Data collection and new methods implemented
- New statistical methods implemented
- Revisions

**COVID-19 Impact on Dissemination**
- Delays
- Informing users
- New data series or analysis introduced
Responses received from 155 national statistical offices

Responses by module (number of countries)
- CPI – 132
- PPI - 85
- XMPI - 58
- QNA - 112
- LFS - 64
- Emp - 24
- HBS - 52

% of Total Responses

Response by Region

AFR (Africa); APD (Asia and Pacific); EUR (Europe); MCD (Middle East and Central Asia); WHD (Western Hemisphere)
Operational Impacts: For 31% of NSOs, all CPI staff were working remotely during the lockdown.

89% of NSOs working remotely noted CPI staff use personal equipment and services to perform work functions.

AFR (Africa); APD (Asia and Pacific); EUR (Europe); MCD (Middle East and Central Asia); WHD (Western Hemisphere)
Operational Impacts: 81% of all NSOs reported working remotely during lockdown – varies across regions

Fewer than 25% of staff working remotely during lockdowns

(57% of NSOs in AFR)

More than 75% of staff working remotely during lockdowns

(77% of NSOs in EUR)

AFR (Africa); APD (Asia and Pacific); EUR (Europe); MCD (Middle East and Central Asia); WHD (Western Hemisphere)
Operational Impacts: 51% of staff had full access to data and systems but this was uneven across regions.

Nearly 70% used messaging and videoconferencing apps for communication, organization, and management.
Data Quality: Only 10% of NSOs reported that the pandemic had no impact on CPI data collection activities.

- CPI - % of NSOs reporting closure of non-essential outlets

  - WHD
  - MCD
  - EUR
  - APD
  - AFR

AFR (Africa); APD (Asia and Pacific); EUR (Europe); MCD (Middle East and Central Asia); WHD (Western Hemisphere)
Data Quality: NSOs reported acquiring new data sources or introducing new collection modes in response to impact on data collection activities.

**Consumer Price Index**

71% of NSOs adopted new methods to collect prices – primarily phone, email, and online presence of sampled outlets.

**Quarterly National Accounts**

82% of NSOs adopted new data sources to compile QNA estimates – nearly 50% report using administrative data for first time.

% of NSOs adopting new methods by region:

- AFR (Africa)
- APD (Asia and Pacific)
- EUR (Europe)
- MCD (Middle East and Central Asia)
- WHD (Western Hemisphere)
Data Quality: The majority of NSOs indicated that they anticipate revisions to be routine – although this is uneven across regions

**Consumer Price Index**

85% report no revisions to be made

**Quarterly National Accounts**

Majority expect routine revisions, but nearly 40% expect larger than normal revisions

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**Count of NSOs that will revise CPI**

- WHD
- MCD
- EUR
- APD
- AFR

**Count of NSOs - larger than normal revisions**

- WHD
- MCD
- EUR
- APD
- AFR

AFR (Africa); APD (Asia and Pacific); EUR (Europe); MCD (Middle East and Central Asia); WHD (Western Hemisphere)
Dissemination: Most NSOs released data on time. Less than 10% of the NSOs reported suppressing some data due to quality concerns.
Innovations

Statistical organizations were not only able to address their operational challenges they were also able to introduce a number of innovations.

The weekly change in prices of essential goods during the COVID-19 lockdown

Week 5

<table>
<thead>
<tr>
<th>Product groups</th>
<th>Food and non-alcoholic beverages (NAS)</th>
<th>Food and NAB – all categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>All essential products</td>
<td>-0.1%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>0.4%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Food and NAB</td>
<td>-0.7%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>Household maintenance</td>
<td>-1.2%</td>
<td>-0.7%</td>
</tr>
<tr>
<td>Health</td>
<td>-1.3%</td>
<td>Food</td>
</tr>
<tr>
<td>Recreation</td>
<td>-1.6%</td>
<td>Non-alcoholic beverages</td>
</tr>
</tbody>
</table>

Cumulative for the entire period 2–30 April

<table>
<thead>
<tr>
<th>Essential Products CPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of scanner data to illustrate the impact of panic buying</td>
</tr>
<tr>
<td>Enhanced data sharing agreements</td>
</tr>
<tr>
<td>Release of inflation calculators</td>
</tr>
<tr>
<td>Introduction of an API to facilitate access to data</td>
</tr>
</tbody>
</table>
Country Dashboard – Impact of COVID-19 on statistical operations

Switzerland

Percent working remotely (lockdown): 75%
Percent working remotely (currently): 75%

Release Schedule:
CPI: No delay in release
PPI: No delay in release
XMPI: No delay in release
LFS: No delay in release
Emp: No delay in release

Zimbabwe

Percent working remotely (lockdown): 0%
Percent working remotely (currently): 0%

Release Schedule:
CPI: Delayed 8-14 days
PPI: No delay in release
LFS: Data collection suspended
HBS: No delay in release – data for 9 months to be compiled

Consumer Price Index

The outbreak of COVID-19 (Coronavirus) and measures implemented to limit its spread have impacted the routine compilation and dissemination of official statistics. The collection of official data has become increasingly difficult with the temporary closure of non-essential businesses and some public offices and restrictions of movement.

Missing source data will potentially affect the compilation of price statistics, balance of payments, national accounts data, and other official statistics. Below describes the impact the COVID-19 pandemic is having on the timeliness, frequency and quality of our data products.

Consumer Price Index

Business operations: 100 percent of staff worked remotely during the lockdown

Currently, 100 percent of staff are working remotely

Release Schedule:
No delay in release

Data Collection:
Prices are being collected in essential outlets that are open, Non-essential outlets are temporarily closed, Prices are being collected from 25% - 50% of all open outlets

New data collection methods implemented:
We began collecting prices from the online presence of sampled outlets, We began collecting prices via phone, We began collecting prices via email, We began using administrative data source, e.g. regulators or ministries

New sources and methods used include:
Impute missing indexes

Accessibility/Reliability: Data disseminated at a detailed level

Revisions:
Data will not be revised

For more information please see www.NSOMaryland.gov or send email to CPIContract@NSOMaryland.gov.
CPI Metadata Survey

Annual collection of detailed CPI methods
- Replaces ad hoc collection of CPI metadata for CPI database

Online collection launched in 2020
- Survey link sent every January to CPI contacts

Metadata collected include
- Coverage
- Reference periods
- Sampling methods
- Price collection sources and methods
- Index calculation methods
- Treatment of missing prices
- QA methods
- OOH and more
CPI Metadata Survey

2019 Metadata Survey (late 2020) – 179 respondents

2020 Metadata Survey (January 2021) – 206 respondents

Metadata will be posted on the CPI database by early 2021

Annual collection facilitates analysis of improved methods across time

▪ Assess the sustainability of methods and products introduced in response to COVID-19
Substantial increase in the use of alternative data sources for the collection of prices in 2020
Implementation of COICOP 2018 and Frequency of weight updates

**COICOP 2018**

<table>
<thead>
<tr>
<th>Year</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>10</td>
</tr>
<tr>
<td>2020</td>
<td>20</td>
</tr>
</tbody>
</table>

**FREQUENCY OF WEIGHT UPDATES 2020**

- Annual: 47%
- 2 years: 28%
- 5 years: 3%
- More than 5 years: 22%