STATISTICS

Quarterly National Accounts: Overview of the implementation in Latin America and the Caribbean and IMF compilation resources.

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Outline

- ***2008 SNA* update and 2017 IMF QNA Manual**

- **Overview of the implementation of the QNA in Latin America and the Caribbean**
  - SNA vintage.
  - Benchmark revisions.
  - QGDP by the production and expenditure approaches.
  - Timeliness of the QNA.
  - Index formula for QNA volume measures.
  - Seasonally adjusted QNA series.
  - Quarterly Institutional Sectoral Accounts.

- **IMF resources**
  - IMF QNA course
  - Update of the 2017 IMF QNA Manual

2008 SNA update and the *QNA*

A number of the planned updates to the 2008 SNA have implications for the compilation of Quarterly National Accounts.

Some of the key issues that impact the Quarterly National Accounts include:

✓ **Expansion of the Asset Boundary**: recording of data, accounting of biological resources, renewable energy resources.

✓ **Updated Financial Corporations sub-sectors:** better reflecting activities such as nonbank financial intermediation.

✓ **Updated Financial instruments:** financial derivatives, fintech, valuation of debt securities and loans, crypto assets.

✓ **Informal economy:** statistical framework on informality focused on the economic unit perspective.

✓ Changes coming from the update of the **BPM6** impacting the RoW account.
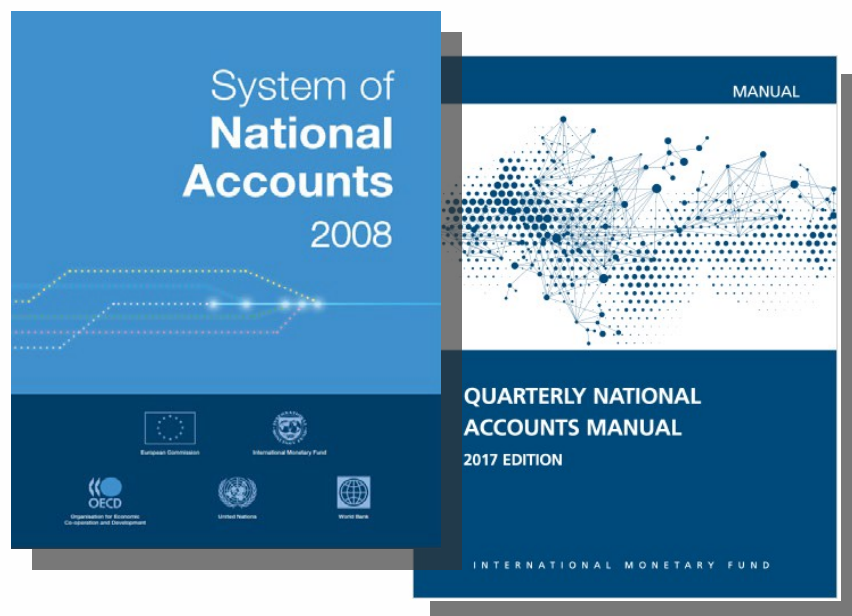
Overview of the implementation of the QNA at global level and in Latin America and the Caribbean based on the

2021- Annual Global Survey on the SNA Statistical Programs

Implementation of the SNA

World-

Of the 206 economies included in the IMF National Accounts survey, **68 percent** have indicated implementing the 2008 SNA (including ESA 2010).

**26 of the 41 LAC** economies (65%) indicated they have implemented the 2008 SNA.
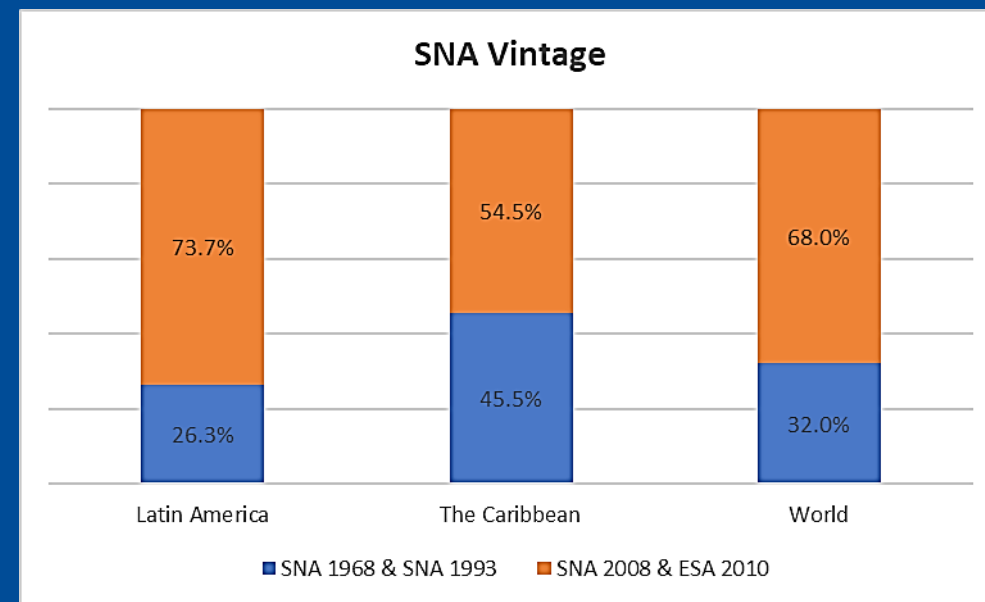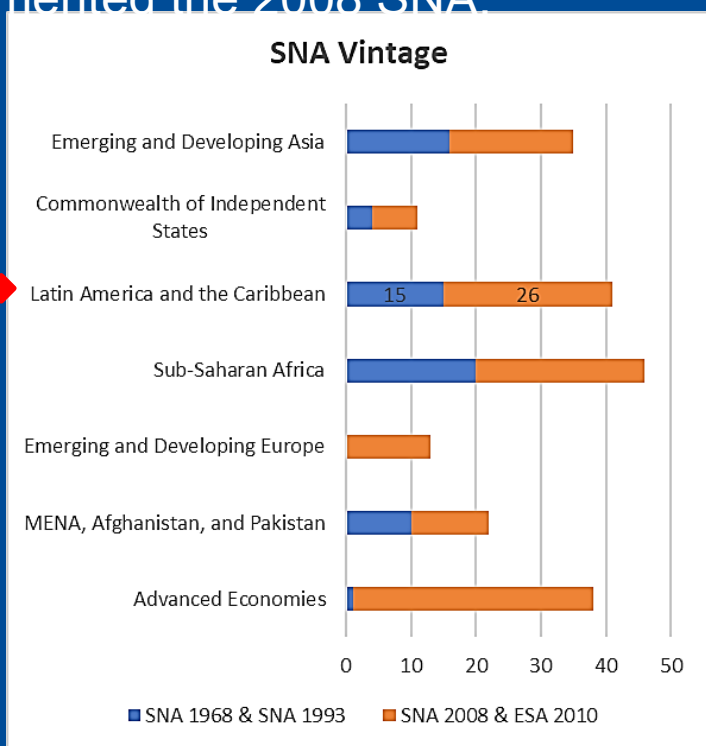
LAC-

By LAC subregions, **74 percent** of the Latin American economies have implemented the 2008 SNA. While in the Caribbean economies, this ratio is **55 percent**.

Benchmark revisions

World - 59 percent of the surveyed economies (122 economies) have rebased their national accounts within the last 10 years.

LAC - 42 percent of the Latin American have rebased their national accounts in the last 10 years compared to **62 percent** of the Caribbean economies.
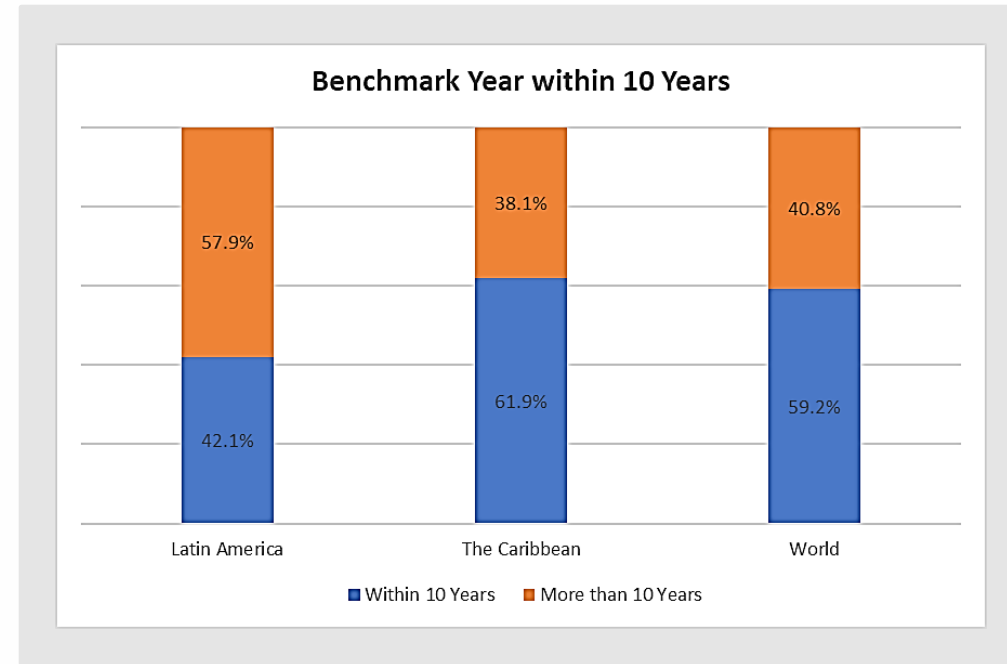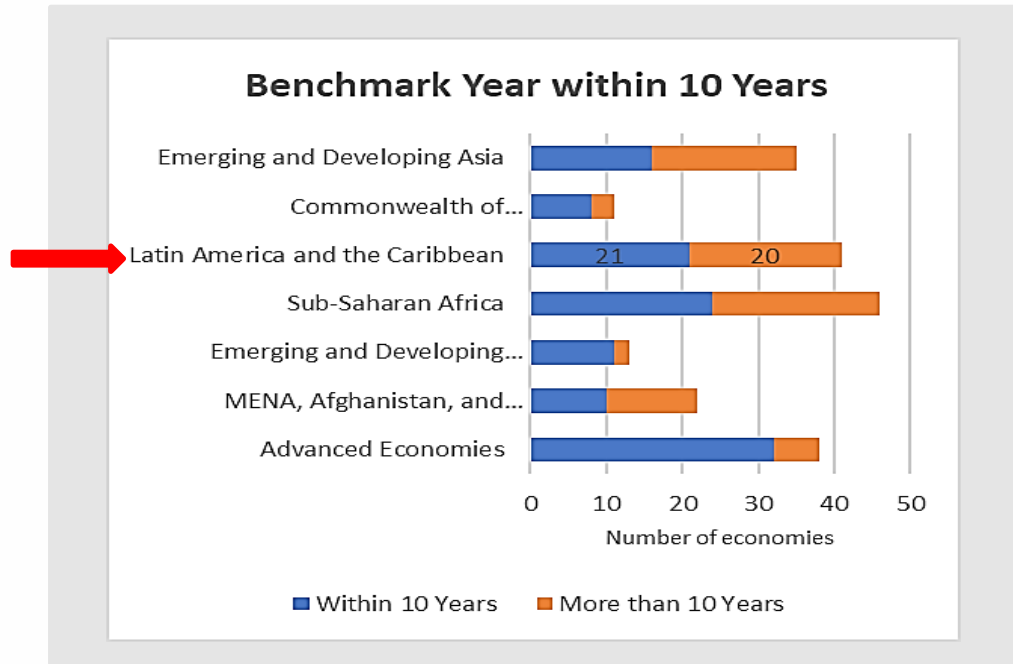
QGDP by Production and Expenditure approaches

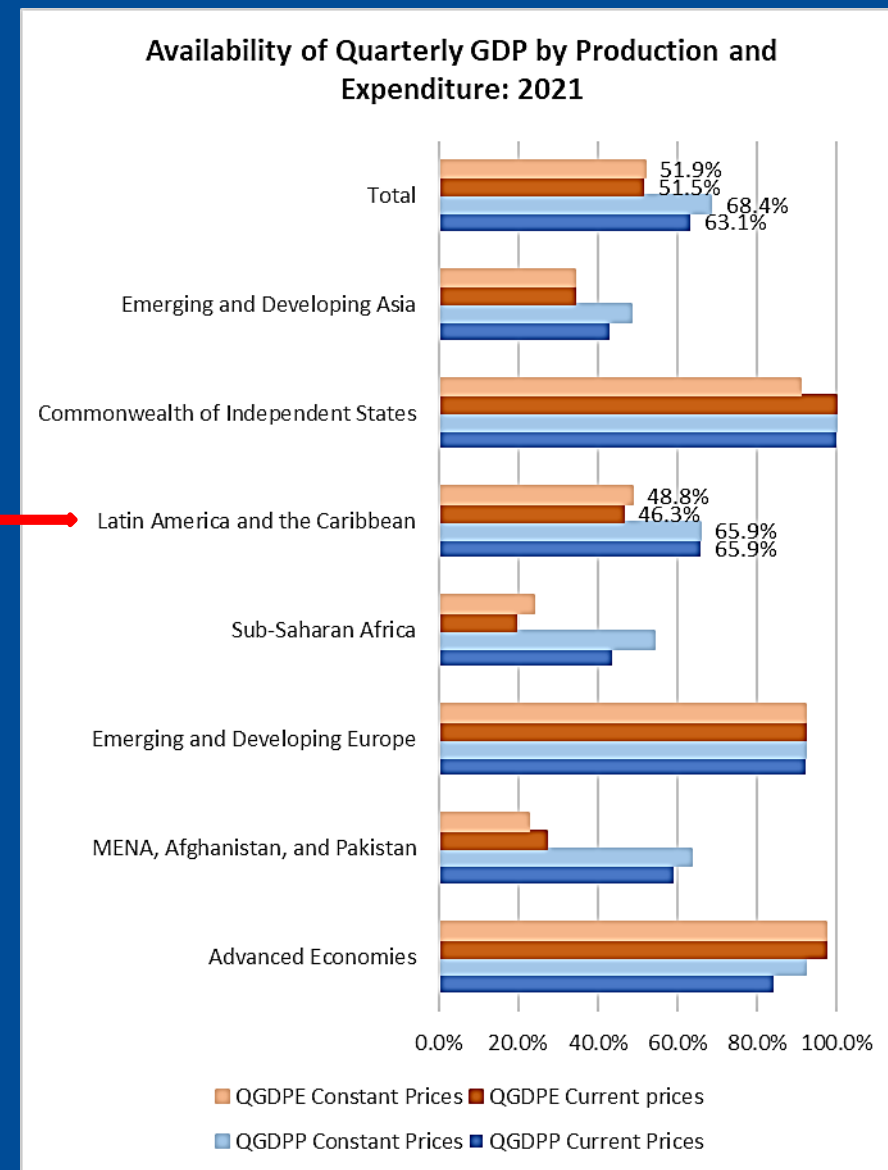**World - 69 percent** of economies compile estimates of constant price QGDP according to the production approach, **52 percent** compile estimates of constant price QGDP according to the expenditure approach.

LAC - 18 economies in Latin America and **9** in the Caribbean (**70%**) compile QGDP according to the production approach in current and constant values.

LAC: Availability of Quarterly GDP by Production and Expenditure - 2021

Availability of Quarterly GDP by Production and Expenditure: 2021
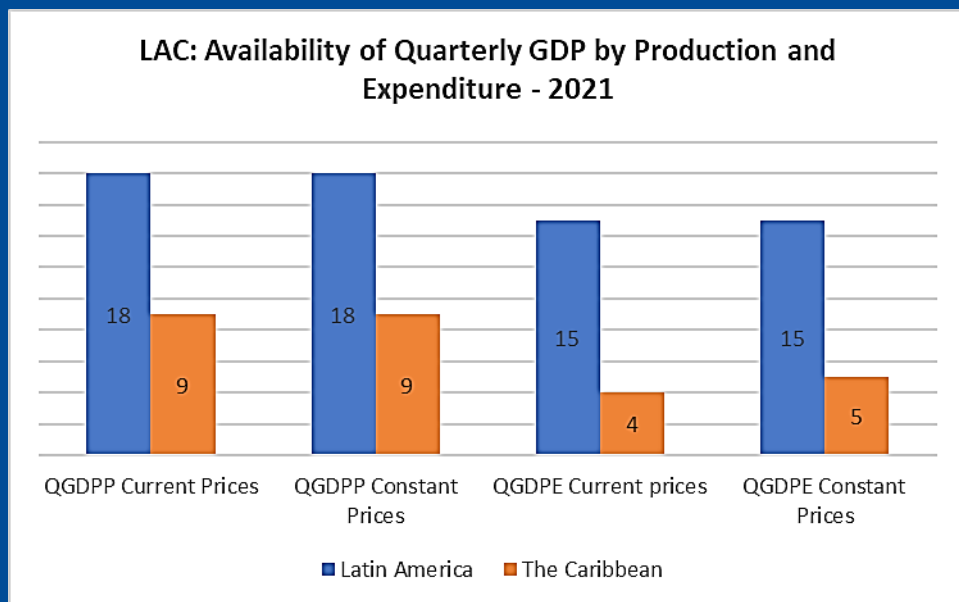
Timeliness of the QGDP

World - 80 percent of economies compiling QGDP meet the IMF's SDDS timeliness targets.

LAC - 15 Latin American and **5** Caribbean economies (**74%**) release their first estimates of QGDP within 90 days of the reference period.

LAC: Timeliness of Quarterly GDP

Timeliness of Quarterly GDP
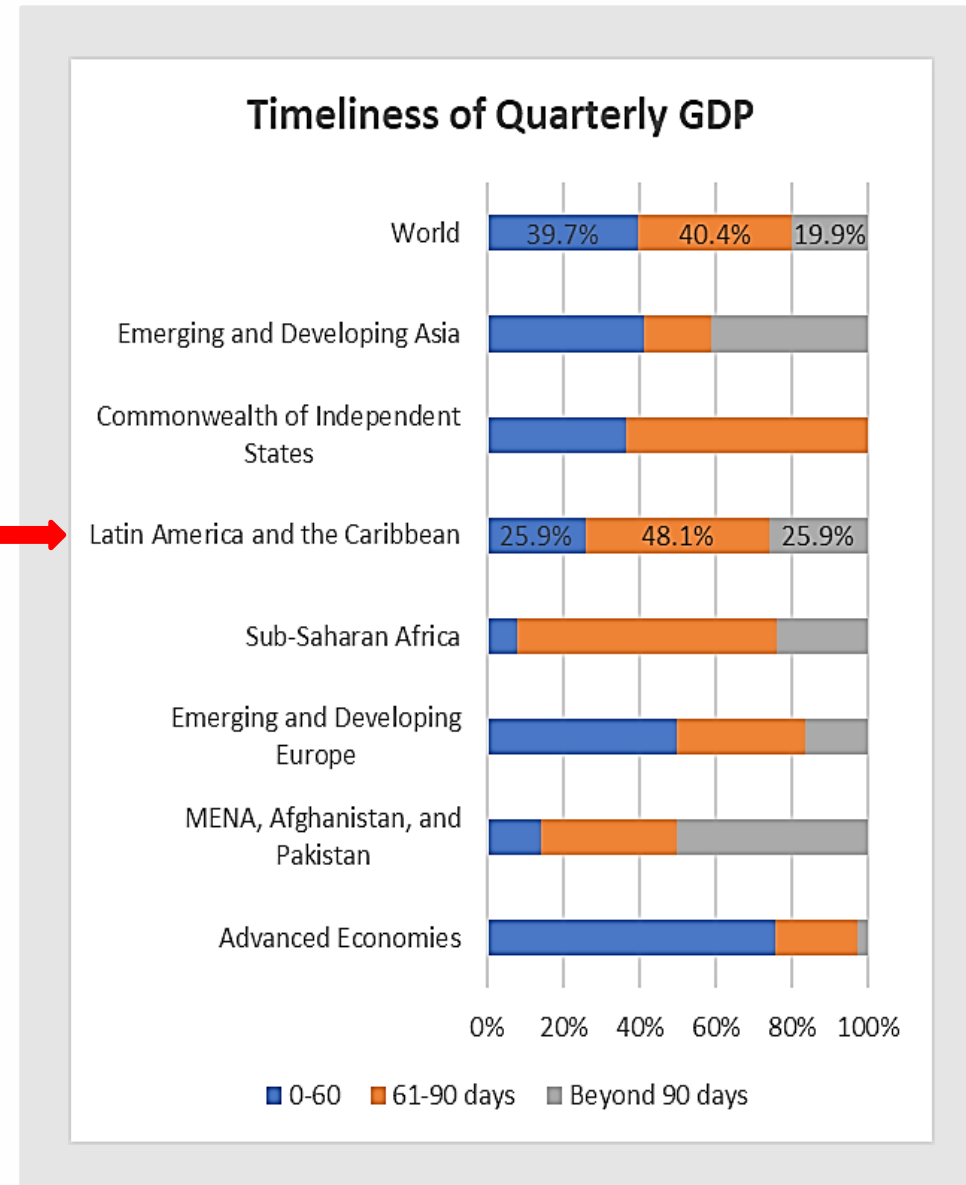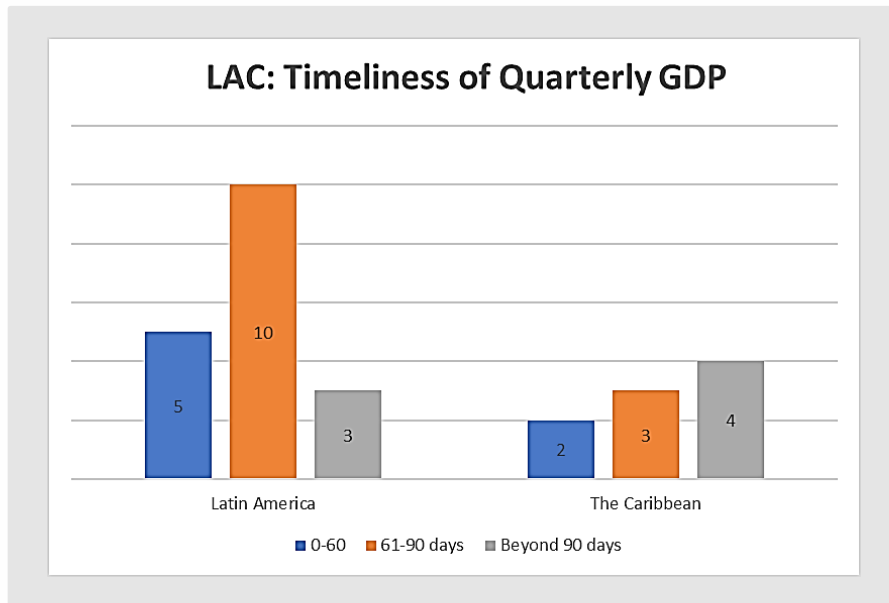
Index formula for QNA volume measures

Index formula used for quarterly volume measures - GDP by production

Region	Chained Fisher / Chained Laspeyres / Fixed weight Laspeyres
World	53.7% / 44.1%
Latin America and the Caribbean	37.0% / 63.0%

Globally, **44 percent** of the economies indicated they use a fixed weighted Laspeyres formula to estimate constant price GDP.

LAC-

50 percent of the Latin America subregion use a chained Laspeyres previous year price formula to estimate constant price GDP.
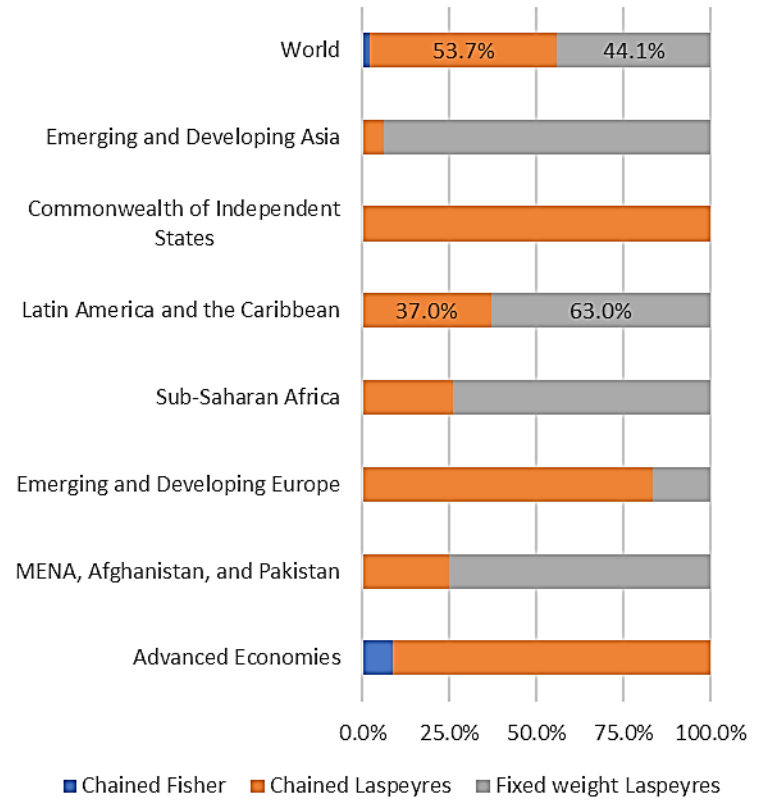
89 percent of economies in the Caribbean subregion use the fixed weight Laspeyres formula.

Index formula used for quarterly volume measures - GDP by production

	Latin America	The Caribbean	World
Chained Laspeyres and Chained Fisher	50.0%	11.1%	55.9%
Fixed weight Laspeyres	50.0%	88.9%	44.1%
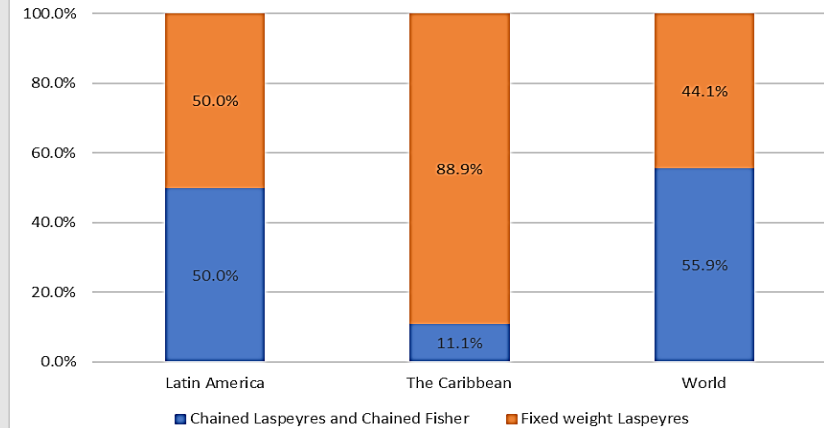
Seasonal adjusted QNA series
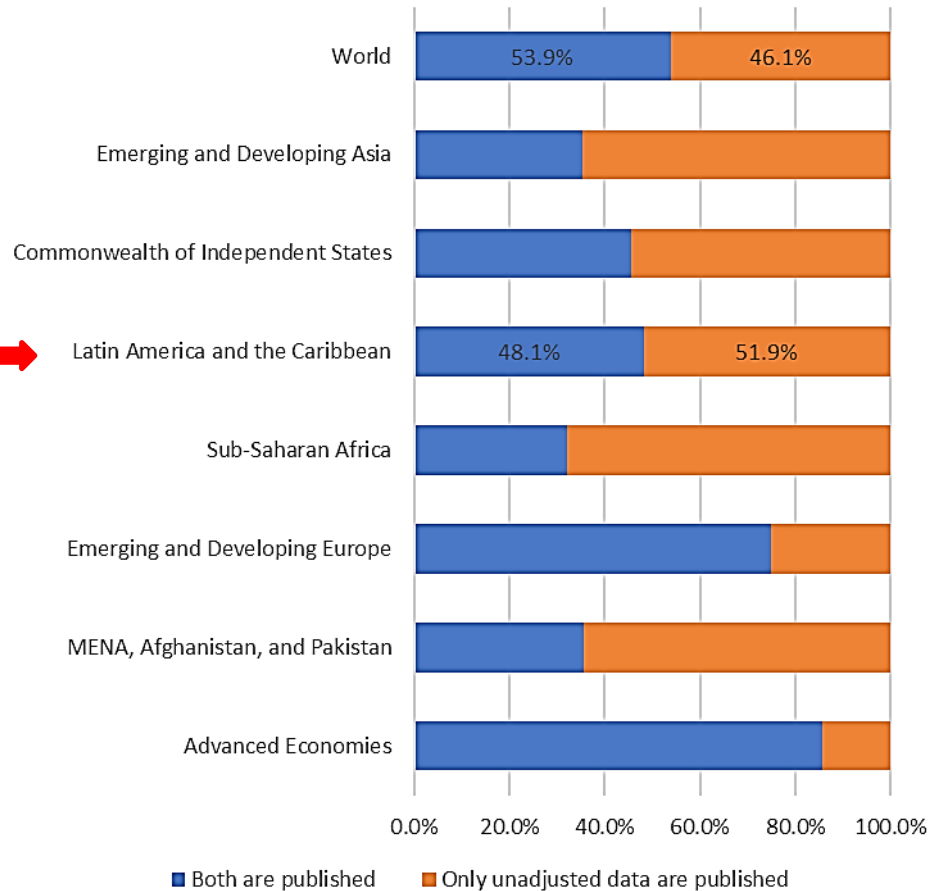
World - 54 percent of the economies that compile QNA disseminate Seasonally Adjusted series.

LAC - 67 percent of economies in the Latin America subregion and **11 percent** of the Caribbean economies publish Seasonally Adjusted series.
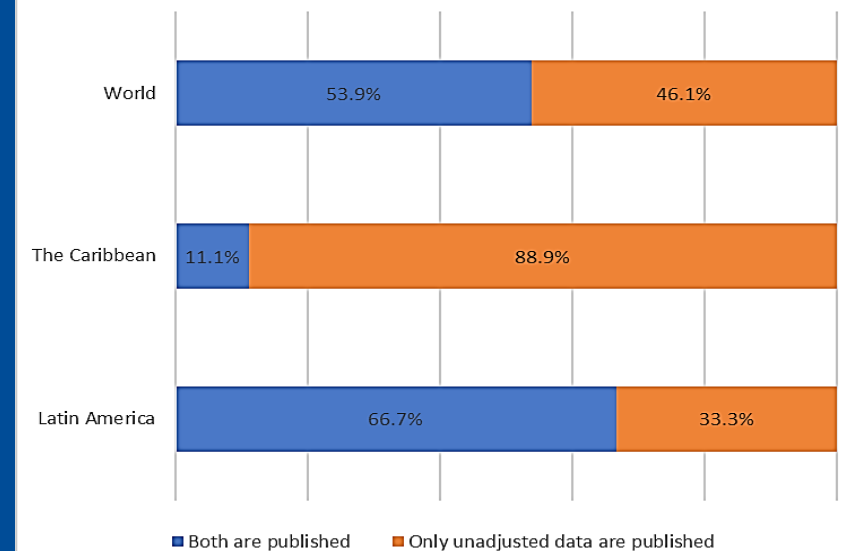
Quarterly Institutional Sector Accounts

World - 107 economies compile annual Institutional Sector Accounts and **31** compile quarterly Institutional Sector Accounts.

LAC – Currently, **4** Latin American economies disseminate quarterly Institutional Sector Accounts, and **5** Caribbean economies reported to compile annual ISA.

Institutional Sector Accounts

Bar chart titled "Institutional Sector Accounts" showing number of economies (Quarterly in orange, Annual in blue) by region:
- Emerging and Developing Asia
- Commonwealth of Independent States
- Latin America and the Caribbean (Quarterly: 4, Annual: 15)
- Sub-Saharan Africa
- Emerging and Developing Europe
- MENA, Afghanistan, and Pakistan
- Advanced Economies

X-axis: Number of economies (0–35)

Legend: ■ Quarterly ■ Annual

Update on IMF Resources to support the compilation of Quarterly National Accounts

IMF Online Training in Real Sector Statistics

National Accounts Statistics

IMFx

Course

Consumer Price Index

IMFx

Course

Quarterly National Accounts and High-Frequency Indicators of Economic Activity

IMFx

Course
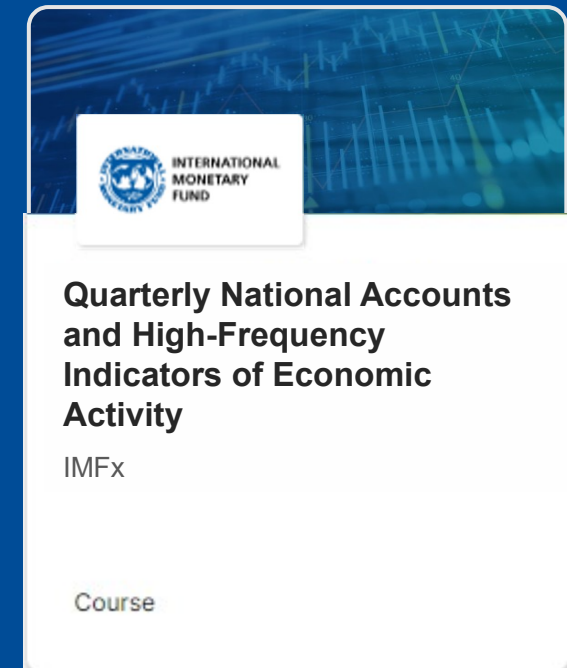
Available

English version available as part of the IMF Online Training Catalog
https://www.imf.org/en/Capacity-Development/Training/ICDTC.

Spanish version under development for NAS and to be developed for CPI.

Under Development

QUARTERLY NATIONAL ACCOUNTS AND HIGH-FREQUENCY INDICATORS OF ECONOMIC ACTIVITY (QNAx)

- Organized in 6 Modules, covering:

 ▶ Module 1: **Scope and Role** of QNA and HFIEAs

  ▶ Module 2: **Data Sources** for QNA and HFIEAs

  ▶ Module 3: **Price and Volume** Measures

  ▶ Module 4: Introduction to **Benchmarking and Data Gaps**

  ▶ Module 5: Introduction to **Seasonal Adjustment**

  ▶ Module 6: Dissemination, **Revisions Analysis**, and Users

- Developed with the support of the **Data For Decisions (D4D) Fund**

Outline of topics covered in the course

Module 1	Module 2	Module 3
Scope and Role of QNA and HFIEAs	Data Sources for QNA and HFIEAs	Price and Volume Measures

| Module 4	Module 5	Module 6
Introduction to Benchmarking and Data Gaps	Introduction to Seasonal Adjustment	Dissemination, Revisions Analysis, and Users
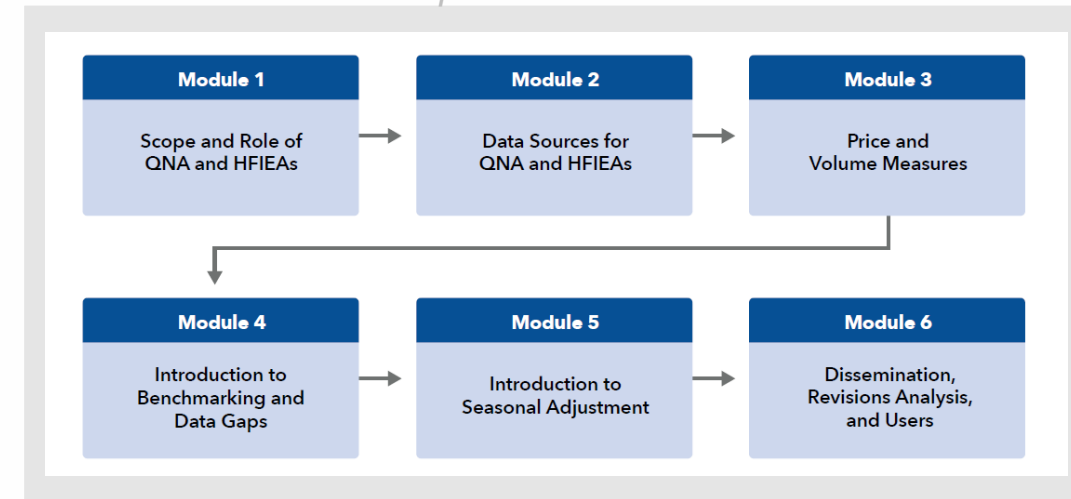
D4D Partners

QUARTERLY NATIONAL ACCOUNTS AND HIGH-FREQUENCY INDICATORS OF ECONOMIC ACTIVITY (QNAx)

- Based on the recommendations of the **2017 IMF QNA Manual**
  - ► Targeted for QNA and HFIEA compilers and users
  - ► Designed as introductory level
  - ► Additional numerical and graphical examples

- **Content** includes:
  - ► Videos
  - ► Clear explanations of the topics with the help of examples and graphs
  - ► Learning activities
  - ► Quiz

- **Timeline**:
  - ► To be available in late 2022/early 2023.

Example of course animation
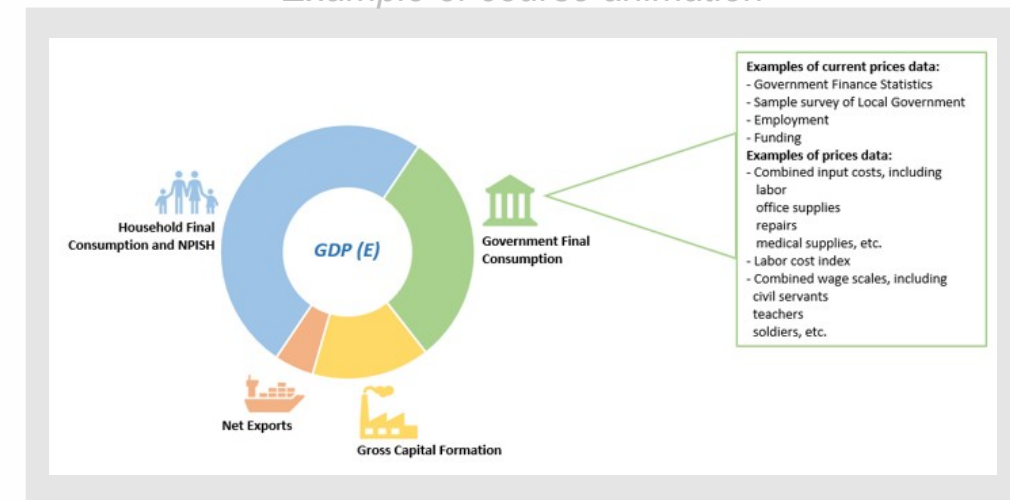
Example of course learning activity

	2017	2018	2019	2020	2021
Index (reference period 2017=100)	100	140	180	200	240
New Index (reference period 2020=100)	?	?	?	100	?

QUARTERLY NATIONAL ACCOUNTS AND HIGH-FREQUENCY INDICATORS OF ECONOMIC ACTIVITY (QNAx)

- Some examples of learning activities in the course.

Use the following table showing production by a fruit grower to answer all three questions provided below in this learning activity.

Quantity and price data for all problems in Learning Activity 2

2020

Product	Quantity	Price per unit
Bananas	1000 kg	$ 2.00
Mangos	300 kg	$ 6.00
Oranges	600 kg	$ 4.00

2021

Product	Quantity	Price per unit
Bananas	500 Kg	$ 3.00
Mangos	600 Kg	$ 5.00
Oranges	500 Kg	$ 4.00

1. What is the Laspeyres volume index for 2021 in comparison to the 2020 base period?
   A. 0.942
   B. 0.985
   C. 1.048
   D. 1.065
   E. 1.113

1. Which of the following is one of the main objectives of QNA compilation?
   A. A key objective for QNA is to cover the whole economy on an accurate basis, while being timely.
   B. A key objective for QNA is to forecast the evolution of the GDP.
   C. A key objective for QNA is to produce accurate annual data.
   D. A key objective for QNA is to give users comprehensive information, necessarily with the same detail as the annual national accounts estimates.

3. Which of the following is an example of a moving holiday effect? (**Select the best response**)
   a. XYZ Corporation pays its employees their wages weekly on Fridays. In 2020 there were 52 Fridays, whereas in 2021 there were 53 Fridays.
   b. In 2019, February had 28 days, whereas in 2020, February had 29 days.
   c. A home moving (removals) corporation announced that May is "national moving month."
   d. In 2021, the Passover holiday began on March 27, whereas in 2022, it began on April 15.

- Some examples of learning activities in the course.

Use the following table showing production by a fruit grower to answer all three questions provided below in this learning activity.

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1. What is the Laspeyres volume index for 2021 in comparison to the 2020 base period?
   A. 0.942
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   D. 1.065
   E. 1.113

Feedback: D is correct. The numerator of the Laspeyres volume index is the sum of 2021 quantities valued at 2020 prices, and the denominator is the sum of 2020 quantities valued at 2020 prices. The numerator is 500 × $2 + 600 × $6 + 500 × $4 = $6,600. The denominator is 1,000 × $2 + 300 × $6 + 600 × $4 = $6,200. The ratio of $6,600 to $6,200 is 1.065.

1. Which of the following is one of the main objectives of QNA compilation?
   A. A key objective for QNA is to cover the whole economy on an accurate basis, while being timely.
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Feedback: A is correct. A key objective for QNA is to cover the whole economy on an accurate basis, while being timely and how to make the trade-off between timeliness and accuracy is the central issue behind the detailed sources and methods discussed in Module 2.

3. Which of the following is an example of a moving holiday effect? (**Select the best response**)
   a. XYZ Corporation pays its employees their wages weekly on Fridays. In 2020 there were 52 Fridays, whereas in 2021 there were 53 Fridays.
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   c. A home moving (removals) corporation announced that May is "national moving month."
   d. In 2021, the Passover holiday began on March 27, whereas in 2022, it began on April 15.

Feedback: D is correct. Holidays such as the Passover, Lunar New Year, Ramadan, and Easter occur on different dates each year. These holidays may be associated with increases or decreases in certain types of economic activity.

Update on IMF QNA Manual

- **2017 IMF QNA Manual**
  - Available at https://www.imf.org/external/pubs/ft/qna/
  - Currently English and Russian versions are available

- **Spanish version**:
  - Collaboration effort among LAC agencies (NSOs and Central Banks) and IMF
  - Ongoing revision work to harmonize terminology
  - Next phases include:
    - Final revision
    - Editorial work
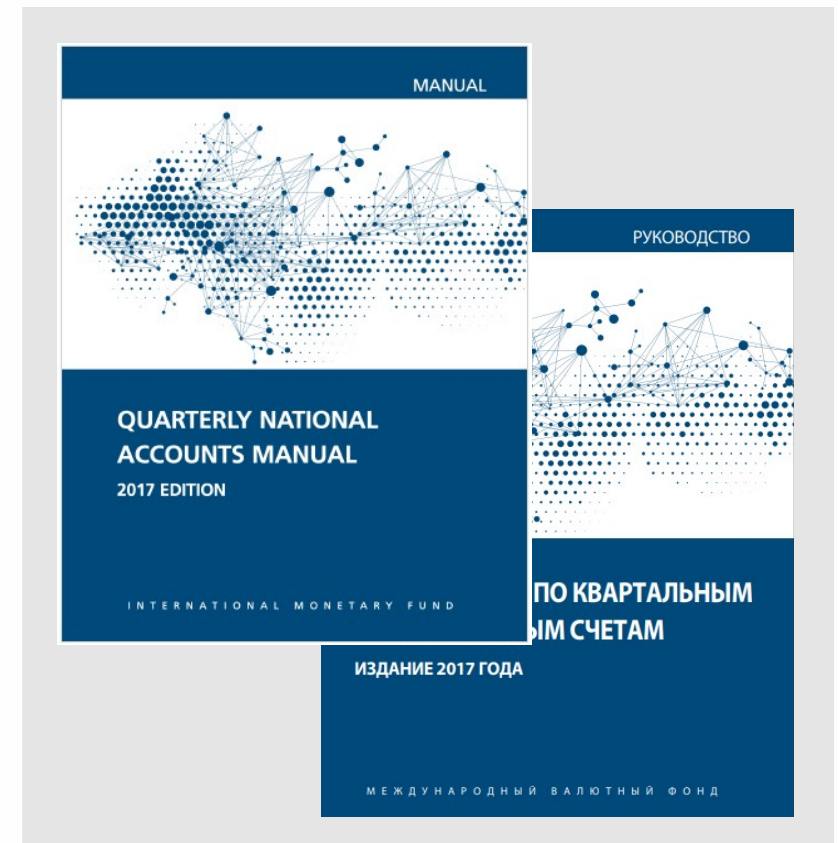
Update on IMF QNA Manual

- **2017 IMF QNA Manual – Next update**
  - ➤ Envisioned to take place after the publication of the updated SNA (i.e., after 2025).

  - ➤ SNA update may reflect on the need to update specific chapters of the IMF QNA Manual; more substantial updates envisioned include:
    - Chapter 3. Sources for GDP and Its Components
    - Chapter 4. Sources for Other Components of the 2008 SNA
    - Chapter 10. Early Estimates of Quarterly GDP
    - Chapter 11. Work in Progress
    - Chapter 12. Revisions

  - ➤ Chapters on QNA techniques (benchmarking, seasonal adjustment, chain-linked volume measures) may not be directly affected by the SNA update and have a lighter update.

  - ➤ Fully digital publication.

Thank you.

References

[System of National Accounts 2008 (imf.org)](#)

[Quarterly National Accounts Manual - 2017 Edition (imf.org)](#)

[System of National Accounts](#): **List of Guidance Notes for the 2008 SNA Update**

https://www.imf.org/en/Publications/WP/Issues/2018/03/02/The-Status-of-GDP-Compilation-Practices-in-189-Economies-and-the-Relevance-for-Policy-45669

https://www.imf.org/en/Publications/WP/Issues/2022/02/11/2020-Global-Stocktaking-of-National-Accounts-Statistics-Availability-for-Policy-and-513070

https://www.imf.org/en/Capacity-Development/Training/ICDTC/Schedule/OL/2022/NASxOL22-169

https://www.imf.org/en/Capacity-Development/Training/ICDTC/Schedule/OL/2022/CPIxOL22-199