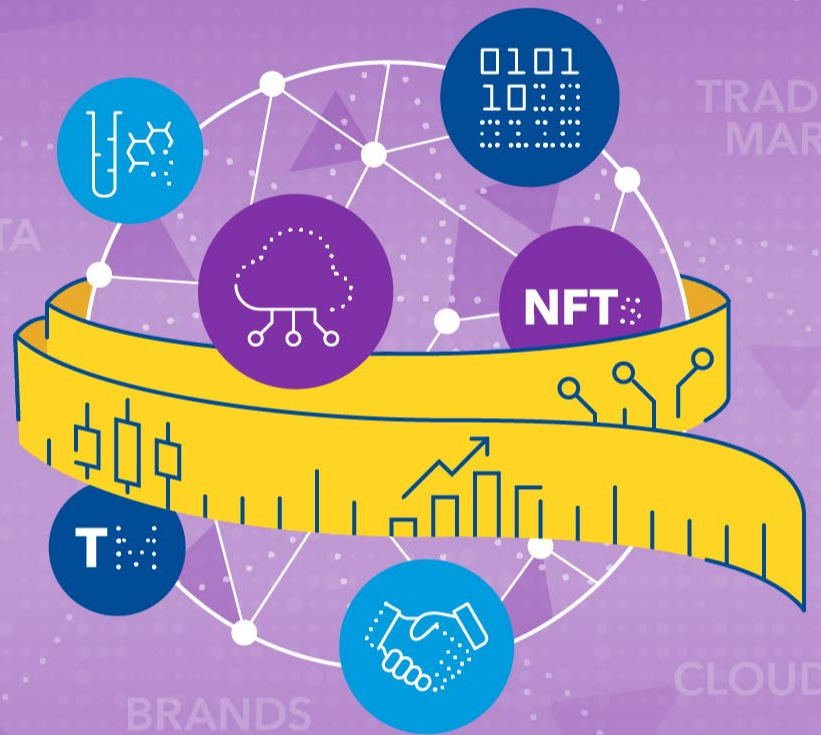


10TH

IMF
Statistical
Forum

META
VERSE

TRADE
MARK



MEASURING THE TANGIBLE BENEFITS OF INTANGIBLE CAPITAL



STATISTICS

Intangible Capital in the Update of the Macroeconomic Standards

NOVEMBER 16, 2022

Jennifer Ribarsky
IMF Statistics Department

The views expressed are those of the presenter and should not be attributed to the IMF, its management or its Executive Directors.

Presentation outline

- Why update the System of National Accounts (SNA) and Balance of Payments Manual (BPM)?
- What intangible capital is currently included in the SNA and BPM?
- How are the SNA and BPM changing?
- What are the challenges?
- What are the implications for key macroeconomic aggregates?
- What are the next steps?

Update of the SNA and BPM

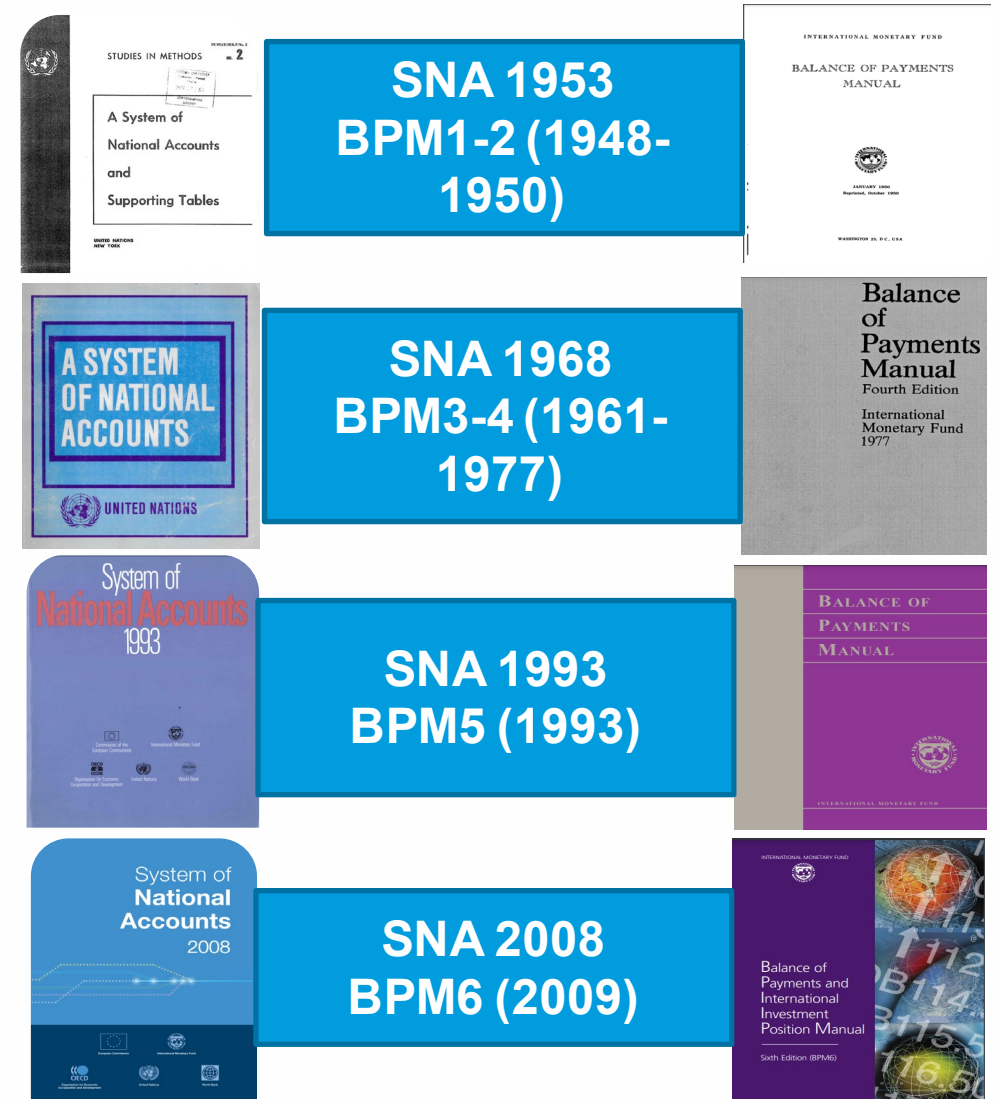
What do the following have in common.....

- ✓ Youtube
- ✓ iPhone
- ✓ Google Assistant
- ✓ Twitter
- ✓ Instagram
- ✓ Uber
- ✓ AirBnB

All of these rose to prominence after 2006 – well after decisions regarding the 2008 SNA and BPM6 updates had been determined.

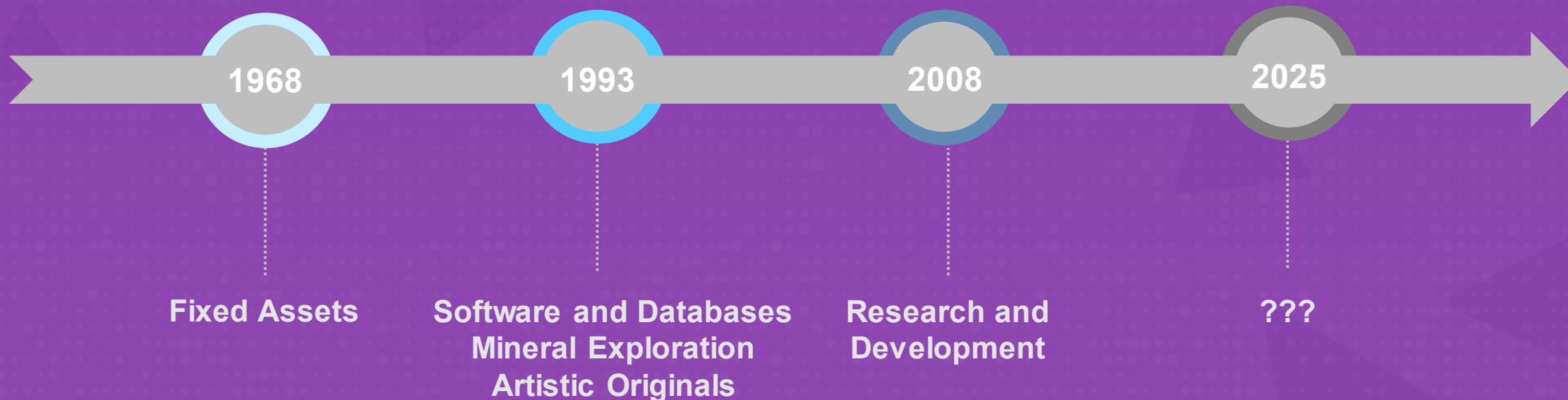
Updating macroeconomic accounting standards

- Macroeconomic accounting standards are regularly updated **to reflect changes in the economy**
- The “updates” can be categorized into three main groups:
 - 1. Conceptual Updates** (i.e., change in what is measured)
 - 2. Methodological Updates** (i.e., change in how activities are measured)
 - 3. Presentational Updates** (i.e., change in how the statistics are presented)
- **The proliferation and increased importance of intangible capital in today’s economy is one of the drivers behind the 2025 update.**



What intangible capital is currently included?

Intangible capital currently in the SNA and BPM



Intellectual property products

- Research and development
- Mineral exploration and evaluation
- Computer software and databases
- Entertainment, literary and artistic originals
- Other intellectual property products

The COVID-19 vaccine, Microsoft Office, location of mineral reserves, the Avengers movies all currently fall within the SNA / BPM asset boundary

Update of the SNA and BPM: Intangible Capital and Digitalization

The Digital Revolution: Widespread economic implications

Data, Artificial Intelligence

Autonomous Vehicles



Farm Hand (+)	Farmer (-)
\$80	\$100
Supplies	
\$20	

✓ Data driven artificial intelligence (AI) is having a significant impact on labor markets and productivity across all sectors of the economy.

APP subscription (-)	Farmer (+)
\$20	\$30
Supplies	
\$10	



The Digital Revolution: Widespread economic implications

Data, Data Analytics

Data

JOEL LINDSEY DEAR 01.13.16 08:55 AM
THE NFL IS FINALLY TAPPING INTO THE POWER OF DATA

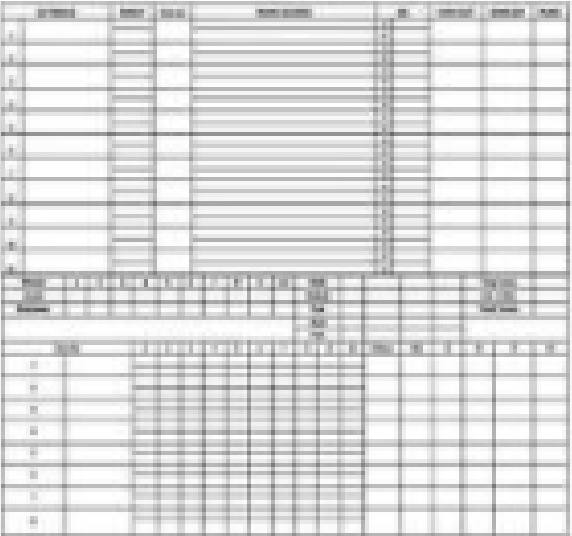


Managing a Sports Team – Yesterday

Scorekeeper (+)	Team Owner (-)
\$10	\$10

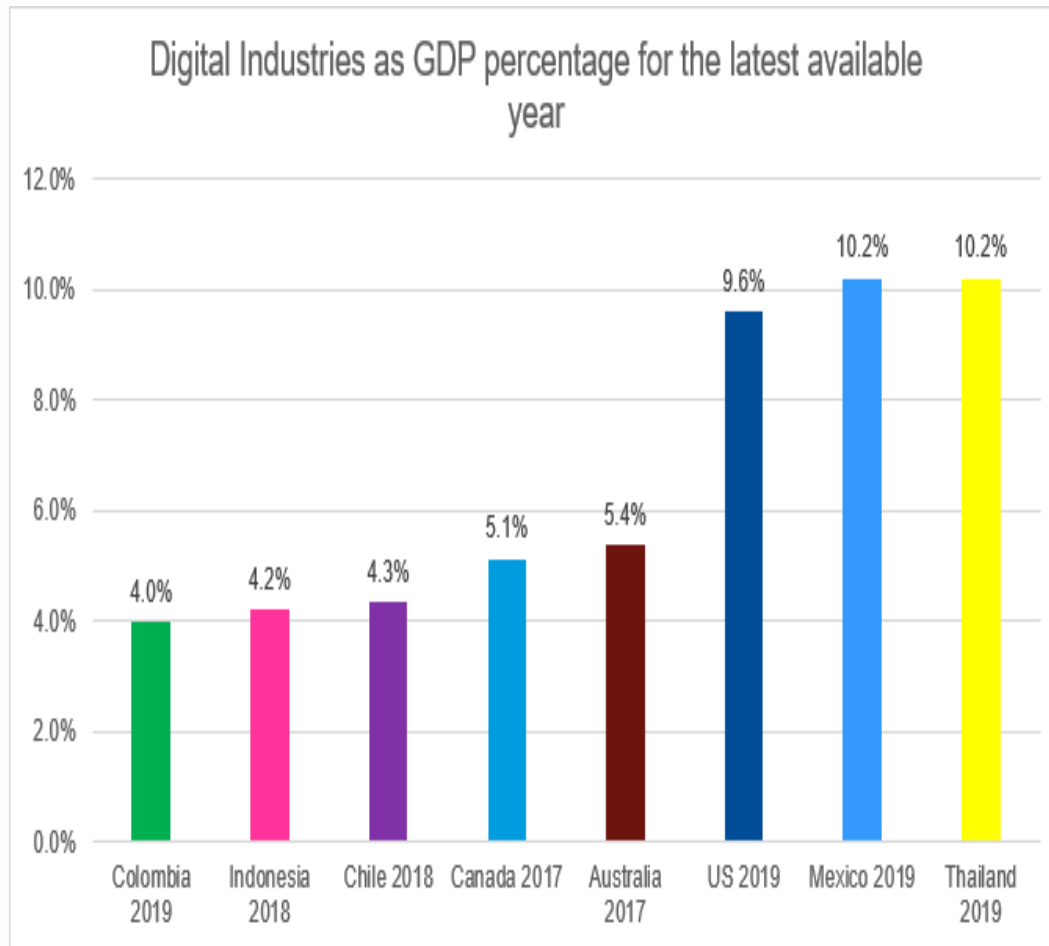
Managing a Sports Team - Today

Data Scientist (+)	Team Owner (-)
\$100	\$100
Data Asset	
\$100	



✓ Companies across a broad range of industries are digitizing information. The “production” of digital data is currently not part of the SNA production/asset boundary. Research is currently underway to determine how to capture this activity in the updated SNA/BPM.

The Digital Revolution: The Digital Economy or the Economy is Digital?



- Update of the standards include guidance on **quantifying the impact of digitalization on the economy**.
- Meeting a wide range of demands and needs
- Recommends countries develop a suite of indicators such as
 - Digital transactions, products and industries.
 - Related to e-commerce, digitally delivered products; digital intermediation platforms, expenditures on information, communication and technology, **Artificial intelligence**, cloud computing and **data**.

Source: Moulton, Tebrake, Tovar (2022) *Experimental Indicators of Digital Industries in Select Countries*

Update of the SNA and BPM: What about marketing assets?

Treatment of marketing assets

Marketing assets consist of items such as brand names, mastheads, trademarks, logos, and domain names.

Key driver of brand value and corporations **invest** in building and supporting their brands to differentiate their products and develop a positive emotional connection with customers.

- ✓ Agreement that conceptually **marketing assets are produced**.
- ✓ This update we are trying to **tackle the measurement challenges**.

Tentative recommendation is to switch marketing assets from non-produced to produced pending the outcome of testing.

We know brands are valuable....



“Nike shares are down today following last night’s matchup between Duke and UNC. Just seconds into the game, Duke star player NBA prospect Zion Williamson suffered a knee injury after his Nike PG 2.5 shoe split on the court. As of this morning, the brand’s stock is down about one percent, equating to roughly \$1.12 billion.”

By Katie Richards

<https://www.adweek.com/brand-marketing/nike-stock-takes-a-hit-after-duke-star-player-zion-williamsons-shoe-splits-on-the-court/#:~:text=Nike%20stock%20down%20about%201,Billion%20in%20its%20market%20cap.&text=%E2%80%9CWe%20are%20obviously%20concerned%20and,Nike%20said%20in%20a%20statement.>

Measurement Challenges for treating data and marketing as produced assets?

Main challenges - Valuation

- **Precise statistical definitions** are needed to ensure no overlaps. No double counting allowed in macroeconomic statistics!
- **How to value?**
 - **Market price**, Data and Marketing Assets are not sold on the market in large enough quantities to develop a market price.
 - **Net present value**, not enough of the required information available.
 - **Sum of costs**, successfully tried already for Data, (see Canada, Netherlands, Australia, USA, academia) and Marketing Assets (see Netherlands, United Kingdom, academia); similarities with other intangible assets in the SNA and BPM (e.g., research and development)

The D's: **Depreciation and Deflation**

- Doesn't depreciate in a conventional sense. What's the appropriate service life?
- What is the appropriate deflator to use since market transactions are lacking?

Main Challenges: Location, Location, Location....



- MNEs are key vehicles in the growing non-financial and financial international integration.
- Economic, financial, tax and regulatory drivers.
- **Global Value Chains (GVCs)** – fragmentation of production across borders (international integration)
- Increasing role of **intangible capital**– use throughout the MNE and ease of relocation

Challenges for national accounts and external sector statistics:

Determining **economic ownership** and the recording of related transactions affects the recording of assets (who “owns”) and related income flows.

- ▶ Intellectual property products (IPP) asset can be leveraged as an input into the production of other (non-IPP) goods and services.
- ▶ IPP asset can earn revenue through royalties and license fees.

Main Challenges: Location, Location, Location...

Change in ownership from an economic point of view means that **all risks, rewards, rights, and responsibilities of ownership are transferred**.

- ▶ Not straightforward in the case of MNEs.
- ▶ May assign legal ownership of the IPP asset to a special purpose entity (SPE).

No change in the concept of what economic ownership means in the updated ISS but further guidance.

- Specifically, assigns economic ownership to a unit on the basis of whether the unit:
 - (i) is a producer of the IPP
 - (ii) receives explicit payment to produce the IPP or a payment to acquire the whole of the previously produced IPP (corresponding with a change in ownership) or
 - (iii) uses the IPP (no change in ownership).
- Changes in ownership mainly follow the type of monetary transaction observed.

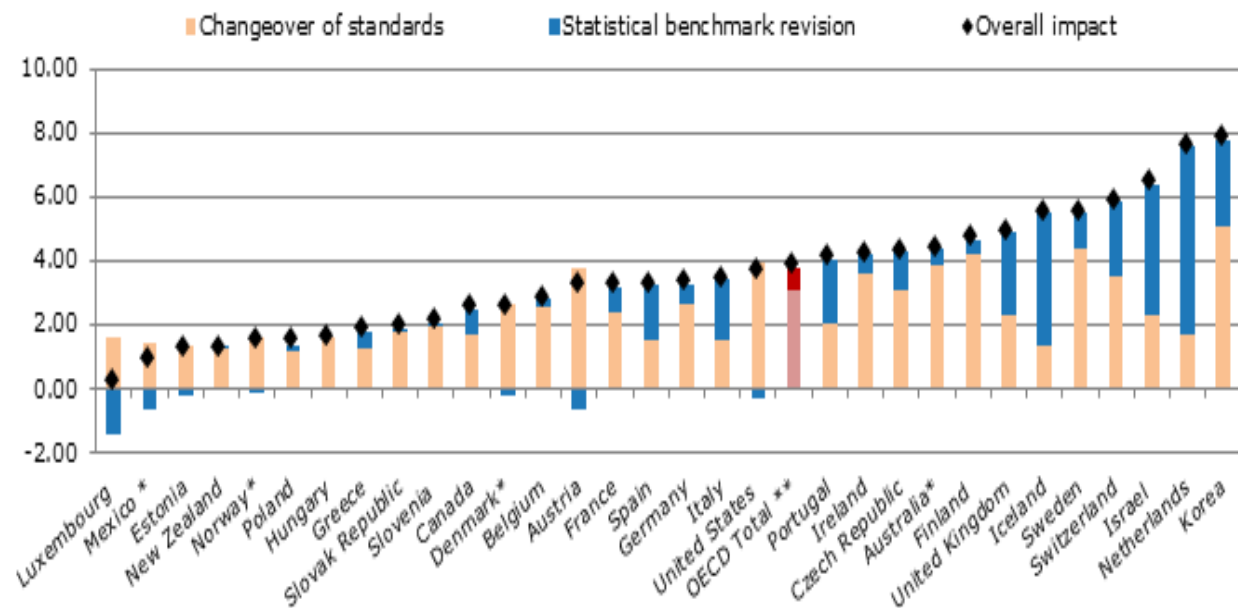
International tax rules are being modified to more align tax with economic ownership of IPP.

Implications of treating data and marketing as capital formation?

Impacts key macroeconomic aggregates

To give a flavor when R&D was treated as investment... impact ranged from 0.5 %-points of GDP to 4.0%-points of GDP.

Overall Impact of the on GDP-levels, year 2010
(changeover to SNA 2008 and statistical benchmark revision)



Incorporating R&D had a significant **impact on GDP levels** but affected growth rates much less.

Incorporating more intangible investments (Data and Marketing) will have impact on GDP and other key aggregates including:

- ✓ Increases output to account for own-account production
- ✓ Increases gross fixed capital formation
- ✓ Increases gross operating surplus/mixed income
- ✓ Increases gross national income (GNI)

*Australia: 2007 data; Denmark: 2008 data; Mexico 2008 data; Norway: 2011 data.

** OECD Total corresponds to available countries

Source: OECD Statistics Brief N. 20, February 2015

What are the next steps?

Next steps

- International statistical community is hard at work addressing these and other issues in the next update of the ISS.
 - ✓ Undertaking technical research on prioritized issues.
 - ✓ Engaging in broad consultation of update issues.
 - ✓ Ensuring overall consistency between SNA and BPM.
 - ✓ A program of experimentation and testing of selected recommendations.
 - Capitalizing data and marketing are key recommendations being tested.
- Updated SNA and BPM7 scheduled to be released in 2025.
- 10th IMF Statistical Forum:
 - ✓ Brings together various groups to exchange ideas
 - ✓ Acts as catalyst to work with countries to close these data gaps and to implement the new ISS.