Towards an integrated framework for measuring the digital economy

High Level Seminar on The Digital Economy: A Policy and Statistical Perspective

Beijing, China
15-17 November 2018

United Nations Statistics Division
Outline of presentation

- Background
- What benefits have the digital economy brought?
- What costs have the digital economy brought?
- What are the outcomes?
- Components of policy framework for the digital economy
- Components of statistical framework for the digital economy
- Conclusions
Many economies around the world are undergoing a digital revolution – fast evolving technologies.

- WA2
- Computer
- Internet
- Smartphone
- Big Data
- Cloud computing
- Artificial Intelligence
- Internet of Things
- Blockchain
- ?
Available timeframe to create a framework

Use of Technology and Data

We are here

Cost

Time
What benefits have the digital economy brought?
What benefits have the digital economy brought?

- Digital economy can make a significant contribution to the realization of the 2030 Agenda for Sustainable Development
What benefits have the digital economy brought?

- Wide variety of goods and services
What benefits have the digital economy brought?

- Innovations in financial markets and new methods of payment
What benefits have the digital economy brought?

- Rising automation
What costs have the digital economy brought?
What costs have the digital economy brought?

**Digital divides within and between countries**

- Infrastructure (broadband, devices, speed)
- Accessibility and use of internet

  by

- Firms (by size and innovation)
- Persons (by age, education, literacy, gender and income)

...
What costs have the digital economy brought?

- A few firms and countries dominate innovation in many frontier technologies

Source: World Economic and Social Survey 2018
What costs have the digital economy brought?

- Erosion of privacy

Source: Wall Street Journal, 8 Nov 2018
What are the outcomes?
What are the outcomes?

- Polarized labour markets

Source: World Economic and Social Survey 2018
What are the outcomes?

- Rising share of capital income and falling sharing of labour income resulting in income and wealth inequality

Source: World Economic and Social Survey 2018
What are the outcomes?

- Digital trust deficit

Note: Trust surplus/deficit is defined as the gap between users’ digital trust environment experience and their tolerance for friction of digital commerce engagement. A higher trust surplus level suggests that users are more patient online and willing to engage with new technologies.

Source: World Economic and Social Survey 2018
Components of policy framework for the digital economy
Components of policy framework for the digital economy

- Policy making process has to be integrated
- A flexible, forward-looking and integrated policy framework that cuts across policy silos is needed
Components of policy framework for the digital economy

- Measurement and Goal Setting
- Leadership and Coordination
- Effective Digital Governance
- Strategic Choices on Platforms

Source: OECD Going Digital
UNDP Framing Policies for the Digital Economy UNIDO Technology Foresight in Asia
Components of statistical framework for the digital economy
Components of statistical framework for the digital economy

- Consistent, timely and reliable statistics on the digital economy are needed

- An integrated statistics approach can help to ensure harmonization
Building blocks

- **Common conceptual framework**
- **Institutional arrangements** (legislative, organizational, budgetary, managerial and customer relationship arrangements) further support the environment for integration
- **Statistical production process** as an integrated production chain from the collection of basic data to the dissemination of statistics
Components of statistical framework for the digital economy

- Statistical operations
- Outputs/Dissemination
  - Digital economy and satellite account
    - Household and demographic statistics
    - Economic & environmental statistics
- Inputs
  - Data collection
    - Frames and registers
    - Surveys
  - Data processing
  - Data integration
- Conceptual framework
- Standards and methods
- Institutional setting
  - Information, Communication Technology (ICT)
  - Management and internal policy
  - Institutional arrangements
Components of statistical framework for the digital economy

Digital economy and satellite account

Standards and methods

Conceptual framework

Ensures the consistency of the concepts, definitions and classifications
Components of statistical framework for the digital economy

<table>
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<th>Institutional setting</th>
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<td>Information, Communication Technology (ICT)</td>
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<td>Institutional arrangements</td>
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- Committees
- Statistics Act
- Latest ICT
- Coordination and collaboration
# Components of statistical framework for the digital economy

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## Surveys
- Price
- e-Commerce
- ICT
- Innovation
- Labour
- Household
- Other data sources

## Other data sources
- Big data
- Administrative data

## SBR
- Type
- Demography
- Ownership
- Activity
- Size
- Type
- Demography
- Ownership
- Activity
- Size
Conclusions

- **Benefits, costs and outcomes**
  - The digital economy can bring great economic and societal benefits
  - Digital divides within and between economies
  - Polarized labor markets, inequalities, lack of trust

- **Policy**
  - A flexible policy framework is needed to determine how to maximize the benefits, while mitigating its negative effects

- **Statistics**
  - An integrated statistical framework for the digital economy is needed to complement the policy framework

- **Way forward**
  - New global user-centered consultation mechanism complementing domain specific regional and international consultation mechanisms (such as for national accounts, business and trade statistics and prices)
Email sna@un.org if you have any questions
Thank you

谢谢