Measuring the Digital Economy: Challenges and Solutions

UN Committee of Experts on Business Statistics

Daniela Ravindra
Outline

- What is the digital economy?
- What has changed?
- What does this mean from a national accounting perspective?
- Filling the data gaps
The “nature” of transactions has changed

- Digitally ordered (e-commerce)
- Digitally delivered
  - Online streaming
  - Subscriptions vs. purchased
- Platform enabled
  - Digital intermediaries
  - Household production
Impact on Macroeconomic Accounts

- From the perspective of the Canadian Macroeconomic Accounts these changes can be grouped into the following broad categories:

  ✓ Global consumers

  ✓ Household production

  ✓ Digital exchanges / Digital markets / Digital intermediaries

  ✓ Investment / Digital leasing / Data assets
What has changed? - Global consumer

- Households are becoming direct importers
- Households are importing more and more digital services (e.g. music and video streaming, online gaming, digital storage)
- Local retailers now need to compete internationally
What has changed? - Household production

- Households are increasingly providing market output
  - Transportation services
  - Private accommodation services
  - Cultural content

- 0.5% of adults living in Canada offered a service in the sharing economy from November 2015 to October 2016
  - 72,000 (0.3%) offered ride services
  - 69,000 (0.2%) offered private accommodation services

- Digital margins, digital intermediation services indirectly measured, digital explicit charges
  - Implicit digital charges such as Uber – takes a proportion of the transaction value, as service charge both to driver and rider
  - Explicit digital charges such as Kijiji – charges a fee to place certain types of ads
- It is uncertain whether mainstream classification systems properly reflect these products.
What has changed? – Investment

- Digital Leasing / Cloud computing?
  - The SNA distinguishes between legal ownership and economic ownership. An asset should be assigned based on economic ownership rather than legal ownership.
  - How does this apply to a company that is purchasing IT services from a foreign firm. Who owns the IT? Should we treat this as a financial lease and assign the asset to the ‘purchaser’ or ‘lessee’
What has changed? - Data Assets

- Databases or Data – what should we be capitalizing?
  - “Databases consist of files of data organized in such a way as to permit resource-effective access and use of the data. Databases may be developed exclusively for own use or for sale as an entity or for sale by means of a licence to access the information contained. The standard conditions apply for when an own-use database, a purchased database or the licence to access a database constitutes an asset.” 2008 SNA 10.112
Next steps for the Canadian macroeconomic accounts

- Updating the Business Register to ensure providers of digital services, including multinational corporations, are properly identified.

- Examine product and industry classification systems to determine where digital intermediation should be captured.

- Expanding the household production account to include a larger set of industries such as accommodation, transportation and cultural services.
  - Imports and exports of household producers will need to be recorded.

- Updating certain household expenditure deflators to include import prices.

- Expanding the asset boundary to include ‘data bases’.

- Filling data gaps through new sources of information including surveys and alternative data.
2018 Canadian Internet Use Survey: Content

1. Access and Internet Use
2. Activities Online
3. Use of Social Network and mobile apps
4. E-commerce
5. ICTSkills
6. Security, privacy and trust
7. Use of online platforms
Survey of Innovation and Business Strategy

This survey collects data on:
• Innovation
• Advanced technology use
• Business strategies and practices
• Global value chains

Coverage
• 13,000 enterprises data available for:
  • 94 NAICS groupings
  • 4 geographic regions
  • 3 employment size groups

Collection Started Jan 23, 2018
Data to be released in Fall 2018 – Spring 2019 for reference year 2017
Canadian Survey of Cyber Security and Cybercrime

This survey collects data on:

• Implementation of cyber security practices
• Cost to prevent or detect cyber security incidents
• Volume and type of cyber security incidents
• Reporting of cyber security incidents
• Costs of recovering from cyber security incidents

Coverage

• 12,500 enterprises of 10+ employees across all industries

Collection ends March 26, 2018

Data to be released in Fall 2018 for reference year 2017
Ad-hoc Surveys and Other Work

- Labour Force Module on internet non-adopters
- Digital Economy Survey
- Work with the International Expert Group on ICT Household Indicators
  - Adopt and ICT/Internet Skills Framework
  - Modernize survey questions related to ICT
Contact

Daniela Ravindra
Statistics Canada
daniela.ravindra@canada.ca