

Measuring the Digital Economy: Challenges and Solutions

UN Committee of Experts on Business Statistics

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STATISTICS CANADA
ONE HUNDRED YEARS AND COUNTING



Statistics
Canada

Statistique
Canada

Canada

2018-06-11

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



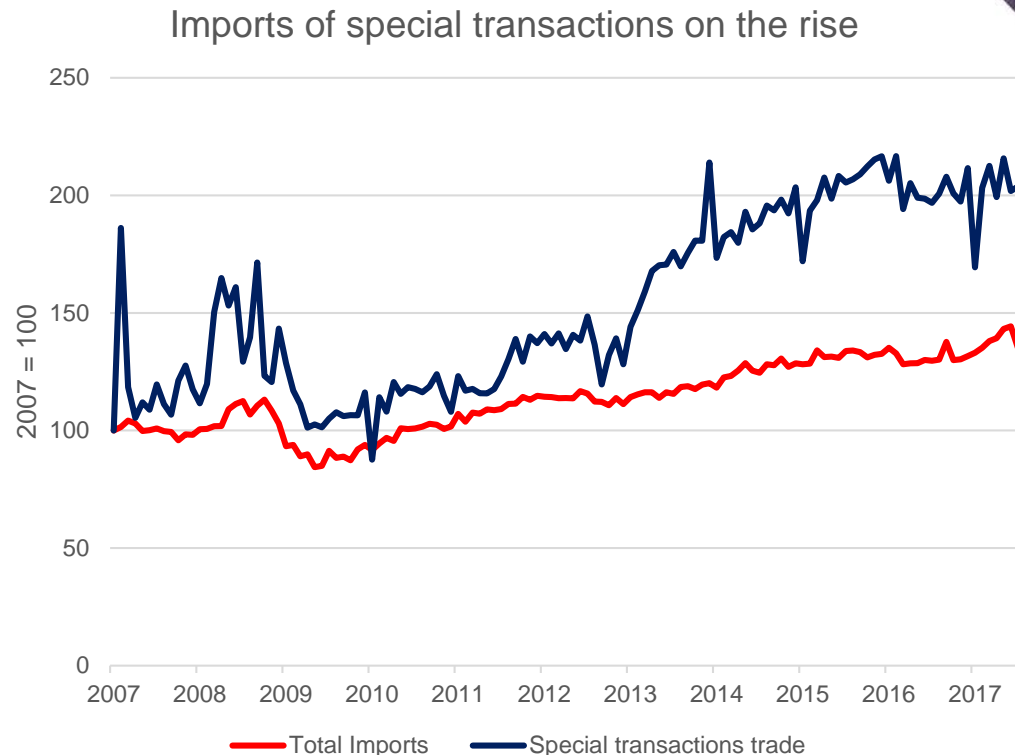
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- From the perspective of the Canadian Macroeconomic Accounts these changes can be grouped into the following broad categories:
 - ✓ Global consumers
 - ✓ Household production
 - ✓ Digital exchanges / Digital markets / Digital intermediaries
 - ✓ Investment / 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

What has changed? – Digital Exchange Markets / Digital Intermediation / Digital margins



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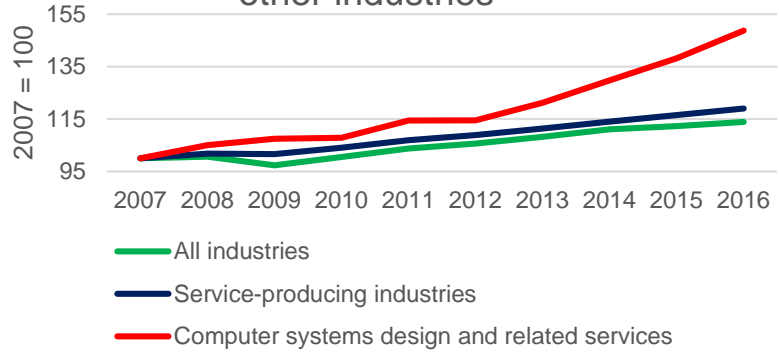
- Digital margins, digital intermediation services indirectly measured, digital explicit charges
 - Implicit digital charges such as Uber – takes a proportion of the transaction value, as service charge both to driver and rider
 - Explicit digital charges such as Kijiji – charges a fee to place certain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



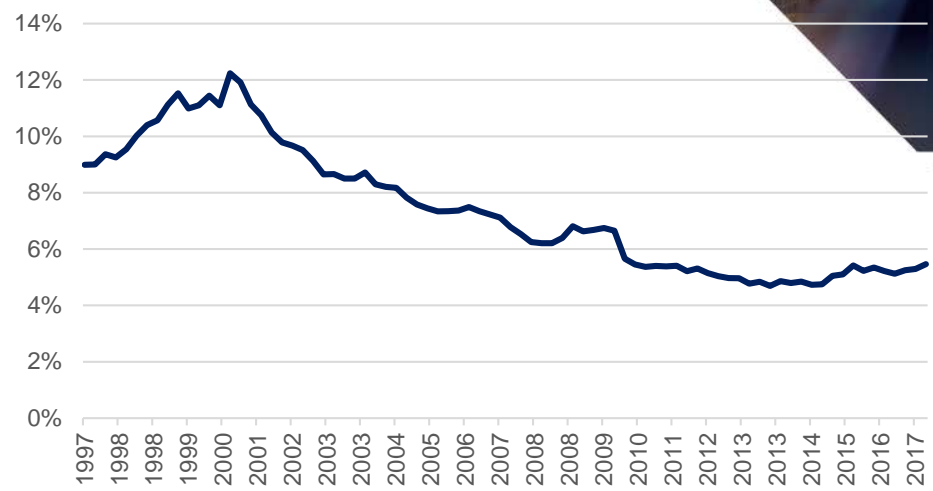


What has changed? – Investment

Value added of computer systems design and related services outpaces other industries



ICT share of GFCF in Canada is declining



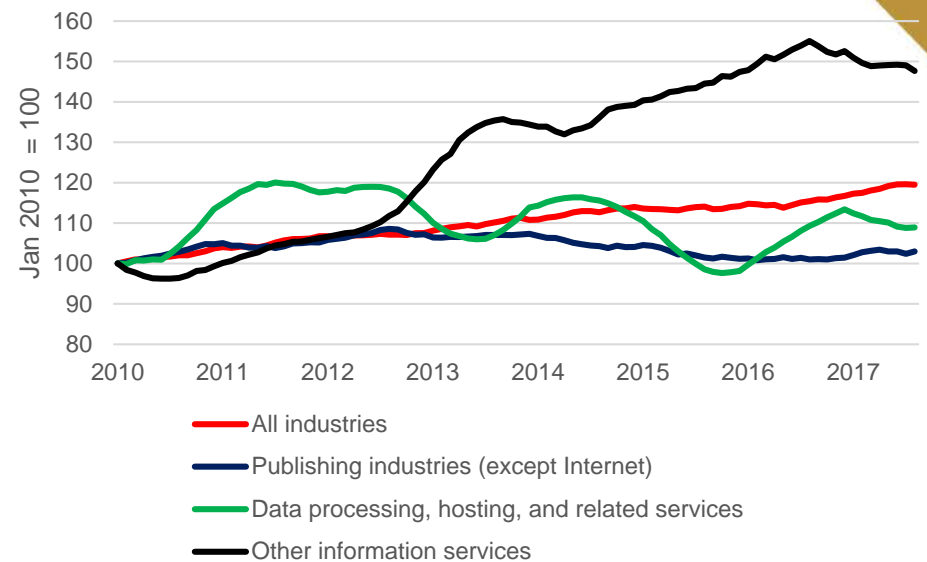
- Digital Leasing / Cloud computing?
 - The SNA distinguishes between legal ownership and economic ownership. An asset should be assigned based on economic ownership rather than legal ownership.
 - How does this apply to a company that is purchasing IT services from a foreign firm. Who owns the IT? Should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

What has changed? –Data Assets

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- 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

Value added for selected 'Data' Publishing industries



Next steps for the Canadian macroeconomic accounts



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- 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 ‘**databases**’
- Filling data gaps through new sources of information including surveys and alternative data





2018 Canadian Internet Use Survey: Content

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1

Access and Internet Use

2

Activities Online

3

Use of Social Network and mobile apps

4

E-commerce

5

ICT Skills

6

Security, privacy and trust

7

Use of online platforms



Survey of Innovation and Business Strategy

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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

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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



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