Measuring the digital economy in New Zealand

Plans & initiatives

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Why measuring the digital economy?

- Making digital transformation visible in economic statistics
- Understanding the economic impacts of digital transformation
Earlier work on measuring the digital economy in NZ
Context
for current plans & initiatives
to develop comprehensive measures
of the digital economy in NZ

Stats NZ context
Measuring the digital economy in NZ

Broader NZ context
Digital strategy for Aotearoa (draft)

International context
OECD framework for measuring the digital economy
Broader New Zealand context for measuring the digital economy

Digital strategy for Aotearoa / New Zealand

The strategy will be an overarching framework that will consist of three pillars:

- **Trust**: Having the right foundations, and feeling safe and secure online
- **Inclusion**: All NZ-ers having the tools, services & skills to contribute and benefit in the digital world
- **Growth**: Growing the tech sector, and all businesses adopting digital technology

*Please note: Not government policy - draft version to be released for public consultation soon*
OECD framework - flexible definition approach

Figure 1: The Digital Economy represented using a “tiered” approach

Source: The Digital Economy Report, 2019, UNCTAD – adapted from Bukht and Heeks, 2017
OECD - conceptual framework for measuring the digital economy (digital SUTs)
## Seven digital industries in the OECD framework

<table>
<thead>
<tr>
<th>Digital industry grouping</th>
<th>Description/examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digitally enabling industries</td>
<td>Internet service providers, telecom companies, computer manufacturers, software and website developers</td>
</tr>
<tr>
<td>Digital intermediary platforms charging a fee</td>
<td>Food delivery companies, travel booking portals, platforms facilitating online auctions</td>
</tr>
<tr>
<td>Data and advertising driven digital platforms</td>
<td>Search engines, social media platforms, developers of zero-priced phone applications and information sharing platforms</td>
</tr>
<tr>
<td>Firms dependent on intermediary platforms</td>
<td>Independent service providers who source work from digital platforms, business who sell via a third party digital platform</td>
</tr>
<tr>
<td>E-tailers</td>
<td>Retail and wholesale businesses engaged in purchasing and reselling goods or services who receive a majority of their orders digitally</td>
</tr>
<tr>
<td>Digital only firms providing financial and insurance services</td>
<td>Online only banks and other financial service providers, online only payment system providers</td>
</tr>
<tr>
<td>Other producers only operating digitally</td>
<td>Priced digital media providers, subscription based service providers (assuming the service is delivered digitally)</td>
</tr>
</tbody>
</table>
The digital economy and the system of national accounts

OECD roadmap

1. First steps - high priority indicators
   a) Output, Gross Value Added (GVA) and its components, of digital industries.
   b) Intermediate consumption of Digital Intermediary Services (DIS), Cloud Computing services (CCS) and total ICT goods and digital services.
   c) Expenditures split by nature of the transaction

2. Main focus - digital supply and use tables (digital SUTs)

3. Ultimate goal - digital satellite accounts
   (including estimates of digital goods and services that lie outside of the current SNA production boundary, e.g. data)

“Generating outputs for the entire digital SUTs is an extremely ambitious task.” (OECD roadmap 2020)
Our plan: Starting with exploration & collaboration and an ‘admin data first’ approach to develop measures of digital industries

- ‘Admin data first’ explorations (with the Stats NZ COVID-19 data team)
  - Brokering lists of digital businesses and matching to the Statistical Business Register
  - Exploring web-scraping to identify digital businesses
  - Collaboration with digital platform providers
  - Digital economy data portal (including trust, inclusion, and economic indicators)

- Collaboration opportunities across government and private sector in New Zealand

- International collaboration opportunities
Potential for developing a digital economy data portal (growth, trust, and inclusion; similar to COVID-19 data portal)

Data sourced from Stats NZ as well as a number of other government agencies and private sector organisations. Please note: Stats NZ is not responsible for the quality of data from the external sources.
Envisaged first steps to develop indicators of digital industries

- Estimates for the digital enabling industry (ICT sector)
  - Annual Enterprise Survey data as proxy for output and value added etc (from detailed industry data)

- Estimates for E-tailers industry
  - Internet sales proportions from Business Operations Survey; electronic card transaction data, ...

- Updating previous work on accommodation & the sharing economy

- Exploring sourcing data via existing surveys
  - Reviews of Business Operations Survey and ICT supply survey
Next steps for Stats NZ

2021/22
- Further exploring data sources & methods to cover digital industries
- Collaborating internationally and with government and private sector partners
- Supporting the Digital strategy for Aotearoa

2022/23 and beyond
- Developing & producing measures of the digital economy depends on available funding/resources for this work
Thanks for your attention!
Any questions or comments?

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Additional slides
OECD framework - Tiered definition

Figure 2: Tiered definition of the Digital Economy

Source: OECD
OECD framework – The traditional and the digital economy

<table>
<thead>
<tr>
<th>Included in GDP production boundary</th>
<th>Outputs</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Digital</td>
<td>Non-Digital</td>
<td>Society</td>
</tr>
<tr>
<td>Digital inputs as a factor of production</td>
<td>High</td>
<td>Narrow measure: Economic activity from producers reliant on digital inputs</td>
<td>Digital society</td>
</tr>
<tr>
<td></td>
<td>Medium</td>
<td>Broad measure: Economic activity from producers significantly enhanced by digital inputs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Low/none</td>
<td>Traditional economy</td>
<td>Traditional society</td>
</tr>
</tbody>
</table>

Source: OECD