UNCTAD ETDA INTERNATIONAL WORKSHOP  
ON MEASURING E-COMMERCE  
Towards a Thriving Digital Economy Era  

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A Global Outlook on Information Economy Statistics  
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Contents

- UNCTAD’s programme on information economy statistics and the Partnership on Measuring ICT for Development

- A global and regional perspective on e-commerce statistics (UNCTAD B2C e-commerce index)

- Learning from national approaches to measuring e-commerce
UNCTAD’s Programme on Measuring the Information Economy

- With the collaboration of the Partnership on Measuring ICT for Development (since 2004)
- An international, multi-stakeholder initiative to improve the availability and quality of ICT data and indicators
- Building consensus on common methodologies for core indicators to inform policy makers

UNCTAD Focus on the Information Economy

- Technical assistance: to boost the capacity of national statistical systems to produce internationally comparable ICT indicators
  - Advisory missions
  - Regional training courses - build regional networks of ICT statisticians
  - Training of trainers
  - Training material

- The Swedish International Development Cooperation Agency (Sida) supports UNCTAD and the Partnership financially in the area of measuring ICT
UNCTAD Focus on the Information Economy

- Core indicators
  - 12 indicators on ICT access and use by enterprises (B1 to B12)
  - 2 indicators on the ICT producing sector (ICT1 and ICT2)
  - 2 indicators on international trade in ICT goods (ICT3 and ICT4)
  - Ongoing work on trade in ICT services and in ICT-enabled services

- Manual: definitions, standards, model questions
  - UNCTAD training material

UNCTAD and E-commerce

- 2 core indicators on e-commerce:
  - proportion of businesses buying (B7) and selling (B8) online + other related: with web presence (B6), with extranet (B11), delivering products online (B12)

- UNCTAD organized session at ITU WTIM on measuring e-commerce, Sep 2012, Bangkok, Thailand

- UNCTAD International Workshop on ICT and E-Commerce Statistics, June 2013, Beijing, China

- UNCTAD at World Summit on the Information Society Forum (WSIS)
  - WSIS May 2015, International e-Commerce for Developing Countries: Practical Case Studies in Overcoming Barriers to Trade Through Digital Channels

- UNCTAD Information Economy Report 2015
  *Unlocking the Potential of E-commerce for Developing Countries*
Measuring E-commerce

- Definition developed by OECD, adopted by the Partnership
  "sale/purchase of goods and services, conducted over computer networks" - revised, no longer narrow/broad distinction

- Useful distinctions between
  - Domestic and international/cross border (in India and Singapore >50% are cross-border, in Republic of Korea 75% domestic)
  - Via EDI or via website (see Eurostat)
  - By enterprise size class (attention to small and medium enterprises)
  - By main economic activity (ISIC rev.4)
  - By goods and services

- Very few official statistics beyond Eurostat and OECD countries
B2B revenues by far the largest type of e-commerce

- Share of B2B in e-commerce revenue:
  - US: 89%
  - Canada: 64%
  - EU: 87%
  - Rep. of Korea: 91%
  - Russia: 57%

Source: UNCTAD IER 2015 estimates based on national sources, eMarketer, and others.

Share of individuals purchasing online 2013
Asia-Pacific major market with great diversity

Source: UNCTAD IER 2015, based on Eurostat, ITU and national data (in red).
UNCTAD B2C E-commerce Index 2014

Indicators included

- Percentage of individuals using the Internet
  - Sources: ITU, Eurostat and national surveys => 216 economies

- Credit card (% age 15+)
  - Source: World Bank Findex survey => 149 economies

- Secure Internet servers (per 1 million people)
  - Source: World Bank => 209 economies

- Percentage of the population having mail delivered at home
  - Source: Universal Postal Union => 168 economies

- Total coverage => 130 economies

Top 10 economies, by region

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<thead>
<tr>
<th>Region</th>
<th>Luxembourg</th>
<th>Republic of Korea</th>
<th>Mauritius</th>
<th>Republic of Korea</th>
<th>Chile</th>
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<td>Mali</td>
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<td>Colombia</td>
<td>Moldova</td>
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Source: UNCTAD IER 2015.
Measuring E-commerce Other Useful Metrics

- Household and individual surveys:
  - Type of products bought online
  - Type of devices used by e-commerce consumers
  - Barriers to e-commerce for consumers
  - Average spend per purchase
  - Most visited e-commerce site
  - The role of social media
  - Preferred payment and delivery options

- Establishment/business surveys:
  - Total volume of e-commerce sales and as a % of total turnover
  - Businesses with a website
  - Questions on automated business processes (CRM, ERP)
  - Barriers to e-commerce for businesses
Challenges with Compiling E-commerce Data

- Limited inclusion of ICT/e-commerce questions in surveys: more often in household surveys than in enterprise surveys
- Low or occasional frequency
- Sample representativity & coverage
- Comparability in terms of definitions & questions used
- Difficult for households to specify total amount spent online
- Availability of business registers (up-to-date, no dormant businesses) - they only cover domestic and not foreign businesses
- Incidence of the informal sector
- B2C - numerous low-value irregular transactions, below administrative thresholds - may lead to biases in national accounts statistics (underestimating imports)
- C2C hard to measure: may need to rely on private data sources

Measuring E-commerce by Statistics Canada

- In 2012, Canadians spent $18.9 billion online (Canadian Internet Use Survey, household survey) - useful to identify main type of purchased items
- In 2012, Canadian enterprises made $13.4 billion in online sales (SDTIU)
- Survey of Digital Technology and Internet Use (SDTIU)
  - covers Canadian private enterprises in almost all industry sectors
  - exclude very small firms, defined based on revenue, had under $250K in revenue
  - sample unit = enterprise (not establishment) => exclude intra-firm transactions (between two establishments within the same enterprise)
  - 17,000 enterprises, stratified sampling, first by industry level (2-nd or 3-rd level of NAICS), then by enterprise size (revenue-based), with large units, sampled with certainty, and medium and small units, random sampling; sample sizes are adjusted for non-response with an expected response rate of 65%
  - Imputation is used for partial non-response: eg. tax data used to impute "sales over Internet" in combination with the "%of sales conducted over the Internet"
Measuring E-commerce by the Office for National Statistics, UK

- In 2013, UK enterprises made e-commerce sales of a total value of £557 billion (E-commerce and ICT Survey of business)
  - covers UK private enterprises with 10 or more employees in selected sectors
  - exclude very small firms, like self-employed and 0 employees
  - 7,850 enterprises, stratified simple random sampling, by industry level and by enterprise size (employment-based: 10-49, 50-249, 250-999, +1000)
  - Industries covered: manufacturing, utilities, construction, wholesale, retail, transport & storage, accommodation & food services, information & communication, other services. Exclude: agriculture, forestry and fishing, mining and quarrying, veterinary activities, public administration and defense, social security, education, health and social work, arts, entertainment and recreation.
- Difficult to collect data on e-commerce purchases => focus on sales
- 22% of businesses with e-commerce sales, 51% with e-commerce purchases
- E-commerce sales = 20% of business turnover
- 65% EDI sales (B2B proxy), 35% website sales

Measuring E-commerce A Way Forward

- Learning from national experiences/approaches to measuring e-commerce
- Importance of metadata availability => to understand how to interpret the data
- Emergence of other data sources: metadata equally important
- Choice between several indicators
- Evaluating impact