

MEASURING E-COMMERCE VALUE ON ICT BUSINESS AND HOUSEHOLD SURVEYS

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Mark Uhrbach



Statistics
Canada Statistique
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www.statcan.gc.ca

PRESENTATION OUTLINE

1. E-COMMERCE SURVEYS AT STATCAN
2. **HOUSEHOLD SURVEY**
3. **BUSINESS SURVEY**
4. RECONCILING BOTH SURVEYS



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E-COMMERCE SURVEYS AT STATISTICS CANADA



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WHY MEASURE E-COMMERCE?



OECD Ministerial held in Ottawa in 1998 identified the potential of e-commerce

electronic commerce offers a radically new way of conducting commercial transactions, and is potentially a key engine to increase economic growth, and enhance development around the world...



And the OECD was urged to...

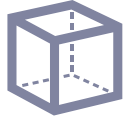
Apply its research and statistical expertise to analyse and measure the economic and social impact of global electronic commerce



As well as...

Work with other international organisations, regional bodies, and the private sector, and Non-OECD countries to encourage collaboration and co-ordination within and among as many fora as possible to advance global electronic commerce

E-COMMERCE SURVEYS IN CANADA

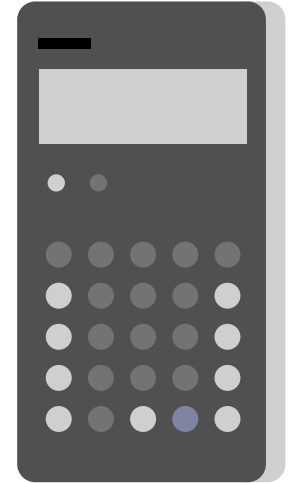


CIUS: Canadian Internet Use Survey

- Main source of **household** e-commerce statistics, although e-commerce is not the focus



Why not calculate it through the Survey of Household Spending (SHS) ? SHS has detailed information on household expenditures, that is used to calculate the GDP and CPI, but it is hard to differentiate online sales vs offline sales



SDTIU: Survey of Digital Technology and Internet Use

- **Enterprise survey**, includes business-to-business as well as business-to-consumer

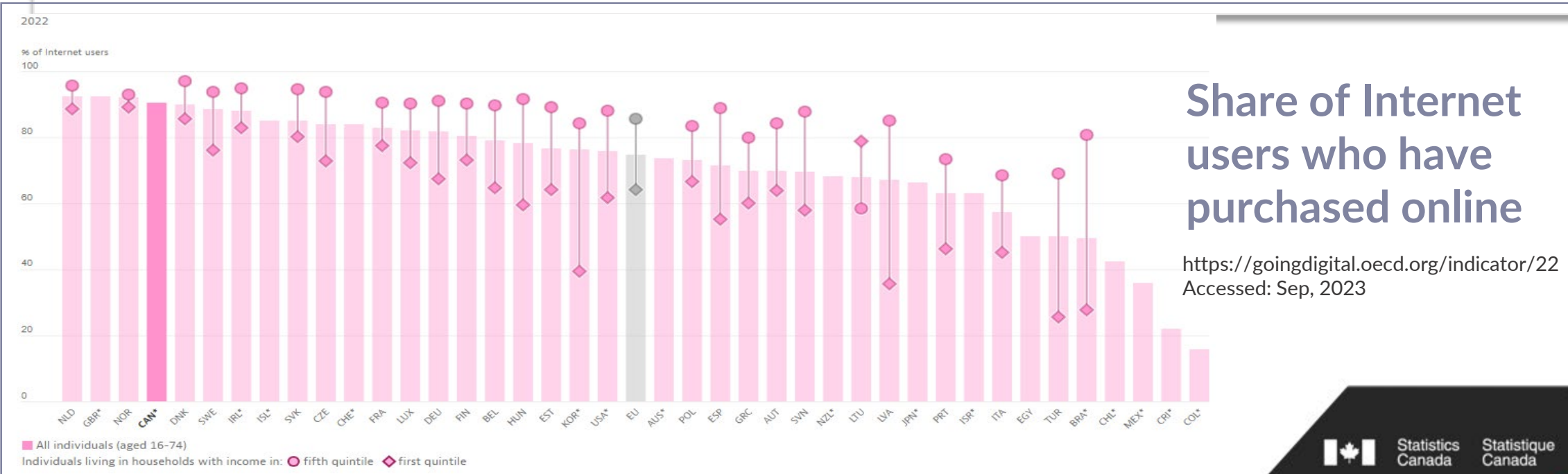


Business to Business accounts for the majority of the value of online sales, a trend that has also been observed in other countries with high e-commerce sales, according to statistics from the UNCTAD.

INTERNATIONAL COMPARABILITY

OECD definition of an e-commerce transaction:

- “...the sale or purchase of goods or services, conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders”.
- Payment and delivery do not have to be conducted online.
- Orders made by telephone calls, fax or manually typed e-mail excluded



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HOUSEHOLD ICT USE AND E-COMMERCE SURVEY

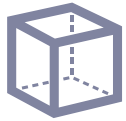


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MEASURING E-COMMERCE THROUGH HOUSEHOLD SURVEYS

Advantages



Can ask and disaggregate by other questions

- Ex: Time spent online, plays video games, etc.



Can link to more demographic individual variables for further disaggregation

- Ex: income, CMA, etc.



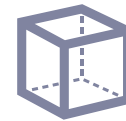
Used by other programs requiring household inputs

- Ex: national accounts



Can build internationally comparable indicators

Issues



Accuracy is reliant on self-reporting.

- Ex: Because of recall period can be hard for respondents to remember



Usually voluntary surveys, same sampling issues as all non-census surveys



Sensitive to survey design (can cause issues with YOY comparisons)

- Responses can be very sensitive to changes in survey wording
- Seasonality (ensuring reference periods are consistent)
- Regional effects

CANADIAN INTERNET USE SURVEY **MAIN PARAMETERS**

Its purpose is to gather data on how digital technologies and the Internet are transforming society, the economy, and the everyday lives of Canadians.



Target population:

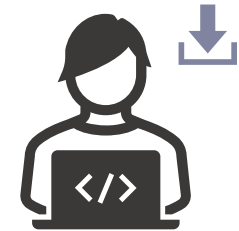
- Individuals 15 years of age or older
- Living in the ten provinces
- Private households



Frequency: Occasional/ biennial

Reference period: various reference periods

Participation: Voluntary



Modes of collection:

- 1) Electronic questionnaire self-response
- 2) Interviewer telephone follow-up


PAST INTERACTIONS OF CANADIAN INTERNET USE SURVEY

- 1997-2003** Household Internet Use Survey (HIUS)
- Focus on household Internet penetration

- 2005-2009** Canadian Internet Use Survey (CIUS)
- Conformed to international standards
 - Changed from a household survey to individual survey

- 2010, 2012** Canadian Internet Use Survey (CIUS)
- redesigned to meet needs of Broadband Canada

- 2018, 2020** Canadian Internet Use Survey (CIUS)
- Survey changed to a stand-alone survey (no longer a LFS supplement, collects demographics)
 - Sampling & collection method changed
 - Complete redesign in 2018, stakeholder consultations for data needs, questionnaire testing
 - New indicators in to address changes in data needs
 - Quebec and rural area oversample

 Detailed information including questionnaires, descriptions, data sources and methodology: [Other reference periods - Surveys and statistical programs - Canadian Internet Use Survey \(CIUS\) \(statcan.gc.ca\)](#)

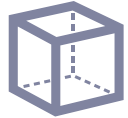
2022 CANADIAN INTERNET USE SURVEY



Total sample: 55,700

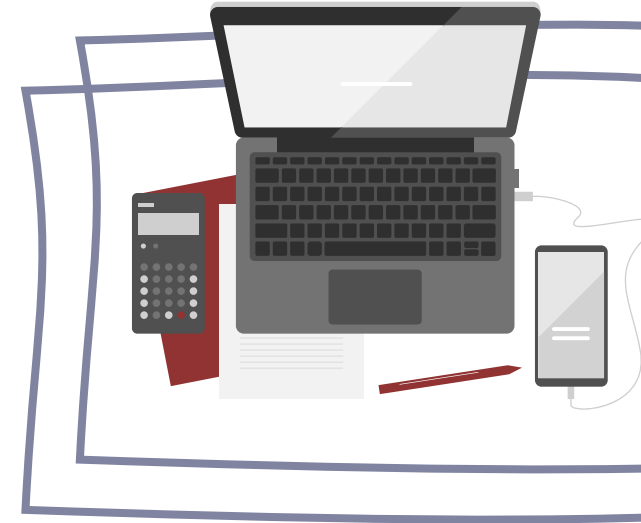


Collection period: December 5, 2022 to April 5, 2023



Response Rate:

	2018	2020	2022
Responses	13,810	17,409	25,118
Response rate	44%	42%	45%



2022 CANADIAN INTERNET USE SURVEY **BREAKDOWNS**

Geography

Province, CMA/non-CMA,
Rural/Urban



Socioeconomics

Education, School attendance,
Employment status, Household
composition & size, income quartiles

Population characteristics

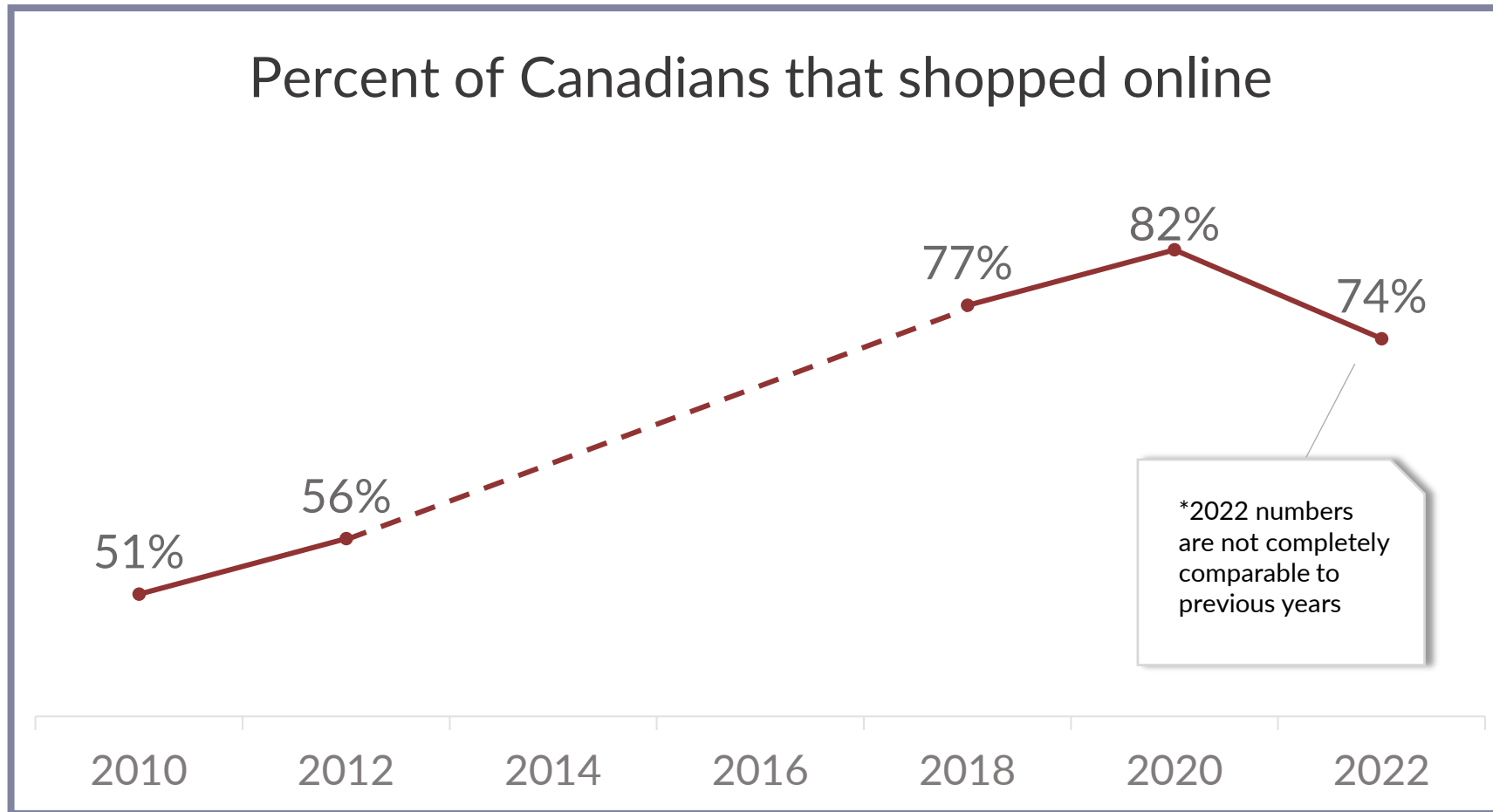
Age groups, Gender, Indigenous
identity, Population group,
Language, Immigration status



Health

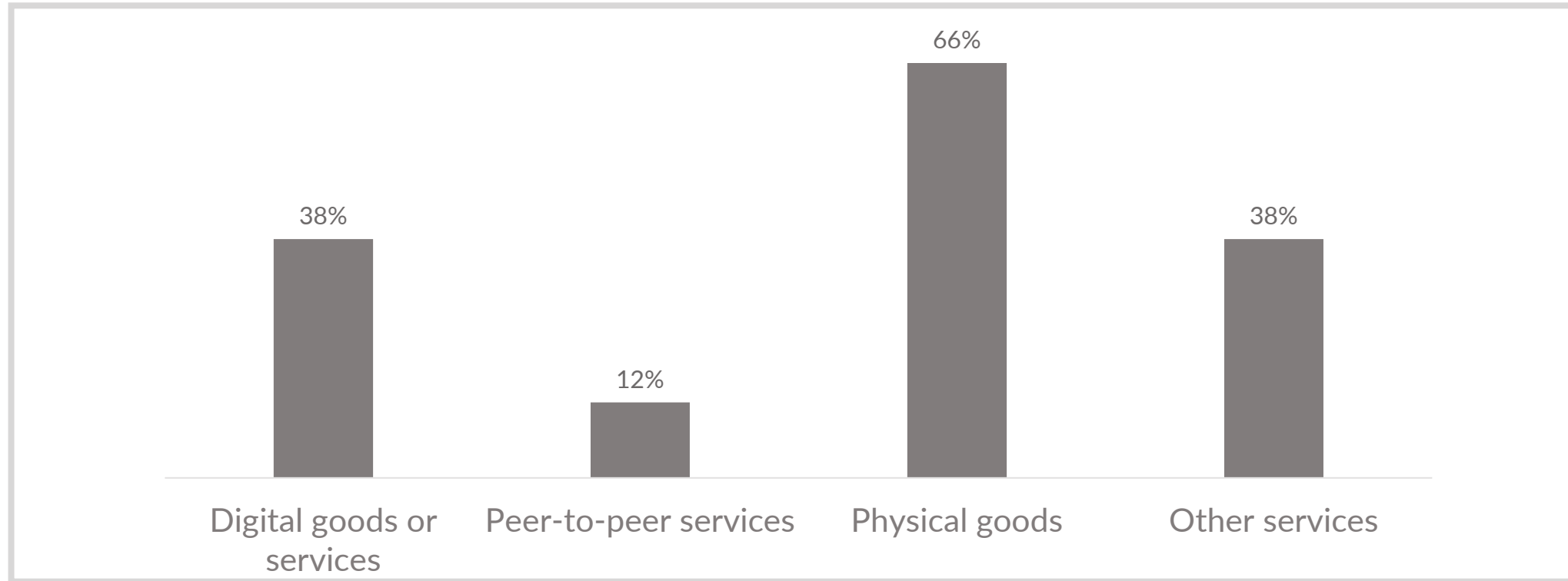
Self-perceived health and life
satisfaction, Disability status

Online shopping has generally been increasing over the years

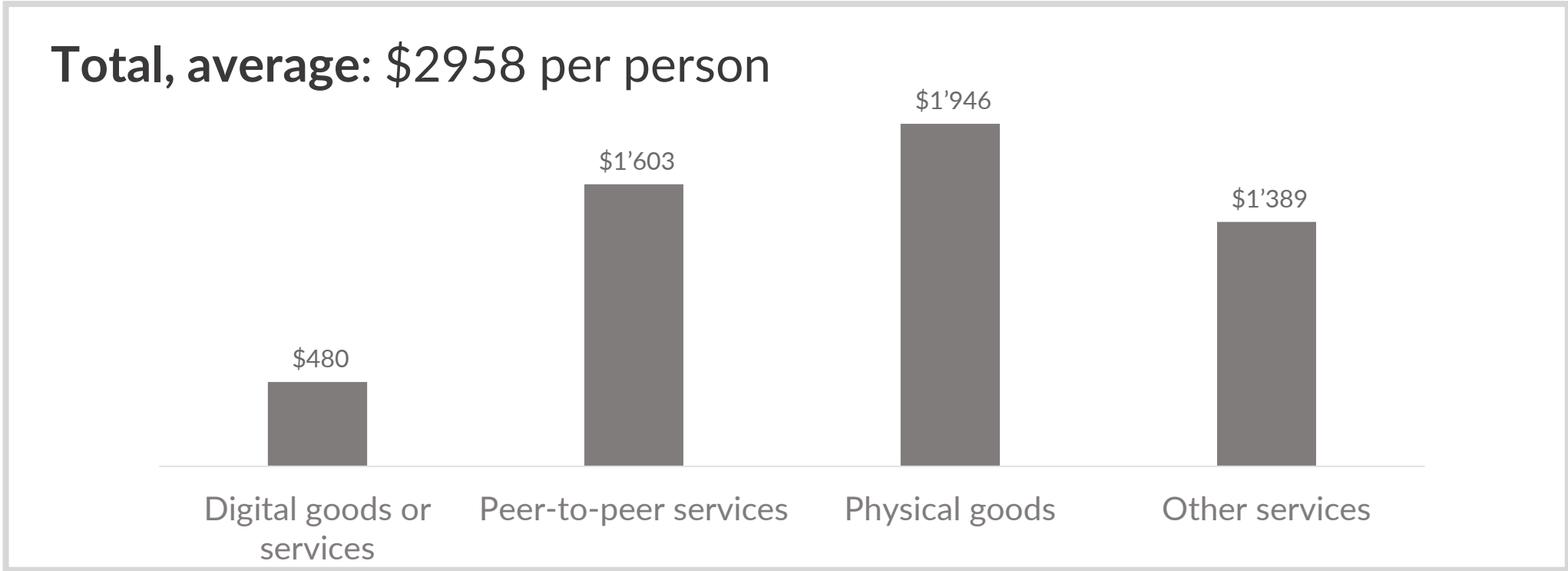


Those **65+** had the lowest proportion at **49%**. Those **25-34** had the highest at **88% (2022)**

Canadians online shopping by type, 2022

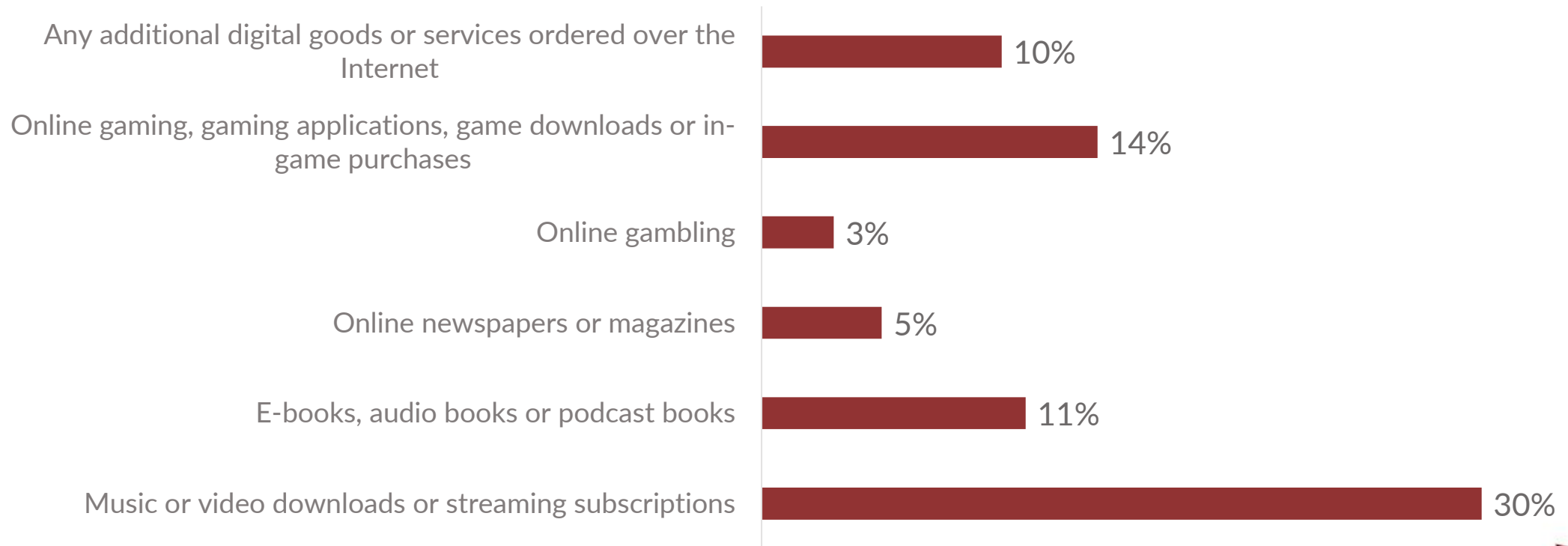


Average expenditure over the internet per person, 2022



Types of digital services bought, 2022

% of Canadians who bought the following



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BUSINESS ICT USE AND E-COMMERCE SURVEY



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SURVEY OF DIGITAL TECHNOLOGY AND INTERNET USE

MAIN PARAMETERS

Its purpose is to measure the impact of digital technologies on the operations of Canadian enterprises.



Targets

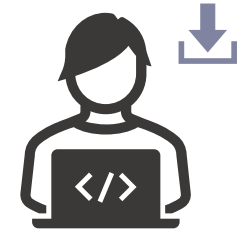
- Canadian businesses (government, enterprises with <5 employees, and certain sectors excluded)



Frequency: Occasional/ biennial

Reference period: 12 month calendar year

Participation: Mandatory



Modes of collection:

- 1) Electronic questionnaire self-response
- 2) Interviewer telephone follow-up

2021 SURVEY OF DIGITAL TECHNOLOGY AND INTERNET USE



Target population: 332, 241 enterprises

- derived from StatsCan's **Business Register (BR)** which contains a list of all businesses in Canada



Total final sample: 15,683



Collection period: 2021-11-25 to 2022-03-21



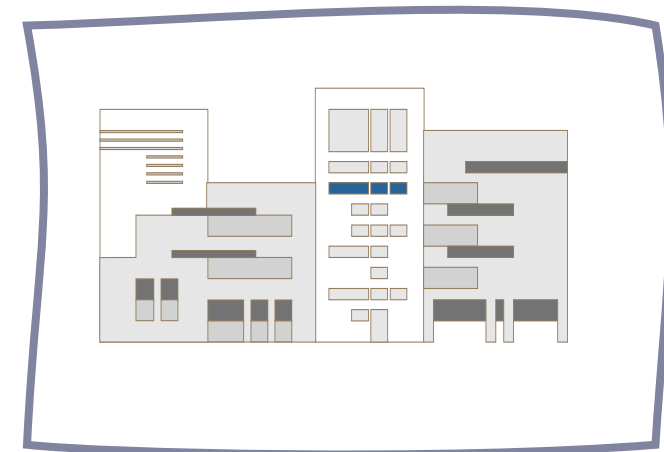
Response Rate: 73%



Stratification

Enterprises were stratified by **industry** and two sets of **size categories** to meet the data needs of both domestic and international stakeholders.

The overall size of the survey sample was determined based on these.



Industry, SDTIU 2021

For Canadian businesses with five or more employees

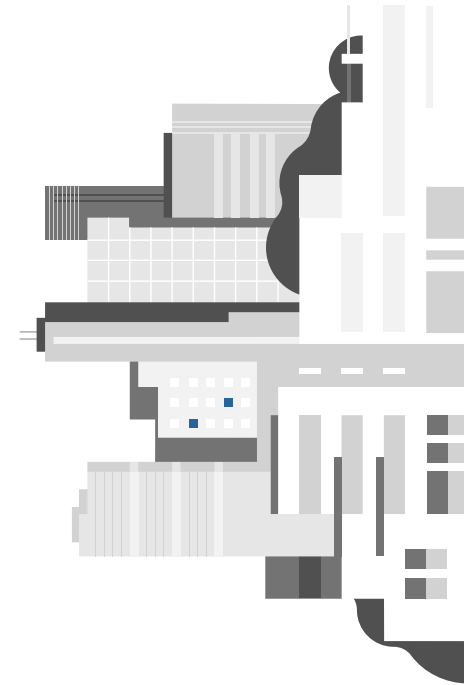
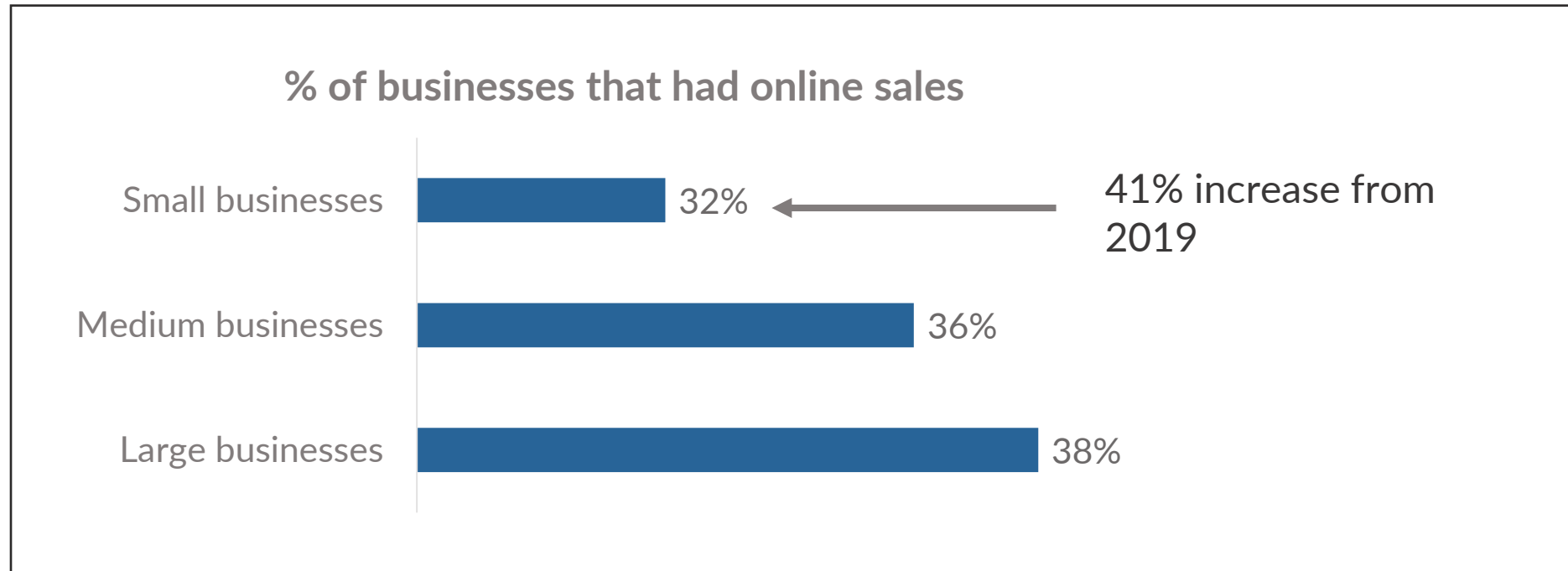
E-commerce by industry, billions of CAD



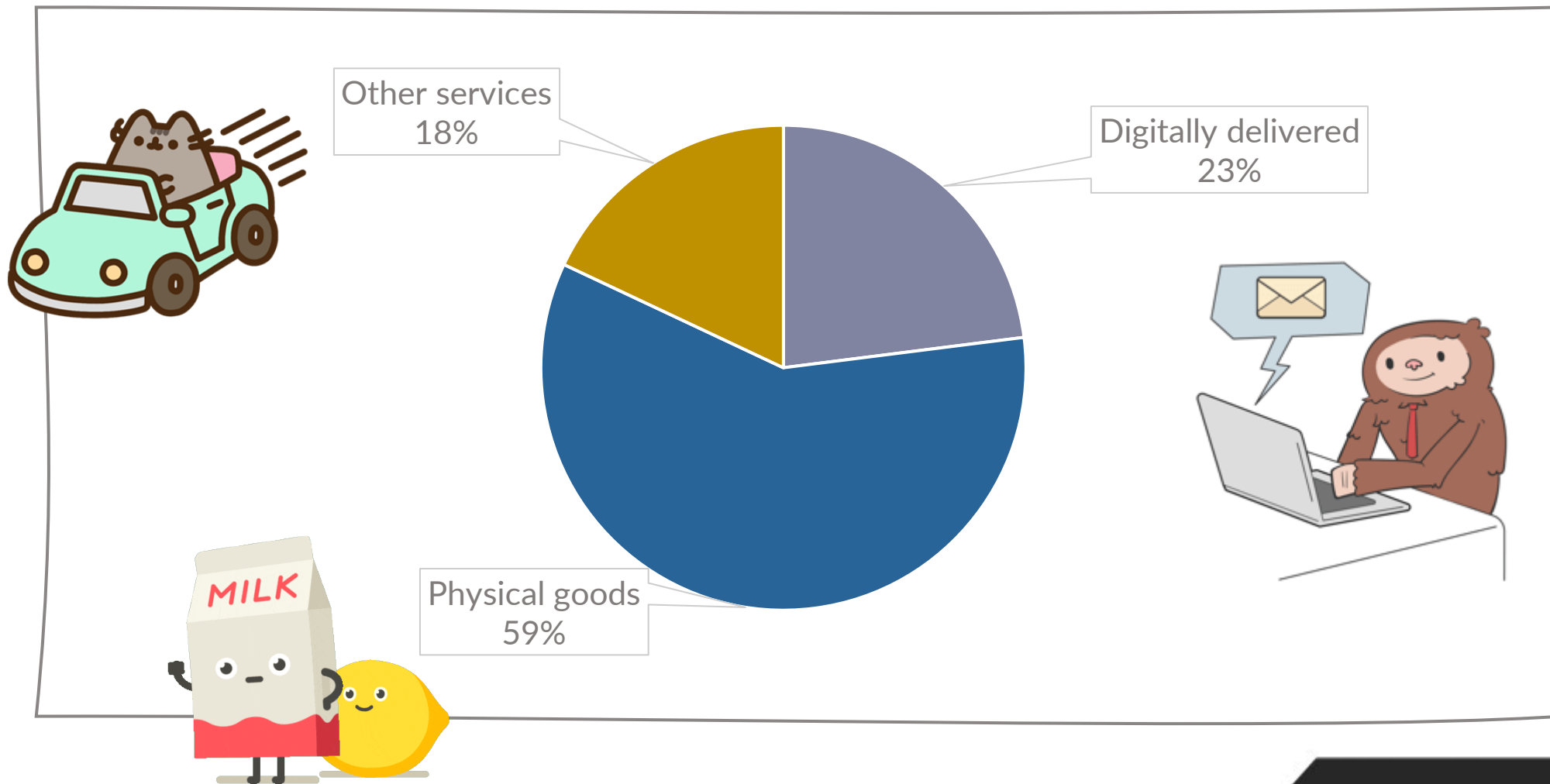
At least **72%** of all e-commerce sales were business-to-business (B2B)

Retail trade was **8.8%** of all e-commerce trade

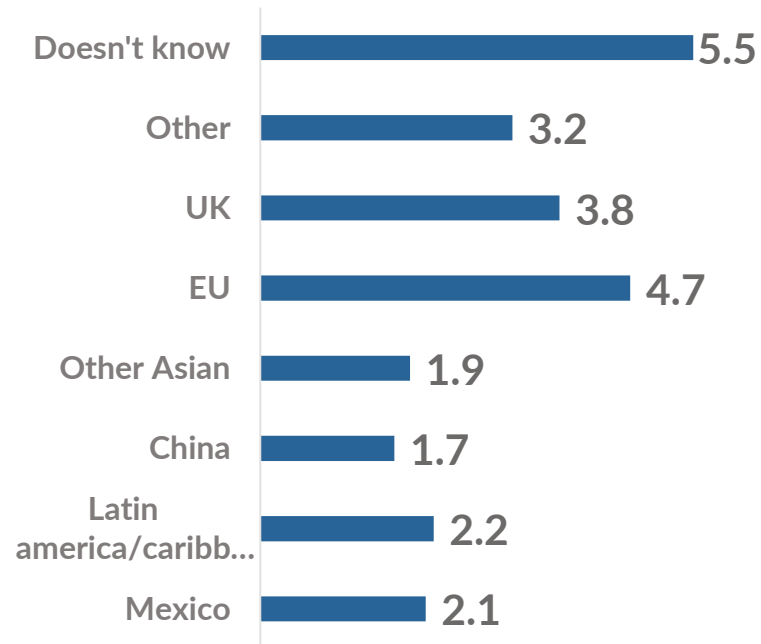
One-third (33%) of Canadian businesses had at least some e-commerce sales in 2021 compared with 25% in 2019



Types of sales, SDTIU 2021



SDTIU 2021: Online sales to specific regions



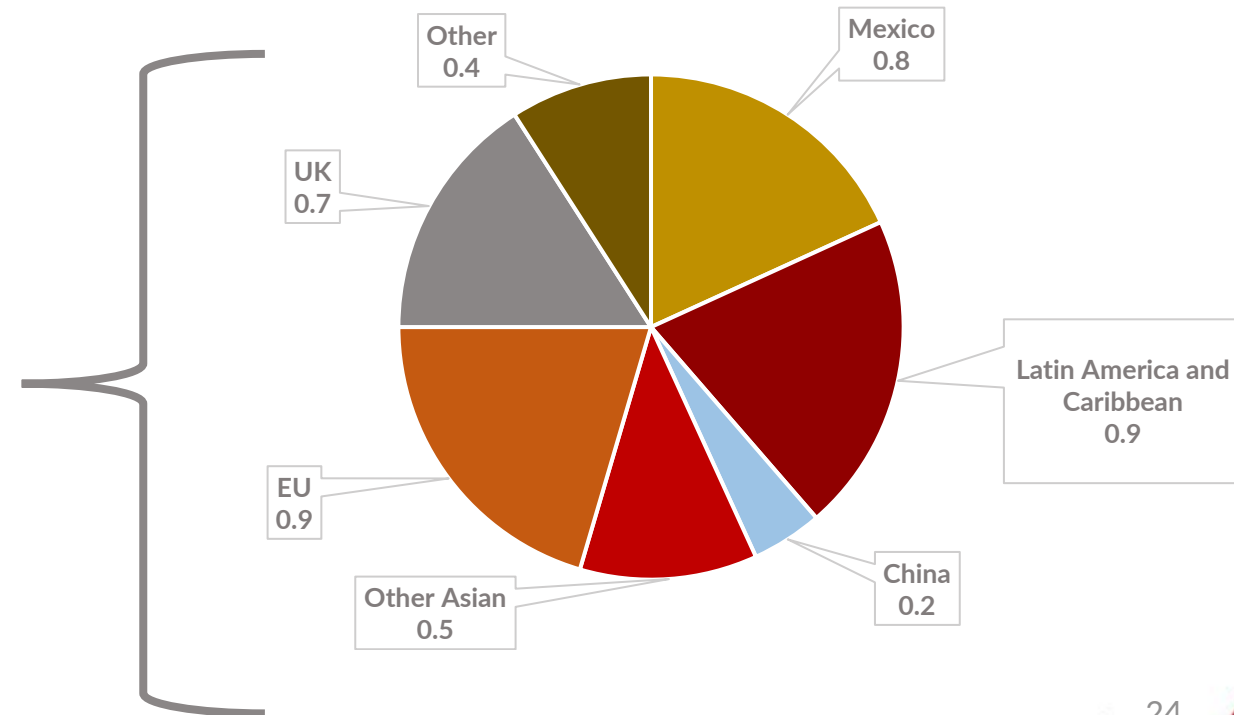
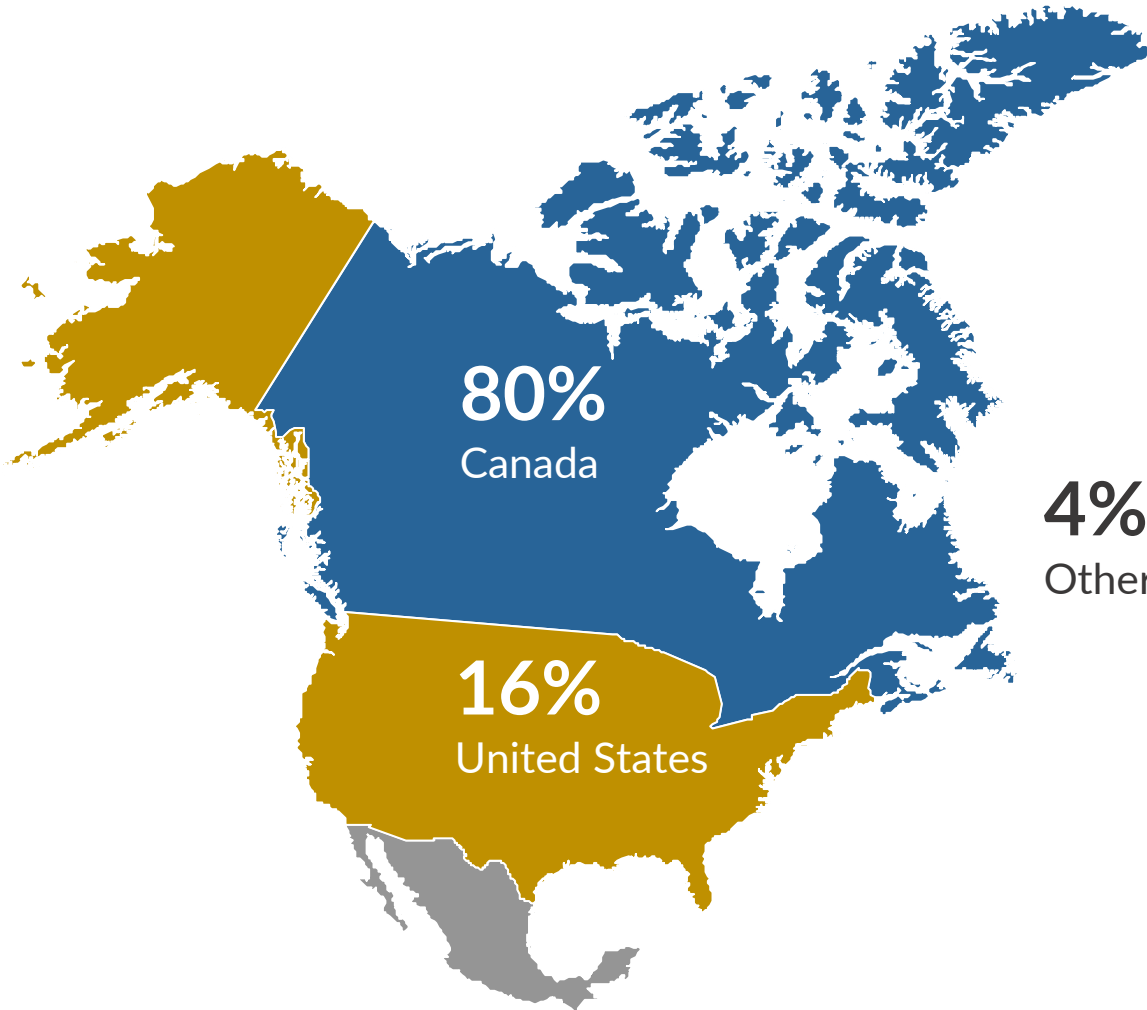
8%
Other regions

94%
Canada

18%
United States

8% of businesses with online sales reported having customers located in regions other than Canada or the United States.

SDTIU 2021: Percentage of value of online sales obtained from specific regions



4% of Canadian businesses online sales originated from international locations outside the U.S.



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Reconciling Household and Enterprise Surveys



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E-commerce continues to grow (but still is a small % of overall sales)



CIUS

2020: \$84 billion

2018: \$57 billion

2012: \$19 billion



SDTIU

2021: \$398 billion

2019: \$305 billion

2012: \$106 billion



Differing estimates

The **CIUS** arrives at a final estimate by using a weighted total.

The CIUS's estimate is lower than the SDTIU's because it only tracks demand-side **retail** (consumer purchases)



The **SDTIU** arrives at a final estimate by using a weighted total.

The largest portion is made up of **business-to-business** transactions, retail is only one portion, making this estimate much larger



STATISTICS CANADA: RELEVANT PRODUCTS



SDTIU 2021 Daily Article:
<https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4225>



CIUS 2022 Daily Article:
<https://www150.statcan.gc.ca/n1/daily-quotidien/230720/dq230720b-eng.htm>



CIUS questionnaire, methodology, more info
<https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=4432>



[OECD handbook on measuring digital trade](#)



UNCTAD handbook:
<https://unctad.org/publication/measuring-value-e-commerce>



SDTIU questionnaire, methodology, more info

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