

## Latest Developments in the Canadian Economic Accounts

# Measuring private short-term accommodation in Canada



Release date: March 14, 2019

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## Acknowledgements

This report was prepared by Catherine Ayotte, Andrew Barclay and Amanda Sinclair of the National Economic Accounts Division (NEAD), Statistics Canada.

This report would not have been possible without the support of the staff of NEAD under the direction Catherine Van Rompaey (Director of NEAD) and James Tebrake (Director General of the Macroeconomic Accounts). Many people from NEAD and other divisions within the Macroeconomic Accounts were involved at various stages of this report. Special thanks to Shane Bahmann, Robert Campbell, Monique Deschambault, Luc Dubois, Ryan Iversen, Louise Jones, Demi Kotsovovs, Matthew MacDonald, Emmanuel Manolikakis and Julie Smith.

## Note to readers

In order to derive estimates of the private short-term accommodation market, Statistics Canada acquired data from a third-party market research and data analytics firm. The data that Statistics Canada acquired includes public information, such as the listing type and rental price, that the firm collects, via web scraping, from various short-term rental platforms. The third-party firm also provides additional market information, such as estimated occupancy rates and earned revenue, that they derive using their own proprietary methods.

# Measuring private short-term accommodation in Canada

## Introduction

New technologies and innovative platforms are rapidly changing the way we interact with one another, how we buy products and how these goods and services are delivered to us. Digitization has been accompanied by the emergence of transformative business models, such as digital intermediary platforms, which connect buyers and sellers in various types of markets. Some of these platforms enable individuals to leverage under-utilized assets, such as a house or car, to provide market output. While these types of peer-to-peer services have always existed, the scale and pace at which they are occurring has been increasing since the emergence of intermediary platforms such as Airbnb, VRBO and others.

The private short-term accommodation market has recently seen tremendous growth. According to a report by CBRE<sup>1</sup> (2017), Airbnb has grown globally from 21,000 guests in 2009 to over 80 million in 2016. In Canada, if Airbnb listings are combined with hotel accommodations, Airbnb accounted for roughly 18% of total traveller accommodation in 2016 (CBRE, 2017). This is almost double the market share from 2015 (CBRE, 2017; HLT Advisory, 2016).<sup>2</sup> Private short-term accommodation activities are largely focused around the rental of houses, apartments or rooms within residential properties. This growth in private short-term accommodation services over the last few years has raised many public policy questions. What is the impact of these activities on housing and rental markets? How should these markets be regulated and taxed? Do they pose concerns for public safety?

In addition to the policy questions raised, these new platform-enabled markets present notable measurement challenges from a statistical perspective. Tax data, business and household surveys, which are the main source of data used throughout the Canadian Macroeconomic Accounts (CMEA), are not designed to capture this type of activity. A lack of detail, classification challenges and possible under reporting of revenues means that the CMEA may not accurately capture this activity using these traditional sources.

In an effort to appropriately measure emerging platform-enabled household activities, Statistics Canada has sought alternative measurement methods to help understand the overall impact of this market on the Canadian economy. This paper will provide an overview of the data sources and methods used to estimate the size of the private short-term accommodation market in Canada. The first section will summarize how the private short-term accommodation market operates in Canada, including a breakdown of the various actors. The second section will explain the methodology used. The third part will discuss the findings, including comparisons with other industries. Finally, the paper will conclude with a section about how these data will be integrated into the core CMEA to enhance economic indicators, such as gross domestic product.

## How private short-term accommodation works

For the purposes of this paper, private short-term accommodation is defined as the listing and rental of privately owned dwellings on a short term basis via an intermediary digital platform. Using this definition, there are three main economic actors involved in this market: the intermediary platforms, host and guests.

Hosts are the providers of the short-term accommodation services. They can be individuals or businesses, who offer short-term rentals of properties they own.<sup>3</sup> They are responsible for listing their property, including setting the price, availability and other terms and conditions. They must also approve each rental of their property. All of this is done via an intermediary platform, in exchange for a share of the rental revenue (the host fee).

1. CBRE is a private company that specializes in real estate services. It began its operations in Canada in 1983, and provides detailed data and market analysis for the hotel industry.

2. This is according to a study conducted by Ryerson University (HLT Advisory, 2016) that used total listings to represent market share. The report looked at Airbnb listings through the end of 2015.

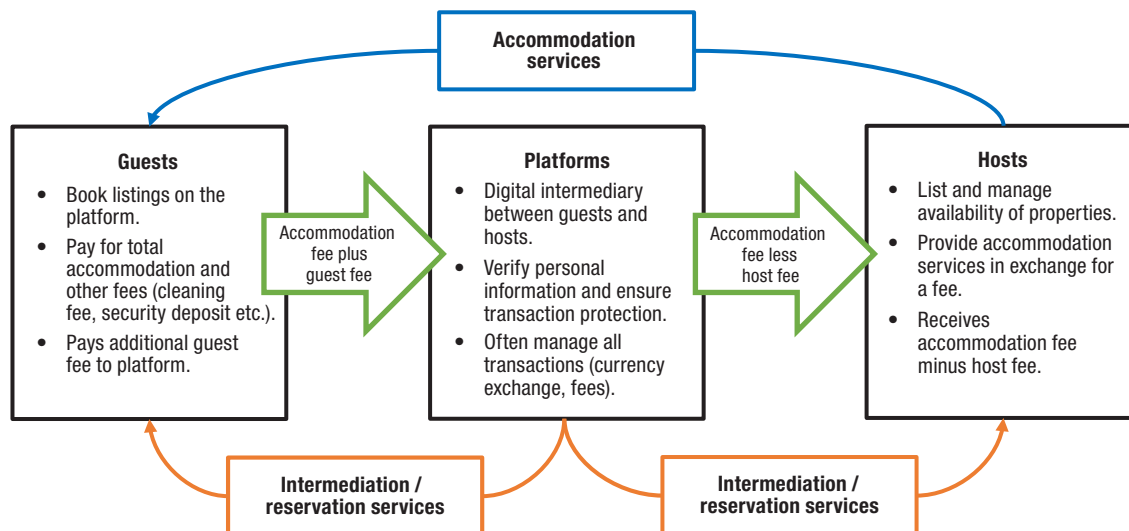
3. There have been recorded cases where renters have listed properties on private short-term accommodation platforms. Additionally, businesses can hire employees to manage their listings. However, for the purpose of this paper we have assumed that hosts own the dwellings that they list. This does not have an impact on the derived estimates. It does, however, affect the interpretation of the findings.

The consumers of the short-term accommodation service (guests) use the platforms to search, reserve and pay<sup>4</sup> for the rental. In addition to the price of the accommodation rental, guests may be charged, by the hosts, other fees for services such as cleaning or accommodating extra people. After all of these charges are totalled, the intermediary platform charges a guest fee in exchange for the use of their services.

Digital intermediary platforms, for which the major players in Canada include Airbnb, VRBO, HomeAway and Flipkey, operate as an online matching and payment processing unit for transactions between hosts and guests. They maintain the websites and digital applications that facilitate the searching, listing and reserving the service. In some cases, the platforms also verify personal information through security checks and transaction protection, and process the payments for the transactions including collecting the fees from the guests and providing the owed revenue to the hosts. For all of these services they charge fees to both hosts and guests. Currently, all of the major intermediary platforms for the private short-term accommodation market in Canada are foreign companies, meaning their services are imported by hosts and guests in Canada.

Figure 1 illustrates the relationship, and the flow of funds, between the three economic actors involved in a private short-term accommodation rental transaction.

**Figure 1**  
**Relationship between actors involved in a private short-term accommodation rental transaction**



Source: Statistics Canada.

## Methodology

In an effort to address data gaps within the CMEA Statistics Canada has used alternative data to estimate the size of the private short-term accommodation market in Canada. This section provides an overview of the data source and methodology used to derive preliminary estimates of this market, including the assumptions made. Statistics Canada acquired data from a third-party market research firm that specializes in providing data analytics for private short-term accommodation rental platforms.<sup>5</sup> The acquired data included web scraped listing information, in addition to derived or modelled revenue data for all properties within the geographic boundaries of Canada.

The following steps were then undertaken to derive preliminary estimates of the private short-term accommodation market.

4. Some platforms offer an option to pay the host directly for the accommodation rental. However, the majority of listings appear to use the payment processing option of the platform.

5. The data was acquired from AirDNA LLC.

First the data were edited for consistency.<sup>6</sup> This included removing duplicate records and filling in missing information, such as a temporarily absent host ID or incorrect provincial classification. Once the data were complete and consistent they were aggregated by province and territory and then confronted with other available sources of information. For example, the number of listings obtained through these data were compared to estimates published by researchers or academics who had scraped their listing information themselves. The comparative analysis revealed similar findings and trends, which corroborated the evidence in the dataset.

Following the editing and data confrontation stage, preliminary estimates were derived for the market's largest firm. This included aggregating the revenue to include host and guest fees charged by the intermediary platform. Assumptions about guests fees were made as the data source did not provide this information.

After compiling the data for the platform represented in the source data, the estimates were augmented to reflect the entire private short-term accommodation market in Canada. This meant researching market share and fee structures for other intermediary platforms that operate within this industry in Canada. Information for these platforms, including fee structures, were collected manually online. However, assumptions had to be made as there was no information on the exact fees paid.

The estimates for the other intermediary platforms were combined with those for the platform represented in the source data. Estimates of total revenue, as well as breakdowns of the revenue accruing to hosts in Canada and that accruing to the intermediary platforms, were compiled. Before discussing the findings, the paper will now present some of the main challenges and limitations with the approach used.

## Experimental estimates of private short-term accommodation

Using the methodology previously-outlined, revenue for the private short-term accommodation market in Canada is estimated at \$2.8 billion in 2018. This includes both the revenue of hosts as well as fees charged by the digital platform companies. The largest markets were in Ontario, British Columbia and Quebec, accounting for nearly 90% of total revenues in 2018. Table 1 provides estimates of total revenue by province and territory between 2015 and 2018.

**Table 1**  
**Total revenue of the private short-term accommodation market, by province and territory, 2015 to 2018**

	2015	2016	2017	2018
	thousands of dollars			
<b>Canada</b>	<b>265,190</b>	<b>814,164</b>	<b>1,930,292</b>	<b>2,760,023</b>
Newfoundland and Labrador	435	3,430	18,239	29,406
Prince Edward Island	451	6,928	19,264	29,768
Nova Scotia	1,115	18,599	44,778	70,870
New Brunswick	421	4,127	12,287	20,510
Quebec	65,192	215,569	467,938	634,588
Ontario	93,967	257,200	628,405	909,421
Manitoba	1,538	4,376	9,784	16,052
Saskatchewan	836	2,508	6,465	11,208
Alberta	8,818	30,916	96,974	151,929
British Columbia	92,020	268,692	620,590	876,080
Yukon	308	1,071	2,777	4,678
Northwest Territories	77	699	2,556	4,797
Nunavut	10	48	234	715

**Note:** Numbers may not add up to totals due to rounding.  
The values are expressed in current dollars.

**Source:** Statistics Canada, special tabulation, 2019.

Growth in private short-term accommodation in Canada has been rapid as total revenues increased nearly tenfold (940%) between 2015 and 2018. Despite this significant growth over the entire period, increases have slowed year after year.

6. One of the main challenges with using web-scraped data is that it is unstructured. This is true for data scraped from an intermediary platform, where users (in this case hosts) have control over what information is provided and how and when it is changed.

Of all the provinces and territories, Nunavut experienced the fastest growth in private short-term accommodation, as revenues increased from \$10 thousand in 2015 to nearly \$715 thousand in 2018. Following Nunavut, the Northwest Territories and the Atlantic provinces recorded the largest growth rates in revenue for private short-term accommodation between 2015 and 2018.

Of total revenue in 2018, \$2.6 billion (or 93%) went to hosts, while \$0.2 billion was earned by the intermediary platform companies. Interestingly, growth in guest fees grew more than host fees between 2015 and 2018. This is largely attributable to changes in the fee structure for the various platforms in 2017.<sup>7</sup> Table 2 provides estimates of the revenue earned by intermediary platforms.

**Table 2**  
**Total fees paid to intermediary platforms, by province and territory, 2015 to 2018**

	2015	2016	2017	2018
	thousands of dollars			
<b>Canada</b>	<b>20,829</b>	<b>62,752</b>	<b>160,329</b>	<b>196,601</b>
Newfoundland and Labrador	33	259	1,515	1,625
Prince Edward Island	34	534	1,600	1,807
Nova Scotia	80	1,434	3,719	4,863
New Brunswick	33	318	1,021	1,143
Quebec	5,117	16,638	38,866	42,589
Ontario	7,384	19,806	52,192	63,613
Manitoba	123	338	813	1,061
Saskatchewan	68	194	537	584
Alberta	685	2,367	8,054	10,534
British Columbia	7,236	20,718	51,545	67,855
Yukon	27	85	232	466
Northwest Territories	8	55	213	404
Nunavut	4	6	22	56

**Note:** Numbers may not add up to totals due to rounding.  
The values are expressed in current dollars.

**Source:** Statistics Canada, special tabulation, 2019.

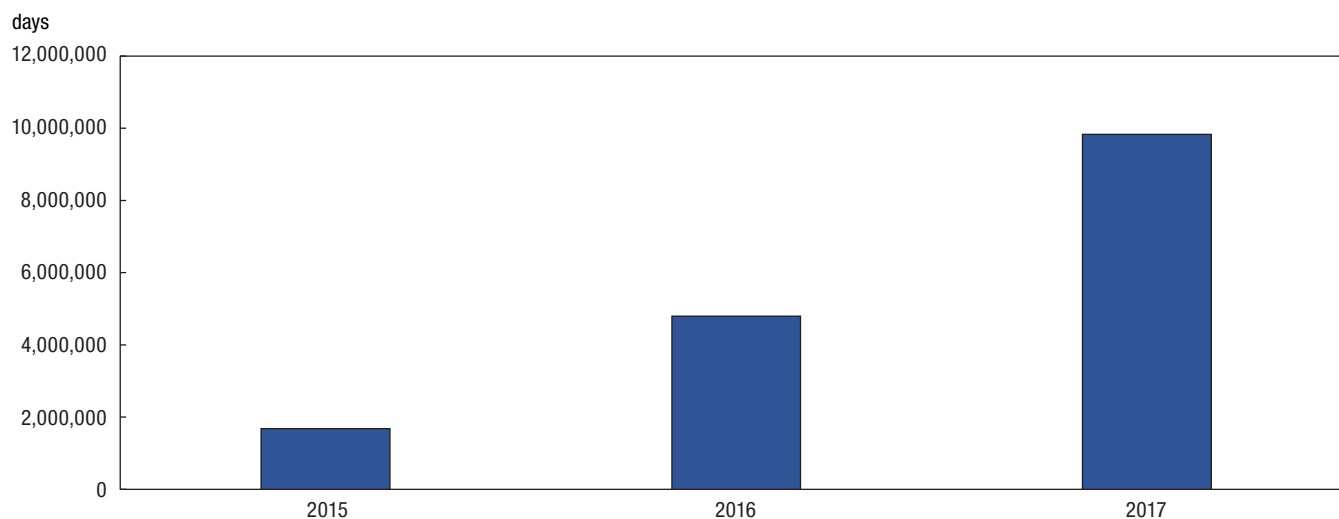
## Additional analysis of private short-term accommodation in Canada

To better understand the private short-term accommodation market in Canada, analysis must extend beyond revenue. The following section provides more detailed analysis about the industry characteristics of private short-term accommodation in Canada. This supplementary analysis is only available for years 2015 to 2017 due to data availability. While this analysis was conducted using data for only one intermediary platform operating in Canada, projections in the United States hint at similar patterns of development for the other major players in the market (JLL, 2016, Wachsmuth et al., 2018).

The use of private short-term accommodation services has grown significantly between 2015 and 2017. Estimated reservation days grew from 1.7 million in 2015 to nearly 10 million in 2017 (see Chart 1), a growth of 485%. Nearly 65% of these reservations were for an entire home or apartment, the most popular rental type since 2015 (see Table 3). While houses, condos and apartments account for the majority of all unit types, there has been an increase in the number of listings and the revenue earned for unique unit types, such as boats, tipis, or igloos (see Table 4).

7. The exact amount charged by intermediary platforms is unknown. These figures were derived by applying the mid-point of the fee range to estimated listing revenues.

**Chart 1**  
**Total reservation days booked using the largest intermediary platform, Canada, 2015 to 2017**



Source: Statistics Canada, special tabulation, 2019.

**Table 3**  
**Breakdown of listing types in Canada, 2015 to 2017**

Listing type	2015		2016		2017	
	Total listings	Total revenue	Total listings	Total revenue	Total listings	Total revenue
Entire home/apartment	64.5	84.6	62.3	85.3	63.7	86.3
Private room	33.5	14.9	35.7	14.2	34.7	13.4
Shared room	2.0	0.6	2.0	0.4	1.7	0.3

Source: Statistics Canada, special tabulation, 2019.

**Table 4**  
**Breakdown of unit types, Canada, 2015 to 2017**

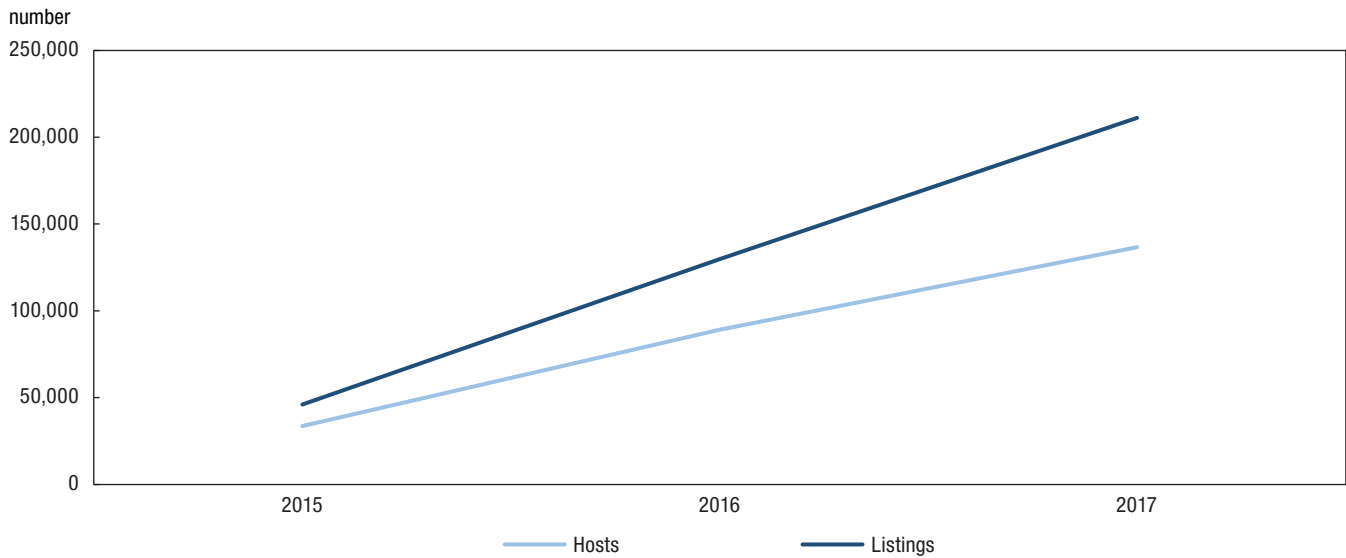
Unit type	2015		2016		2017	
	Total listings	Total revenue	Total listings	Total revenue	Total listings	Total revenue
Apartment	55.4	61.8	49.6	48.2	41.3	32.9
Condo	4.5	5.7	6.5	10.2	7.9	11.7
House	29.2	23.6	28.9	26.1	30.8	30.1
Other	10.9	8.8	15.1	15.6	20.0	25.3

Source: Statistics Canada, special tabulation, 2019.

As the private short-term accommodation market has become more popular in Canada, the number of listed properties per host has also increased. In 2015, the number of listings per host was 1.37. By 2017 this ratio had risen 13% to 1.54 listings per host (see Chart 2). Additionally, hosts that advertise multiple listings tend to make them available more often than hosts that have only a single listing. Chart 3 shows that, on average, hosts with multiple properties make their listing available nearly three days more per month than hosts with only one listing.

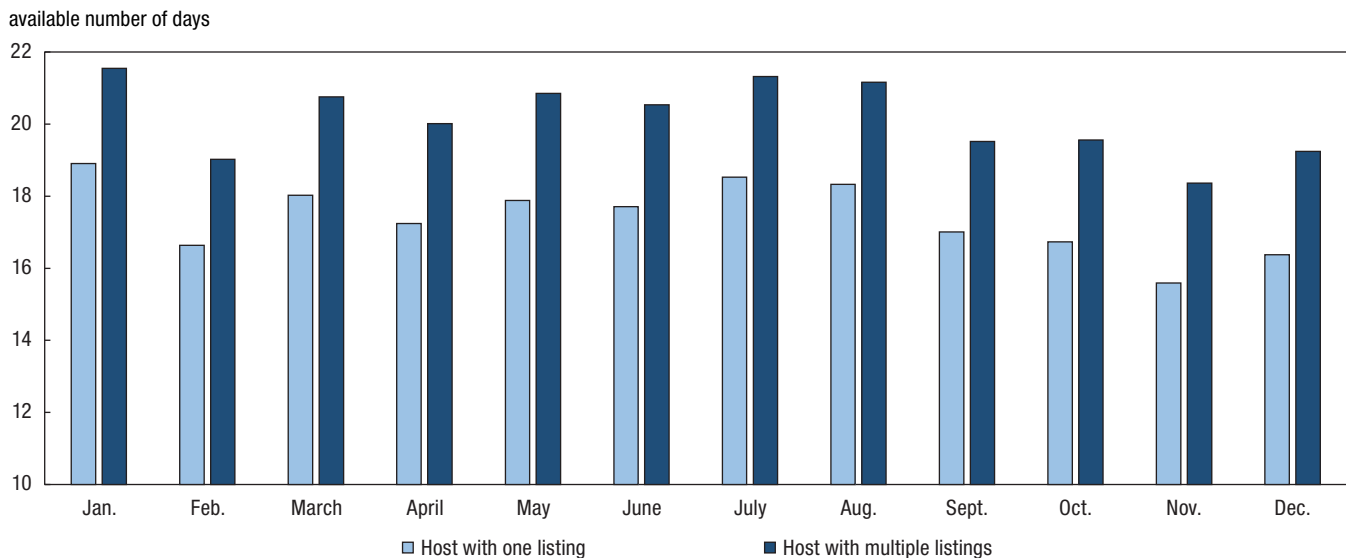


**Chart 2**  
**Number of hosts and number of listings on the largest intermediary platform, Canada, 2015 to 2017**



Source: Statistics Canada, special tabulation, 2019.

**Chart 3**  
**Available days for single listing and multiple listing hosts, Canada, 2017**



Source: Statistics Canada, special tabulation, 2019.

The average length of stay for guests using the most popular platform in Canada was 3.5 days in 2017, a decrease from 4.8 days in 2015. Listings in Nunavut were estimated to have the longest average stay in 2017, at 4.3 days. The shortest average stay was estimated for New Brunswick (3.0 days). Table 5 shows that the length of stay was shorter in the summer months (3.3 days in June 2017 compared with 3.8 days in December 2017), perhaps as guests were more inclined to book weekend trips. The shorter reservations in the summer months in the Atlantic provinces could also be impacted by fluctuations in availability for other types of traveller accommodation, such as hotels (Group ATN, 2017).

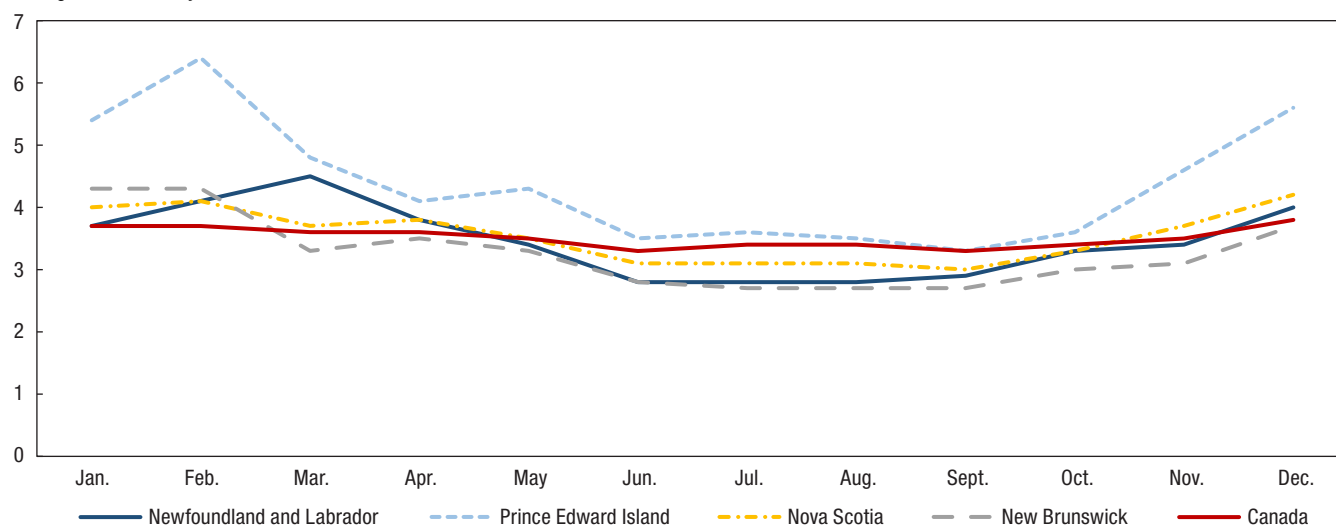
**Table 5**  
Average number of days per reservation in Canada, 2017

	January	February	March	April	May	June	July	August	September	October	November	December
	number of days											
<b>Canada</b>	<b>3.7</b>	<b>3.7</b>	<b>3.6</b>	<b>3.6</b>	<b>3.5</b>	<b>3.3</b>	<b>3.4</b>	<b>3.4</b>	<b>3.3</b>	<b>3.4</b>	<b>3.5</b>	<b>3.8</b>
Newfoundland and Labrador	3.7	4.1	4.5	3.8	3.4	2.8	2.8	2.8	2.9	3.3	3.4	4.0
Prince Edward Island	5.4	6.4	4.8	4.1	4.3	3.5	3.6	3.5	3.3	3.6	4.6	5.6
Nova Scotia	4.0	4.1	3.7	3.8	3.5	3.1	3.1	3.1	3.0	3.3	3.7	4.2
New Brunswick	4.3	4.3	3.3	3.5	3.3	2.8	2.7	2.7	2.7	3.0	3.1	3.7
Quebec	3.6	3.6	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3	3.4	3.7
Ontario	3.6	3.6	3.5	3.6	3.5	3.3	3.4	3.5	3.4	3.4	3.5	3.6
Manitoba	4.2	4.0	4.0	3.8	3.9	3.7	3.9	4.0	3.9	3.8	3.8	4.0
Saskatchewan	4.2	4.5	3.6	3.7	3.4	3.4	3.5	3.5	3.5	3.8	3.5	4.0
Alberta	3.5	3.5	3.5	3.5	3.4	3.2	3.2	3.3	3.2	3.4	3.6	3.8
British Columbia	4.0	4.0	3.8	3.6	3.5	3.3	3.4	3.4	3.4	3.6	3.7	4.0
Yukon	3.6	4.3	4.5	3.5	4.2	3.1	3.2	3.1	3.4	4.2	4.3	4.6
Northwest Territories	3.5	3.3	3.5	3.7	3.8	3.7	3.4	3.6	3.0	3.0	3.7	3.4
Nunavut	6.2	2.3	6.9	4.8	4.3	5.2	3.5	5.4	4.5	3.5	3.6	4.8

Source: Statistics Canada, special tabulation, 2019.

**Chart 4**  
Average length of stay, Atlantic provinces, 2017

average number of days



Source: Statistics Canada, special tabulation, 2019.

The total number of listings on the largest platform in Canada accounted for 1.0% of the supply of dwellings in the country in 2016 (see Table 6). British Columbia had the highest proportion of listings relative to total dwellings (1.7%). Prince Edward Island and Yukon had the second highest ratios of listings to dwellings, at 1.4%. The average daily revenue per available listing is \$37, this was compared to \$95 for hotels (CBRE, 2016). British Columbia had the highest daily revenue per available listing (\$51) and the highest daily revenue per hotel room (\$111). Nunavut had the lowest daily revenue per available room (\$12).

**Table 6**  
**Ratio of listings to total number of dwellings and the revenue per listing compared to hotel revenue per available room, Canada, 2016**

	Ratio of listings to dwellings	Daily revenue per available listing	Daily revenue per available room (hotels) <sup>1</sup>
	%	dollars	
<b>Canada</b>	<b>0.9</b>	<b>37.20</b>	<b>94.82</b>
Newfoundland and Labrador	0.4	25.77	90.45
Prince Edward Island	1.4	49.06	77.43
Nova Scotia	0.6	40.97	84.36
New Brunswick	0.3	26.26	66.36
Quebec	1.2	31.16	108.34
Ontario	0.8	36.61	98.79
Manitoba	0.2	17.78	76.63
Saskatchewan	0.2	14.36	67.67
Alberta	0.5	23.83	68.81
British Columbia	1.7	50.55	111.45
Yukon	1.4	25.32	..
Northwest Territories	0.8	41.06	..
Nunavut	0.2	12.34	..

.. not available for a specific reference period

The values are expressed in current dollars.

1. Data was taken from CBRE, 2016.

Source: Statistics Canada, special tabulation, 2019 and CBRE, 2016.

## Addressing data gaps in the Canadian Macroeconomic Accounts

Given available data sources, measuring household production, in the case of individuals providing short term accommodation services, is a challenge for the CMEA. The growth in the scale and frequency of this type of activity, along with the emergence of digital intermediary platforms, often which are non-resident entities, has amplified the complexity. Estimating the size of the private short-term accommodation market is a first step to address potential emerging data gaps related to the digitalization of the economy.

The following section outlines how the estimates presented above will be incorporated into the CMEA, according to the three approaches of measuring gross domestic product (GDP): the production account, and the income and expenditure accounts.

### Production account

The two main actors that provide services in the private short-term accommodation market are intermediary platforms and hosts. The split in revenue manifests itself in accommodation fees, which go to the hosts as well as guest and host fees, which go to the platforms. Hosts provide short-term traveller accommodation services, which means that they belong to the traveller accommodation industry (BS721100). Digital intermediary platforms provide reservation services and therefore have been classified into the travel arrangement and reservation services industry (BS561500).

### Integrating the revenue of hosts

The traditional approach for measuring economic activities of industries is through business surveys and various types of tax data. The *System of National Accounts 2008* (European Commission et al., 2009) describe industries that are not completely captured by surveys and tax data as 'hidden' or 'underground'. In the case of private short-term accommodation this is partly true.

Renting by larger commercial actors is captured through business surveys and tax data, but households that rent on intermediary platforms are likely not fully captured because the traditional collection vehicles do not measure their activities well. Traditional business survey frames generally do not include households that produce market output. Additionally, there is evidence of underreporting and misclassification in tax data. As a result household activities, such as providing short-term accommodation services, are not fully captured in the CMEA.

In order to differentiate the captured and uncaptured portions of total revenue, an assumption about the likelihood that a host would be included within business survey frames or report their earnings on tax forms had to be made. The criteria that was established was that if a host generated more than \$30,000 in revenue in one year or listed three or more properties, then it was assumed that their revenue was already captured in the CMEA. The value of \$30,000 CAD in revenue was based on the current threshold for collecting and remitting the government sales tax (GST) in Canada.

The choice of three properties was based on the assumption that hosts with more than two properties were more likely to be undertaking larger scale commercial activity, perhaps renting properties for investment purposes, and therefore should already be captured in business surveys or tax data. It was assumed that hosts with one or two properties may be renting their primary and perhaps a secondary residence, such as a cottage, and therefore would not be captured in a business survey and could underreport or misclassify their earned revenue.

While it was possible to estimate revenues of private short-term accommodation services, there is no information about the expenses related to this economic activity, except for the host fee paid to the intermediate platforms. As a result, the expenses (intermediate inputs) for this industry had to be imputed.<sup>8</sup> After estimating the host fees paid, the remaining intermediate inputs were estimated using the ratio of inputs to output for the traveller accommodation industry. The value of total inputs was allocated to products using the same distribution as the traveller accommodation industry, except for the host fees which were all allocated to the products for travel arrangement and reservation services (BS561500).

While alternative approaches were considered, partially offsetting the private short-term accommodation activities in the owner-occupied housing industry was chosen. This was because hosts were assumed to be households, renting either their primary or secondary dwellings, an adjustment to the provision of owner-occupied housing services was required in order to avoid double counting output. Essentially, it was assumed that when a homeowner rents their primary dwelling the output was transferred from owner-occupied housing services to traveller accommodation services. As a result, a partial offsetting reduction in the output of the owner-occupied housing industry was made. The offsetting amount was derived using information on the price differential between the short and long term rental rates.

A summary of the impacts on the production account can be found in Table 7. This table describes the changes that have occurred in the national accounts. Uncaptured output (revenue minus inputs) was incorporated into the GDP for the traveller accommodation industry. The uncaptured revenue has been used to estimate output. At the same time, the output and corresponding inputs of the owner-occupied housing industry was reduced to reflect the transformation of the house from housing services to traveller accommodation services. Output for the traveller accommodation industry rose by the uncaptured host revenue minus the host fees. For the owner-occupied housing industry, output has decreased by the uncaptured revenue being transferred to the traveller accommodation industry. Overall output increased. According to the approach described for the above, estimates of the private short-term accommodation market are used to improve the CMEA starting with the 2015 reference year.

8. The input structure is likely different than the traveller accommodation industry (i.e., hotels). However, because of a lack of data on the expenses for private short-term accommodation, the traveller accommodation industry structure was used as a proxy.

**Table 7**  
**Summary of impact on the production account**

	<b>Traveller accommodation industry</b>	<b>Owner-occupied housing industry</b>	<b>Effect on total economy</b>
<b>Output</b>	Output (increases) = uncaptured host revenue – host fees.	Output (decreases) = proportion of the uncaptured host revenue.	Output increases.
<b>Intermediate inputs</b>	Intermediate inputs (increases) = maintaining equivalent output to input ratio for the industry.	Intermediate inputs (decreases) = maintaining equivalent output to input ratio for the industry.	Impact varies depending on the relative input to output ratios for the two industries.
<b>Gross domestic product (GDP)</b>	GDP (increases) via gross mixed income	GDP (decreases) via gross mixed income	

Source: Statistics Canada, 2019.

## Integrating the revenue of the digital intermediary platforms

Digital intermediary platforms provide reservation-making services to both hosts and guests. As such their output is classified as travel arrangement and reservation services (BS561500). Currently, all of the digital intermediary platforms that facilitate the private short-term accommodation market in Canada are foreign entities. While subsidiary companies may be present in Canada, these entities generally only exist to provide marketing or advertising support services to the foreign-based parent company.

Foreign companies are included in the non-resident sector, and thus their services provided to Canadian businesses or households were treated as imports. While Statistics Canada administers an enterprise-based survey on international trade in commercial services, it does not capture transactions between Canadian private households and non-resident service providers. As a result there is a gap in the coverage of imports of services from digital intermediary platforms.

In order to address this gap, some of the estimated host and guest fees were incorporated into the international balance of payments. Analysis revealed that the host fees paid by both the captured<sup>9</sup> and the uncaptured hosts were likely missing from the international trade of services data and thus the full amount of host fees was incorporated into the CMEA.

When it came to guest fees, only a portion was incorporated into the international trade of commercial services as an import. This value was determined based on the residence of the final consumer and the identified data gap in household final expenditures, both of which are discussed in more detail in the following section.

## Income and expenditure accounts

All of the revenue earned by uncaptured hosts were added to the primary income account in the form of mixed income. This was based on the assumption that most uncaptured revenue is earned by hosts that are unincorporated businesses. The income of incorporated businesses is already captured in business surveys and tax data and thus there is no need to make an adjustment to gross operating surplus.

The gap in coverage associated with the private short-term accommodation market, though smaller on the expenditure side, was still present. This was due to the fact that the travel expenditure surveys capture a portion of the private short-term accommodation market, but respondents were likely unable to differentiate some of the fees from private short-term accommodation from the remainder of their expenditure on traveller accommodation. Available detail in travel surveys did not allow for a split of consumption of traveller accommodation services from imports of reservation services. There was also still a minimal gap on the expenditure side as the existence of an imbalance with the income perspective made it difficult to capture all of the household final consumption expenditure (HFCE).

The following steps were taken to address the data gap associated from the expenditure or demand perspective. First, the value of traveller accommodation services, equal to the revenue of hosts, was split between domestic and foreign consumption. This was done using ratios of spending by domestic tourists versus spending by foreign

9. While revenue of captured hosts was assumed to be included within industry surveys and/or tax data, there was little evidence that these hosts were captured in the trade of commercial services survey.

tourists, from the tourism satellite account (Statistics Canada, 2017-a). Once split, these estimates were confronted with other sources to determine what amount was still missing from household expenditure. As mentioned above, the majority is captured by household expenditure and travel surveys and thus already included in estimates of HFCE.

For guest fees, the same split between spending by domestic tourists and spending by foreign tourists was applied, to obtain the value of guest fees paid by Canadian guests. This amount was incorporated into household expenditure for the travel arrangement and reservation services industry (BS561500). A small offset for traveller accommodation (BS721100) was required in order to account for the fact that the household expenditure and travel surveys already captured this spending. For example, the surveys capture the entire spending on traveller accommodation, and respondents will not distinguish between the fees paid for the accommodation and those paid for reservation services. In essence this offsetting was done to shift spending from traveller accommodation (BS721100) to travel arrangement and reservation services (BS561500). The guest fees paid by non-resident guests were completely omitted as this transaction occurs between two non-resident actors and thus is out of scope for the CMEA.

Finally, all host fees, both captured and uncaptured, were incorporated into the intermediate consumption of BS561500 in the traveller accommodation industry.

Table 8 provides a summary of the impact on the expenditure account. For travel expenditure, there was an increase in both reservation services and traveller accommodation. There was also an increase by foreign travellers, as well as an increase in imports.

**Table 8**  
**Summary of impact on the expenditure account**

	Final consumption expenditure		Imports
	Travel expenditures	Non-residents	
<b>Reservation services</b>	Increase = to guest fees of domestic travellers.	Not affected by the introduction of this new activity.	Increase = to host fees+ guest fees by domestic travellers.
<b>Traveller accommodation</b>	Increase = expenditures by guests minus guest fee by domestic travellers.	Increase = expenditures by guests minus guest fee by international travellers.	Not affected by the introduction of this new activity.

Source: Statistics Canada, 2019.

## Impact and limitations

All changes have been incorporated into the provincial and territorial supply and use tables, the quarterly income and expenditure accounts, GDP by industry and the balance of payments starting with reference year 2015. There will be no adjustments made to prior periods as analysis has revealed that the magnitude of the uncaptured activity is minimal prior to 2015. The impact on published macroeconomic indicators, such as GDP is expected to be very minimal for 2015. However, given the significant growth in this activity, the impact could be more notable for subsequent periods.

Statistics Canada will continue to monitor the private short-term accommodation market to refine the data sources and assumptions used. As this market continues to develop and as regulations evolve existing and new sources of data may provide more information to improve methods for measuring these activities.

In addition to the previously-mentioned limitations, the approach for incorporating private short-term accommodation into the CMEA does not include using a unique price deflator. At present, the existing price deflator for traveller accommodation services is used for private short-term accommodation services. The impact of this limitation is considered small, given the minimal impact of private short-term accommodation relative to the total traveller accommodation industry. Going forward, Statistics Canada will conduct analyses of price changes and quality of services, in order to develop a representative price deflator or set of deflators. This will ensure that volume measures accurately reflect the entire traveller accommodation industry, including private short-term rentals.

## Conclusion

Digitalization and the emergence of intermediary platforms have made it easier for households to produce goods and services, such as accommodation services. The dramatic rise in the popularity of these intermediary platforms has underscored the importance of capturing this emerging activity in macroeconomic indicators, such as GDP.

This paper outlines a new approach to measure the private short-term accommodation market in Canada. These experimental estimates provide useful insight into the size and growth of this market over the last number of years. They also reveal interesting trends about how this market is changing over time and the characteristics of the actors involved.

In addition to providing information about this market, these estimates are being used to address emerging data gaps within the CMEA. Still, there is a need for more complete data to ensure that macroeconomic indicators accurately account for all economic activity. As regulation and awareness of these types of activities continues to increase, new sources of data may become available. Statistics Canada will continue to monitor the activities and as new data and information emerges, and refine the sources, methods and assumptions to properly account for private short-term accommodation.

## Glossary

**Captured revenues:** are the revenues that are most likely already captured in the CMEA through traditional data sources such as enterprise surveys and/or administrative data.

**Digital or intermediary platforms:** operate as an online matching and/or payment processing unit for transactions between hosts and guests. They maintain the websites and digital applications that facilitate the searching, listing and reserving the service. In some cases the platform will verify personal information through security checks and transaction protection, and process the payments for the transactions including collecting the fees from the guests and providing the owed revenue to the hosts. For all of these services they charge fees to both hosts and guests.

**Guests:** are consumers of the short-term accommodation services. They use digital platforms to search, reserve and pay for accommodation rental. In addition to the price of the accommodation rental, guests may be charged, by the hosts, other fees for services such as cleaning or accommodating extra people. After all of these charges are totalled, digital platforms typically charges a guest fee in exchange for the use of their services.

**Guest fees:** are fees paid by guests to intermediary platforms for their intermediation services (i.e., facilitating the reservation and payment for the rental).

**Hosts:** are the providers of the short-term accommodation services. They can be individuals or businesses, who offer short-term rentals of properties.

**Host fees:** are fees paid by hosts to intermediary platforms for their intermediation services (i.e., facilitating the reservation and payment for the rental).

**Private short-term accommodation:** the short term rental of a privately owned dwelling via a digital intermediary platform.

**Uncaptured revenues:** are the revenues which are most likely not captured in the CMEA through traditional data sources such as enterprise surveys and/or administrative data. These revenues are most likely not captured because business surveys are not designed to measure market-based production undertaken by private households. Additionally, revenue earned by private households can often be misclassified and/or underreported in tax data.

**Web scraping:** is a process through which information is gathered and copied from the Web, for later retrieval and analysis. It can be conducted manually or through the use of an automated software.



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