

# COVID Shutdown Regulations Negatively Impact Employment and Sales of Restaurants in Ontario

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## Abstract

Due to the world-wide COVID-19 pandemic, shutdown restrictions on businesses and facilities have limited economic activities. This paper examines the shutdown effect on restaurants by reopening a city in Ontario (Peterborough) and comparing its restaurant operating situation with that of another city (Brantford) after three months. The survey results indicate that shutdown restrictions have negative impacts on restaurant employment, sales and operating confidence. However, the more drastic increase in COVID-19 positive cases in the reopened city suggests the Ontario government to be conservative for further policy decisions.

## 1 Introduction

The COVID-19 pandemic has impacted many businesses, including restaurants, and resulted in mass-layoffs of workers throughout the world. According to HuffPost (Tencer 2020), “Canada’s unemployment rate was 13.5% in May 2020, the highest it has been since 1976” (Wikipedia, n.d.). However, the unemployment crisis in Canada, which would result in rising rates of depression, suicide, frustration, crime, and other unprecedented social issues, was proactively considered and managed by the Government of Canada. The Canada Emergency Wage Subsidy (CEWS) (Canada, n.d.b) as well as the Canada Emergency Rent Subsidy (CERS) (Canada, n.d.a) programs were enacted swiftly and served as much needed lifelines for businesses to survive. The Ontario government also provided a range of support such as provincial tax rebates, loans and debt relief interventions, utility bill payment reductions, business grants, and low-interest loans, etc (Ontario, n.d.).

To help recover from the current recession, we at Petit Poll have partnered with the Ontario government to examine the effects and scope of COVID shutdown on restaurants. We conducted an experiment by selecting two single tier cities, namely Peterborough and Brantford,<sup>1</sup> with similar restaurant operating situations in Ontario and investigated how reopening the dine-in services for restaurants in Peterborough has prevailed over the state of continued shutdown in Brantford through surveys. The results showed that the reopening policy has positively impacted the employment, sales volume and operating confidence on restaurant businesses in Peterborough. In addition, the governmental support programs contributed substantially to restaurant businesses in both reopened and shutdown cities. However, the more drastic increase in the COVID-19 positive cases in Peterborough demonstrated the public health concerns of the reopening, and the Ontario government should strike a balance between public health and economic recovery in further policy decisions.

We organize the rest of paper as follows: In Data section, we first discuss interventions of the experiment. Next, we introduce sampling methods and survey methodologies to collect the data. And then, we discuss main findings from survey results. In Discussion section, we elaborate on concerns about the intervention on city selections, sampling methods and survey methodologies. And we also propose our thoughts on further policy implications. In Appendix, we include screenshots of survey contents.<sup>2</sup>

<sup>1</sup>Ontario’s Municipal Act, 2001 defines a single-tier municipality as “a municipality, other than an upper-tier municipality, that does not form part of an upper-tier municipality for municipal purposes”

<sup>2</sup>Code and data are available at the GitHub repo: [https://github.com/honn-ishinn/restaurants\\_covid\\_shutdown](https://github.com/honn-ishinn/restaurants_covid_shutdown)

## 2 Data

Our data explores shutdown effects on restaurant businesses in Ontario. We analyzed it using R (R Core Team 2020), and packages `tidyverse` (Wickham et al. 2019), `stringr` (Wickham 2019), `here` (Müller 2020), `ggpubr` (Kassambara 2020), `janitor` (Firke 2021). We used R packages `cansim` (Shkolnik 2020), `httr` (Wickham 2020), `xml2` (Wickham, Hester, and Ooms 2020) to decide our intervention and sampling method, and packages `bookdown` (Xie 2016), `kableExtra` (Zhu 2020), `ggrepel` (Slowikowski 2021), `finalfit` (Harrison, Drake, and Ots 2020) to format the document. We referenced **Impact Evaluation in Practice** (Gertler et al. 2016) and **Sampling Theory and Practice** (Wu and Thompson 2020) to design our experiment.

### 2.1 Intervention

We want to examine the shutdown effects on restaurant businesses in Ontario. The plan of the experimental design was to reopen all restaurants (i.e., enable the dine-in option) in particular Ontario regions, while enforcing current provincewide shutdown restrictions (i.e., disable the dine-in option while enable the take-out option) on restaurants in the rest of Ontario regions. And after the three-month reopening, we compare restaurant operating situations in reopened regions with those in shutdown regions through data collected from online surveys of restaurant owners.

However, due to the current COVID-19 pandemic, any loosening of shutdown restrictions increases chances of COVID exposures, resulting in challenges on public health and safety of reopened regions. It is highly risky and hasty to reopen a large area of Ontario regions for the sole purpose of our experiment. Therefore, we mindfully chose Peterborough, a relatively small size Single-tier city 125 kilometers northeast of Toronto, as the only region to reopen in Ontario. We compared Peterborough’s restaurants operating situations with those in Brantford, another Single-tier city 105 kilometers southwest of Toronto with similar population. Since demographics, land areas and more importantly, restaurant operating situations between these two cities are quite similar with each other<sup>3</sup>, we consider these two cities as valid comparison cities that could yield an accurate estimate of restaurant businesses shutdowns. In our experiment, we assigned restaurants in Peterborough as the treatment group and those in Brantford as the control group. We also ensured restaurants within these two cities to have equal eligibilities to receive government supports with certain conditions (e.g. subsidies, grants, etc.) to estimate the real impact of shutdown effects on restaurant businesses after three-month reopening in Peterborough.

In September 2020, Petit Poll conducted the first survey on restaurants in Peterborough and Brantford to examine their business conditions before the experiment. Starting from October 2020, the Ontario government reopened Peterborough while keeping shutdown restrictions on the rest of Ontario regions. After a three-month period in January 2021, Petit Poll started to conduct survey on restaurants in Peterborough and Brantford about their business performance from October to December 2020. Survey results were released in February 2021.

### 2.2 Sampling Method and Survey Methodology

As we would like to understand the effect of COVID shutdown on restaurant businesses in Ontario, we considered all restaurants in Ontario as our target population. The frame population are all restaurants in Peterborough and Brantford. We used the following approaches to obtain the sampled population as below:

1. Scraped postal codes of all restaurants located within the circle of the Brantford City Centre to a 40 km radius on Yelp. And then applied the same method for Peterborough.<sup>4</sup>
2. Acquired a list of postal codes in Brantford and Peterborough from the Postal Code Conversion File (PCCF) retrieved from the University of Toronto Library (Toronto Library, n.d.).

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<sup>3</sup>Approaches to select these two cities are further introduced in the discussion section

<sup>4</sup>Land areas of both Brantford and Peterborough are less than 100 kilometer squares, so searching restaurants 40 km within the city center almost ensures to include all restaurants in Peterborough and Brantford

3. Compared these two lists and eliminate restaurants with postal codes outside of Peterborough and Brantford to get the list of all restaurants in Brantford and Peterborough as the frame population.
4. Randomly selected 100 restaurants from Brantford and 100 restaurants from Peterborough to form the sampled population.

The first survey was conducted before the decision on intervention to ensure our assumptions about restaurant similarities between Peterborough and Brantford. We asked respondents about the restaurants’ employment, average monthly sales, nature and category of restaurant, restaurant capacity to examine restaurant similarities between these two cities.

Table 1: Sampling Summary of the First Survey

City	Survey Administered	Total Sample Collected	Telephone Survey	Online Survey
Brantford	100	50	43	7
Peterborough	100	55	47	8

We used telephone interviews and online questionnaire methods to administer the survey. The telephone interview served as the primary channel and an online survey option was provided when respondents could not or prefer not to be interviewed over the phone. As shown in the above table (Table 1), our sampled population included 50 valid responses in Brantford and 55 in Peterborough. Among which, 7 were collected via online surveys in Brantford and 8 in Peterborough. Online surveys with no or incomplete answers were treated as nonresponses and were not included in the dataset for further analysis<sup>5</sup>. The survey was administered in following steps:

1. Scraped phone numbers of restaurants from Yelp while we determined the frame population.
2. Working from 2 pm to 4 pm, half of survey staffs called the Brantford restaurants, and the other half called the Peterborough restaurants simultaneously. Each phone call took around 15 minutes to complete. All restaurants on the pre-determined list were reached within one week.
3. When the call was connected, the survey staff would provide a brief introduction of the survey purpose and indicate that the survey was sponsored by the Ontario government.<sup>6</sup>
4. To ensure the quality and accuracy of data collection, survey staffs would ask if the respondent at the restaurant worked at a management-level position in the restaurant or was familiar with the restaurant’s sales performance. If the respondent answered no, the survey staff would ask the caller to pass the call to the relevant staff in the restaurant. If that staff was not available, the survey staff would schedule another call or provide the online questionnaire based on the preference identified by the respondent. Respondents who were interested in answering questions via online questionnaires could leave their email addresses and have two weeks to complete survey questions.
5. Respondents who were not reached by phone for the first time were called again in the following week. Restaurants that did not respond to the second call were documented as “nonresponse”.
6. To address privacy concerns and to increase the response rate, respondents were notified before the survey that all answers were recorded anonymously. Respondents were told at the beginning of the telephone survey that they could terminate the survey anytime if they want to. Respondents were also notified before the survey that they would have a chance to win a 50-dollar gift card if they fully participated.

<sup>5</sup>Exception for Question 6 of the first survey, which respondents could skip the question

<sup>6</sup>Scripts used to approach respondents are included in Appendix A and B

Table 2: Summary Statistics of the First Survey

	Responses	Brantford	Peterborough
Total Samples		50 (47.6)	55 (52.4)
Restaurant Category	Casual dining	38 (76.0)	40 (72.7)
	Fine dining	12 (24.0)	15 (27.3)
Restaurant Nature	Quick-service	27 (54.0)	26 (47.3)
	Table-service	23 (46.0)	29 (52.7)
Number of Employees	Less than 5	10 (20.0)	15 (27.3)
	5 -10	20 (40.0)	19 (34.5)
	10 - 30	12 (24.0)	10 (18.2)
	30 - 50	2 (4.0)	4 (7.3)
	Prefer not to say	6 (12.0)	7 (12.7)
Average Monthly Sales	\$0 - \$25,000	10 (20.0)	16 (29.1)
	\$25,000 - \$50,000	17 (34.0)	16 (29.1)
	\$50,000 - \$80,000	6 (12.0)	7 (12.7)
	\$80,000 - \$110,000	5 (10.0)	4 (7.3)
	\$110,000 - \$150,000	4 (8.0)	2 (3.6)
Restaurant Capacity	Prefer not to say	8 (16.0)	10 (18.2)
	Less than 10	5 (10.0)	6 (10.9)
	10 - 20	14 (28.0)	15 (27.3)
	20 - 40	19 (38.0)	16 (29.1)
	40 -70	2 (4.0)	5 (9.1)
	70 -100	4 (8.0)	5 (9.1)
	Prefer not to say	6 (12.0)	8 (14.5)

From the summary statistics of the first survey as shown above (Table 2, values inside the bracket represent percentage), we found that the distribution of category, nature, number of employees, average monthly sales and capacity of restaurants was similar between Peterborough and Brantford. These results confirm our initial assumptions that restaurants in these two cities are similar enough to implement our intervention of reopening Peterborough.

After three months of our intervention, we conducted the second survey on the same sampled population with same sampling methods. The second survey (Table 3) included 45 valid responses in Brantford and 48 in Peterborough. And among which, 5 were collected via the online survey in Brantford and 7 in Peterborough.

Table 3: Sampling Summary of the Second Survey

City	Survey Administered	Total Sample Collected	Telephone Survey	Online Survey
Brantford	100	45	40	5
Peterborough	100	48	41	7

Two surveys incurred a total cost of \$15,000 CAD, which was mainly used to hire and train staff to conduct the telephone survey, collect data and administer the online survey if applicable. A small portion of the cost (\$500 CAD) was used for online survey technology support and database maintenance. We also gave out 20 gift cards with a total worth (\$500 CAD) as incentives for higher response rate.

## 2.3 Main Survey Results

The second survey examined two parts of our interests: (1) Effects of the intervention on restaurant business conditions. (2) Effects of the the intervention on restaurants' dependency on government supports. Respondents answered survey questions based on business situations during the intervention period. Several key findings are discussed in the following:

### 2.3.1 Business Conditions

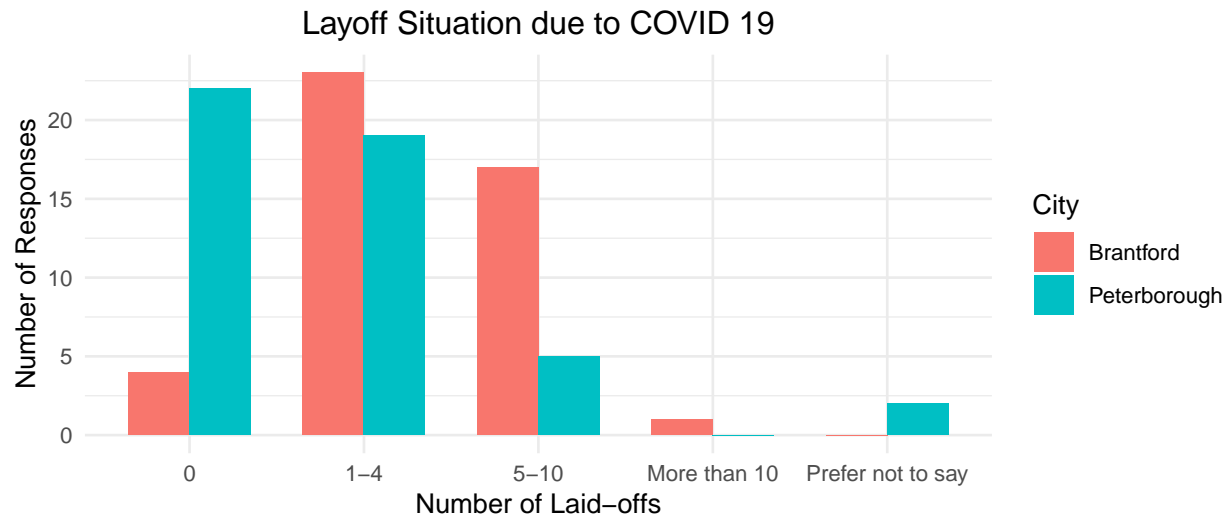


Figure 1: Layoff Situation due to COVID 19

Compared to Peterborough, restaurants in Brantford had much higher number of layoffs (Figure 1), suggesting that the continuing shutdown greatly affected the employment situation in Brantford. In Peterborough, there were considerable number of restaurants with no layoffs, possibly because restaurants required staffs to operate the dine-in service after reopening.

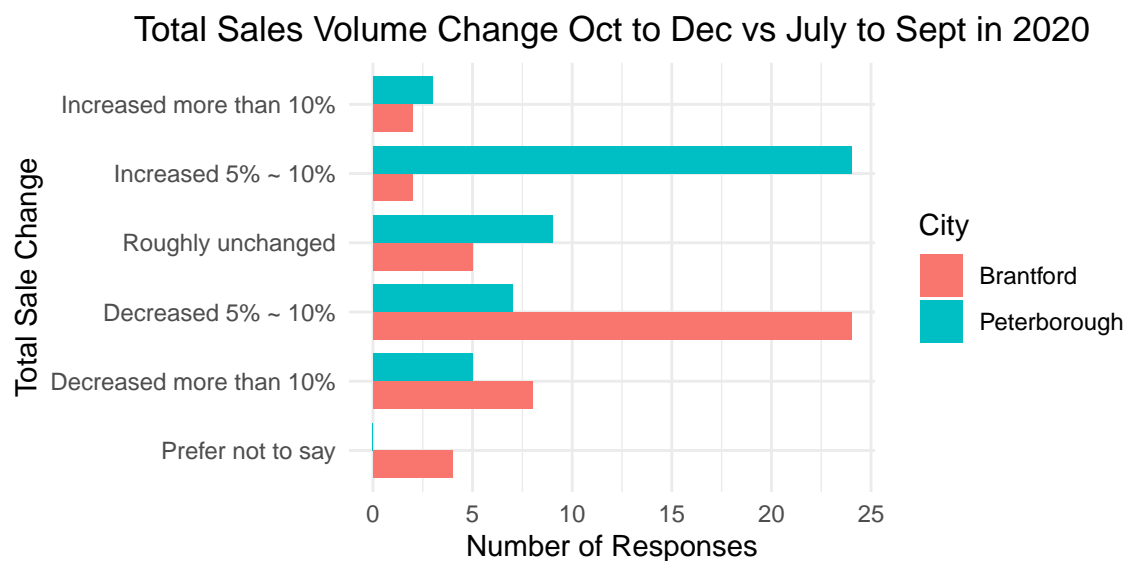


Figure 2: Total Sales Volume Change Oct to Dec vs July to Sept in 2020

From Figure 2, we noticed a considerable increase in sales in Peterborough during the reopen period. This indicated that when restaurants opened, some people would have used their dine-in services, regardless of potential pandemic risks.

In contrast, continued shutdown restrictions during October to December on Brantford resulted in a slight decrease in sales volume for these restaurants. Possible reasons for the decrease in restaurant sales included: (1) Residents in Brantford changed their preferences to cook more by themselves, instead of relying on meals from restaurants. (2) The continued shutdown resulted in closures of other businesses, therefore, minimizing their customer volume. (3) There exists some seasonal fluctuations on food service industries. People were more likely to stay at home when the weather was cold.

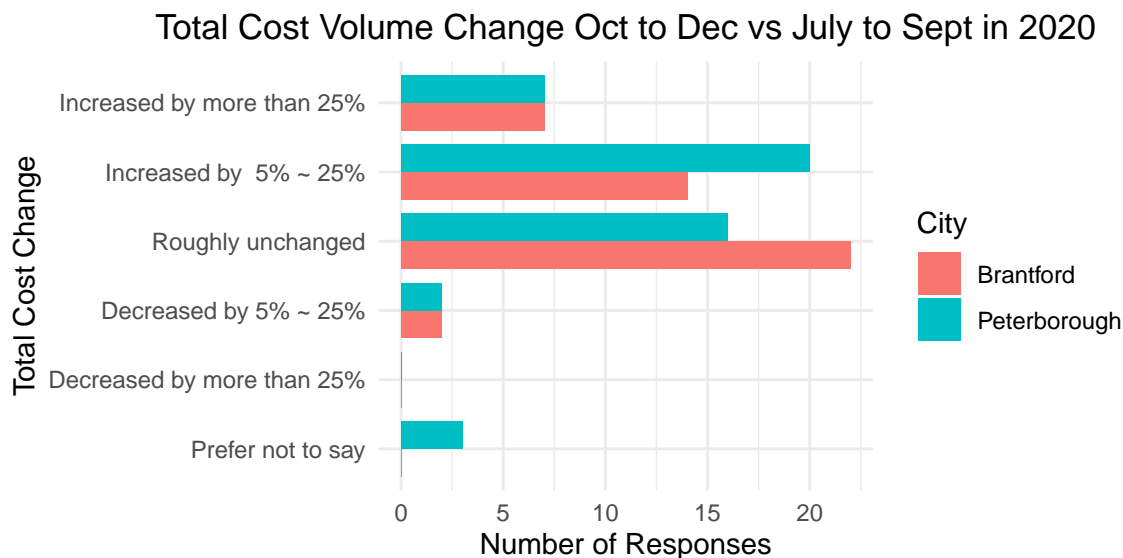


Figure 3: Total Cost Volume Change Oct to Dec vs July to Sept in 2020

Increased costs of restaurants in Peterborough, as shown in Figure 3, demonstrated more activities in their restaurants. We expect the cost increase would likely be variable cost. This change suggested that restaurants would have spent more in hiring staff, utilities or housekeeping materials to maintain their dine-in area. Although increased operating cost would usually impact the business unit negatively, from a broader view, these costs could generate economic flow into local society and are vital for other business sectors to survive. Therefore, we consider the increased cost in restaurants during the reopening period as a good signal of economic wellbeing.

Figure 4 shown below illustrates respondents' opinions towards the expected survivability of their businesses. Restaurants in Brantford were not as positive to continue their businesses for longer times, indicating a stressful operating situation during this continuing shutdown period. While on the other hand, restaurants in Peterborough generally expected to survive longer, showing stronger confidence to continue their businesses after the pandemic.

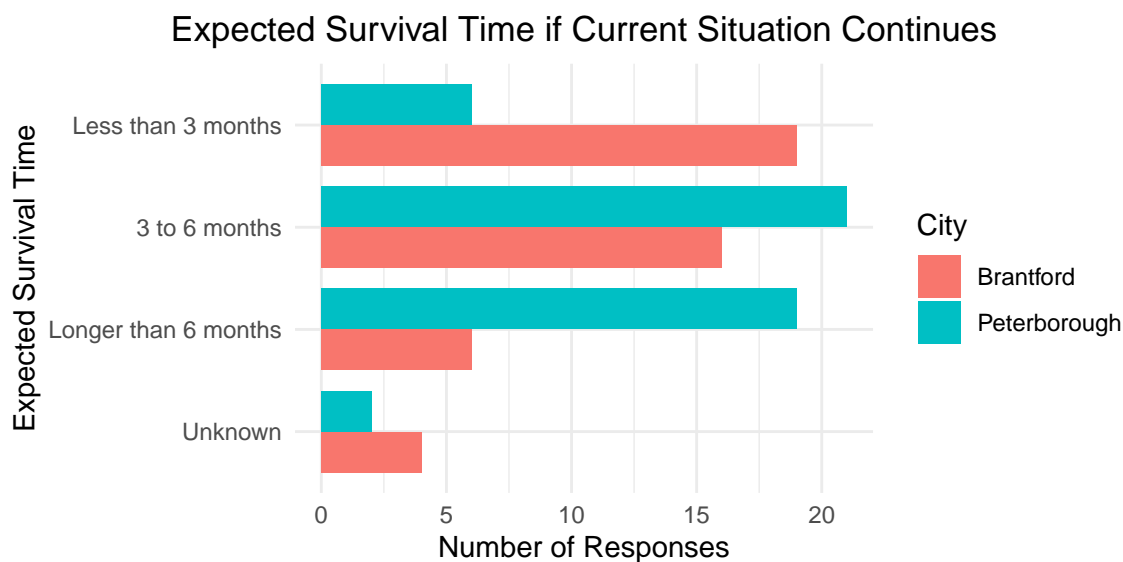


Figure 4: Expected Survival Time if Current Situation Continues

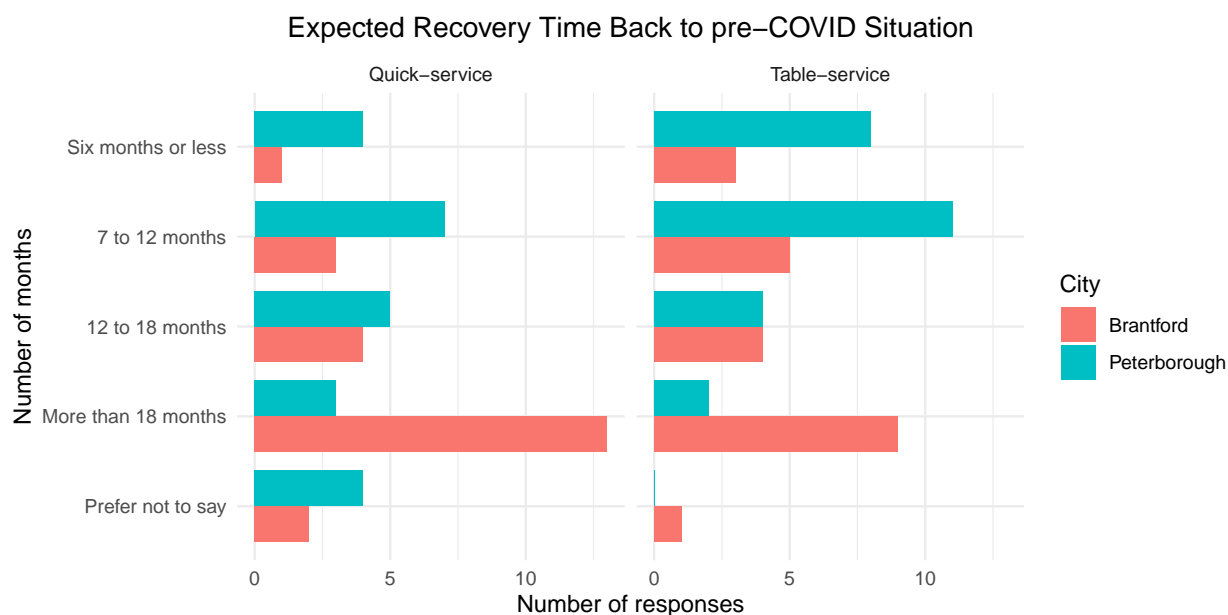


Figure 5: Expected Recovery Time Back to pre-COVID Situation

In addition, survey results about expected recovery time back to pre-COVID situation (Figure 5) showed that even if the pandemic ends immediately, most restaurants in Brantford, especially quick-service restaurants, would hold negative views to recover back to pre-COVID operating situation in a short period. For restaurants in Peterborough, despite some suspicions to recoup with the pre-COVID situation in more than a year, most of them expected to recover in less than a year. Therefore, we believe that the continued shutdown in Brantford had harmed the business confidence of Brantford restaurants, while the reopening in Peterborough built confidence to alleviate current operation difficulties.

### 2.3.2 Government Support

As agents to gather relevant feedbacks for the Ontario Government, we asked respondents' opinions towards the helpfulness of government financial support programs. Survey results (Table 4) showed that both cities generally considered support programs helpful, especially in Brantford where the shutdown restriction was still being implemented. From previous gloom results on restaurants' business conditions, it is not a surprise that restaurants in Brantford required more government financial supports.

Table 4: Helpfulness of Government Financial Support Programs on Restaurants

City/Rating	Terrible	Poor	Fair	Good	Excellent
Brantford	2.22% (1)	6.67% (3)	8.89% (4)	42.22% (19)	40.00% (18)
Peterborough	6.25% (3)	14.58% (7)	27.08% (13)	35.42% (17)	16.67% (8)
Total	4.30% (4)	10.75% (10)	18.28% (17)	38.71% (36)	27.96% (26)

As shown in Figure 6, restaurants in Peterborough had applied more business loans than those in Brantford during the intervention. Since loans have to be paid back, businesses with low operating confidence were less likely to apply for loans. With increased business opportunities after reopening, restaurant owners were more likely to invest for faster recovery, and this corresponds with our previous findings of longer expected survival time (Figure 4) and expected recovery time (Figure 5) in Peterborough restaurants as mentioned before.

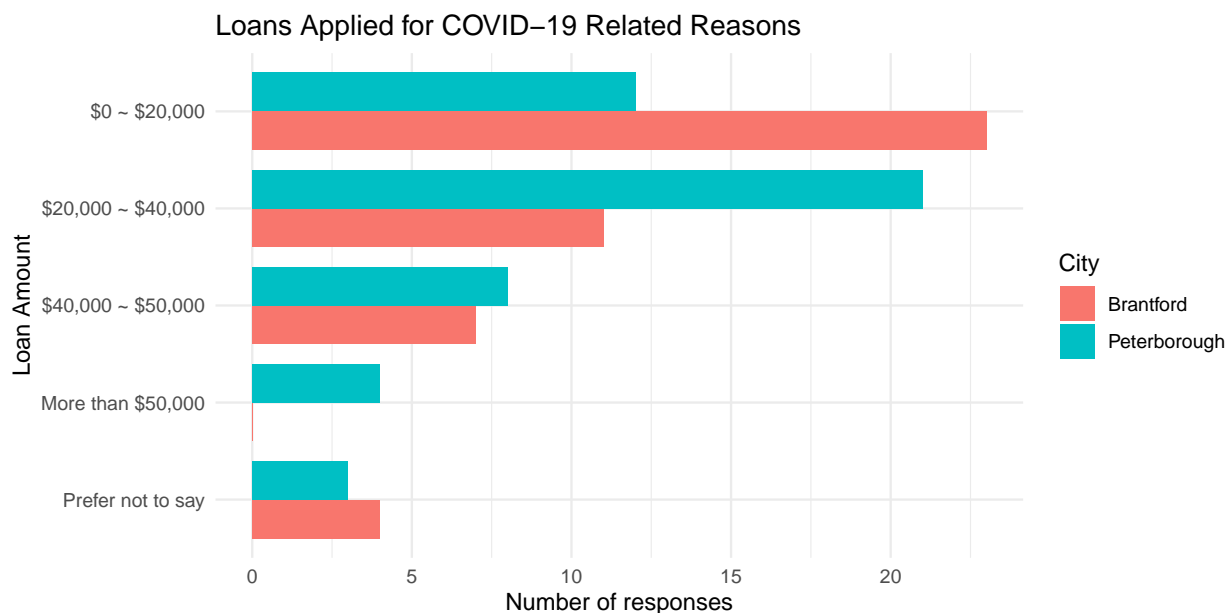


Figure 6: Loans Applied for COVID-19 Related Reasons

In contrast, restaurants in Brantford generally received more grants than those in Peterborough (Figure 7). Since grants are non-repayable funds and require certain conditions to apply, restaurants in Peterborough with better business conditions may not be eligible to apply for grants. And restaurants that suffered more in Brantford could receive more grants during the shutdown.



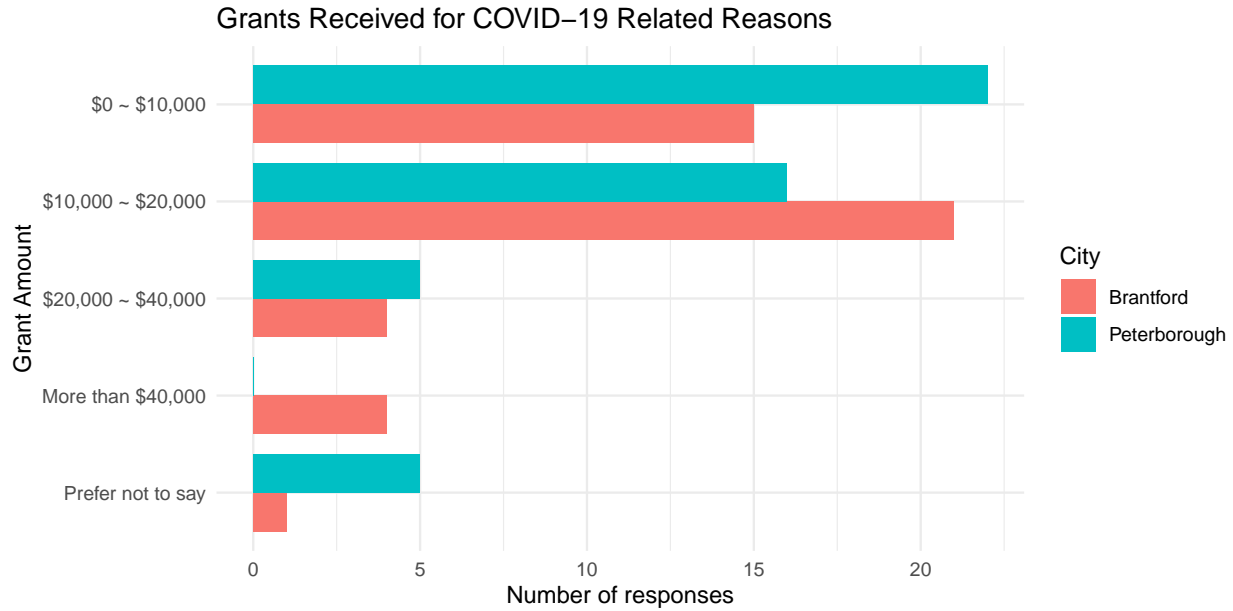


Figure 7: Grants Received for COVID-19 Related Reasons

### 3 Discussion

#### 3.1 Survey Results and Policy Implication

##### 3.1.1 Staffing

- Our survey found that restaurants in Peterborough had lower layoffs compared to those in Brantford, suggesting that reopening restaurants may lead to more employment in the industry.
- Policy implications: The Ontario government should continue existing supports to restaurants during the lockdown and consider additional support measures to mitigate the risk of increased unemployment. Reopening restaurants may lead to increased employment in corresponding areas.

##### 3.1.2 Restaurant Sales

- We found a considerable increase in sales in Peterborough restaurants during the reopening period and a slight decrease in Brantford restaurants, suggesting that reopening could lead to more business revenues for better economic performance.
- Policy implication: The Ontario government should expect better sales for reopened restaurants. However, it is important to acknowledge that the economy would take a long time to reach pre-pandemic performance, and restaurants may still need continued government financial supports for future recovery.

##### 3.1.3 Future Projects of Restaurants

- Restaurants in Peterborough showed more optimism about future operations, while restaurants in Brantford were less confident to survive during the continuing shutdown. The reopening and the subsequent increase in revenue had instilled hope for food service businesses.
- Government implication: Rebuilding business confidence is a crucial aspect of short-term business recovery and long-term economic stability. The Ontario government should carefully monitor business projection and equip businesses with tailored supports based on their recovery needs.

### 3.1.4 Dependence on Government Support

- Compared with Peterborough, Bradford restaurants showed higher dependence on government financial support programs, especially grants, possibly due to lack of strong revenue streams.
- Policy implication: When implementing reopening policies, the Ontario government could leverage more direct non-repayable funding support and reasonably reduce the use of indirect low-interest loans for the reopened business.

### 3.1.5 Tradeoff between Public Health and Economy

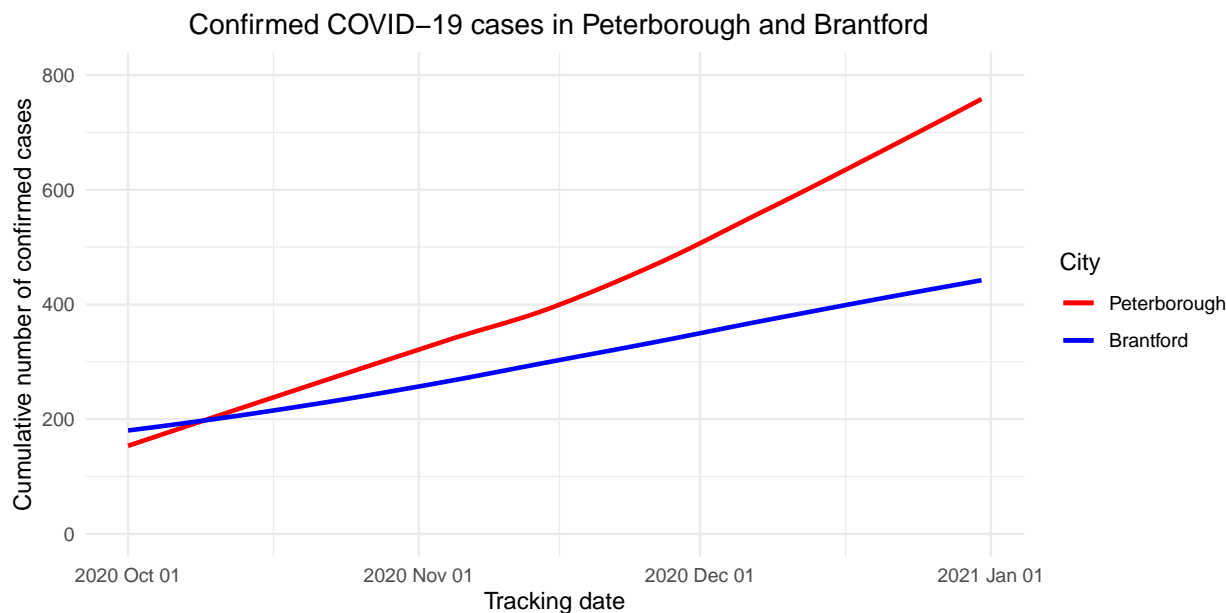


Figure 8: Total Confirmed COVID-19 cases in Peterborough and Brantford

- While reopening leads to increased employment, improved restaurant sales, positive business confidence, and ultimately increased government revenue, the impact of the reopening of restaurants needs to be assessed against the situation of the pandemic. By closely monitoring the confirmed COVID-19 cases during the intervention period, we found a much faster spread of COVID-19 cases in Peterborough compared to Brantford (Figure 8). Since the dine-in option allows customers to take off masks for meals in the restaurant, such increasing chances of direct contacts among citizens could potentially fasten the spread of COVID.
- The Ontario government should strike a balance between economic recovery and public health and safety. The health and safety of Ontario citizens should always be the top priority for the government. The Ontario government should carefully monitor and assess the impact of COVID-19 cases and adjust its reopening policies accordingly.
- In the case of reopening and possible reclosure of restaurants in certain regions, the Ontario government should clearly and effectively communicate risks and harms of COVID-19 resurgence and its willingness and devotion of business concerns.

## 3.2 City Selection

To obtain an accurate estimate of the shutdown effect on restaurant businesses, average characteristics of restaurants in the reopening city and those in the shutdown city need to be identical (in theory) in the absence of the reopen intervention under current COVID outbreak. Since businesses in the food service industries are highly labor intensive (Swayne 2016), the **total employment** in food service industries between selected

cities is preferred to be as identical as possible. Besides, population density (Total Population/ Total Land Area in squared kilometers) also has significant organizational life-cycle effects(Parsa et al. 2011). At different population density levels, competitions for food services varies, leading to different restaurants mortality rates even without the reopen intervention. As a result, total employment in food service and population density serve as the two primary restaurant operation characteristics for the selection of treatment city and control city.

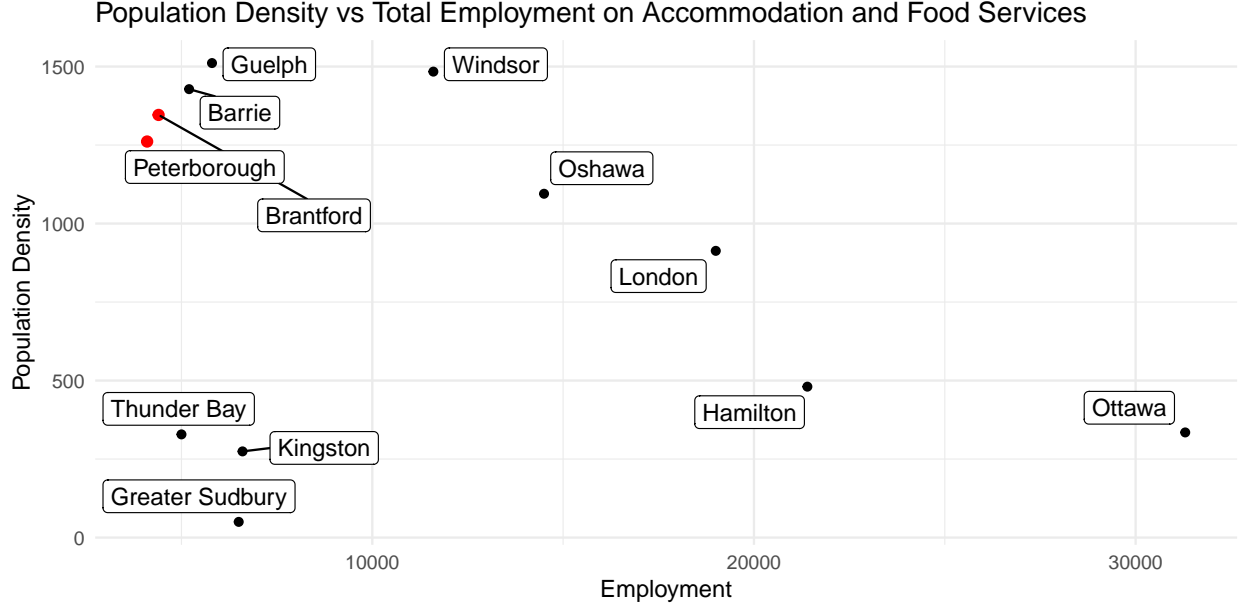


Figure 9: Population Density vs Employment on Accommodation and Food Services in Ontario Cities in 2016

We used the employment by industry data and 2016 Census data available at Statistics Canada to identify cities with similar total employment in food service industry and population density. The above point graph(Figure 9) indicated that Brantford and Peterborough have similar characteristics affecting restaurant operations. In addition, the coefficient of the graph

$$\frac{\text{Population Density}}{\text{Total Employment}} = \frac{\text{Total Population/Total Land Area}}{\text{Total Employment}}$$

, which could be interpreted as the number of people served by a restaurant employee per square kilometers, helps to identify the restaurant operating situation in designated regions. Similar coefficients between Brantford and Peterborough (0.306 vs 0.308) also suggest close restaurant characteristics. Besides, there is neither significant demographics nor land areas difference between these two cities, so we consider them as a valid comparison group and reopened Peterborough as the treatment group while maintaining Brantford shutdown as the control group.

Extra concerns when determining the treatment group and control group:

- The employment data at Statistics Canada uses the NAICS (North American Industry Classification System) standard and assigns employment services to Accommodation and Food Service category. So there is less employment in food services. We assume that the ratios between the accommodation employment and the food service employment between Peterborough and Brantford are the same.
- Since the distance between Brantford and Peterborough is more than 200 kilometers apart, residents in Brantford are unlikely to travel such long distance solely for a dine-in meal. So the treatment of reopening Peterborough would not affect the mealing behavior in Brantford. However, residents

in shutdown regions near Peterborough might go for dine-in meals, potentially increasing sales in Peterborough restaurants. The actual reopening effect on restaurants could be overestimated due to possible increase in sales from nearby shutdown regions' residents that would not sustain once the reopen expanded to all Ontario regions.

- The mindful comparison between cities' similarities on employment, population density, etc. ensures the internal validity of our experiment so that we could accurately estimate the true impact of shutdown restrictions on restaurant. However, our shutdown effect evaluations may not be generalized to the entire population of interest, i.e., all restaurants in Ontario such as township regions or cosmopolitan city Toronto due to different levels of competitions, operating costs, etc.

### 3.3 Concerns about Sampling Method

The sampling methods of this experiment were accompanied by some inevitable limitations and biases:

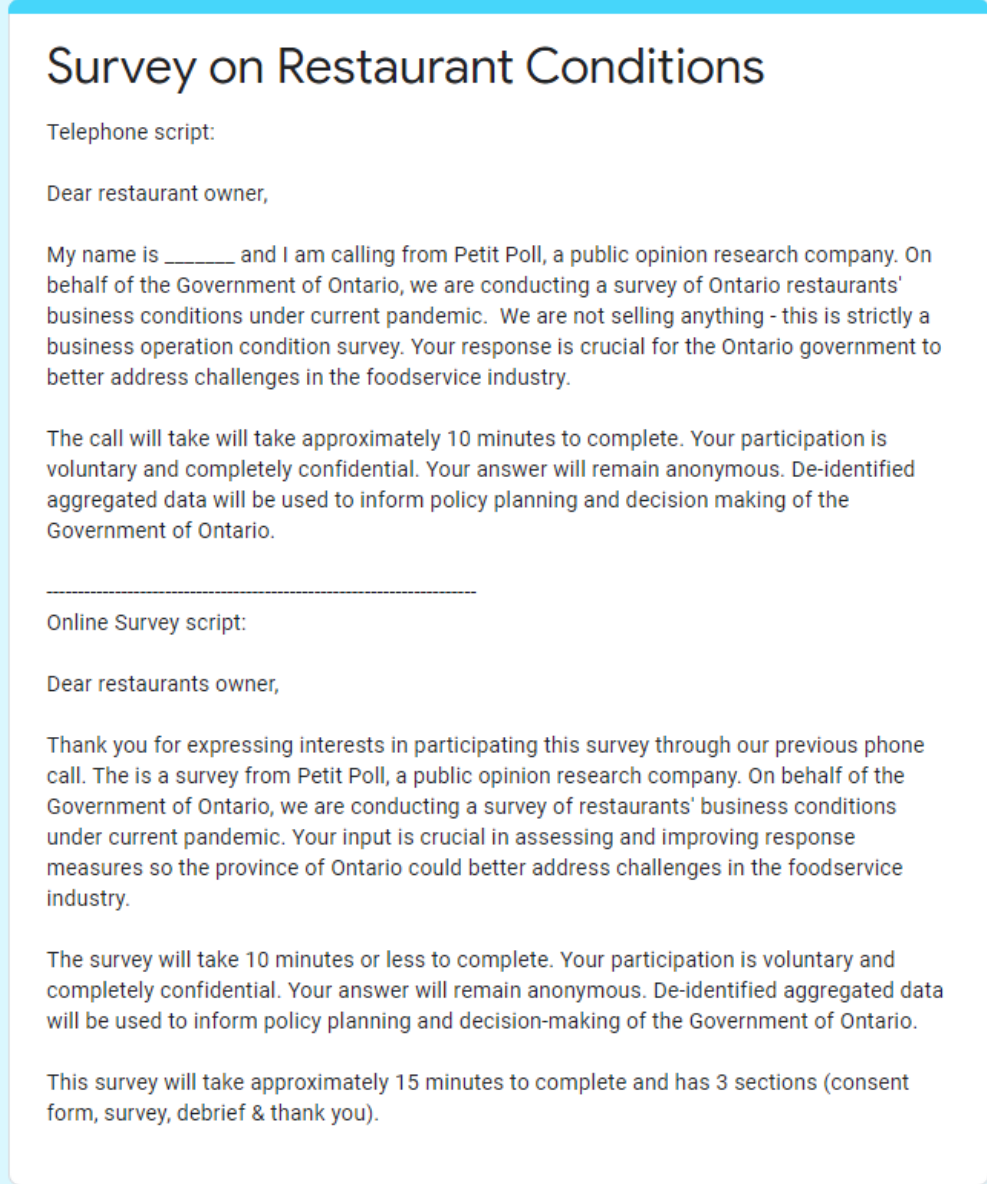
- All restaurants in Brantford and Peterborough may not be accurately represented on Yelp. Some restaurants may not be registered on Yelp and some may not have updated their information on time. What is more, restaurants would only appear in the Yelp query when it has been reviewed by one of its users, which suggests that certain new restaurants may not be on the list. These limitations may result in the exclusion bias of our frame population.
- Since results of the first survey before implementing our experiment suggest apparent similarities between restaurants in Peterborough and those in Brantford, we assume surveyed restaurants to have similar qualities. However, attributes of restaurants (capacity, employment, service type, etc) were not controlled in our analysis. In other words, we assume the response rate within the different restaurant subgroups to be the same. Variations in the actual response between restaurants in two cities are unknown and may impact the internal validity of results.
- Even though the size of our sampled population is somehow small (100 restaurants each in Peterborough and Brantford), it has already captured more than half of our frame population (There are no more than 200 restaurants in each city). So we believe our sampling population could represent the general characteristics of our frame population.
- The sample suffered from survivorship bias as we only surveyed restaurants that were still in operations. Restaurants that lost their businesses during the pandemic before October in 2020 could not be captured with our intervention started in October 2020, while these restaurants would be the most impacted by the COVID shutdowns. Another aspect of the survivorship bias involves the use of the same frame population for the first survey and the second survey. The three-month intervention would also affect business operating situations of restaurants. And the decreased response rate of the second survey might also imply the survivorship bias of our experiment.
- The sampling methods bore self-selection bias. From a psychological standpoint, respondents may have a stronger desire to respond the survey if they have a strong opinion to express about their situations. Because of increasing sales and growing operation confidence during the intervention, respondents in Peterborough restaurants might be more willing to participate to our survey, leading to the higher response rate in Peterborough.
- The accuracy of responses may be hindered by difficulties in reaching the management staff of restaurants. The phone numbers scraped from Yelp was usually used for food ordering and the staff who picked up the phone may not know the sales status. However, we do not believe this would significantly skew the result. According to Statistics Canada, 98.5% of restaurants in Canada have 0-99 employees(Canada, n.d.c). Since food service businesses are usually small to medium size, there is a high likelihood for the survey to reach management staff in the restaurant. Respondents were also asked to pass the phone to management staff or leave their email to receive the online survey if they would like to do so, therefore mitigating the negative impact caused by the telephone survey method.
- Respondents may react differently in a phone interview compared to an online survey. These two methods may potentially produce significantly different results even when two surveys have same

questions (Yan Xin 2014). People may be more comfortable answering a certain type of question online rather than by phone call, or vice versa.

- Compared to the average survey response rate around 33% (CustomerThermometer, n.d.), the response rates of our surveys are relatively higher (more than 50% in the first survey and 40% in the second survey). We credit our high response rates to efforts made in the following: (1) We spent a great amount of our budget to hire and train survey staffs to better approach our respondents. (2) We offered respondents chances to withdraw gift cards as incentives to participate our surveys. (3) We did not ask exact value of question of our interest (e.g. Sales). Instead, we offer respondents several options to choose (e.g. \$0 ~ \$10,000 ) so that respondents are more comfortable to participate in our survey.

## 4 Appendix A

Link to access the first survey about restaurant business conditions conducted in September, 2020: <https://docs.google.com/forms/d/1Bl8CbJiN8sUbhsDdnzqP4iflyE9KT8iJgYI9ldcR2g8>



**Survey on Restaurant Conditions**

Telephone script:

Dear restaurant owner,

My name is \_\_\_\_\_ and I am calling from Petit Poll, a public opinion research company. On behalf of the Government of Ontario, we are conducting a survey of Ontario restaurants' business conditions under current pandemic. We are not selling anything - this is strictly a business operation condition survey. Your response is crucial for the Ontario government to better address challenges in the foodservice industry.

The call will take approximately 10 minutes to complete. Your participation is voluntary and completely confidential. Your answer will remain anonymous. De-identified aggregated data will be used to inform policy planning and decision making of the Government of Ontario.

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Online Survey script:

Dear restaurants owner,

Thank you for expressing interests in participating this survey through our previous phone call. The is a survey from Petit Poll, a public opinion research company. On behalf of the Government of Ontario, we are conducting a survey of restaurants' business conditions under current pandemic. Your input is crucial in assessing and improving response measures so the province of Ontario could better address challenges in the foodservice industry.

The survey will take 10 minutes or less to complete. Your participation is voluntary and completely confidential. Your answer will remain anonymous. De-identified aggregated data will be used to inform policy planning and decision-making of the Government of Ontario.

This survey will take approximately 15 minutes to complete and has 3 sections (consent form, survey, debrief & thank you).

Figure 10: Scripts to contact with restaurant owners in the first survey

# Survey on Restaurant Conditions

Telephone script:

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Dear restaurants owner,

Thank you for expressing interests in participating this survey through our previous phone call. This is a survey from Petit Poll, a public opinion research company. On behalf of the Government of Ontario, we are conducting a survey of restaurants' business conditions under current pandemic. Your input is crucial in assessing and improving response measures so the province of Ontario could better address challenges in the foodservice industry.

The survey will take 10 minutes or less to complete. Your participation is voluntary and completely confidential. Your answer will remain anonymous. De-identified aggregated data will be used to inform policy planning and decision-making of the Government of Ontario.

This survey will take approximately 15 minutes to complete and has 3 sections (consent form, survey, debrief & thank you).

Figure 11: Consent form of the first survey

**Business conditions**

1. Where is your restaurant located?

☐ Peterborough

☐ Brantford

2. How many employees do your restaurant currently have? (Restaurant means the entity in your current location, a chain restaurant could have any entities)

☐ Less than 5

☐ 5 - 10

☐ 10 - 30

☐ 30 - 50

☐ Prefer not to say

3. Which of the following category best describe your restaurant in terms of formality?

☐ Fine Dining

☐ Casual Dining

4. On average, how much sales has your restaurant made monthly in the past three months?

☐ \$0 - \$25,000

☐ \$25,000 - \$50,000

☐ \$50,000 - \$80,000

☐ \$80,000 - \$110,000

☐ \$110,000 - \$150,000

☐ \$150,000 or above

☐ Prefer not to say

5. Which best describes the nature of your restaurant?

☐ Table-service restaurant

☐ Quick-service restaurant

6. How many customers could your restaurant serve at the same time? (You may skip this question if your restaurant is in quick-service)

☐ Less than 10

☐ 10 - 20

☐ 20 - 40

☐ 40 - 70

☐ 70 - 100

☐ More than 100

☐ Prefer not to say

Figure 12: Survey questions in the first survey

**Thank you!**

Thank you for taking the time to participate in our survey!

Your insights are incredibly valuable as we aim to better understand the businesses conditions of Ontario restaurants under current COVID pandemic.

We want to restate our commitment to your confidentiality. All of the responses from our survey will be kept confidential. Although we may use aggregated data in our presentations, we will not use your name, your restaurants' name or any other identifying information anywhere in our data. Additionally, all data will be deleted after 60 days.

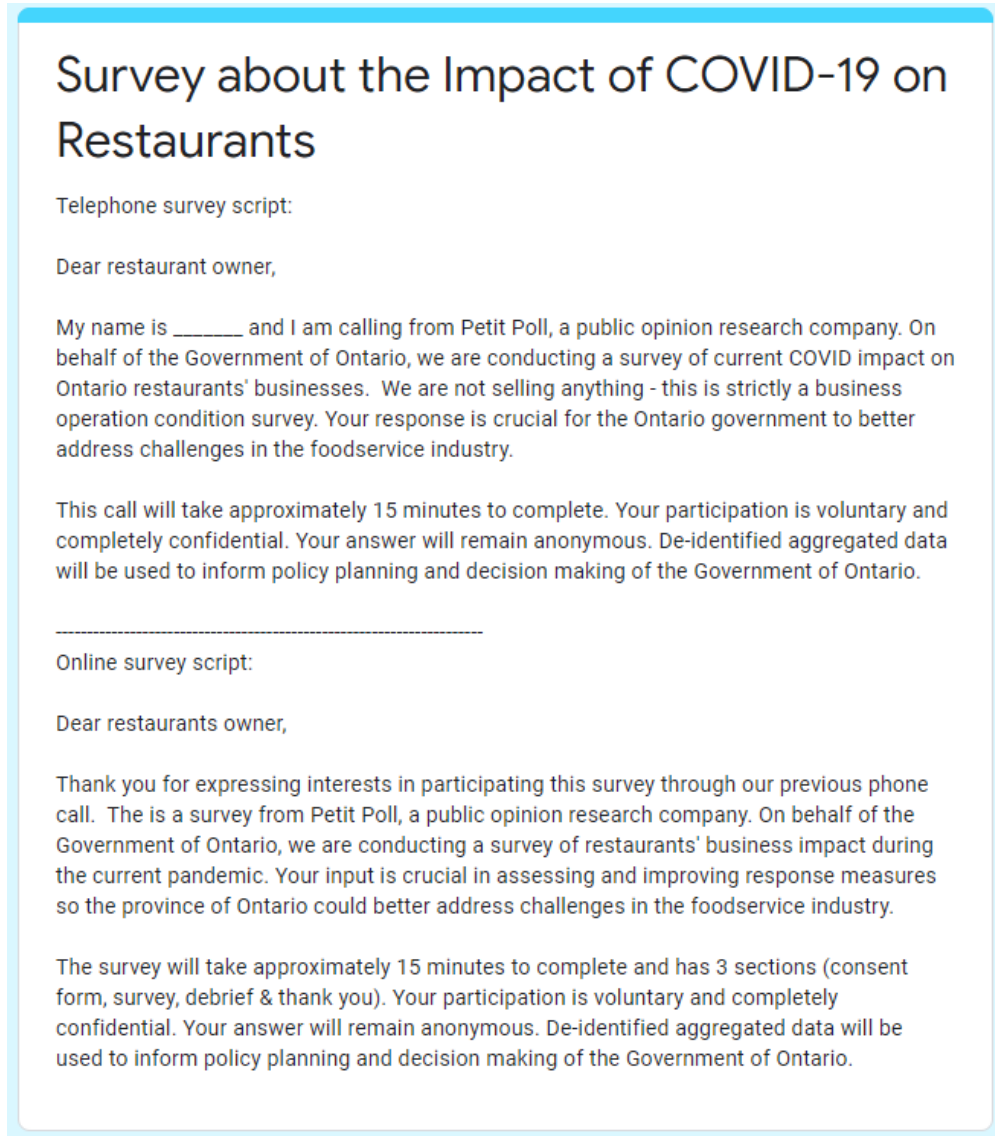
If you have any questions, please contact researchers at [info@petitpoll.ca](mailto:info@petitpoll.ca).

Figure 13: Thanks section of the first survey



## 5 Appendix B

Link to access the second survey about impact of COVID-19 on restaurants conducted in January, 2021:  
[https://docs.google.com/forms/d/1FXSeKFkvCtM41k9xFYjQQ\\_eDGdBs9skVYZ3zU5LNRgY](https://docs.google.com/forms/d/1FXSeKFkvCtM41k9xFYjQQ_eDGdBs9skVYZ3zU5LNRgY)



The image shows a screenshot of a document titled "Survey about the Impact of COVID-19 on Restaurants". It contains two sections of survey scripts. The first section is for a telephone survey, starting with "Telephone survey script:" and "Dear restaurant owner,". It includes a paragraph introducing the survey by Petit Poll on behalf of the Government of Ontario, stating it's a business operation condition survey. It also mentions that participation is voluntary and confidential, and that the data will be used for policy planning. The second section is for an online survey, starting with "Online survey script:" and "Dear restaurants owner,". It thanks the owner for previous participation and introduces the current survey about business impact during the pandemic. It also states that participation is voluntary and confidential, and the data will be used for policy planning.

**Survey about the Impact of COVID-19 on Restaurants**

Telephone survey script:

Dear restaurant owner,

My name is \_\_\_\_\_ and I am calling from Petit Poll, a public opinion research company. On behalf of the Government of Ontario, we are conducting a survey of current COVID impact on Ontario restaurants' businesses. We are not selling anything - this is strictly a business operation condition survey. Your response is crucial for the Ontario government to better address challenges in the foodservice industry.

This call will take approximately 15 minutes to complete. Your participation is voluntary and completely confidential. Your answer will remain anonymous. De-identified aggregated data will be used to inform policy planning and decision making of the Government of Ontario.

-----

Online survey script:

Dear restaurants owner,

Thank you for expressing interests in participating this survey through our previous phone call. The is a survey from Petit Poll, a public opinion research company. On behalf of the Government of Ontario, we are conducting a survey of restaurants' business impact during the current pandemic. Your input is crucial in assessing and improving response measures so the province of Ontario could better address challenges in the foodservice industry.

The survey will take approximately 15 minutes to complete and has 3 sections (consent form, survey, debrief & thank you). Your participation is voluntary and completely confidential. Your answer will remain anonymous. De-identified aggregated data will be used to inform policy planning and decision making of the Government of Ontario.

Figure 14: Scripts to contact with restaurant owners in the second survey

## Consent Form

The procedure to be used is an online survey consisting of 15 close-ended multiple-choice questions. No personal or identifying information will be collected. At the end of the survey, you will be thanked for your time and provided with a contact e-mail for future reference.

### RIGHT TO WITHDRAW

I am free to withdraw at any time before, during, or after the study without being penalized and without the need to give any explanation.

### DATA PRIVACY, AND CONFIDENTIALITY

All materials and results will be kept confidential, and, in particular, my name and any identifying information will not be associated with the data. My responses will be recorded through the online form to assist with the research process. This data will be deleted after 60 days.

### ETHICS

This activity constitutes reflective and professional practice and is exempt from Research Ethics Board (REB) Review per <https://petitpoll.ca/ethics-human-research/activities-exempt-human-ethics-review>

### INFORMED CONSENT

I hereby consent to participate in a survey conducted by Petit Poll on behalf of the Government of Ontario.

If you have any questions or concerns about this study, please contact Petit Poll at [info@petitpoll.ca](mailto:info@petitpoll.ca).

The purpose of this study is to understand Ontario restaurants' business impact during the current pandemic.

I understand that:

- The procedures to be used is answering an online survey
- I will receive no compensation for my participation
- I may pause, skip an activity, or withdraw from the study at any time without penalty and without the need of an explanation
- My responses will be recorded through the online form and shared with the Government of Ontario to inform policy planning and decision making.
- All materials and results will be kept confidential, and, in particular, that my name, my restaurant's name and any identifying or identified information will not be associated with the data.

Figure 15: Consent form of the second survey

**Background Information**

1. Where is your restaurant located?

☐ Peterborough

☐ Brantford

2. Which best describes the nature of your restaurant?

☐ Table-service restaurant

☐ Quick-service restaurant

**Business conditions**

Please answer the following questions based on your experience in the past three months (October to December)

3. How many employees have you laid off because of COVID 19?

☐ 0

☐ 1-4

☐ 5-10

☐ More than 10

☐ Prefer not to say

4. How was your total sales volume during October to December 2020 compared to July to September 2020?

☐ Increased more than 10%

☐ Increased 5% ~ 10%

☐ Roughly unchanged

☐ Decreased 5% ~ 10%

☐ Decreased more than 10%

☐ Prefer not to say

Figure 16: Survey questions 1 - 4 in the second survey

<p>5. How was your total costs volume during October to December 2020 compared to July to September 2020?</p> <p><input type="radio"/> Decreased more than 25%</p> <p><input type="radio"/> Decreased by 5% – 25%</p> <p><input type="radio"/> Roughly unchanged</p> <p><input type="radio"/> Increased by 5% – 25%</p> <p><input type="radio"/> Increased by more than 25%</p> <p><input type="radio"/> Prefer not to say</p>	<p>7. To what extent, your revenue changed after the pandemic?</p> <p><input type="radio"/> Decreased more than 25%</p> <p><input type="radio"/> Decreased by 5% – 25%</p> <p><input type="radio"/> Roughly unchanged</p> <p><input type="radio"/> Increased by 5% – 25%</p> <p><input type="radio"/> Increased by more than 25%</p> <p><input type="radio"/> Prefer not to say</p>
<p>6. To what extent, the number of your orders have decreased after the pandemic?</p> <p><input type="radio"/> Decreased more than 25%</p> <p><input type="radio"/> Decreased by 5% – 25%</p> <p><input type="radio"/> Roughly unchanged</p> <p><input type="radio"/> Increased by 5% – 25%</p> <p><input type="radio"/> Increased more than 25%</p> <p><input type="radio"/> Prefer not to say</p>	<p>8. If current conditions continue, how long do you expect your business to survive before you will have to close down permanently?</p> <p><input type="radio"/> Less than 3 months</p> <p><input type="radio"/> 3 to 6 months</p> <p><input type="radio"/> Longer than 6 months</p> <p><input type="radio"/> Unknown</p> <p><input type="radio"/> Prefer not to say</p>

Figure 17: Survey questions 5 - 8 in the second survey

<p>9. Which best describes the current profitability of your overall operations?</p> <p><input type="radio"/> Operating at a loss</p> <p><input type="radio"/> Breaking even</p> <p><input type="radio"/> Profit between 1% and 5%</p> <p><input type="radio"/> Profit of 5% or more</p> <p><input type="radio"/> Prefer not to say</p>	<p><b>Government intervention</b></p> <p>Please answer the following questions based on your experience in the past three months (October to December)</p>
<p>10. If COVID-19 situation stops now, how many months do you expect your business to recover to the previous level?</p> <p><input type="radio"/> Six months or less</p> <p><input type="radio"/> 7 to 12 months</p> <p><input type="radio"/> 12 to 18 months</p> <p><input type="radio"/> More than 18 months</p> <p><input type="radio"/> Prefer not to say</p>	<p>11. To what extent do you feel the government financial support programs to help your business survive? (1 being bad, 5 being excellent.)</p> <p><input type="radio"/> 1</p> <p><input type="radio"/> 2</p> <p><input type="radio"/> 3</p> <p><input type="radio"/> 4</p> <p><input type="radio"/> 5</p> <p><input type="radio"/> Prefer not to say</p>
	<p>12. Have signed up for the lease subsidy introduced by the government last year?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> I don't know</p> <p><input type="radio"/> Prefer not to say</p>

Figure 18: Survey questions 9 - 12 in the second survey

13. Is your business receiving the Canada Emergency Wage Subsidy(CEWS)?

- ☐ Yes
- ☐ No
- ☐ I don't know
- ☐ Prefer not to say

14. How much loans have you received for COVID-19 related reasons?

- ☐ \$0 - \$20,000
- ☐ \$20,000 – \$40,000
- ☐ \$40,000 – \$50,000
- ☐ More than \$50,000
- ☐ Prefer not to say

15. Including the above governmental programs (if applicable), how much grants have you received for the COVID related reasons?

- ☐ \$0 - \$10,000
- ☐ \$10,000 - \$20,000
- ☐ \$20,000 - \$40,000
- ☐ More than \$40,000
- ☐ Prefer not to say

Figure 19: Survey questions 13 - 15 in the second survey

**Thank you!**

Thank you for taking the time to participate in our survey!

Your insights are incredibly valuable as we aim to better understand how are the businesses of the Ontario restaurants impacted by the current pandemic.

We want to restate our commitment to your confidentiality. All of the responses from our questionnaire will be kept confidential. Although we may use aggregated data in our presentations, we will not use your name, your restaurants' name or any other identifying information anywhere in our data. Additionally, all data will be deleted after 60 days.

If you have any questions, please contact researchers at [info@petitpoll.ca](mailto:info@petitpoll.ca).

Figure 20: Thanks section of the second survey

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