COVID Tax Recovery

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Abstract

As shutdowns due to the novel coronavirus were first implemented in March 2020, businesses across all sectors of the economy began to experience extreme hardship. Nearly a year later, businesses from sectors like food industries to travel industries received little financial aid or even tax breaks. Businesses across America desperately need aid, and the tax code can be one of the most effective optimal mechanisms to provide assistance to struggling businesses. This study aims to identify the sector(s) favored by the public most to provide tax aid by gathering survey data and determining the sector(s) that the public believes need help the most and thus would warrant the largest amount of tax aid. Survey participants chose from the following sectors: restaurants/food services, small businesses (non-restaurants), non-profit organizations, hotels/hospitality services, and tourist attractions/tour agencies. The results indicated that all of the business sectors had an approximately ‘aid’ equal ranking, though the number of people selecting them as the sector in greatest need of aid varied substantially. There was no significant difference between the survey results of each individual sector, and it can thus be concluded that all of the sectors included in the study are generally viewed as ‘in need of aid’ by the public. Even though the data is statistically insignificant, it serves as a good indicator of where New York City taxpayers would prefer to have their tax dollars be allocated to. Citizens of New York City do not have strong and justifiable views on where and how their tax dollars should be distributed -- instead, it indicates the randomness of this particular sample and how it provides a relatively accurate glimpse at the distribution of opinions citywide. While the perception of these taxes by the public is not the only decider in policy, it provides a good insight into whether or not people would be supportive of such an action. From the data, it can be reasonably inferred that the taxpayers believe that tax aid should be provided to all sectors listed in the survey. Therefore, the solution of having government-backed 0% loans and/or lines of credit funded by a temporary tax increase as suggested previously can be implemented and would be generally supported by citizens, based on the data collected.

Categories: COVID-19, New York City
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Background

Since its origin, COVID-19 has had a negative impact on businesses across New York City and has crippled many at the same time. Some of the largest and most heavily hit sectors were: small businesses, restaurants, hotels and hospitality services, tourism agencies and tourist attractions, and nonprofits. The purpose of this paper is to determine which sector or sectors are those that the public would be most likely to support giving tax aid to / seeing a portion of their tax dollars go to. Understanding Covid-19’s impact on businesses and identifying the ones that need help the most is vital to effectively overcome the financial struggles that the pandemic has inflicted upon certain industries -- that understanding is the ultimate objective of this study. Having a general conception of how the public views these struggling sectors may give some valuable insight into how a solution could be structured.

Potential Sectors

Small Businesses:

Lockdowns have forced small businesses to shutter for extended periods of time. Many NYC residents have also changed their shopping habits, like shopping online from stores such as Amazon or Walmart instead of going to shop at local businesses. Since March 1st of 2020, more than 2,800 businesses in New York City have shut down (Haag, 2020). Roughly one-third of the city’s small businesses may be closed for good (PFNYC, 2020). Small businesses are essential for the success of the city’s economy as they provide jobs for more than three million people (or about half of the workforce) and make up 98% of the city’s employers (Haag, 2020). The government needs to do everything it can to keep New York’s small businesses alive through job retention and support the communities that are built around them in this time of crisis. Tax aid is an excellent option to help these struggling small businesses stay afloat by taking some of the burdens off of the businesses and allowing them more time to recover from the tremendous losses they have faced in the past year. This money will help these businesses stay open, enabling them to stimulate the city’s economy (Heady et. al, 2009).

Hotels and Hospitality Services:

The Covid-19 pandemic severely crippled hospitality services throughout New York City. Covid-19 lockdowns and travel restrictions destroyed the hospitality industry as tourism declined dramatically, sending the number of customers into a nosedive. During the week of March 1-7, 2020, it was reported that the occupancy levels at NYC hotels were 72.1%; the average daily rate for a room was $188.59, while the revenue per available room was $136.05 (Miller, 2020). However, just three weeks later, after the travel restrictions were imposed; occupancy levels dropped nearly 80% to just 15.2% of rooms being occupied. The average daily rate also fell nearly 25% to $146.37 and revenue per available room fell nearly 85% to $22.34 (Miller, 2020). With tourism significantly falling after travel restrictions were placed (dropped nearly 66% to about 22.9 million people), the pandemic caused a major drought of hospitality service customers, and nearly 90% of workers in the hospitality industry have been laid off as a result (Sterling,
2021). With this massive drop in revenue, nearly 28% of hotels, or 200 out of the 700 currently in New York City have already closed, either temporarily or permanently (abc7ny, 2021). The hospitality industry has always been dependent on tourism and with the current pandemic many hotels are struggling to remain open and many workers in the hotel industry are struggling to keep their jobs. These places are continuing to struggle throughout the pandemic and these percentages continue to remain much below normal levels. Tax relief would be incredibly beneficial to the hospitality industry as it would allow hotels to remain open through this time of struggle. It would also enable these hotels to keep holding jobs, which would help to stimulate the economy. With occupancy levels sitting at a historic low for an extended period of time, tax relief would allow a significant part of New York City’s economy to remain open and allow their workers to keep their jobs.

Tour Agencies and Tourist Attractions:

The COVID-19 pandemic has had a major impact on tourist attractions and travel agencies. The lockdown has reduced travel to a minimum and tourist presence has been very low over the course of the pandemic. Small businesses have been hit very hard by the lockdown but the businesses that depend on the constant influx of tourists (which has dropped dramatically) have a long road to recovery. The customer base for tourist-centric businesses has fallen substantially over the last year, and while small businesses may have experienced a similar issue, the magnitude of that plaguing the tourism industry is much greater (small businesses have lost fewer of their customers than those in the tourism industry). International tourism dropped by 80% in 2020 (Stacey, 2020), and international travel spending fell by 76% (compared to 34% for domestic travel) while business travel spending fell 70% (compared to 27% for leisure travel) (Barnes and Holmberg, 2021). Tour agency jobs have been down 50% in traveler accommodations, 45% in ground passenger transportation, 66% in clothing stores, and nearly 70% in the performing arts. Since tourism has dropped so much over the last year, these jobs are at risk and could put millions of people, who may not have a stable income, out of work. Travel agencies were expected to lose at least $24 billion in foreign spending this year because of the rapidly spreading coronavirus and they lost 8.2 million visitors in one year, even more than the 7.7 million international travelers lost in 2001 and 2002, after the 9/11 terrorist attacks (Hirsch, 2020). The government has aided tour agencies in other cities like Miami where tourism is a significant part of the economy. They have used stimulus checks to aid tour agencies and attractions by helping them remain open. However, agencies and attractions do not have a stable source of income due to the decrease in travel and the tax aid would help greatly because the loss of income has never been so severe in the tourism sector. Stimulus packages and other previously used forms of aid are too small-scale and temporary to provide an effective solution to help keep this sector on its feet (given the perpetual loss of customers/income).

Restaurants and Food Services:

The COVID-19 pandemic has caused many restaurants and food services to shut down, particularly in New York City. In fact, nearly a third of the 2,800 small businesses in New York City that have permanently closed in the last year were restaurants (Haag, 2020). This led many to have no income for months which was extremely detrimental to both the employees and the employers. Although takeout was always an option, many businesses couldn’t afford to maintain
it a few weeks after the shutdown because of rent and other expenses. New York’s food businesses had to close down in masses, causing unemployment to skyrocket, which led to more people struggling financially. As of mid-May 2020, open restaurants had reduced staffing for takeout and delivery only and the prospects for returning to full employment by June 30 were dim given the constraints imposed by capacity caps (Kaufman et al., 2020). The types of food services that were hurt the most were businesses that predominantly relied on customers dining in. Many insurance companies denied covering employers during the pandemic, with the claim that New York state considered restaurants an essential business (Haag, 2020). For the most part, smaller independent restaurants have been even more disenfranchised when compared to bigger foodservice companies. “The smallest of restaurants, those under $2 million in revenue, are the ones that most need the help” (Kaufman et al., 2020). As summer came, outdoor dining was allowed with a limited capacity. For many restaurants, purchasing decorative tents, and booths for this new change caused them to go into a great amount of debt, since it was difficult to afford these new necessities. All of the costs that these restaurants have incurred over the last year would have their effects dramatically reduced with the provision of tax aid and loans to tide the businesses (and their employees) over until the lockdowns are lifted and people begin to dine out again (at non-reduced capacity).

Nonprofits:

Organizations have had to find new ways to provide their services during the hard times of COVID-19. Revenues shrank, but expenses did not go away. Things have become more difficult and increasingly expensive while COVID-19 remains undefeated. Minimizing the risk of infection required taking steps that translated into less money coming in and more going out. The top three concerns for generating organizational revenue for nonprofits currently are fundraising events being canceled (64.10%), the loss of funders or corporate partners (45.15%), and difficulties meeting funder requirements (38.46%) (NLC, 2020). The cancellation and postponement of various events have also posed a serious issue -- the majority of income generation for nonprofits has disappeared as well as volunteers (as a result of social distancing) (Larson, 2020). Large non-profit organizations were able to navigate through the pandemic without much trouble as smaller nonprofits did. Nonprofits like Feeding America were able to help local food banks across the nation by using its COVID-19 response fund. Another example would be Oxfam America, which also worked hard to ensure people were able to sustain themselves and provided people with food, water, and helped unemployed people to find jobs. (JWU COE, 2020). However, smaller nonprofit organizations urgently need relief and recovery funding in order to keep their operation alive, but they have faced numerous difficulties in requesting economic aid. Nonprofit organizations have been having a hard time obtaining or receiving money from lenders since lenders tend to lend money to more longstanding organizations, and COVID has made it even worse for these smaller organizations since the economy has been struggling and previous donors have lost income. (McCambridge, 2020) Even if their applications get approved, they still have no idea about which stage of the process their applications were in or if they were even in the system (McCambridge, 2020). A lot of relief and recovery fundings that are available have not focused on supporting nonprofits either, as they are focusing on the plight of small businesses (Delaney, 2020). Economic support for nonprofit organizations is vital because it can help nonprofit organizations to serve people that need help and achieve their goals. Tax can be used as economic support and alleviate some of the negative
consequences caused by COVID-19. Since non-profit organizations do not pay taxes, the
government cannot give them money directly, but non-profit organizations can get help through
the use of mechanisms like payroll credits.

Avenues of Aid:

When it comes to monetary aid, there are two primary, rather straightforward mechanisms:
government-backed 0% loans and lines of credit. In order to gather the funds needed for these
loans and lines of credit, we would recommend the city introduce a small temporary increase in
taxes for as long as pandemic restrictions are in place (e.g., the year 2021), on those making over
a certain amount per year. This increase in taxes must be small in order to minimize the
likelihood of the highest earners leaving the city for another that would not have that increase in
taxes, a phenomenon known as capital flight (Chen, 2021). A potential value could be a version
of the Biden Administration’s American Rescue Plan, where those making a salary over $400,000
per year would get a temporary increase in their personal income tax (e.g., 0.25%) (Watson et al.
2021). This tax would pool enough money to back these loans and/or lines of credit that would be
used to help struggling businesses in the sector(s) described above. In order to pay back these
loans, businesses would do so through tax credits -- the type of credit depends on their
classification in the tax code. If they are a C corporation (a corporation that is taxed separately
from its owners/shareholders), they would receive corporate tax credits and use the money that
they would have paid in those taxes to pay back the loan. If they are an S corporation or a sole
proprietor (like most small businesses) (a corporation that is not subject to income tax, where the
owners/shareholders are taxed instead), they would receive personal income tax credits, and use
the money they would have used to pay those taxes to pay back the loan. In other cases, such as
that of nonprofits, where there is no taxable income, owners would get payroll credits (which
apply quarterly rather than annually) and use those to pay back the loans. All of these credits
would be refundable in order for them to carry over if they are not used in their entirety (rather
than matching expenses dollar for dollar) and help businesses even if they are not currently
making a profit.

Materials and Methods

In order to effectively determine how the city ought to distribute the limited amount of funds that
they have, we must gauge public opinion. The data needed to draw the necessary conclusions for
this study would be gathered through the use of a survey that would ask the general public to
choose the sector(s) that they believed were the ones that needed aid the most or would benefit
the most from getting monetary help during the pandemic. This would provide a quantitative and
objective measure of which industries and sectors of the economy the public sees as ‘needing
help’ the most and allows us to act accordingly. Using the data gathered by our survey, we will be
able to determine which economic sector requires the most tax aid. By spreading it out, we will
be able to determine the general public opinion on the sector that has so far suffered the most
losses relative to their economic importance. With this information in hand, we will be able to
formulate the best plan for revitalizing a large portion of New York City’s economy. Along with
that, we can discern which areas would end up having the most effective aid relative to possible
costs. We also considered the possibility of location impacting the choice of the economic sector
they believed needed the most tax aid; thus, we also asked for their borough in the survey.
Utilizing this information, we will be able to draw conclusions on which area requires the most aid, and the most optimal type of aid (i.e. tax credits) to give them. Public opinion would not be the only thing that would be considered when developing a comprehensive solution to these issues (or iteration of a government/tax budget), but it provides insight into where the general public would be comfortable seeing a small portion of their money go to. The survey was distributed online, given the nature of the pandemic, and the demographic was adults that resided (and thus would be paying taxes) in New York City. This unique situation may not provide an *entirely* accurate representation of the preferences of the entire adult population of NYC, as only those with an internet connection were able to participate in the survey.

**Results**

The survey that was used to collect data for this study consisted of two parts. In the first, participants were directed to choose the business sector that they believed needed aid the most, and then rank (on a scale of one to five) how much aid they believed the sector needed, one being only a little bit of aid and five being as much aid as possible. They were then directed to do the same ranking with the sector that they believed needed aid the most after their first choice (second most). This data was then used to determine what the most common choice of sector was, as well as which sector(s) were deemed “in greatest need of aid”.

In order to analyze this data, ANOVA and post hoc tests were conducted. The main outcome measure we examined is the amount of financial aid people thought a certain business sector need (on the aforementioned 1-5 scale). This value is determined from the average rank that participants gave each business sector in the survey conducted for this experiment. Each business sector was indexed in order to run the ANOVA tests. Restaurant/Food Services is represented by 1, Small Businesses (non-restaurants) by 2, Non-profit Organizations by 3, Hotels/Hospitality Services by 4, and Tourist Attractions/Tour Agencies by 5.

Each business sector was then ranked on an “aid” scale of 1 to 5, where a rank of 1 meant that the sector only needed a little bit of aid, and 5 meant that it needed as much aid as it could possibly get. For the frequency test, we looked at which sectors were chosen to be the “sector that needs financial aid” most frequently across the board. For the “needing-help” rank, we looked at the average rank calculated for each sector. In both iterations (most and second-most), the ANOVA test’s independent variable was the chosen business sector, and the dependent variable was the rank given to the sector by each participant.

**First Choice Analysis**
According to the descriptives of the first choice rank (Table 2), the average rank (simply, how badly the sector needs aid) given to the various sectors is as follows: Restaurant/Food Services with 4.526, Small Businesses (non-restaurants) with 4.323, Non-profit Organizations’ with 4.727, Hotels/Hospitality Services’ with 4.769, and Tourist Attractions/Tour Agencies’ with 4.667. The mean square value (0.638) seen in Table 1 is a significance test, the results of which indicate that the data collected was largely pseudo-random. Additionally, because the F-test value is greater than the P-value of our data, we cannot reject the null hypothesis, which is that all of the business sectors would have an approximately equal number of people selecting them as the sectors in greatest need of aid.

From the descriptives in Table 2, we see that the choice with the highest mean, or average, rank was Hotels/Hospitality Services with an average rank of 4.769, with Non-profit organizations coming in at a close second with a mean rank of 4.727. Third was Tourist Attractions/Tour Agencies at an average rank of 4.667, with fourth being Restaurant/Food Services with an average rank of 4.526 and Small Businesses (non-restaurants) coming in last with a mean rank of 4.323. Most people tended to agree with others that made the same choice, as the average distance between the rank that each person gave a sector and the sector’s average rank were less than one point away for every sector. The N column simply indicates the number of people that chose this option when deciding which sector needed aid the most. It ought to be noted that while the average rank for certain categories (namely small businesses) is not as high as the ranks of some of the other sectors, a larger number of people chose these sectors as the ones in greatest need of aid.
need of aid (while small businesses has the lowest average rank, it had the greatest number of selectors).

From this table, it can also be observed that Small Businesses (non-restaurants) was the most commonly picked sector, with roughly 40% of people deeming it as the sector in greatest need of aid. Restaurant/Food Services was second, with around 25% of participants. Third was Hotels/Hospitality Services, with around 17% of people, fourth was Non-profit Organizations, with about 14%, and last was Tourist Attractions/Tour Agencies, with a mere 4% of people. However, it ought to be noted that while Hotels/Hospitality Services and Non-profit Organizations had the highest average rank, they were not the most commonly picked choices, rather, they were the third and fourth most common choice, respectively. Also, while Tourist Attractions/Tour Agencies had the third highest average rank, only 4% of participants chose this option, or about three people.

![Figure 1](image_url)

*Figure 1*

Figure 1 provides a visual representation of the average rank given to each business sector.
Table 3

The post hoc tests done in Table 3 compares the average rank of each individual sector with another sector. The sector represented by the number in the leftmost column is being compared with the number in the column to its right (second column from the left). The mean difference was calculated by subtracting the mean rank of the second sector in question from the first -- if the difference was positive (such as in row 1), the first sector had an average rank higher than that of the second. If the difference was negative (such as in row 2), the first sector had a lower average rank than the second sector.

The first comparison made was between the Restaurant/Food Services and the rest of the sectors. The mean rank of Restaurants/Food Service is 0.204 higher than Small Businesses (non-restaurants), 0.201 lower than Non-profit Organizations, 0.243 lower than Hotels/Hospitality Services, and 0.14 lower than Tourist Attractions/Tour Agencies. The second comparison was made between the Small Businesses (non-restaurants) sector and the remaining sectors. The mean rank of the Small Businesses (non-restaurants) was 0.405 lower than the Non-profit Organizations, 0.447 lower than the Hotels/Hospitality Services, and 0.344 lower than the Tourist Attractions/Tour Agencies. The comparison between Non-profit Organizations and the rest of the sectors demonstrates that the average rank of Non-profit Organizations is 0.042 lower than the Hotels/Hospitality Services, and 0.061 higher than the Tourist Attractions/Tour Agencies. Lastly, the average rank of Hotels/Hospitality Services is 0.103 higher than the average rank of Tourist Attractions/Tour Agencies. The p-tukey value indicates that these differences were not statistically significant, though their pseudo-random nature provides a good indication of the diversity of the sample that this data was gathered from.

Second Choice Analysis
According to the descriptives of the second choice rank found in Table 5, the average rank of Restaurant/Food Services is 3.643, Small Businesses (non-restaurants)’s is 4.045, Non-profit Organizations’ is 4.333, Hotels/Hospitality Services’ is 4.083, and Tourist Attractions/Tour Agencies’ is 3.500. As for the first-choice rank, the F-test value is greater than the P-value, and thus, the null hypothesis cannot be rejected, which effectively means that all of the business sectors have a relatively even distribution of selections (all sectors are picked a similar number of times).

Although Restaurants/Food Services was the most popular second choice, the necessity of funding that people believe should be allocated for them is given a lower preference. The average rank for this sector in this category is 3.6, though 28 people chose Restaurants/Food Services to be the sector that needs funding the most. It can be reasonably inferred, then, that people think that restaurants/food services are in great need of funding so they can continue to be in business, but they do not need an enormous amount of aid for that to occur. However, the frequency of choice for this sector plays a part in this comparatively lower ranking -- the sectors that get selected the most tended to end up with a lower rank, which can also be interpreted to mean that many people believe that the sector needs aid the most, though with varying degrees of magnitude. Small Businesses (non-restaurants) were the next most popular second choice, with an average rank of 4.045 and 22 participants selecting the option. This higher rank indicates that some participants believed that this sector was in need of a bit more funding than Restaurants/Food Services. Hotels/Hospitality were the third most popular choice with 12 selections and an average rank of 4.083, which means that they are deemed to need a greater
amount of financial aid compared to Small Businesses and Restaurants. Nonprofit organizations were the fourth most popular choice with 9 selections but were deemed to need the greatest amount of aid, with an average rank of 4.3. However, financial aid to less popular choices like Hotels/Hospitality and Nonprofit organizations with higher average rankings did not seem to be a very high priority of the public. Restaurants/Food Services and Small Businesses (non-restaurants) received a greater number of votes, so it can be inferred that they are most valued as a priority for financial aid by the general public.

Figure 2

(visual representation of the data (average rank for each sector)
Table 6

In the second round, the majority of people chose Restaurants/Food Services as the sector that would benefit the most from financial aid. Interestingly, these people did not select this sector to need the greatest possible amount of aid -- in fact, participants chose almost all the other sectors, aside from Tourism, to receive a greater amount of aid. This is shown by the post hoc comparison for the second business sector choice. The comparison shows that compared to Restaurants/Food Services, Small Business, Nonprofit organizations, and Hotels/Hospitality had a negative mean difference (-0.403, -0.690, and -0.440 respectively). The negative mean difference indicates that those sectors were seen as needing to receive a greater amount of aid than Restaurants/Food Services. When compared to Tourist Attractions/Tour Agencies, the Restaurants/Food Services sector’s average rank had a positive difference, which means that people generally wanted more funds to be allocated for the Restaurants/Food Services sector instead of the Tourism one. The p-tukey value indicates that while these differences were not statistically significant, they were the product of random choices and thus a relatively good insight into the beliefs of the average New York City resident and taxpayer.

Discussion

Although the data is statistically insignificant, it is still an important reading of the general opinions of where New York City residents and taxpayers believe their tax dollars should go. The First Choice ANOVA test showed a p-value of 0.240 and the Second Choice ANOVA test showed a p-value of 0.166, which are both lower than the p < 0.05 threshold for statistical significance. This does not mean that the citizens of New York City do not have strong and justifiable views on where and how their tax dollars should be distributed -- instead, it indicates the randomness of this particular sample and how it provides a relatively accurate glimpse at the distribution of opinions citywide. Even though the data is insignificant, it provides great insight into the attitude of and priorities of those surveyed and can be extrapolated to think in the context of all New York City taxpayers. Those surveyed most frequently chose small businesses (non-
restaurants) as their first choice of where tax dollars should be allocated, and for their second choice, they most frequently chose restaurants and food services. These results reveal that people are observing the struggling small businesses and restaurants in their communities and do not want them to shut down. Those surveyed least often prioritized tour agencies and non-profit organizations for where their money should be directed, which could be due to the fact that New York City residents are most frequently interacting with small businesses and restaurants rather than non-profits and tourism agencies/attractions on a regular basis. Therefore, it would impact the residents more if those restaurants and small businesses do not receive aid and subsequently shut down. However, this does not mean that people think that some sectors do not need or deserve aid. It simply means that those surveyed believe that aid should be provided to all struggling sectors in a relatively equal fashion (seen in the average ranks, which are all above 3) and are prioritizing some sectors more than others. Therefore, appropriate actions about tax dollar allocation should be implemented by the government in order to address the adverse effects of the pandemic.

Limitations:

Due to the ongoing pandemic, this survey had limitations like conducting it online and this made it difficult to reach out to a more diverse sample size. People having access to the internet, smartphone and personal computer mainly took part in this survey. The study and the survey was limited to New York City and its residents.

Conclusion

The data shows that while there is no clear sector that should be prioritized over another, it can be seen that the taxpayers in New York City do believe that the impact of COVID is severe and assistance in all sectors is needed. This data shows that all sectors included in this survey need assistance and these taxpayers are willing to shoulder the load and see their tax money used for aid for these sectors. The sectors within this survey need to have tax aid as none of the sectors were ranked low, throughout a majority of the responses. It can thus be reasonably inferred that the taxpayers believe that tax aid should be provided to all the sectors. Using this information, the solution of having government-backed 0% loans and/or lines of credit as suggested previously can be implemented and would be generally supported by citizens, based on the data collected. In order to gather the funds needed to help these sectors, there could be (as proposed before) a small increase in taxes for those who make above a certain dollar amount per year (e.g. $400,000, as per the American Rescue Plan numbers). This would help gather the funds needed to allocate to the different sectors and from the data, we can see that people think these sectors urgently need tax aid.
References


