



Business Impact of COVID-19 on CRUT

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Abstract

Every aspect of human life has been impacted by the COVID-19 pandemic. People are suffering greatly as a result of the widespread COVID-19 infection, regardless of their age, gender, occupation, level of education, or country of residence. The corona virus outbreak has caused a significant impact on the education sector as well as on the public transportation, banking, and food processing industries, etc. The public transportation industry has suffered the most out of these. Public transportation was compelled to halt operations as a result of the lock-down. The objective of the research is to find the COVID-19 pandemic effects on mobility behaviours with certain focus on bus users, in terms of their comfort and returning back to using Mo Bus. Primary data is collected through a standardized questionnaire from 50 respondents who were chosen using a convenience sampling method and sustainable solutions were suggested.

Key Words: COVID-19, Travel, Mo Bus

1. Introduction

The COVID-19, a pandemic that devastated the world's socioeconomic activity and had a profound impact on all cultures and customs, was first recorded in the month of December 2019. Fear of COVID-19 forced several cities into lockdown, and streets were deserted in many nations. The COVID-19 pandemic has been one of the most abrupt shocks to the global economy in modern times (Hausler et al. 2020). Nearly everyone has been impacted by the circumstances, some to a greater or lesser extent than others, but COVID-19 has had a significant influence on the transportation industry. Travel needs, travel options and commuter behaviour around the world have been forced to change drastically to mitigate the effects of COVID-19, as well as to meet the prescribed physical distancing protocols (Budd and Ison 2020). Travel is a basic need

for a modern day era. It is required for both official and informal needs, such as a planned break from daily life. Capital Region Urban Transport (CRUT), a Special Purpose Vehicle (SPV) established by the Housing & Urban Development (H & UD) Department of the Government of Odisha, is providing public transportation services in Puri, Cuttack, and Bhubaneswar. CRUT has been registered in accordance with the 2013 Companies Act. In order to change the urban public transport scenario in the city and its hinterland through the utilisation of smart technology, service benchmarking, and customer happiness, the Mo Bus service was introduced on November 6, 2018. The objective of this research is to find out the impact of COVID-19 on Mo Bus service. It also focuses on how Covid has affected people's attitudes toward Mo Bus as well as how subjective norms affect people's choices towards Mo Bus after COVID-19.

Following were the format of the paper: Introduction, Research Framework, Data Analysis, Major Findings of the Study and lastly Conclusion will be included.

2. Research Framework

The purpose of this study is to evaluate the effects of COVID-19 on the CRUT Mo Bus service. The report also addresses alternative initiatives that could aid in restoring public confidence in Mo Bus, fostering understanding in the face of such extraordinary challenges, and promoting sustainable mobility in the future.

Both primary and secondary data are used as the study's foundation. A standardised questionnaire was used to gather the primary data from 50 respondents who were selected through a convenience sampling technique. The form was split into two sections, the first of which contained information about the respondents' socioeconomic status, including their age, gender, occupation, annual income, and household and individual vehicular ownership. The second section concentrated on documenting the effect of COVID-19 on travel behaviour. Additionally, respondents were asked to rank a number of doable actions that may be taken to stop the spread of COVID-19, especially while using Mo Bus. Reputable journals, newspapers, and online sources were used to gather secondary data.

2.1 Sample Profile

A total of 50 samples were collected. The sample distribution by gender reveals responses from 34% females and 66% males. In terms of occupation, Students have the highest share (76%), followed by Govt. Service respondents (12%). The smallest sample collected was from the housemaker (2%) and Private Service respondents (4%) category (Table 1).

Table 1: Profile of Samples

Category	Sub-Category	% of samples
Gender	Male	66%
	Female	34%
Age	<20	2%
	20-25	58%
	25-30	24%
	>30	16%
Occupation	Private service	4%
	Student	76%
	Self-employed	6%
	Govt. service	12%
	Housemaker	2%
Annual Income	Below 2.5 LPA	68%
	2.5 LPA – 5 LPA	8%
	5 LPA – 7.5 LPA	10%
	7.5 LPA- 10 LPA	12%
	10 LPA – 12.5 LPA	0
	12.5 LPA – 15 LPA	2%
Household and Individual Vehicle Ownership	No Vehicle	2%
	Only Cycle	6%
	Only 2-Wheeler	64%
	Only 4-Wheeler	2%
	Multiple Vehicles	26%

3. Data Analysis

Table 1: What was your preferred mode of travel before the COVID-19 lockdown?

Preferred Mode of Travel	No. of Respondents	Percentage (%) of Respondents
Bus	13	26
Rail	4	8
Metro	0	0
Private Auto	1	2
Shared Auto/Cab	2	4
Private Cab	2	4
2-Wheeler	19	38

4-Wheeler	7	14
Cycling	1	2
Walking	1	2
Total	50	100

Table 1 shows that larger majority of the respondents (38%) preferred to travel by 2-Wheeler before COVID-19 lockdown and 26% respondents preferred to travel by Bus. A small percentage of respondents preferred to travel by Private Auto, Private Cab and Shared Auto.

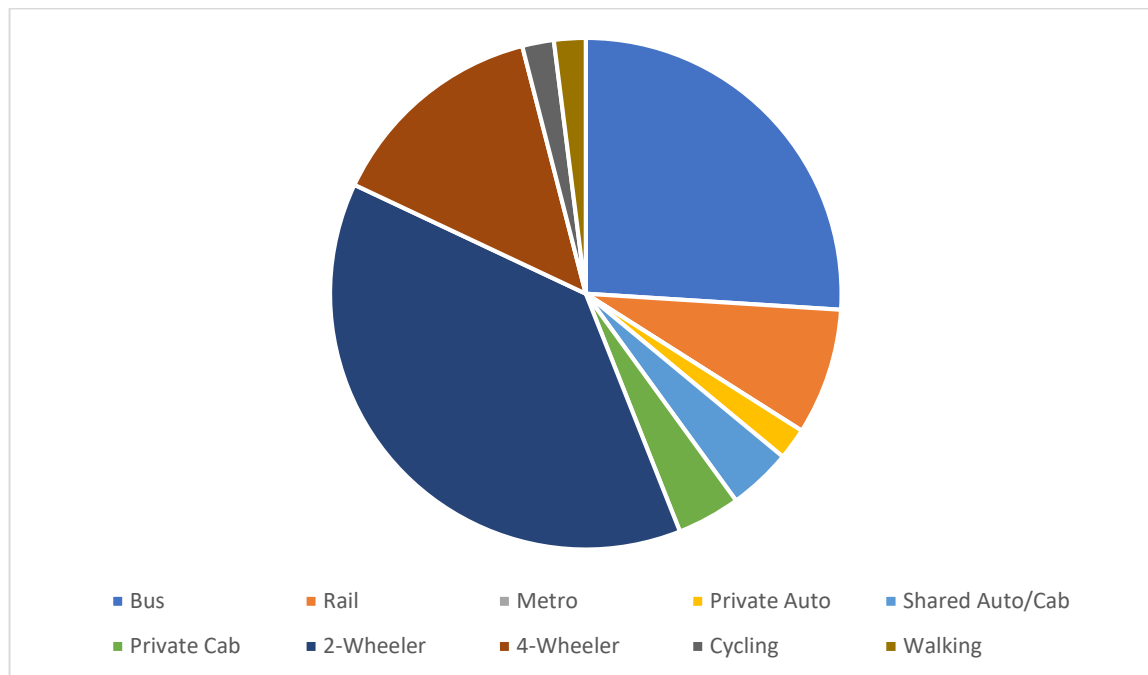


Table 2: Are you encouraged by your friends and family to use public transport after the COVID-19 lockdown?

Response	No. of Respondents	Percentage (%) of Respondents
Yes	33	66
No	17	34
Total	50	100

Table 2 shows that a larger majority of the respondents (66%) were encouraged by their friends and family to use public transport after the COVID-19 lockdown, 34% of respondents were suggested by their friends and family to not use public transport and the belief that maintaining physical distance when using public transport would be difficult.

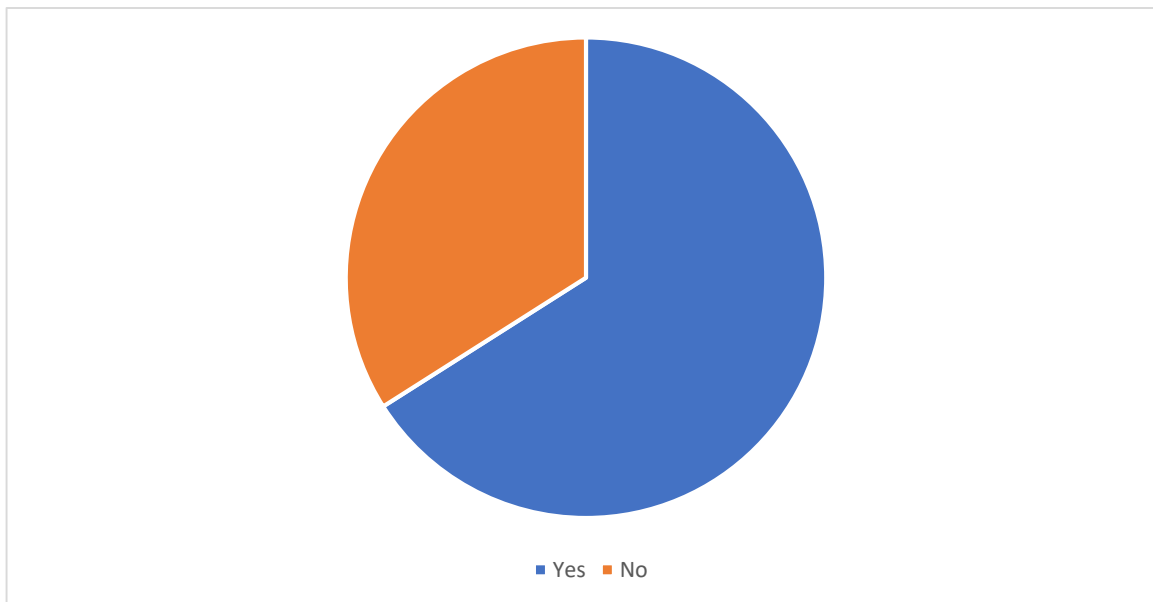


Table 3: Did you travel with Mo Bus before the COVID-19 Pandemic?

Response	No. of Respondents	Percentage (%) of Respondents
Yes	41	82
No	9	18
Total	50	100

Table 3 shows that a larger majority of the respondents (82%) travelled with Mo Bus before the COVID-19 pandemic. 18% of respondents did not travel with Mo Bus before the COVID-19 pandemic.

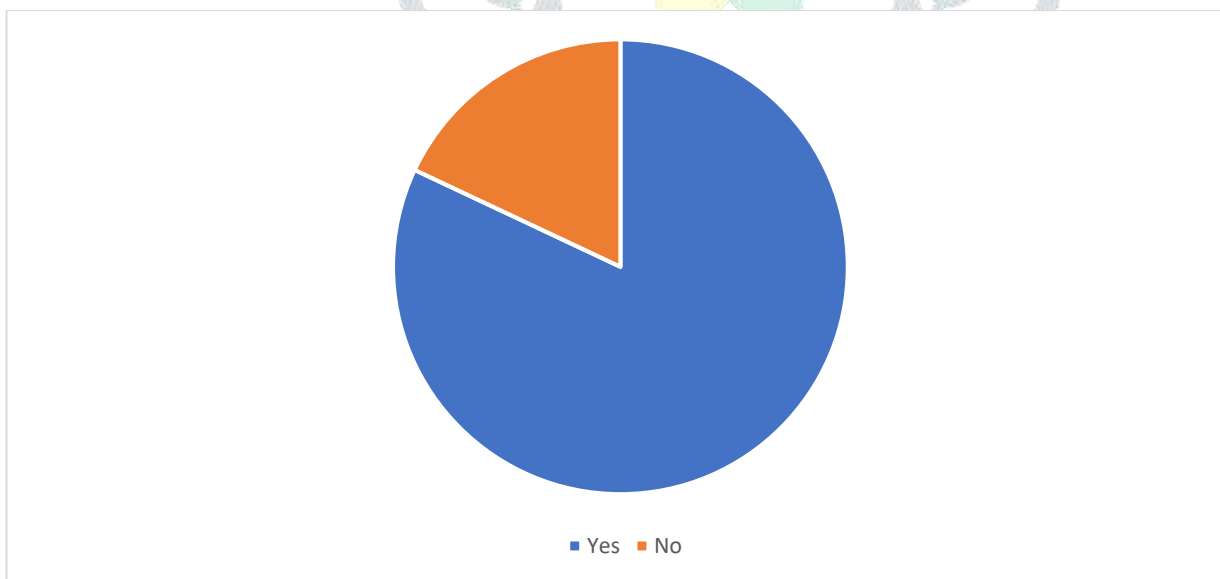
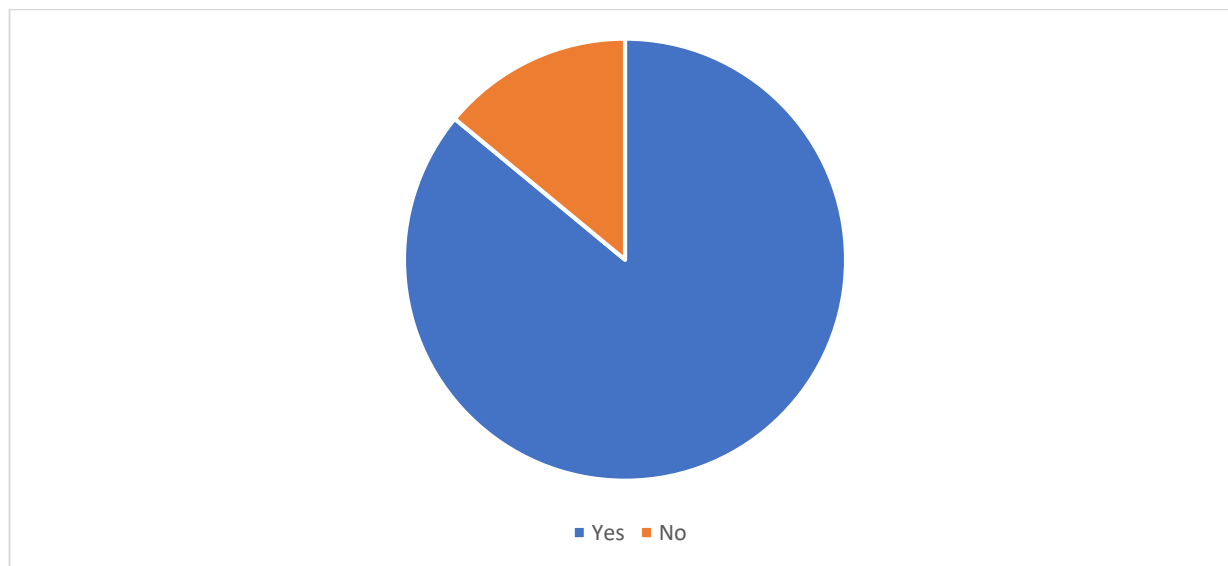


Table 4: Were you comfortable with Mo Bus before the COVID-19 Pandemic?

Response	No. of Respondents	Percentage (%) of Respondents
Yes	43	86
No	7	14
Total	50	100

Table 4 shows that a larger majority of the respondents (86%) were comfortable with Mo Bus before the COVID-19 pandemic. A small percentage of respondents (14%) were not comfortable with Mo Bus before the COVID-19 pandemic.

**Table 5: Did you feel safe with Mo Bus before the COVID-19 Pandemic?**

Response	No. of Respondents	Percentage (%) of Respondents
Yes	46	92
No	4	8
Total	50	100

Table 5 shows that a larger majority of the respondents (92%) feel safe with Mo Bus than before the COVID-19 pandemic. 8% of respondents did not feel safe with Mo Bus before the COVID-19 pandemic.

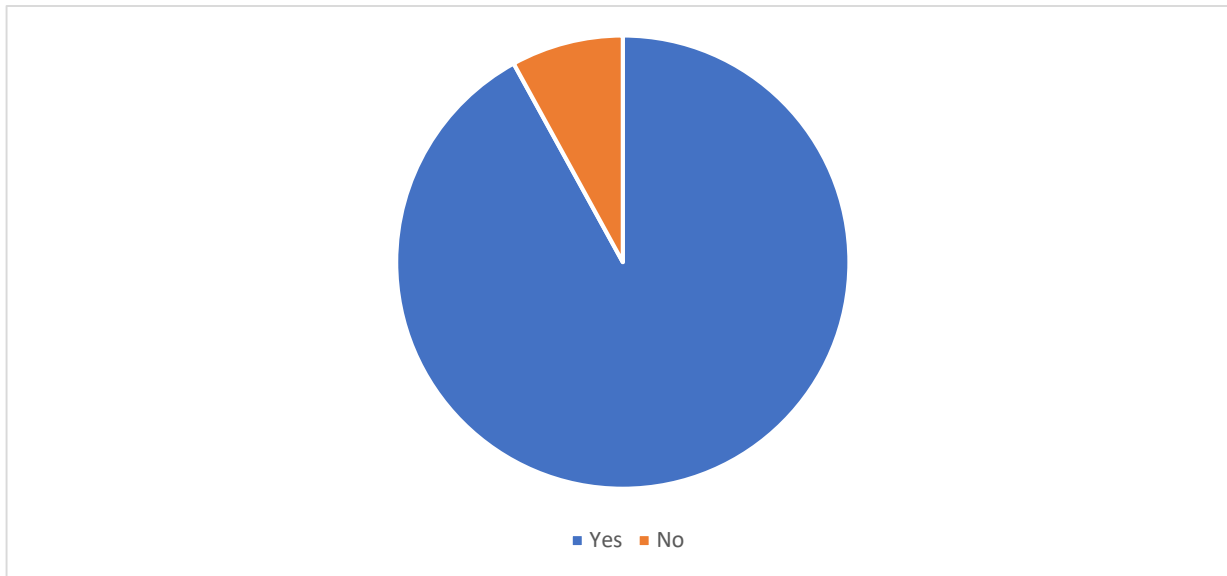


Table 6: Did you take the Mo Bus after the COVID-19 Pandemic?

Response	No. of Respondents	Percentage (%) of Respondents
Yes	31	62
No	19	38
Total	50	100

Table 6 shows that a larger majority of the respondents (62%) travelled with Mo Bus after the COVID-19 pandemic. 38% of respondents did not travel with Mo Bus after COVID-19 pandemic. This is because of the perceived high risk of contamination on Mo Bus, and the belief that maintaining physical distancing when using Mo Bus would be difficult.

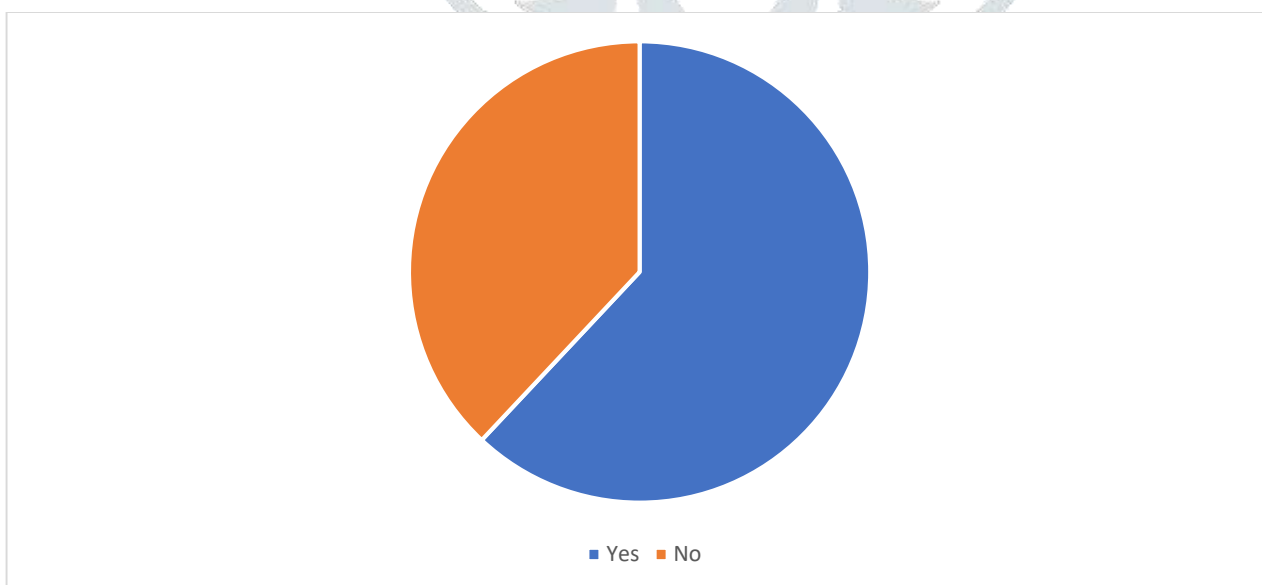
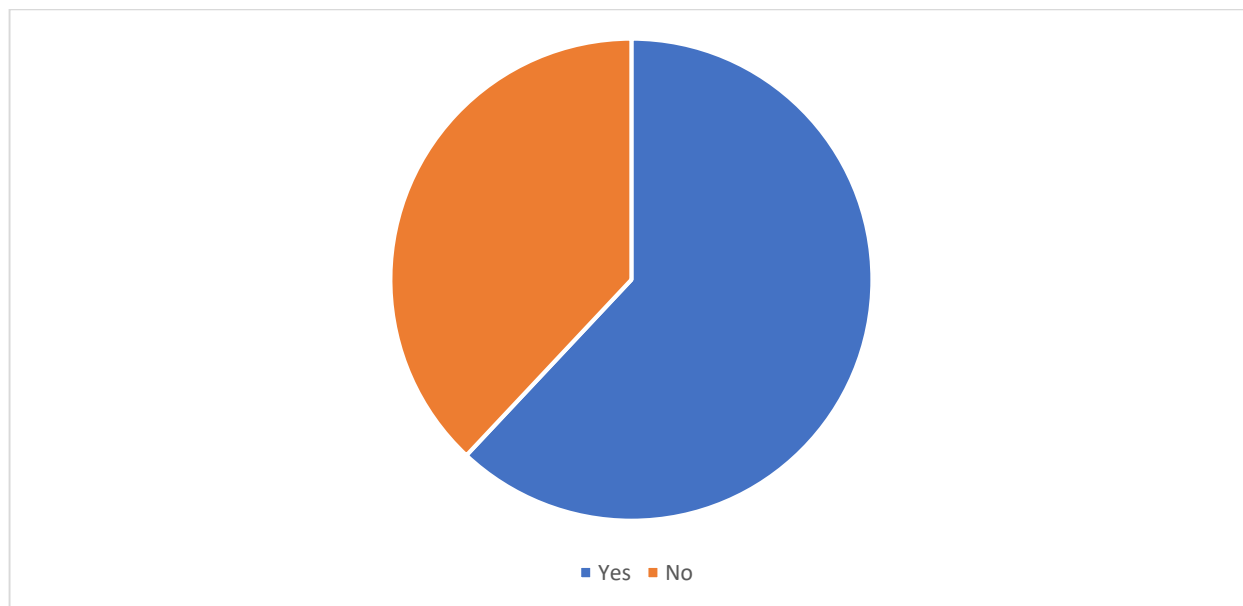


Table 7: Were you comfortable with Mo Bus after the COVID-19 Pandemic?

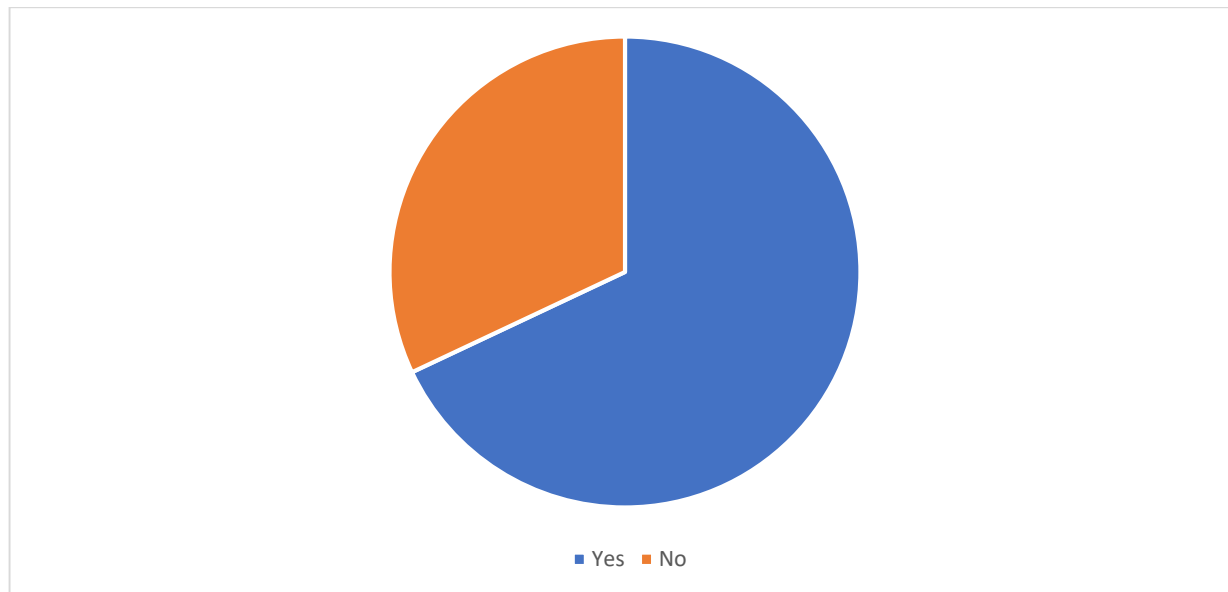
Response	No. of Respondents	Percentage (%) of Respondents
Yes	31	62
No	19	38
Total	50	100

Table 7 shows that a larger majority of the respondents (62%) were comfortable with Mo Bus service after the COVID-19 pandemic. 38% of respondents were not comfortable with Mo Bus service after the COVID-19 pandemic.

**Table 8: Did you feel safe with Mo Bus after the COVID-19 Pandemic?**

Response	No. of Respondents	Percentage (%) of Respondents
Yes	34	68
No	16	32
Total	50	100

Table 8 shows that a larger majority of the respondents (68%) feel safe with Mo Bus after the COVID-19 pandemic. 32% of respondents did not feel safe with Mo Bus before the COVID-19 pandemic.



3.1 User expectation from Mo Bus

The respondents were judged based on the importance given to each of 15 statements regarding the possible requirements for them on using Mo Bus back again where it was judged on 5 point LIKERT scale where the counter measures were measured in terms of variables like Social Distancing, Sanitation, Technology, Rules and Checks which were asked in terms of IMPORTANCE, WORRY AND SAFETY.

Serial No.	Variable	Statements	Average
1	Social Distancing [1]	Are the protocols given below IMPORTANT for Safe Travel [Reduced Seating]	4.48
2	Sanitation [1]	Are the protocols given below IMPORTANT for Safe Travel [Regular Disinfecting]	4.50
3	Technology [1]	Are the protocols given below IMPORTANT for Safe Travel [Contact Tracing]	4.66
4	Rules [1]	Are the protocols given below IMPORTANT for Safe Travel [Compulsory Face Mask]	4.78

5	Check [1]	Are the protocols given below IMPORTANT for Safe Travel [Temperature Check]	4.68
6	Social Distancing [2]	Do you Feel Worried if you observe the following [Overcrowding]	4.64
7	Sanitation [2]	Do you Feel Worried if you observe the following [Missing Sanitation]	4.68
8	Technology [2]	Do you Feel Worried if you observe the following [Aarogya Setu is not downloaded]	4.48
9	Rules [2]	Do you Feel Worried if you observe the following [Face mask removed during journey]	4.52
10	Check [2]	Do you Feel Worried if you observe the following [Temperature check missed]	4.44
11	Social Distancing [3]	Will you feel safe if Authorities of CRUT make sure [Passenger maintain social distancing]	4.56
12	Sanitation [3]	Will you feel safe if Authorities of CRUT make sure [Disinfection is regularly done]	4.76
13	Technology [3]	Will you feel safe if Authorities of CRUT make sure [Aarogya Setu is downloaded]	4.44
14	Rules [3]	Will you feel safe if Authorities of CRUT make sure [Face mask compliance]	4.76
15	Check [3]	Will you feel safe if Authorities of CRUT make sure [Proper screening]	4.78

The average result in the above table indicates that Sanitation and Rules are viewed as having the highest priority for the items like disinfecting the bus along with routine checks and temperature measurements have the highest averages when compared to questions that are looped regularly. Next in line are social distancing and contact tracing using technology factor.

4. Major Findings of the Study

Despite the reduction in lockdowns across the globe, it is obvious that physical distancing will still be the norm in the short to medium term, which will be a major barrier. As suggested by the responses received, CRUT is likely to be negatively impacted in the short term. Restoring public trust in using Mo Bus and addressing the health-related risks of doing so are both essential. Web ticketing, demarcating seats to maintain the physical distancing, disinfecting the bus after each trip, installing handwash stations at bus stops, face shields and regular thermal screening for drivers and conductors, and entry from the rear gate and exit from the front gate, can all help in building trust in riders (GIZ India 2020).

5. Conclusion

The COVID-19 Pandemic's impact on the Mo Bus was investigated, and a demographic survey was conducted to determine how the sample's behaviour and demographic make-up were affected by the pandemic. Various implementable measures have been rated by the respondents towards addressing the concerns while traveling through Mo Bus. In conclusion, the data and analysis could possibly improve the service and operations in such a way that the factors affecting the revenue decrease and devastating impact of COVID-19 on CRUT will be reduced.

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