**Task 1 Report**

DATE: April 11, 2023

TO:

FROM:

SUBJECT: Task 1 Pre-Implementation Survey Deliverable

**Introduction**

The COVID-19 pandemic has enhanced the need for contactless fare payment options to address rider safety concerns and support transit agency operations and financial sustainability. As shown in **Figure 1**, the ridership for rural demand-responsive agencies involved with this project dropped significantly during the peak of the pandemic and has not rebounded strongly. During the pandemic, protective safety measures such as plexiglass shields between drivers and passengers made cash, fare booklet, and token-based fare collection more difficult and forced many agencies to forgo fare collection. The combination of reduced ridership and fare collection are concerning while COVID-19 outbreaks remain a risk.

**Figure 1:** Monthly Total NTD Passenger Trips in Study Area

This project is interested in assessing the potential for contactless fare payment to encourage rural communities to return to transit through pre-implementation and post-implementation surveys, as well as operational benefits for small rural agencies through operational interviews. This report will focus on the pre-implementation survey results.

Prior work surveying contactless fare payment attitudes (Brakewood and Kocur, 2016; Golub et al 2022) have mostly studied urban systems such as London, Chicago, Denver, and Portland, and have focused analysis on access and demographic disparities in the use of contactless fare payment and comfort/discomfort in using it. Similar questions were adopted in this pre-implementation survey to determine potential access barriers for rural transit users.

To contextualize the survey in a rural, small transit agency setting, the Final Report for Transit IDEA Project 79 (2016) was consulted to understand specific challenges for contactless fare payment usage in rural communities. Questions about passenger acceptance of technology, biases, and monetary capability were included to assess the magnitude of these challenges in the study area.

**Survey Questions**

Survey questions were developed to assess transit usage patterns throughout the pandemic, attitudes about COVID-19 safety and fare payment, and the prevalence of potential barriers to contactless technologies. Many questions were inspired by Dr. Yingling Fan’s prior work exploring the return to shared mobility throughout the pandemic in Greater Minnesota. Some questions were adopted from the survey tool used by Golub et al to gauge barriers to contactless fare payment.

The first section of the survey includes a screening question ensuring the participant is over 18 years old (Q1) and a question reporting which transit provider the participant used most in the last year (Q2). The survey results between agencies will not be compared—this question simply provided an indicator that the sample of responses collected was representative of the service area.

Block one surveys frequency of transit use before the pandemic, during the pandemic, current usage, and preferred usage(Q3-6). These questions can be used to determine the strength of individual respondents’ return to transit after the pandemic. Attitudes about COVID-19 safety (Q7) and its relative importance (Q8) are surveyed. Current fare payment(Q9) and satisfaction with it (Q10), as well as attitudes about the proposed contactless fare payment(Q11) and trip planning technologies(Q12) are also surveyed in this section to get a baseline idea of acceptance of the new technology.

Block two asks about smart phone, data plan, and internet access (Q13-Q15) as well as access to potential payment methods(Q16), comfort level with storage of financial information(Q17), and preferred payment method if cash on board was no longer an option(Q18). These questions were inspired by similar survey questions in Golub et al and were included to assess determine how common various access barriers are in the study area.

Block three asks sociodemographic information such as age, zip code, disability, race/ethnicity, and gender (Q19-Q23). This block allows for analysis of how demographics might affect transit usage or fare payment attitudes and was also used to verify results.

The final block (Q24-25) asks for survey participants’ email addresses if they wish to enter a drawing to win one of ten $50 Visa gift cards and will not be reported. The list of collected email addresses will be used to distribute the post-implementation survey in task 2.

The full survey tool is attached in **Appendix A**.

**Survey Distribution**

Surveys were distributed in both Qualtrics and paper format from February 1st through March 24th, 2023. Six transit agencies (City of Morris Transit, Transit Alternatives, Tri-Cap Transit Connection, Central Community Transit, Prairie Five Rides, and United Community Transit) helped to distribute the Qualtrics link through their websites, social media posts, and QR code posters on vehicles. Agencies also received paper forms to distribute and collect inside transit vehicles, which they scanned and returned to the research team. Papersurvey.io online software was used to generate paper surveys and scan in and process returned copies. The paper form was a single piece of 8.5x11” paper printed double-sided with unique QR code identifiers to ensure responses on both sides were matched.

A target sample size of 100 responses per agency was set using each agency’s estimated monthly average number of unique riders as a population size and evaluating various confidence levels and margins of error. A 95% confidence level with a 10% margin of error was selected because those target sample size seemed attainable for a month of data collection, as survey distribution was intended throughout the month of February.

**Table 1:** Target Sample Size Calculations

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | Population Size | **95%** | **95%** | **95%** | **99%** | **99%** | **99%** |
| **10%** | **5%** | **3%** | **10%** | **5%** | **3%** |
| Central Community Transit | **1000** | 88 | 278 | 516 | 142 | 399 | 648 |
| Prairie Five Rides | **957** | 87 | 274 | 505 | 141 | 392 | 630 |
| United Community Transit | **1400** | 90 | 302 | 606 | 148 | 450 | 796 |
| Morris Transit | **357** | 76 | 185 | 268 | 113 | 232 | 299 |
| Tri-Cap Transit Connection | **3500** | 93 | 346 | 818 | 158 | 558 | 1208 |
| Transit Alternatives | **5000** | 94 | 357 | 880 | 161 | 586 | 1347 |
|  | SUM | **528** | 1742 | 3593 | 863 | 2617 | 4928 |
| Note: sample sizes were calculated using the method from Table 8 of TCRP Synthesis 63 | | | | | | | |

**Response Errors**

In total, 937 Qualtrics responses and 76 paper forms were collected. All the paper forms can be considered valid and unique, but five were removed from analysis because of incompleteness (missing the back side of the form). However, there were many repeat responses in Qualtrics with identical multiple-choice selections, start and end datetimes, and many responses in Qualtrics which reported a non-Minnesota zip code, which leads the research team to believe some Qualtrics responses were invalid bot attacks or responses from people outside the study area. A variety of validity filters were considered, including unique responses only, Minnesota zip codes only, service area county zip codes only, and match of zip code and fare payment method with agency. To ensure an adequate sample size with some level of validity, only unique Qualtrics responses reporting Minnesota zip codes were used. The distribution of responses to be used in analysis are as follows:

**Table 2:** Transit Agency Distribution of Survey Responses Used in Analysis

|  |  |  |  |
| --- | --- | --- | --- |
| **Transit Agency** | **Qualtrics (Filtered)** | **Paper** | **Combination** |
| Central Community Transit (CCT) | 132 | 21 | 153 |
| City of Morris Transit | 121 | 1 | 122 |
| None of the above | 1 | 1 | 2 |
| Prairie Five Rides | 10 | 26 | **36** |
| Transit Alternatives | 118 | 11 | 129 |
| Tri-Cap Transit Connection | 118 | 10 | 128 |
| United Community Transit | 16 | 1 | **17** |
| **SUM** | **516** | **71** | **587** |

It should be noted that both Prairie Five Rides and United Community Transit did not meet the sample size target of 100 responses, despite an extra three weeks of data collection in March. The overall target of 528 responses (**Table 1**), however, was met, which seems sufficient for the analysis requested in this task.

**Figure 2** shows the response distribution in comparison to the reported NTD monthly average ridership values for each agency. Again, United Community Transit and Prairie Five Rides responses are unfortunately underrepresented in the sample set.

**Figure 2:** Transit Agency Distribution of Survey Responses Used in Analysis

**Survey Results**

Full distributions for each question are provided in **Appendix B**.

**Attitude Towards Contactless Fare Payment**

Overall satisfaction with current fare payment methods and interest in contactless fare payment were surveyed, and the results are presented in **Figure 3**.

**Figure 3:** Fare Payment Satisfaction and Interest in Contactless Fare Payment

While 50% of respondents were dissatisfied with their current fare payment method, it should be noted that only 14% of respondents indicated that a contactless option would make the more likely to use public transit.

Fare payment satisfaction was grouped by fare payment method to determine if specific fare payment methods are more accepted than others. The results are shown in **Figure 4**.

**Figure 4:** Fare Payment Satisfaction Grouped by Fare Payment Method

It should be noted that not every transit agency uses every payment method. A summary of current possible methods for payment is available in **Table 3**.

**Table 3**: Current Possible Fare Payment Methods for Each Agency

|  |  |
| --- | --- |
| Agency Name | Possible Fare Payment Methods |
| City of Morris Transit | Monthly pass for unlimited rides  Cash on board the transit vehicle  Free rides through a social service |
| Transit Alternatives | Cash on board the transit vehicle  Free rides through a social service  Punch card on board the transit vehicle |
| Tri-Cap Transit Connection | Cash on board the transit vehicle  Tokens on board the transit vehicle  Free rides through a social service |
| Central Community Transit (CCT) | Cash on board the transit vehicle  Punch card on board the transit vehicle  Free rides through a social service |
| Prairie Five Rides | Free rides through a social service  Cash on board the transit vehicle  Monthly pass for unlimited rides |
| United Community Transit | Cash on board the transit vehicles  Monthly pass for unlimited rides  Free rides through a social service |

Dissatisfaction and indifference were highest for tokens, punch cards, and cash-on-board payment options. Respondents who reported using a monthly pass or free rides through a social service generally reported higher levels of satisfaction with their fare payment type.

Common barriers to contactless fare payment include unbankedness (lack of access to a financial institution which allows for easy fare purchasing) and limited smartphone or internet access. To assess the relationship between these barriers and interest in contactless fare payment, **Figures 5-6** were generated.

**Figure 5:** Interest in Contactless Fare Payment Grouped by Internet Access

Regardless of the type of internet survey respondents had access to, a majority of respondents reported they would be unaffected or less likely to use transit if contactless fare payment was introduced.

**Figure 6:** Interest in Contactless Fare Payment Grouped by Potential Payment Method Access

Similarly, regardless of the type of potential payment methods survey respondents had access to, a majority of respondents reported they would be unaffected or less likely to use transit if contactless fare payment was introduced.

To assess whether specific types of credit/debit card usage in contactless fare payment are uncomfortable to respondents, comfort levels with different payment methods were assessed. The results are shown in **Figure 7**.

**Figure 7:** Comfort Level with Contactless Fare Payment Methods

There does not seem to be a most comfortable/preferred method of using credit/debit cards to purchase contactless fare.

**Transit Use Frequency**

To assess the strength of decline in transit use during the pandemic and return to transit after its peak, responses to the frequency questions were compared in matrix format. The most common response combinations are in yellow, and least common in red.

**Figure 8:** Transit Use Frequency Pre-Pandemic vs. During Pandemic



Response quantities are concentrated near the diagonal of this matrix, indicating that transit use frequency was about the same before and during the pandemic for many riders, and it was fairly infrequent (concentrated between no use and 1-2 days per week). Overall, 37% of respondents reported the same frequency before and during the pandemic, 33% reported more frequent use pre-pandemic than during the pandemic, and 30% reported more frequent use during the pandemic than pre-pandemic.

**Figure 9:** Transit Use Frequency During Pandemic vs. Current Use



Response quantities are concentrated in the upper righthand triangle of this matrix, indicating that current transit use frequency is higher than it was during the pandemic. Overall, 62% of survey respondents reported more frequent current use than use during the pandemic, 29% reported the same frequency, and 9% reported more frequent use during the pandemic than current use.

**Figure 10:** Transit Use Frequency Current Use vs. Preferred Use



Response quantities are concentrated in the lower lefthand triangle of this matrix, indicating that current transit use frequency is higher than what transit users indicated that they would prefer. Overall, 59% of survey respondents reported preferring to use transit less frequently than they currently do, 28% reported preferring to use transit the same frequency that they currently do, and 13% reported preferring to use transit more frequently than they currently do.

**Figure 11:** Transit Use Frequency Pre-Pandemic vs. Current Use



Response quantities are concentrated in the upper righthand triangle of this matrix, indicating that current transit use frequency is higher than it was before the pandemic. Overall, 59% of survey respondents reported a higher current frequency than pre-pandemic frequency, 29% reported the same frequency, and 12% reported a higher pre-pandemic frequency than current.

Perceptions of COVID-19 safety measures were also evaluated with respect to the strength of return to transit (comparing pre-pandemic and post-pandemic transit use frequency) to determine if dissatisfaction with COVID-19 safety measures correlates to a decreased frequency of transit use post-pandemic when compared to pre-pandemic. Results are shown in **Figure 12**.

**Figure 12:** COVID-19 Safety Satisfaction Grouped by Strength of Return to Transit

**WHICH FIGURE WORKS BETTER?**

Higher levels of dissatisfaction were present for both respondents who reported more frequent transit use post-pandemic and respondents who reported more frequent transit use pre-pandemic. Higher levels of satisfaction/neutrality were present for respondents who reported the same frequency of transit use before and after the pandemic.

**Conclusion**

There is considerable dissatisfaction with current fare payment methods in the area, but discomfort with the idea of contactless fare payment is persistent. There does not seem to be any particular barrier to accessing contactless fare payment that explains this discomfort. While the number of passenger trips in the service area has decreased substantially during the pandemic and not quite recovered to pre-pandemic levels currently, survey respondents generally reported using transit at about the same frequency before and during the pandemic, and more frequently now than they did during and before the pandemic. Satisfaction with COVID-19 safety measures was fairly evenly distributed between satisfaction, dissatisfaction, and neutrality, and more dissatisfaction was present in survey responses that used transit more frequently after the pandemic than before, as well as responses that used transit more frequently before the pandemic than after.

**Works Cited**

Allen et al. (2016). Implementation of Smart Card Automatic Fare Collection (AFC) Technology

in Small Transit Agencies for Standards Development. Transit IDEA Project 79. <https://onlinepubs.trb.org/onlinepubs/IDEA/FinalReports/Transit/Transit79.pdf>

Brakewood, C., & Kocur, G. (2011). Modeling Transit Rider Preferences for Contactless Bank Cards as Fare Media: Transport for London and the Chicago, Illinois, Transit Authority. Transportation Research Record, 2216(1), 100–107. <https://doi.org/10.3141/2216-11>

Golub et al. (2022). Equity and exclusion issues in cashless fare payment systems for public transportation. Transportation Research Interdisciplinary Perspectives 15, 100628. <https://doi.org/10.1016/j.trip.2022.100628>

**Appendix A: Survey Tools**

Western Minnesota Contactless Payment Pre-Implementation Survey

Start of Block: Screening

Q1 Thank you for participating in this study examining rural Minnesotans' attitudes about public transit, transit health and safety measures during the COVID-19 pandemic, and transit fare payment methods before the deployment of new technology.  
  
This survey is 25 questions long, and at the end you will be asked if you want to provide your email for entry into a sweepstakes drawing to win one of ten $50 Visa gift cards as incentive for participation.  
  
First, we must verify that you are eligible to complete the survey.  
  
Are you 18 years old or older?

* Yes (1)
* No (2)

Skip To: End of Survey If Thank you for participating in this study examining rural Minnesotans' attitudes about public tra... = No

Q2 Which of the following public transit providers have you used most in the last year?

* City of Morris Transit (1)
* Transit Alternatives (Productive Alternatives, The Otter Express) (2)
* Tri-Cap Transit Connection (3)
* Central Community Transit (CCT) (4)
* Prairie Five Rides (5)
* United Community Transit (6)
* None of the above (7)

End of Block: Screening

Start of Block: Transit Questions

Q3 Before the COVID-19 pandemic, how often did you typically use demand-responsive public transit (dial-a-ride) service?

* Not at all (1)
* Less than one day a week (2)
* 1-2 days a week (3)
* 3-4 days a week (4)
* 5 or more days a week (5)
* Not Applicable (ie, did not live in the service area) (6)

Q4 During the COVID-19 pandemic before vaccines were widely available, how often did you typically use demand-responsive public transit (dial-a-ride) service?

* Not at all (1)
* Less than one day a week (2)
* 1-2 days a week (3)
* 3-4 days a week (4)
* 5 or more days a week (5)
* Not Applicable (ie, did not live in the service area) (6)

Q5 How often do you currently use demand-responsive public transit (dial-a-ride) service?

* Not at all (1)
* Less than one day a week (2)
* 1-2 days a week (3)
* 3-4 days a week (4)
* 5 or more days a week (5)

Q6 If COVID-19 is no longer a threat, how often would you like to use demand-responsive public transit (dial-a-ride) service?

* Not at all (1)
* Less than one day a week (2)
* 1-2 days a week (3)
* 3-4 days a week (4)
* 5 or more days a week (5)

Q7 In general, how satisfied are you with the safety and cleanliness of transit vehicles in regards to COVID-19?

* Extremely dissatisfied (1)
* Somewhat dissatisfied (2)
* Neither satisfied nor dissatisfied (3)
* Somewhat satisfied (4)
* Extremely satisfied (5)

Q8 Overall, which is more important for increasing your use of public transit?

* Covid-19 safety measures are more important (1)
* General service improvements are more important (2)
* There is no difference in importance (3)

Q9 How do you currently pay for your transit fare?

* Cash on board the transit vehicle (1)
* Tokens on board the transit vehicle, purchased from a vendor ahead of time (2)
* Punch card on board the transit vehicle, purchased from a vendor ahead of time (3)
* Monthly pass for unlimited rides (4)
* Free rides through a social service (5)

Q10 In general, how satisfied are you with how you pay your fare? (ie cash on board, tokens, etc)

* Extremely dissatisfied (1)
* Somewhat dissatisfied (2)
* Neither satisfied nor dissatisfied (3)
* Somewhat satisfied (4)
* Extremely satisfied (5)

Q11 Contactless fare payment is a form of fare payment that uses digital methods (such as a tap card or mobile app) instead of paper ones (such as cash, tokens, or tickets) to reduce contact between the transit rider and the driver or fare box.  
  
How would a contactless fare payment method affect your decision to use public transit?

* Makes me much less likely to use public transit (1)
* Makes me slightly less likely to use public transit (2)
* Does not affect my decision (3)
* Makes me slightly more likely to use public transit (4)
* Makes me much more likely to use public transit (5)

Q12 A trip planning tool is a mobile app or website that lets the rider easily plan, schedule, and book their transit trip in one place, reducing the need to consult maps and schedules.  
  
How would a trip planning tool affect your decision to use public transit?

* Makes me much less likely to use public transit (1)
* Make me slightly less likely to use public transit (2)
* Does not affect my decision (3)
* Makes me slightly more likely to use public transit (4)
* Makes me much more likely to use public transit (5)

End of Block: Transit Questions

Start of Block: Fare Payment Questions

Q13 Cell phones that use the internet and install new applications (apps) are called "smartphones". Is your phone a smartphone?

* Yes, it is a smartphone (1)
* No, it is not a smartphone (2)
* I don't have a cell phone or smartphone (3)

Q14 How concerned are you about running out of monthly data on your phone?

* Very concerned (use data for necessary tasks only) (1)
* Somewhat concerned (use data sparingly, prefer to be connected to internet when possible) (2)
* Not very concerned (use data frequently, for all purposes) (3)
* Not Applicable (I do not use data on my phone) (4)

Q15 How do you typically access the internet? (Select all that apply.)

* Home internet (1)
* Work internet (2)
* Library/community center/other public hotspots (3)
* Mobile internet/cell phone data plan (4)
* No access to the internet (5)

Q16 Which of the following do you have access to? (Select all that apply.)

* Savings Account (1)
* Checking Account (2)
* Debit Card (3)
* Credit Card (4)
* Prepaid or Gift Card (with Mastercard/Visa logo) (5)
* PayPal, Venmo, Cash App, or some other mobile payment service (6)

Q17 How comfortable are you with sharing credit/debit card information with the transit agency for the purpose of fare payment?

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Completely Uncomfortable (1) | Slightly Uncomfortable (2) | Slightly Comfortable (3) | Completely Comfortable (4) | Don't Know/Not Applicable (5) |
| Using your credit/debit card on a website one time without allowing the website to store it (1) |  |  |  |  |  |
| Storing your credit/debit card in a website for regular payments (2) |  |  |  |  |  |
| Storing your credit/debit card in a smartphone application for regular payments (3) |  |  |  |  |  |
| Giving your credit/debit card information over the phone to the transit agency (4) |  |  |  |  |  |

Q18 Imagine a situation in the future where cash may not be accepted on board transit vehicles. If this were the case, how would you primarily prefer to pay for your fare?

* Cash at a transit office for a contactless fare card (1)
* Credit/Debit at a transit office for a contactless fare card (2)
* Credit/Debit payment through a smartphone app or computer (mobile payment) (3)
* I would not be able to use the bus (4)

End of Block: Fare Payment Questions

Start of Block: Socio-Demographic Questions

Q19 What is your age?

* 18-24 (1)
* 25-34 (2)
* 35-44 (3)
* 45-54 (4)
* 55-64 (5)
* 65+ (6)

|  |
| --- |
|  |

Q20 What zip code do you live in?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q21 Do you have a disability or illness that affects your ability to travel in the region?

* Yes (1)
* No (2)

Q22 What best describes your race or ethnicity? Select all that apply.

* American Indian or Alaskan Native (1)
* Asian (3)
* Black or African American (6)
* Hispanic (9)
* Native Hawaiian or Other Pacific Islander (5)
* White (11)
* Some other race (12)

Q23 What is your gender?

* Woman (1)
* Man (2)
* Non-binary (3)
* Other (4)

End of Block: Socio-Demographic Questions

Start of Block: Completion

Q24 Thank you for completing this survey! As thanks for participating, our team is providing ten $50 Visa gift cards to be randomly awarded to ten survey participants. Are you interested in being entered to receive this reward?

* Yes (1)
* No (2)

|  |
| --- |
|  |

Q25 Please provide your email address to be entered into the sweepstakes drawing. Your email will not be connected to your responses on the earlier sections of this survey.  
  
By providing your email address, you are also consenting to being contacted by our research team for limited future communication related to this project.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

End of Block: Completion

**Text

Description automatically generated**

**Text

Description automatically generated**

**Appendix B: Distribution Table**

|  |  |
| --- | --- |
| q3 |  |
| 1-2 days a week | 153 |
| 3-4 days a week | 69 |
| 5 or more days a week | 47 |
| Less than one day a week | 141 |
| Not Applicable (ie, did not live in the service area) | 3 |
| Not at all | 174 |
|  |  |
| q4 |  |
| 1-2 days a week | 178 |
| 3-4 days a week | 52 |
| 5 or more days a week | 27 |
| Less than one day a week | 182 |
| Not Applicable (ie, did not live in the service area) | 2 |
| Not at all | 146 |
|  |  |
| q5 |  |
| 1-2 days a week | 149 |
| 3-4 days a week | 175 |
| 5 or more days a week | 129 |
| Less than one day a week | 129 |
| Not at all | 5 |
|  |  |
| q6 |  |
| 1-2 days a week | 188 |
| 3-4 days a week | 51 |
| 5 or more days a week | 62 |
| Less than one day a week | 155 |
| Not at all | 131 |
|  |  |
| q7 |  |
| Extremely satisfied | 92 |
| Somewhat satisfied | 63 |
| Neither satisfied nor dissatisfied | 161 |
| Somewhat dissatisfied | 150 |
| Extremely dissatisfied | 120 |
|  | 1 |
|  |  |
| q8 |  |
| Covid-19 safety measures are more important | 169 |
| General service improvements are more important | 225 |
| There is no difference in importance | 189 |
|  | 4 |
|  |  |
| q9 |  |
| Cash on board the transit vehicle | 174 |
| Free rides through a social service | 17 |
| Monthly pass for unlimited rides | 43 |
| Punch card on board the transit vehicle, purchased from a vendor ahead of time | 188 |
| Tokens on board the transit vehicle, purchased from a vendor ahead of time | 165 |
|  |  |
| q10 |  |
| Extremely satisfied | 80 |
| Somewhat satisfied | 55 |
| Neither satisfied nor dissatisfied | 159 |
| Somewhat dissatisfied | 160 |
| Extremely dissatisfied | 132 |
|  | 1 |

|  |  |
| --- | --- |
| q11 |  |
| Makes me much less likely to use public transit | 134 |
| Makes me slightly less likely to use public transit | 168 |
| Does not affect my decision | 201 |
| Makes me slightly more likely to use public transit | 29 |
| Makes me much more likely to use public transit | 55 |
|  |  |
|  |  |
| q12 |  |
| Does not affect my decision | 191 |
| Make me slightly less likely to use public transit | 132 |
| Makes me much less likely to use public transit | 156 |
| Makes me much more likely to use public transit | 60 |
| Makes me slightly more likely to use public transit | 46 |
|  | 2 |
|  |  |
| q13 |  |
| I don't have a cell phone or smartphone | 4 |
| No, it is not a smartphone | 24 |
| Yes, it is a smartphone | 554 |
|  | 5 |
|  |  |
|  |  |
| q14 |  |
| Not Applicable (I do not use data on my phone) | 24 |
| Not very concerned (use data frequently, for all purposes) | 242 |
| Somewhat concerned (use data sparingly, prefer to be connected to internet when possible) | 158 |
| Very concerned (use data for necessary tasks only) | 156 |
|  | 7 |
|  |  |
| q15 |  |
| Home internet | 304 |
| Work internet | 239 |
| Mobile internet/cell phone data plan | 310 |
| Library/community center/other public hotspots | 230 |
| No access to the internet | 7 |
|  |  |
|  |  |
| q16 |  |
| Savings Account | 190 |
| Checking Account | 222 |
| Debit Card | 244 |
| Credit Card | 181 |
| Prepaid or Gift Card (with Mastercard/Visa logo) | 187 |
| PayPal, Venmo, Cash App, or some other mobile payment | 181 |
|  | 9 |
|  |  |
| q17\_1 |  |
| Slightly Uncomfortable | 112 |
| Completely Comfortable | 137 |
| Slightly Comfortable | 142 |
| Completely Uncomfortable | 93 |
| Don't Know/Not Applicable | 95 |
|  | 8 |

|  |  |
| --- | --- |
| q17\_2 |  |
| Slightly Uncomfortable | 107 |
| Completely Comfortable | 146 |
| Slightly Comfortable | 130 |
| Completely Uncomfortable | 109 |
| Don't Know/Not Applicable | 88 |
|  | 7 |
|  |  |
| q17\_3 |  |
| Slightly Uncomfortable | 118 |
| Completely Comfortable | 159 |
| Slightly Comfortable | 102 |
| Completely Uncomfortable | 105 |
| Don't Know/Not Applicable | 96 |
|  | 7 |
|  |  |
| q17\_4 |  |
| Slightly Uncomfortable | 103 |
| Completely Comfortable | 156 |
| Slightly Comfortable | 116 |
| Completely Uncomfortable | 105 |
| Don't Know/Not Applicable | 98 |
|  | 9 |
|  |  |
| q18 |  |
| Credit/Debit payment through a smartphone app or computer (mobile payment) | 208 |
| Cash at a transit office for a contactless fare card | 176 |
| Credit/Debit at a transit office for a contactless fare card | 177 |
| I would not be able to use the bus | 14 |
|  | 12 |
|  |  |
| q19 |  |
| 65+ | 24 |
| 35-45 | 1 |
| 45-54 | 22 |
| 25-34 | 220 |
| 18-24 | 148 |
| 35-44 | 145 |
| 55-64 | 24 |
|  | 3 |
|  |  |
| q21 |  |
|  | 17 |
| No | 530 |
| Yes | 40 |
|  |  |
| q22 |  |
| American Indian or Alaskan Native | 118 |
| Asian | 97 |
| Black or African American | 105 |
| Hispanic | 110 |
| Native Hawaiian or Other Pacific Islanders | 102 |
| White | 259 |
|  | 5 |

|  |  |
| --- | --- |
| q23 |  |
| Man | 316 |
| Non-binary | 1 |
| Other | 1 |
| Woman | 266 |
|  | 3 |