2022 BC Transit Ridership Survey Report

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Prepared for:

The Binghamton Metropolitan Transportation Study & Broome County Transit

Based on research conducted by students in PAFF 510-01, PAFF 510-02: Research Methods, Fall 2022

Department of Public Administration
College of Community and Public Affairs
Binghamton University, State University of New York
Binghamton, NY

Class Participants:

Ogheneyole Akuwovo, Braden Alessi, Jessica Alvarado, Pericles Andon, Annabelle Bangs, Morgan Baren, Victoria Barics, Alexi Berges, Dominic Bossey, Samantha Carroll, Stephanie Cassens, Cheng Chang, Ella Chinn, Chelsey Delius, Lou Deprez, William Dunphy, Spencer Freer, Eden Greenberg, Amy Hartman, Loye Henry, Christian Hinckson, Danielle Horowitz, Jacqueline Jergensen, Monishka Jhaveri, Julia Kline, Michael Lee, Grace Lee, Zeya Li, Dylan Licata, Lia Lorenzana, Samuel Marks, Alex Martone, Thomas Odette, Jenna Picciano, Priya Pindiprolu, Aleksia Radulov, Nastasia Radulov, Kurtis Reilley, Joshua Samuel, Ruby Tower, Bethany Watson, Jiaxin Wu, and Bin Zhou

Under the direction of Professor Matthew J. Uttermark with Francesca Bové

Cover photo from the Broome County Website. Retrieved from https://www.gobroomecounty.com/sites/default/files/dept/transit/pdfs/Maps/System-Map-2019.pdf

Acknowledgements: We want to thank BC Transit's bus drivers and staff for their grace and courteousness while fielding the survey. We also wish to thank Ronald Hirst, Greg Kilmer, and Jennifer Yonkoski for their time in helping to plan and deploy this iteration of the ridership survey.

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Executive Summary

This report summarizes and analyzes the data collected by the PAFF 510 Research Design Methods class at Binghamton University for the 2022 BC Transit Ridership Survey. The survey was created to measure characteristics of riders, demographics of riders, and satisfaction with bus services.

Students in PAFF 510: Research Methods collected survey data over the course of one week. Beginning October 14 and ending October 21, the students collected 862 surveys. The charts made with this data use total number of responses (n responses) to calculate percentages. We also give the total number of respondents (n respondents) in cases when individual respondents gave multiple answers.

Eight Key Takeaways

1) The majority of respondents, 58%, reported paying their bus fare with a College ID. The next most common form of payment is cash (22%).

2) If bus service were not available in 2022, riders would be most likely to use a rideshare or taxi service (37%). Riders were almost as likely to walk (16%) to their destination as they were to get a ride with a friend or abandon the trip altogether (both 18%). From our data we saw that about 54% of riders choose to ride the bus because they do not have a car. These results illustrate the importance of BC Transit services to riders.

3) 58% of riders take between one and five minutes to reach the bus stop, down from 63% in 2014. Riders take longer to reach their bus stop in 2022. As in previous surveys, the most frequent transfer location was the BC Junction stop.

4) The 2022 demographic results vary significantly from the 2014 results. This survey found that 36% of riders identified as white, whereas previous surveys saw more than 50% of riders identify this way. The modern survey also specified "Asian" as an option for race/ethnicity, which allowed 23% of riders to select this new option. We still see, however, a disparity between the racial composition of BC Transit's ridership compared to Broome County's total population. The 2022 survey found that 63% of riders chose an option other than "white" as their race/ethnicity. Meanwhile, the 2020 US Census reports that less than 15% of Broome County's total population identified themselves this way.

5) The majority of bus riders identified as female, comprising 54% of respondents, while males came in at 41%. The 2022 survey added new inclusive options for gender identification. 2.04% of riders identified as non-binary and 0.51% selected transgender. Another 1.66% of respondents selected Prefer Not to Say.

6) Similar to the 2014 survey results, this year's ridership satisfaction survey revealed that the majority of riders were satisfied with BC Transit. Rider sentiment seems to have improved in areas with traditionally high ratings for dissatisfaction. For bus frequency and timeliness, dissatisfaction decreased from 40% in 2014 to only 30% in 2022. Likewise, fewer riders were dissatisfied with bus cleanliness. Only 12% of riders rated bus cleanliness poorly in 2022, compared to nearly 30% in 2014.

7) Covid-19 inspired two new questions on the 2022 survey. First, we asked riders whether Covid-19 was a concern for them when riding BC Transit buses. Only 26% responded "Yes." Of those 211 riders with concerns, we asked them to write a comment specifying those concerns. Common themes among these responses include: the lack of mask use among riders, questions about how frequently the bus is sanitized throughout the day, and worries about sharing such a confined space with a crowd.

8) Riders had the opportunity to make open-ended comments. Overall, riders frequently commented that they would like for BC Transit to run later on weekends and increase frequency during the weekdays.

We feel confident that the results of this 2022 survey will be very useful to BC Transit in making decisions about marketing and service changes.

Literature Review

Public Transportation is a key mode of travel for many citizens in different cities and counties. There are many factors that influence the use of public transportation, and varied reasons that public transportation may be heavily utilized in some areas, while it is struggling in other areas. In this literature review, public transportation will be viewed through the lens of bus ridership. When analyzing bus ridership, there are many factors to keep in mind, such as why people ride the buses, who rides the buses, and how to get more bus riders. This paper will focus on reviewing literature that specifically focuses on these factors so we might learn from other places.

Why People Ride

The competition to public transportation is private, individual transportation. This comes most often in the form of car ridership. The major reason that people do or do not take public transportation is the availability of a car to them (Cevero, 1993; Neff, 2007; Valley Metro, 2014). In the Valley Metro Bus Ridership Survey, which is for the Phoenix area, the impact of car availability on public transportation use was quite evident, as their report stated “Among riders who said they are using public transit less often…having a car now [was] the top reason given by 31%” (Valley Metro 2014). Additionally, they found that for bus riders specifically, only 18% have access to a vehicle, meaning that 82% of bus riders in the Phoenix area do not have another option for transportation. This could point to the fact that they have no other option for transportation besides the bus. This holds true for United States bus ridership as a whole, as a study done by the American Public Transportation Association (APTA) found that “less than one-half, 45.4 percent, of public transportation riders have a vehicle available when deciding to make a transit trip” (Neff, 2007). While this is a much higher number of available vehicles than in Phoenix, it illustrates the point that most Americans who are taking the bus do not have an automobile available to them. This could mean that when an automobile becomes available, they are less likely to take public transportation. This concept of car ownership and its correlation to public transportation use could explain why major cities, such as New York City, see higher levels of public transportation use. "In the Bronx, for example, the vehicles per household rate range from 0.52 to 2.31 vehicles (NYCDOT 2004). It has also been found in other areas, such as California, that “for no-vehicle households…42.3 percent of trips were made by…transit versus only 3.5 percent of trips for households with three or more vehicles” (Cevero, 1993).

Another factor that plays a large role in why people ride buses is their economic status. An article by Mike Maciag in Governing states, “people who use public transportation are disproportionately poorer than other commuters in nearly every U.S. city” (Maciag, 2014). This is also illustrated in ridership demographics put together by CBS Outdoor (2012), which shows

that the largest percentage of riders in Los Angeles, Miami, and Detroit were all from the lowest economic class. Maciag (2014) writes, “a third of New Orleans residents who commute via public transportation live in poverty, compared to 9 percent who drive cars.” Part of this is due to the cost of owning and operating a vehicle being much higher than the cost of taking public transportation.

Who Rides

In addition to why people are riding the bus, another factor of interest is who is riding the bus. According to the National Household Transportation Study (NHTS), a survey by the Federal Highway Administration (FHWA), there are several factors of interest that help define a typical American public transportation rider. The most recent survey, completed in 2009, provides some interesting statistics for American transit use that affect our understanding of public transit users, including those who ride buses, in the United States. One important transit population identified by the study is the non-Hispanic black population. Of all travel by transit, non-Hispanic blacks make up 32.2%, despite only being 12.1% of the population as a whole. Interestingly, that population only uses transit for 3.0% of their travels, relying heavily on personally owned vehicles (POV) either as a driver or a passenger (Chu, 2012).

Another important market for transit, as defined by the NHTS, is the low to low-middle income population. This market is defined as making below $49,999 a year, and it amounts to 68.8% of the total transit ridership. However, unlike the non-Hispanic black population, this market uses transit for almost 7% of their travel, which is a significant amount in the United States where only 2.1% of travel is made via transit (Chu, 2012). Another large market for transit is zero-vehicle households. In America, people who live in zero-vehicle households use transit as their mode of travel 26.7% of the time and make up 48.5% of the overall transit use (Chu, 2012). One final important market represented by the NHTS survey is people traveling to and from work. According to the survey, 27.4% of transit use is for work or work related activities representing a significant share of travel (Chu, 2012). All of these populations represent a significant portion of American transit use.

Through these are national trends, one can easily see how they might impact Broome County and its transit offerings. Though the overall population of Broome County has decreased in the last 25 years, the non-Hispanic black population has nearly doubled in size from 4,333 in 1990 to 9,851 in 2006 (McGovern, 2008). Currently, this represents 4.8% of Broome County’s population, the second highest race/ethnicity next to white (U. S. Census Bureau, 2010). Keeping in mind national trends, this increase should be noted, as non-Hispanic blacks are a large transit market. Beyond race, in Broome County, 53.9% of the population lives in a household that makes below $49,999 annually. This is a very high number, and, according to national trends, should notably affect the number of people who ride the bus (U. S. Census Bureau, 2012). In addition, Binghamton has 10.5% zero-vehicle households (Hwang, Wilson, Reuscher, Chin, and

Taylor, 2014). This population, statistically, should also be represented heavily in the population of people who use transit. Finally, the population of people commuting to and from work is about 45% of the working population of Binghamton. Though this is usually a large factor in bus ridership, as this number is not especially high, it may not have the kind of impacts we have come to expect nationally (U. S. Census Bureau, 2012).

While these demographics statistics are essential, a study by the APTA also provided other ridership factors that help to define a typical rider. To this end, we are also concerned with trying to ascertain other helpful information such as the most common reasons for the use of public transportation, which showed that 59.2% of riders were using the systems to travel to work, 10.6% were traveling to school, 8.5% of riders were going shopping or dining, 6.3% were conducting personal business, 6.7% reported using public transportation for a social purpose, 3% of trips were for medical reasons, and the remaining 5.7% reported "other" for the purpose of their trip (APTA, 2007). Another variable of interest is if they had alternative means of transportation available, which 45.5% of riders reported having (APTA, 2007). Also, how frequently riders reported using the public transportation system is of great interest. This study found that 81.2% of the ridership used public transportation 3 or more days per week, with 65.5% of riders riding 5 or more days per week (APTA, 2007).

Another interesting piece of datum supplied by the APTA is how people get to their destination if their chosen mode of roadway public transit no longer operated. 40.9% of people said that they would either drive themselves or find a ride, implying that even people who have other options see public transit as valuable and worthwhile enough to take. However, 23.8% of respondents reported that they would simply not take the trip, showing the reliance a lot of people have on public transit (Neff and Pham, 2007). This illustrates the difference between the "need to ride" and "want to ride" populations who take the bus. While some people have alternative modes of transport in America, there are those who have no option but public transit. These two populations are quite different and therefore may have different needs in terms of public transit.

In markets similar to Broome County, we can find even more data that help us understand metropolitan Broome County ridership. For one, Broome County, and the City of Binghamton specifically, have a lot of student activity and ridership (Binghamton Metropolitan Transportation Study, 2009). Interestingly, a study of college towns and transit ridership found that in communities with a large amount of college students, population density is one of the most important factors affecting ridership. As students tend to aggregate in small areas (e.g. student apartment complexes, off-campus academic facilities) the population density of certain areas should significantly impact routes and frequency in college towns. Though this study focuses on a college town in Massachusetts, the findings may help inform some practice in Broome County. Because students are essentially commuters that tend to live in clusters in specific areas, the article argues that using just data on employment, income, and housing is not enough to accurately represent the population a bus system might seek to serve (Oldread, 2011).

All of these factors add up to a complicated portrait of a Broome County rider, one that we hope to further explore in the 2014 BC Transit ridership survey

Increasing Ridership

To increase bus ridership, transit systems must take rider comfort into consideration including safety, perception of the system, friendliness of the driver, and welcoming bus environment. In regards to the riders' level of comfort, the Federal Transit Administration's database provides any past plans to increase ridership for a variety of public transportation systems (continuously updated). According to the database, the South Bend Transportation Corporation (TRANSPO) began to focus on rider safety through driver training programs and safety familiarity, which resulted in about a 10% increase in ridership in a two-year span (Federal Transit Administration, 2004).

Another form of rider comfort is in the theory of incentive, where riders believe they are gaining from their experience. On the FTA's database, the Nantucket Regional Transit Authority suggests a rider incentive program such as the one their agency provides called "Do the Ride Thing" (2004). The idea of the program is to promote a car-reduced city where riders choose another mode of transportation (Federal Transit Administration, 2004). Throughout the day, when a consumer chooses to ride the bus, walk, or ride a bicycle, they are entered into a drawing for a variety of donated prizes from local businesses (Federal Transit Administration, 2004). According to the FTA, Nantucket's program increased ridership within a three-year time span (2004).

Most of these suggestions can become successful if the riders' perception of the public transportation system is positively maintained. The Kansas City Regional Transit Alliance's article, "Building Ridership: Make Transit Fun, Attractive", highlights the inventive tactic of Boulder, Colorado's public transportation system to improve their image (2014). The simple concept of making buses colorful and attractive along with creating bus names such as "Hop, Skip, Jump, Bound, Bolt, Dash, and Stampede" seem to grasp the attention of not only children but adults as well (Kansas City Regional Transit Alliance, 2014). Along with the creative names and bus décor, the buses also play satellite radio in the background for their riders (Kansas City Regional Transit Alliance, 2014). Though the idea of satellite radio seems appealing, it may not be a cost effective marketing concept for all cities. The strategies based on rider comfort play a role in the fluctuation of ridership; however, they are not the only concepts that must be incorporated for the highest success rate of the individual public transportation system.

Rider dissatisfaction often lies with the timeliness of the buses, bus schedule, and route availability. In order to increase ridership, the individual public transportation system must appeal to the ridership base, attracting the consumers within the agency's service area. According to the 2011 BC-Transit Rider Survey Report, Binghamton University students were most concerned with the dissatisfaction portrayed by riders in the area of route regularity (Handy

et. al., 2012). To increase ridership in this area, it is imperative to survey riders on which routes they typically take. In theory, it would be necessary to ask riders which routes they would like to see the given public transportation system incorporate in their program.

The Greater Bridgeport Transit's article, "Top 10 Growth in Ridership" highlights the notion that their region's employment rate has increased, requiring the system to incorporate more downtown and business routes to designated areas (2009). The article also describes the idea of an increase in ridership requiring the agency to make some changes in their buses to keep consumers satisfied, such as newer buses to avoid maintenance issues (Greater Bridgeport Transit, 2009). In the same respect, Community Transit illustrates the idea that ridership can be maintained or even increased by "strategically cutting unproductive service", meaning that routes can be cut based on their amount of ridership (2013). If a route is not utilized often and another route is visibly in need of an increase in transport, the agency may be obligated to cut one route in order to run the latter route more frequently. Eric Jaffe (2012) writes about a "multi-destination" approach within the Broward County transit system that brings consumers to their workplace rather than a general area for drop-off. Jaffe highlights the idea that often times public transportation systems focus on bring its riders to general areas rather than specific drop-off spots. In other words, multiple bus stops can be incorporated into the routes to make multiple business stops for employees. Again, this method may only work in cities where there is a higher employment rate. This suggestion implies that the riders' desired end destination is their workplace and the transportation system must allot time in the schedule for these stops.

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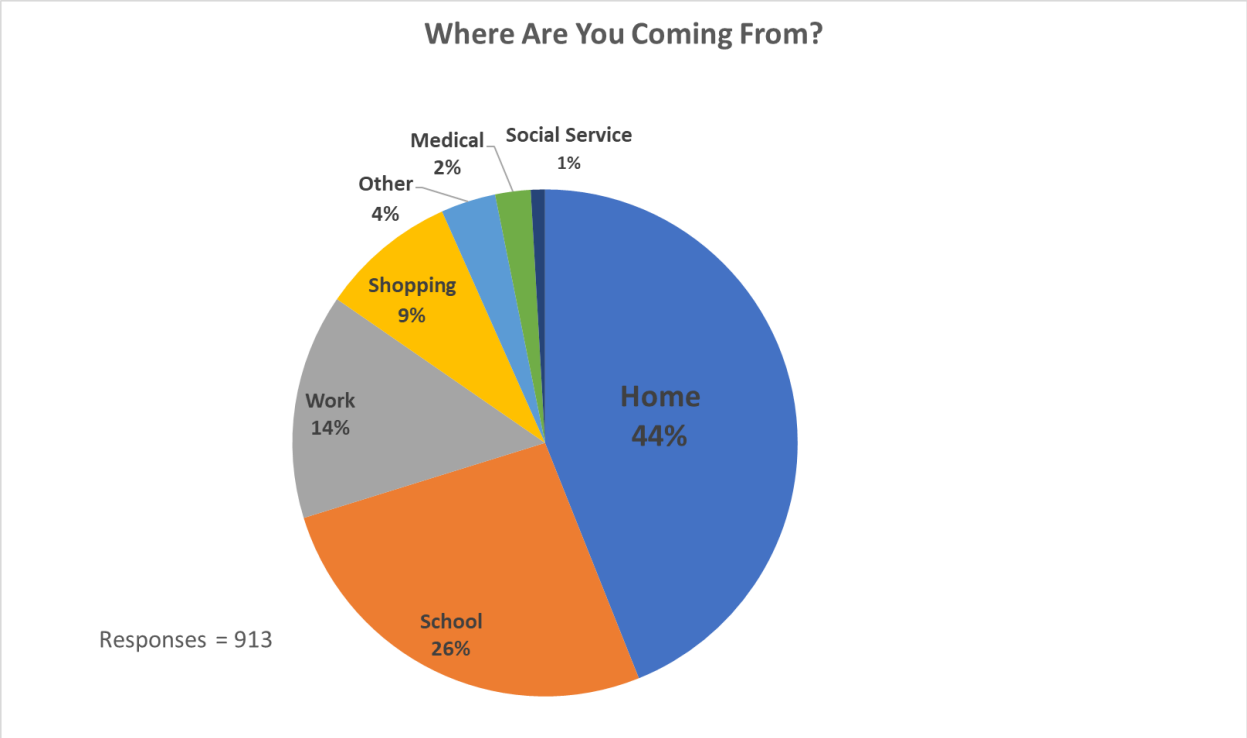
Survey Results

Today's Ride

Question 1: Regarding this bus trip, where are you COMING FROM?

The first question of our survey provided information regarding where riders came from. The top three places riders came from in the 2022 Transit survey were home, school, and work (44% were coming from home, 26% were coming from school, and 14% were coming from work). The results from 2014 B.C. Transit survey results varied slightly from the results in the 2022 B.C. Transit surveys, however home, work and school were still the top answers in both 2014 and 2022. In comparison to the 2014 report, there was a decrease of 2% of respondents who said they were coming from home, there was a 12% increase of respondents who said they were coming from school, and a 3% increase of respondents who said they were coming from work.

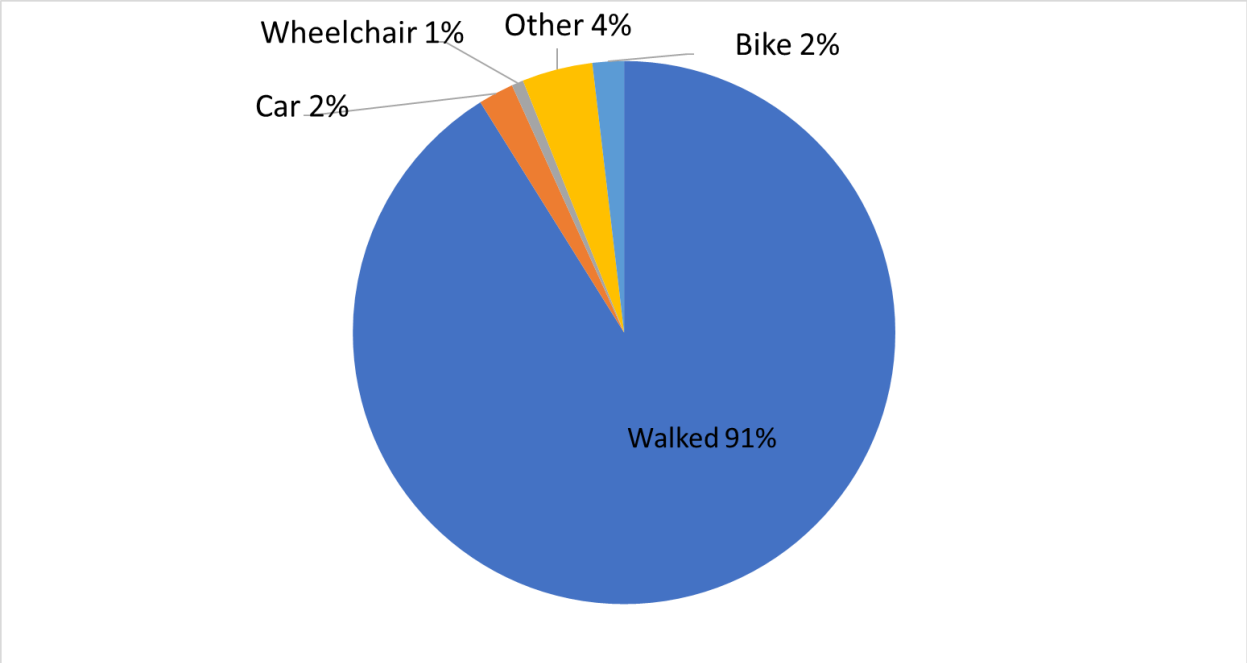
Note: The charts made with this data use n(responses) to calculate percentages, but n(respondents) is also given to indicate when singular respondents gave multiple answers.



Question 2: How did you get to the bus stop today?

The 2022 B.C. Transit Survey revealed a few similarities to the 2014 survey. In the 2022 surveys, research indicated that walking is the most prevalent form of transportation to the bus stop, which was approximately 91%. This is very similar to the 2014 survey, which also indicated that 91% of people walked to the bus.

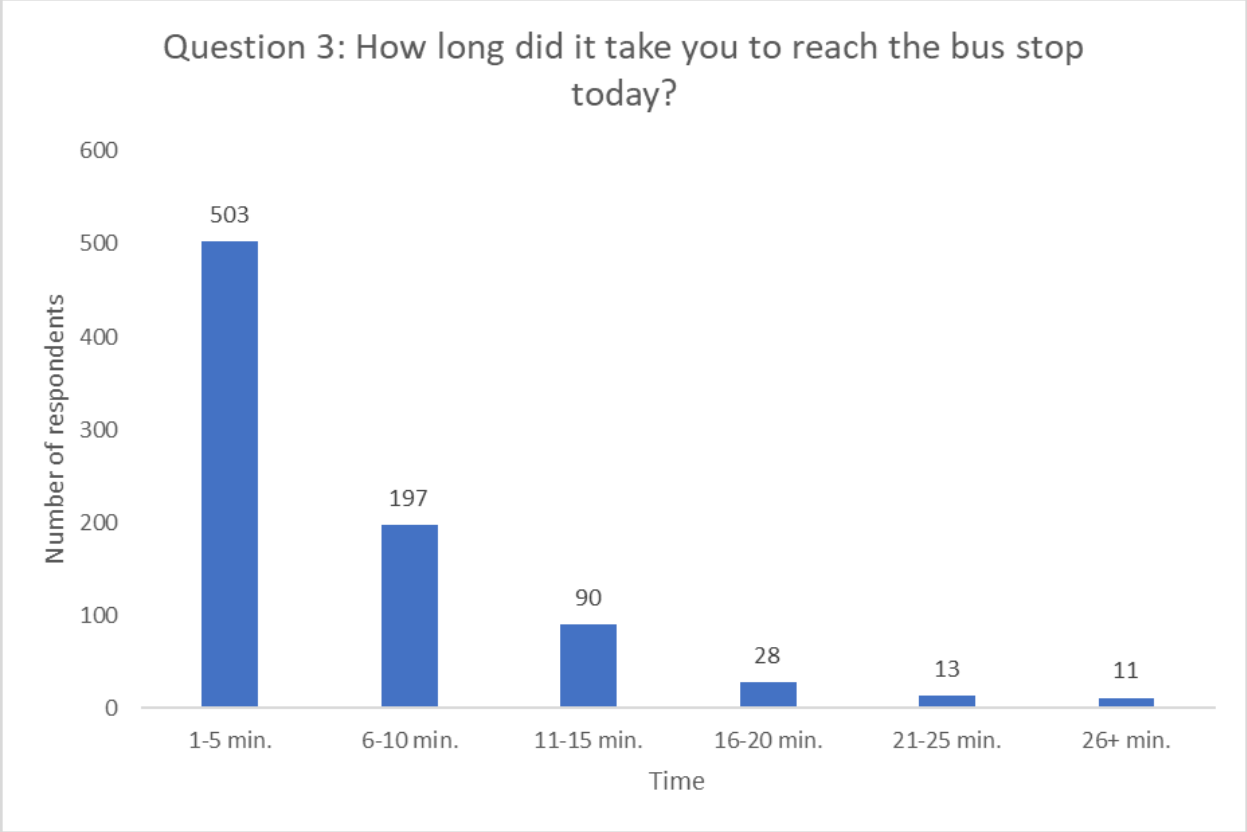
Some other answers respondents provided for this question were car (approximately 2%), wheelchair (approximately 1%), bike (approximately 2%) and other (approximately 4%). This differed a bit from the answers provided in the 2014 survey in which the answers were bike (approximately 1%), ride (approximately 3%) wheelchair (approximately 1%) bus (approximately 3%) and other (approximately 0%).



Question 3: How long did it take you to reach the bus stop today?

The graph below shows the breakdown of how long it took respondents to reach their bus stop. Out of 862 respondents, we had 842 recorded responses.

There were 503 respondents who took 1-5 minutes (approximately 59.7% of respondents), 197 respondents who took 6-10 minutes (approximately 23.4%), 90 respondents who took 11-15 minutes (approximately 10.7% of respondents), 28 respondents who took 16-20 minutes (approximately 3.3% of respondents), 13 respondents who took 21-25 minutes (approximately 1.5% of respondents), and 11 respondents who took 26 or more minutes (approximately 1.3% of respondents).



Question 4: Where did you get on the bus?

A content analysis was performed to determine where riders were boarding the bus. It was an open-ended question. Therefore, the analysis called for a coding scheme that would allow for a good interpretation of the data. Responses were first separated based on the nature of the responses.

Location refers to a point of reference along a bus route. Places of business and major areas of attraction (e.g. BC Junction, the mall, etc.) were grouped together to create this category. Whenever possible, items referring to the same location (for example, "University Union," and "Bing Uni") were re-coded and consolidated for ease of interpretation.

Location	Number of Responses	Percentage of Responses
BC Junction	51	6.73%
Oakdale Mall	12	1.59%
University Plaza	8	1.06%
Binghamton University	180	23.78%
Other	506	66.84%
Total Responses	757	

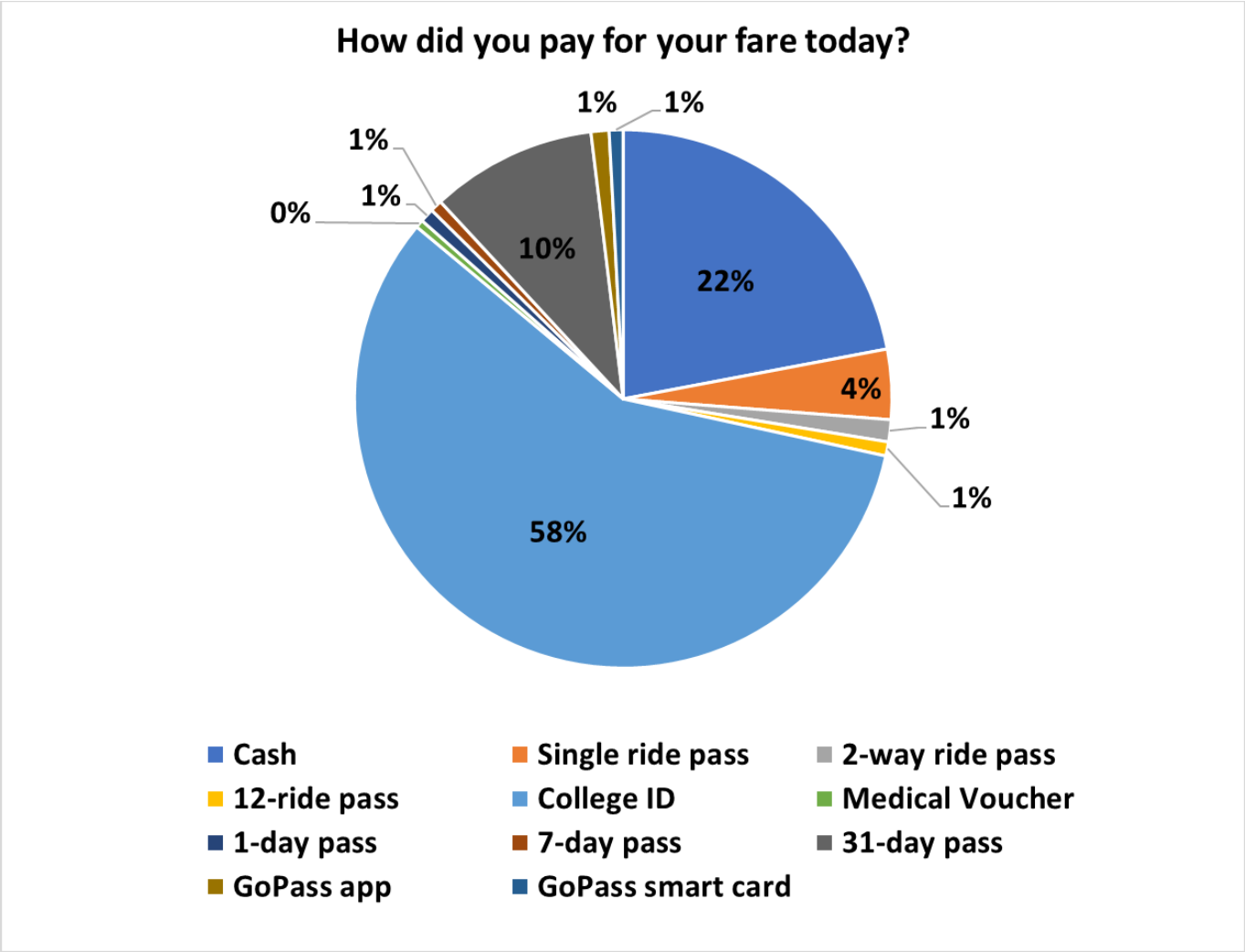
The table on the left shows the number of total responses recorded, as well as how many responses we got regarding each location. The column all the way to the right provides each location with a percentage of responses when compared to the total amount of responses.

References to a street or avenue were grouped together to create a second category. Whenever possible, items referring to the same location (for example, "Main," and "Main Street") were re-coded and consolidated for ease of interpretation.

The table on the right shows the total number of responses recorded, as well as how many responses we got regarding each street location. The column all the way to the right provides each street location with a percentage of responses when compared to the total amount of responses.

Street	Number of Responses	Percentage of Responses
Leroy St	12	1.59%
North St	10	1.32%
Washington St	18	2.38%
Front St	27	3.57%
Floral Ave	19	2.51%
Vestal Ave	16	2.11%
Main St	61	8.06%
Other	594	78.47%
Total Responses	757	

Question 5: How did you pay for your fare today?

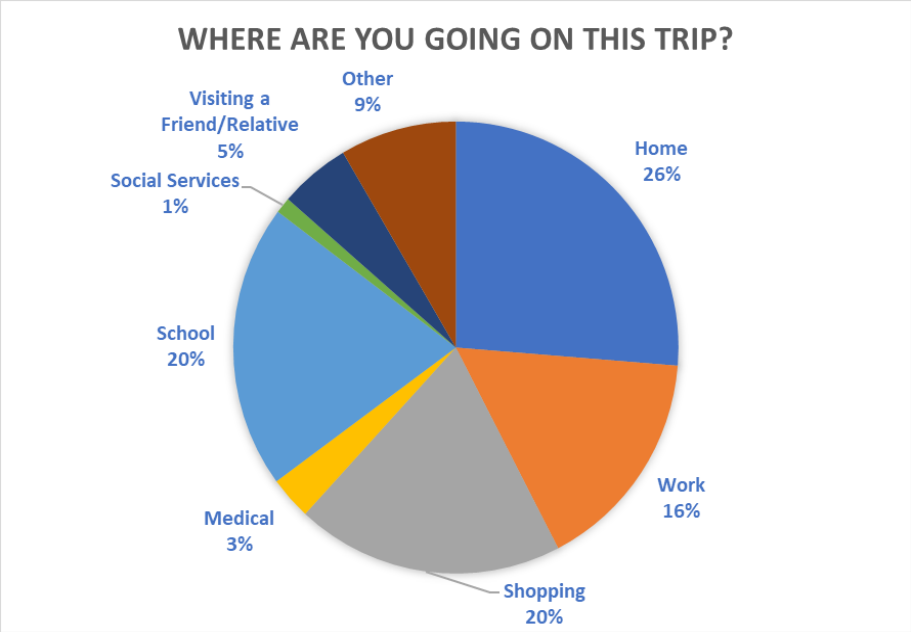


From the chart we learned that about 57% of respondents paid for their fare with a college ID. This is in line with the 2014 survey where most riders also used their college ID. The next most common form of payment is cash (22%), followed by 31-day pass (10%) and single ride pass (4%)

GoPass app, GoPass smart card, 7-day bus pass, 2-way ride pass, 12-ride pass, medical voucher, and a 1-day bus pass *each* accounted for only about 1% of fare payment (approximately 7% in total).

Question 6: Regarding this bus trip - where are you GOING?

The plurality of people - exactly 26% - using BC transit were on their way home, although many people were on their way to go shopping, go to school, or go to work.



Question 7: Where will you get off the bus?

Where will you get off the bus?		
Location	**Number of Responses**	**Percentage of Responses**
Binghamton University	122	15.82%
BC Junction	74	9.60%
Broome County C.C.	55	7.13%
Main St.	42	5.45%
Front St.	19	2.46%
Vestal Ave.	18	2.33%
Oakdale Mall	17	2.20%
Floral Ave.	17	2.20%
Washington St.	9	1.18%
Leroy St.	8	1.04%
Other	390	50.58%
Total Responses	771	

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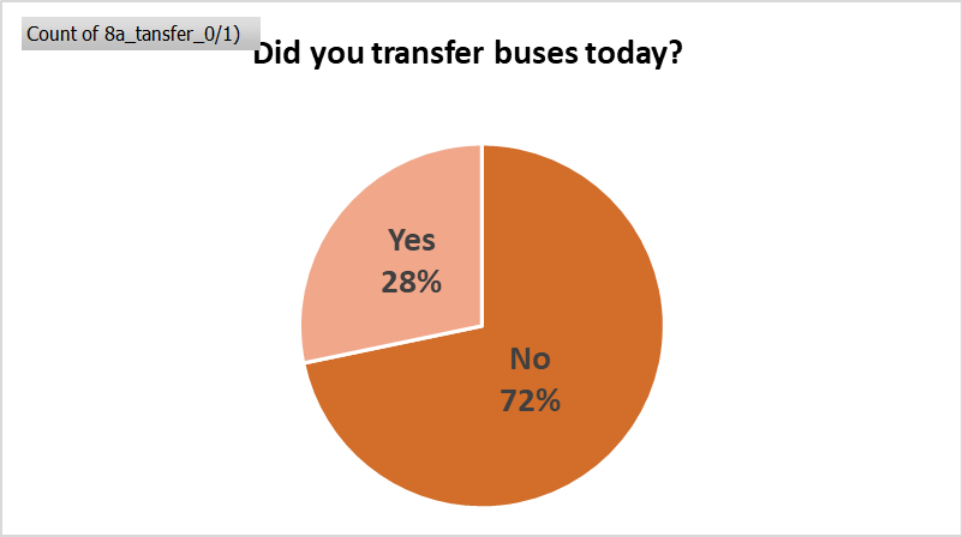
Location refers to a point of reference along a bus route. Places of business and major areas of attraction (for example, BC Junction, the mall, etc.) were grouped together to create this category. Whenever possible, items referring to the same location (for example, "University Union," and "Bing Uni") were re-coded and consolidated for ease of interpretation. As illustrated, "other" was the most frequent response.

References to a street or avenue were grouped together to create a second category. Whenever possible, items referring to the same location (e.g. "Main," and "Main Street") were re-coded and consolidated for ease of interpretation. As illustrated, "other" was the most frequent response.

Question 8: Do you need to transfer buses today?



Most people who participated in the survey, exactly 72% of the respondents, did not need to transfer buses on the day that they filled out the survey.

While this is a large majority, it is still important to note that more than one quarter of the respondents did in fact need to transfer and so this might be an important population for further study in terms of optimizing the bus schedule.

It is interesting to note that many people who responded "Yes" to the original Question 8 subsequently left Question 8a and Question 8b blank. Only 184 of people who responded to Question 8 proceeded to respond to Question 8a, then only 179 of those 184 proceeded to respond to Question 8b.

Question 8a: If yes, how many times did you/will you transfer?

Note: 233 respondents answered "Yes" to Question 8; Only 184 answered this follow-up question

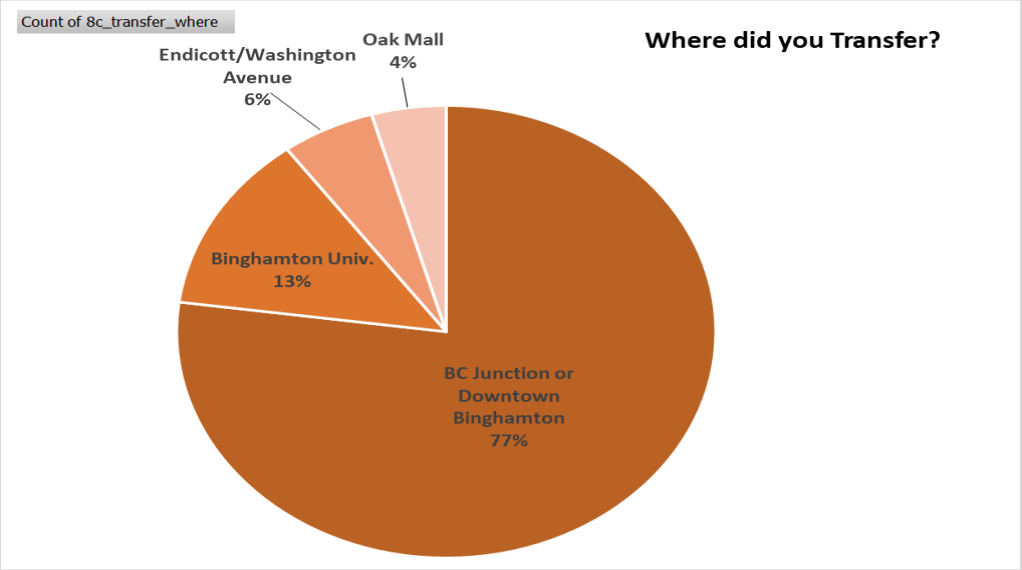
If yes, how many times did you/will you transfer?	Number of Respondents	Percentage of Respondents
1 Transfer	**143**	**78%**
2 Transfers	**37**	**20%**
3 Transfers	**2**	**1%**
More than 3 Transfers	**2**	**1%**

Of those who responded that they would need to transfer buses on the day that they took the survey - 28% of the respondents - the large majority of them, exactly 143 of them specified that they would only need to transfer once. While it is a smaller percentage, it is also important to note that 20% of the respondents who responded that they would need to transfer noted that they would need to transfer twice. This is an especially interesting population that might require further study in terms of optimizing bus schedules for population convenience.

Furthermore, we must note that while 233 respondents answered yes to question 8, only 184 of those respondents then responded to question 8a. Therefore, we must acknowledge that there is some gap in our knowledge of the frequency of transfers.

Question 8b: If yes, where did you transfer?

Note: 233 respondents answered "Yes" to Question 8; Only 179 answered this follow-up question



A large majority of these respondents note that they would be transferring at BC Junction in Downtown Binghamton. This seems is unsurprising when considering that BC

Junction is the central hub of the transit system where most buses can be found at some point. Furthermore, we see that only 13% of respondents transfer at Binghamton University - perhaps a smaller population than we might expect which may indicate that the buses cater towards students too much who typically do not need to transfer. Of course this maintains an assumption that most of the respondents who are transferring at the university are students, which might not necessarily be true. Regardless, further study into the population of bus riders who need to transfer might require a greater focus of study.

Question 9: If bus service were not available, how would you make this trip?

If bus services were not available in 2022, how would you make this trip?	Number of Respondents	Percentage of Respondents
Drive	47	5%
Ride with Someone	169	18%
Taxi/Uber	349	37%
Bike	34	4%
Walk	146	16%
Would Not Make This Trip	174	18%
Other	18	2%

If the bus were not available, 5% would drive, 18% would ride with someone, 37% would take a taxi, 4% would bike, 16% would walk, 23% would not make the trip, and 2% would do something else (other).

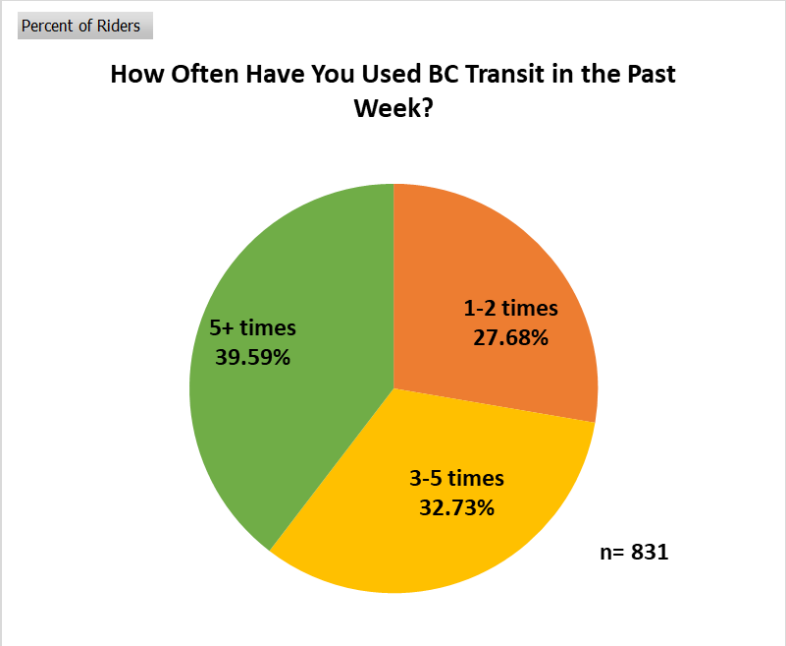
The main differences from 2014 to 2022 was the large increase in the number of people who would take a taxi/ridesharing service if the bus was not available (20% to 37%), while

people who walk and would not make the trip if the bus was not available decreased (walk decreased from 23% to 16% and would not make the trip decreased from 23% to 18%). We can see a side-by-side comparison of these details in the table below.

If bus services were not available, how would you make this trip?	2014 (Percentage)	2022 (Percentage)
Drive	4%	5%
Ride with Someone	21%	18%
Taxi	20%	37%
Bike	4%	4%
Walk	23%	16%
Would Not Make This Trip	23%	18%
Other	4%	2%

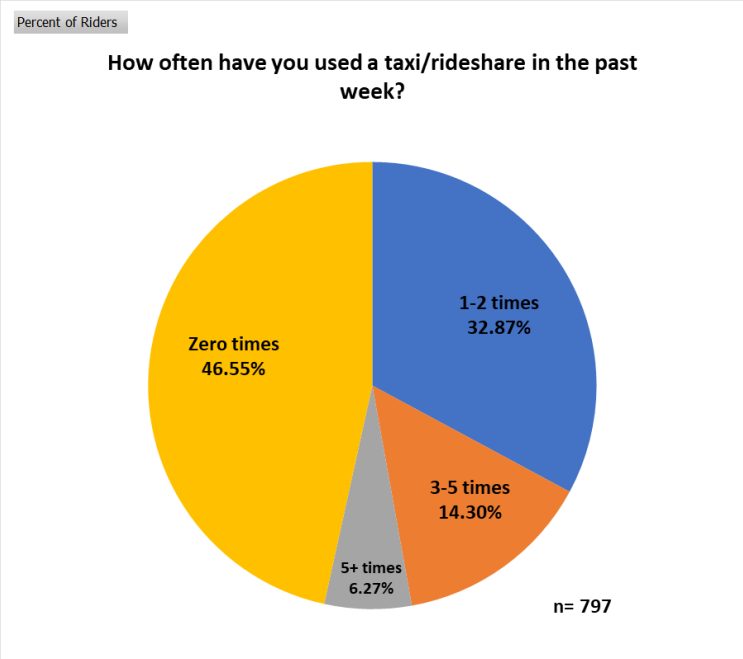
Question 10: How often have you used BC Transit in the past week?

The usage of BC Transit is fairly evenly distributed. 27.68% of Riders use BC Transit 1-2 times a week, 32.73% use it 3-5 times a week, and 39.59% use it more than five times a week. Hence, when considering that almost half of riders reported not using cab services (question 11) and about half do not have access to a vehicle (question 12), it can be concluded that the majority of people are using bus services because the service is a necessity.



Question 11: How often have you used a taxi/rideshare in the past week?

The usage of a taxi/rideshare service (such as Uber, Lyft, etc.) was less common among BC Transit riders. Of the riders surveyed, 46.55% had not used a taxi/rideshare service in the past week, 32.87% used one 1-2 times, 14.30% used one 3-5 times, and only 6.27% used one over 5 times in the previous week.



Question 12: What is the most important reason you ride the bus?

	Number of Respondents	Percentage of Respondents
No car available	430	54%
Bus is more convenient	123	15%
Bus is cheaper	171	21%
No convenient parking	9	1%
Protect the environment	15	2%
I would rather ride than drive a car	31	3%
Other	7	1%

The most important reason for why someone rode the bus was no car available (54%), the bus is cheaper (21%), the bus is more convenient (15%), they would rather ride the bus than drive a car (3%), they want to protect the environment (2%), there is no convenient parking (1%), or another reason (other; 1%).

The "Other" category yielded responses such as: "for wife having a car," "do not drive," "one car family," and "it's quicker."

Question 13: Is the potential transmission of COVID-19 a concern when riding the bus?

Of the 809 respondents, 598 people (73.92%) believed that COVID-19 was not a concern while riding the bus, whereas 211 people (26.08%) did believe that COVID-19 was a concern.

Is the potential transmission of Covid-19 a Concern while Riding the Bus	Number of Responses	Percentage of Responses
No	598	73.92%
Yes	211	26.08%
Total	**809**	**100.00%**

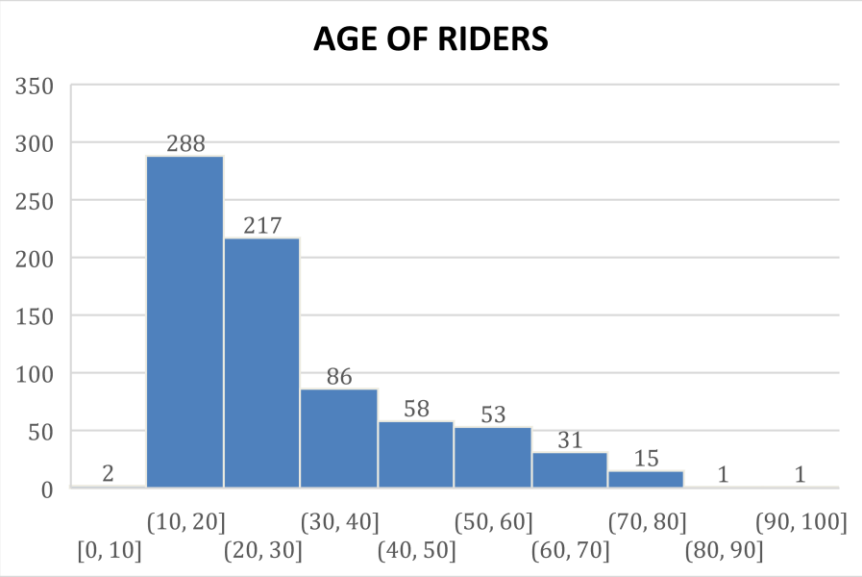
Question 13a: If COVID-19 is a concern, why?

Of the 809 respondents, 211 people (26.08%) believed that COVID-19 was a concern while riding the bus. Respondents who indicated concern regarding COVID-19 transmission were provided the opportunity to indicate why they were concerned. A content analysis of responses was performed to identify common themes regarding concern for transmission. We identify three key themes through this analysis. The first theme regards the lack of/no masks. The second theme regards concerns of cleanliness. The third and final theme regards the crowded /enclosed nature of the bus. Examples of each theme are reported in the table below.

General Themes of Concerns Regarding Covid-19	
Theme: No Masks	
Example 1	"For example, a mom and son came on the bus, and she said he was really sick, he had no mask."
Example 2	"No masks and no social distancing."
Example 3	"Covid-19 cases are starting to rise again and people on the bus start coughing, and they aren't wearing a mask which can spread anything through the air."
Theme: Cleanliness Concerns	
Example 1	"No sanitizers and mask are not required for people who cough."
Example 2	"They don't clean."
Example 3	"The bus is not cleaned after people."
Theme: Crowded and Enclosed Space	
Example 1	"Buses more packed at rush times."
Example 2	"People coughing and sneezing in a closed space."
Example 3	"Not everyone wears a mask, I can't always sit away from others."

Who's Riding

Question 14: How old are you?



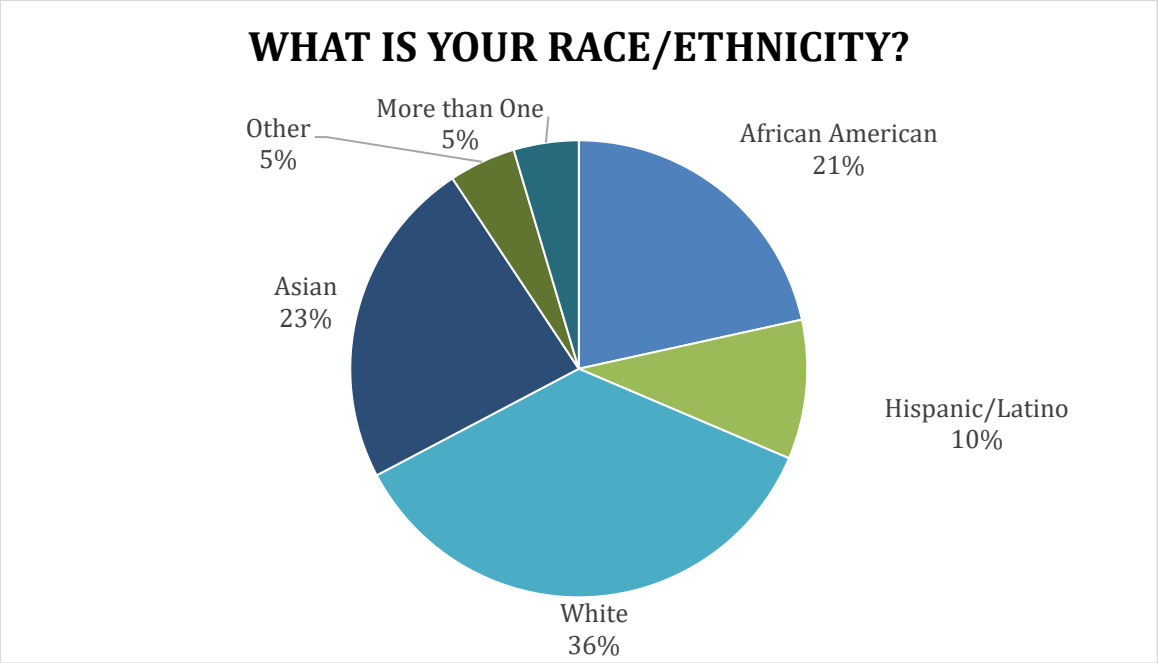
This bar chart primarily shows that people aged 18-25 are the major group of bus riders in the 2022 survey. Most of the respondents are likely students at Binghamton University. Any individuals who answered under 18 were not included in this study beyond the indication of their age.

Question 15: Gender of Bus Riders

The majority of respondents in the 2022 survey were female at 54.39%. In the 2014 survey the only options for gender were male or female, while the 2022 survey included nonbinary, transgender, and prefer not to say. It appears that female respondents were the majority of respondents both in the 2014 survey and the 2022 survey regardless of the inclusion of new options.

Gender	Percentage of Riders (2014)	Percentage of Riders (2022)
Male	47%	41.40%
Female	53%	54.39%
Nonbinary	*	2.04%
Transgender	*	0.51%
Prefer Not to Say	*	1.66%
* This option was added for the 2022 survey		

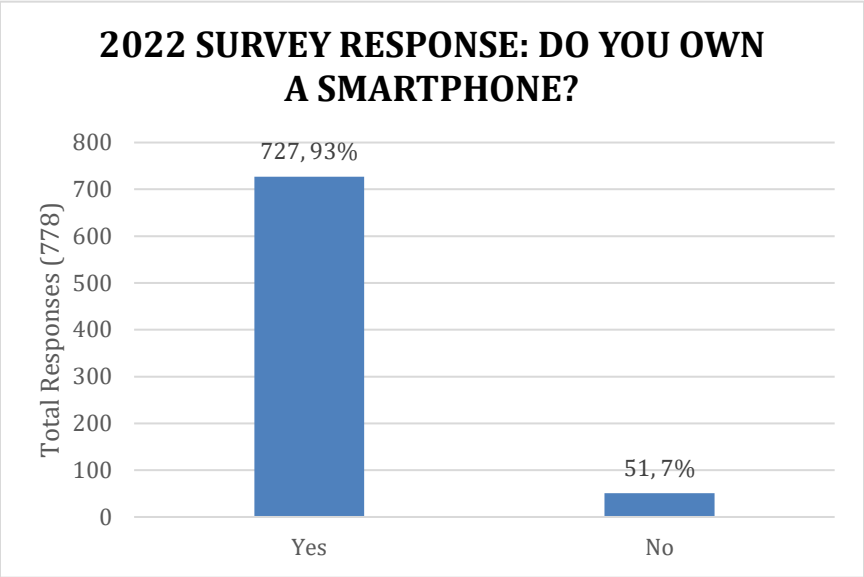
Question 16: Race/Ethnicity of Bus Rider



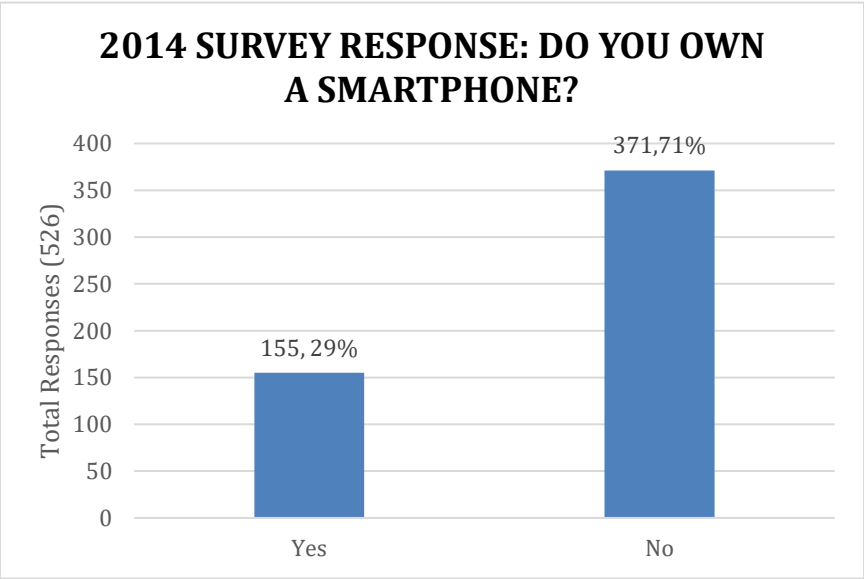
In this pie chart, we may notice that "White," "Asian" and "African American" are the top 3 bus riders in the BC Transit. At the same time, the percentage of "Hispanic/Latino" passengers is also up to 10%. Besides, "More than One" and "Other" are the same with 5% in the total responses respectively. In the table below, we report the race and ethnicity of riders to 2020 Broome County census data and find large deviations between ridership and county demographics.

Race/Ethnicity	All Riders	Broome County residents (2020 US Census)
White	36%	85.3%
African-Am	21%	6.7%
Asian	23%	4.5%
Hispanic	10%	4.8%
Other	5%	0.4%
Two or more races	5%	3.2%

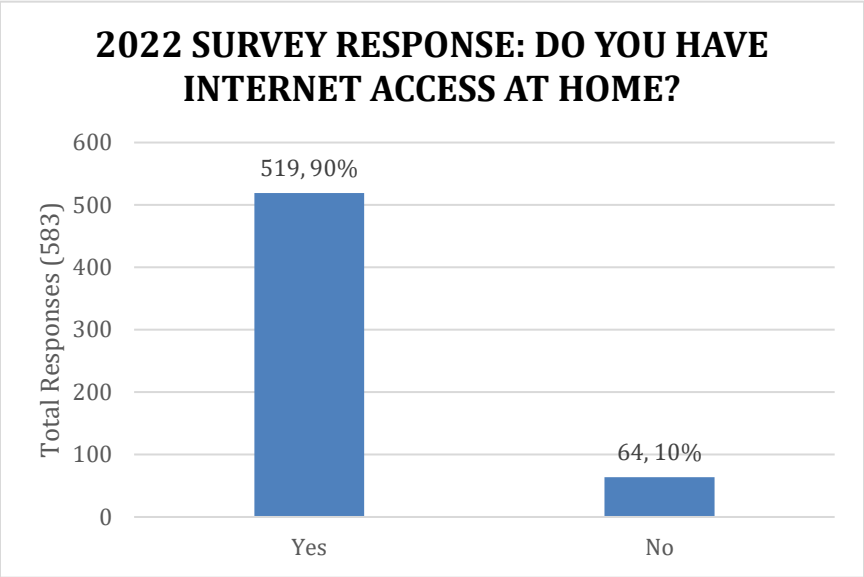
Question 17: Do you own a smart phone?



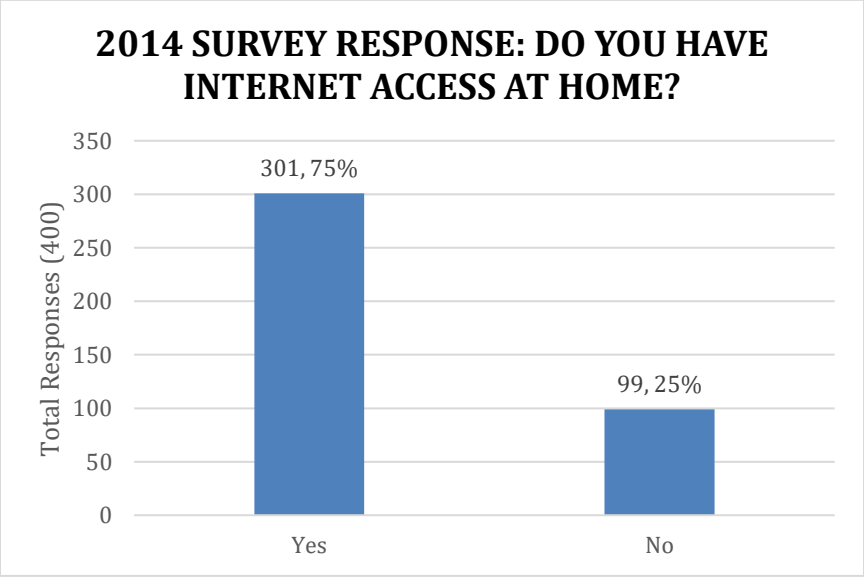
In the 2022 survey, 93% bus riders own a smartphone, which is *a sharp contrast* with the survey in 2014 (also see the bar chart below) where the percentage of that is only 29%. This is a dramatic increase in individuals who own smartphones since 2014. Additionally, this increases the likelihood of respondents having internet access through their smartphone.



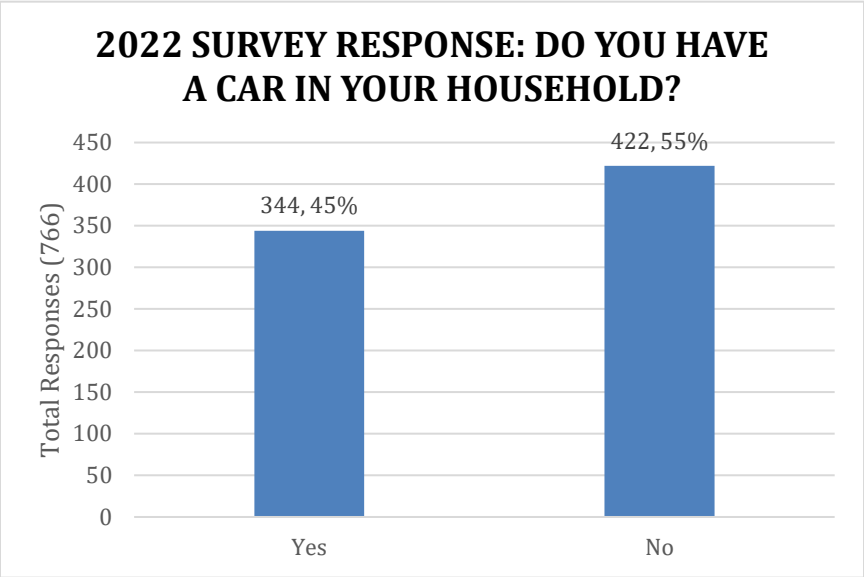
Question 17a: Do you have Internet access at home?



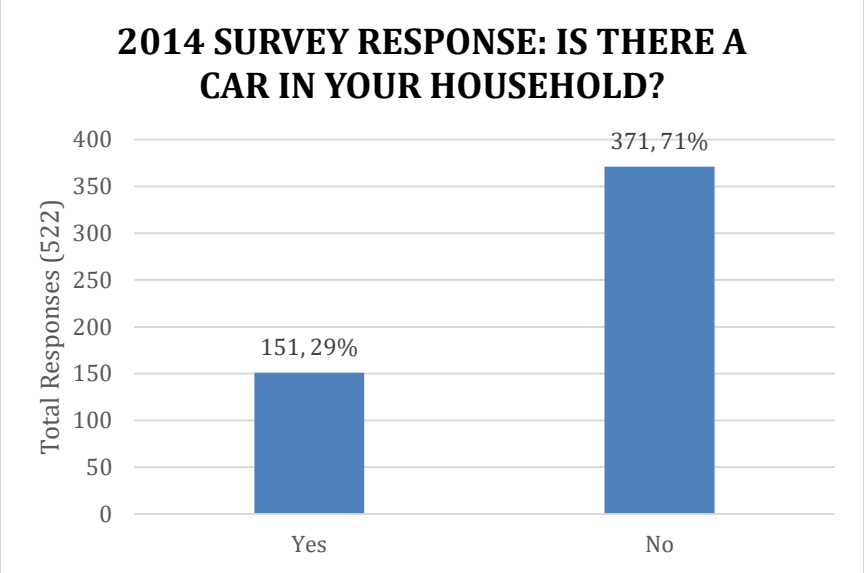
This bar chart reflects that in the 2022 survey, 90% bus riders have internet access at home. The percentage of that in 2014 is 75% (also see the bar chart below). This is not as dramatic of an increase as some of the other questions- see Question 17 below. Even if not all respondents have not answered this question there is a significant chance that more than half of the riders have internet access.



Question 18: Is there a car in your household?

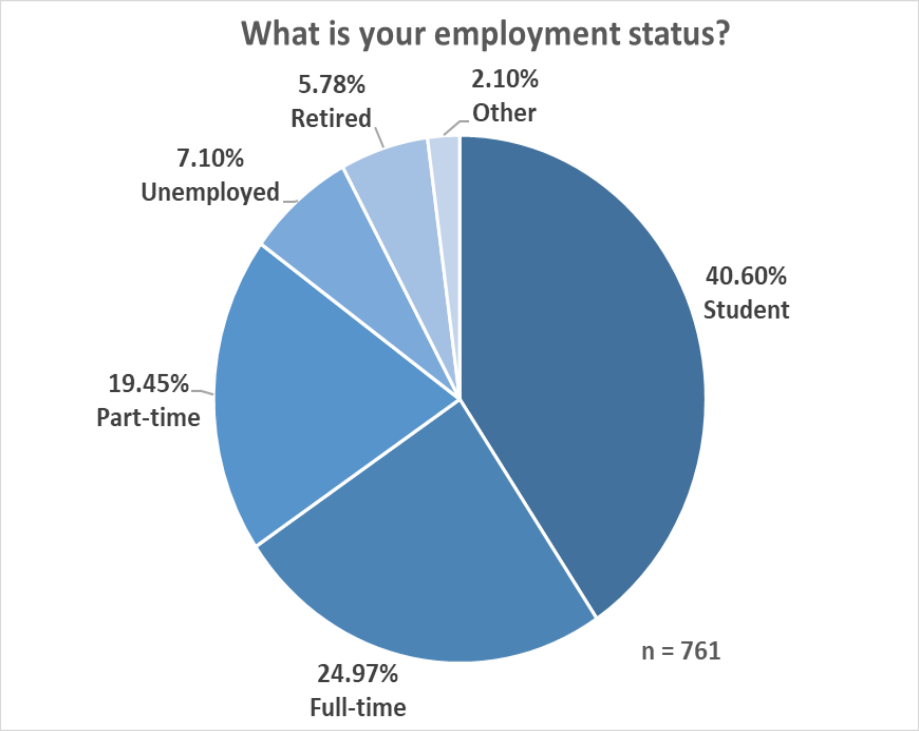


In the survey, the percentage of bus riders who have a car in their household is 45%. The percentage of that in 2014 is 29% (also see the bar chart below). There is an increase in respondents who have a car in their household but still will use the bus as a transportation option.



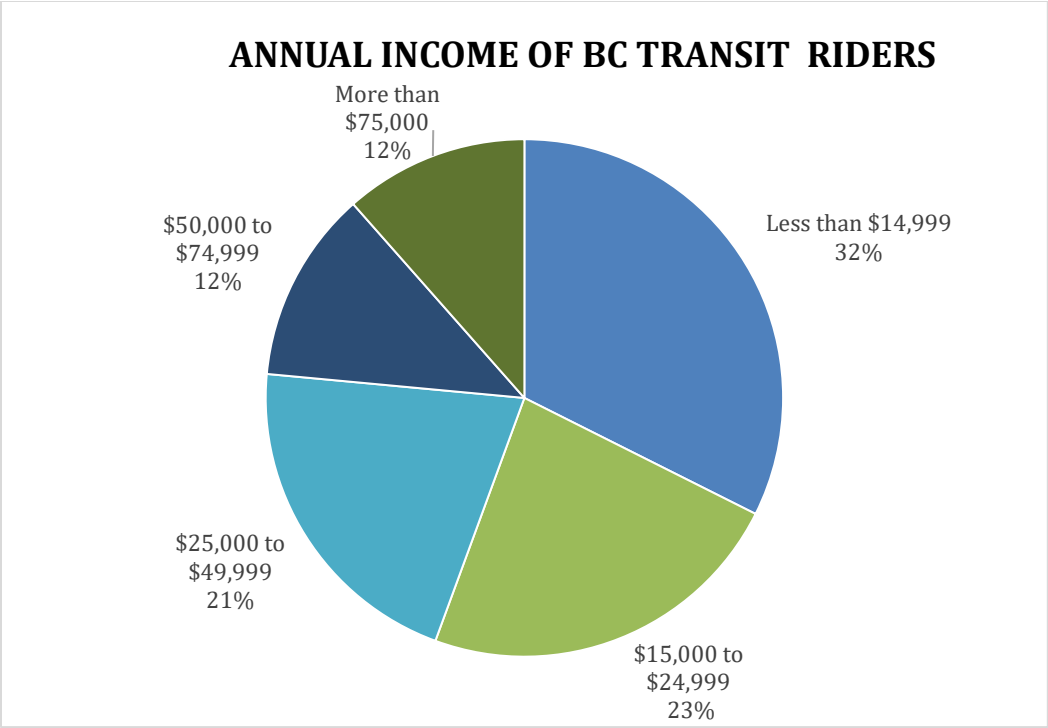
Question 19: What is your employment status?

Note: n represents the total number of responses provided.



Based on 761 responses provided by riders who participated in the 2022 BC Transit Survey, it was found that the largest group of riders were students, accounting for 40.60% of ridership. With people with full-time employment status accounting for 24.97% of ridership, people with part-time employment status accounting for 19.45% of ridership, people who are unemployed accounting for 7.10% of ridership, retirees accounting for 5.78% of ridership and those with other non-specified employment status accounting for 2.10% of ridership. In this pie chart, the category of "Other" does also include different responses like "Disabled (n = 6)", "Leave of Absence (n = 1)", "N/A (n = 1)", "Per diem (n = 1)", "SSI (n = 2)" and "Volunteer (n = 1)".

Question 20: What is the annual income of your household?



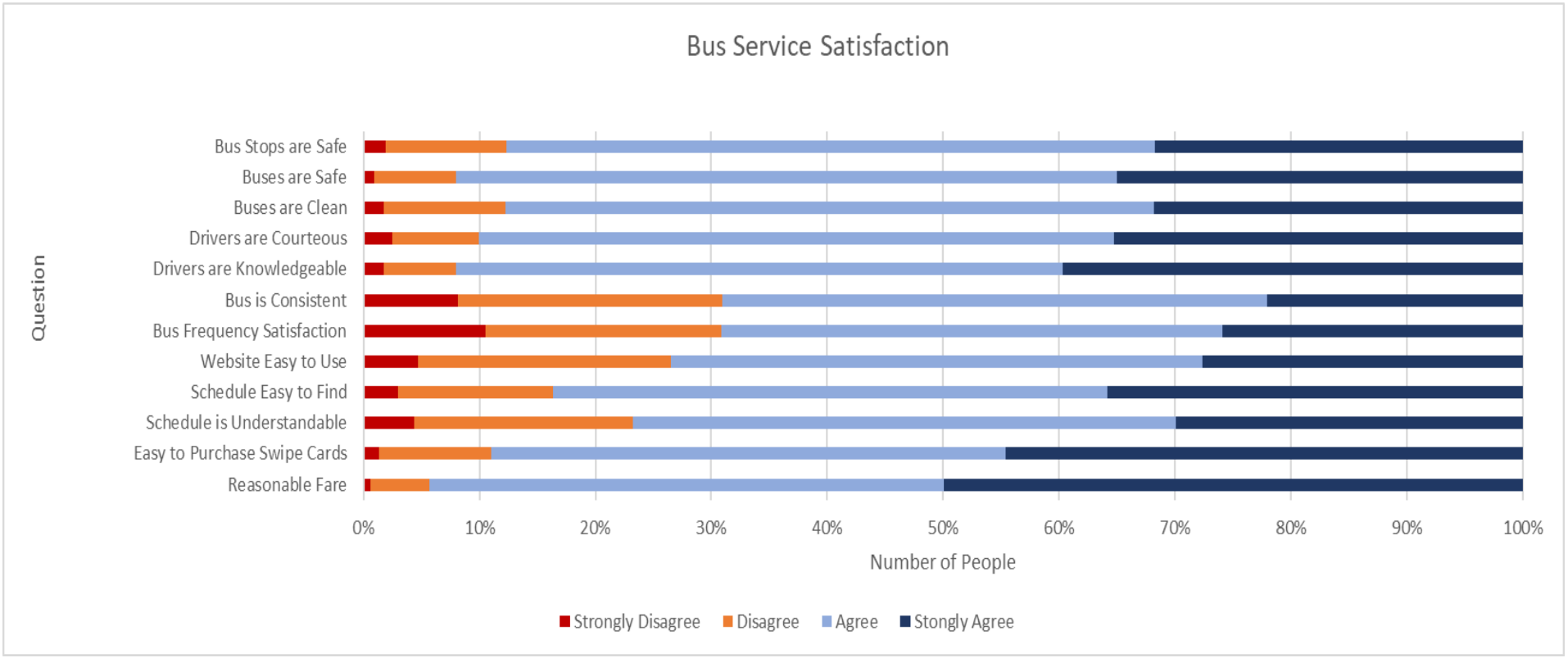
Based on the responses provided by bus riders who participated in the 2022 BC Transit survey, it was found that the majority of riders- 32%, lived in households where the total annual income was less than $14,999. With 23% living in households with a total annual income between $15,000 and $24,999, 21% living in households with a total annual income between $25,000 and $49,999, 12% living in households with a total annual income between $50,000 and $74,999, and another 12% living in households with a total annual income of more than $75,000.

Evaluation of Today's Ride: Questions 21-32

Questions 21 through 32 asked the riders to rate how much they agreed with different statements describing their experience. Riders chose from four options ranging from "Strongly Disagree" to "Strongly Agree." They could also select an "I Don't Know" option, although there was no sentiment-neutral option available.

The chart on the next page illustrates the resulting sentiments for each of these questions. One bar represents a single question. The different colored subsections of each bar correspond to the four possible response options. The proportion of a bar that is filled by a color corresponds to the percentage of respondents who answered with the matching option for that question. Red and orange represent disagreement with the statement; blue and dark blue represent agreement.

Note that "I Don't Know" responses have been excluded from the chart. Out of 766 recorded responses, 247 respondents chose "I Don't Know" for at least one of the questions. Of respondents who have an opinion on various of their ride on BC Transit, their experiences are broadly positive. BC Transit scores particularly high on questions related to safety, price, and the quality of bus drivers. While, over two thirds of respondents provide favorable marks across all items, riders gave the lowest rates to questions related to bus schedules and website navigability.


Bus Service Satisfaction
Question
Bus Stops are Safe
Buses are Safe
Buses are Clean
Drivers are Courteous
Drivers are Knowledgeable
Bus is Consistent
Bus Frequency Satisfaction
Website Easy to Use
Schedule Easy to Find
Schedule is Understandable
Easy to Purchase Swipe Cards
Reasonable Fare
0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Number of People
Strongly Disagree
Disagree
Agree
Stongly Agree

Bus Stops are safe:
84.68% of riders felt safe at their bus stop.

Vehicles are safe:
89.49% of riders felt safe on the bus.

Buses are clean:
86.24% say the buses are clean.

Drivers are courteous:
86.44% find drivers courteous during rides.

Drivers are knowledgeable:
83.84% believe their drivers are knowledgeable about the bus system.

Bus is consistent:
67.06% say that buses are consistent.

Bus frequency satisfaction:
67.59% of riders are satisfied.

Website easy to use:
61.50% of riders think that the BCT website is easy to use.

Schedule easy to find:
81.42% of riders think that the BCT schedule is easy to find.

Schedule is understandable:
75.62% of riders find the schedule understandable.

Easy to purchase swipe cards
60.26% of riders say that it is easy to purchase swipe cards.

Reasonable fare:
80.16% agree that the fare is reasonable.

Question 33: Additional Rider Comments

Below find the consolidated themes for Question 33
Requests to expand transit services: - make buses available for more hours each day - overall increase of Sunday availability - allow for real-time tracking of buses
Commonly Requested Routes: - Owego, Chenango Forks, and Chenango Valley - wider availability throughout Vestal and Vestal Parkway - near amenities like movie theatres, UPS Stores, and retail
Requests to improve bus stops: - some stops are difficult to identify - increase the number of bus stops

Question 33 was a write in question for survey feedback. Many respondents did not answer this question due to its location at the bottom of the survey. The main themes for feedback were requests to expand transit services, requested routs, and request to improve bus stops.

Multivariate Analyses

In this section we provide a series of multivariate analyses to better understand some important experiences and concerns riders have while on BC Transit. In all tables reported below we estimated models with the following set of demographic variables: respondent age; respondent sex (we include only respondents who identify as male or female in the analysis); respondent race; if the respondent owns a smartphone; respondent employment status; and respondent income.

While these models are more complex, they provide valuable information helping to determine which demographic variables correlate with outcomes of interest. In other words, relying on these multivariate models allows us to report if one demographic variable – for example, a respondent's age – is an important determinate on an important aspect of a rider's BC Transit experience while simultaneously accounting for their other demographic variables.

Which Riders are Concerned About COVID-19?

Survey participants were asked, "Is the potential transmission of COVID-19 a concern when riding the bus?" We repot results below using a logistic regression model. We use a logistic regression model when the outcome of interest is a binary outcome. In this case respondents could indicate that they either were or were not concerned about the transmission of COVID-19 on public transit. In the table below positive values indicate that the demographic variable is correlated with a higher probability of concern regarding COVID-19 transmission. Conversely, a negative value indicated that the variable is correlated with a lower probability of concern regarding COVID-19 transmission. We print an asterisk (*) next to variables which reach conventional levels of statistical significance – e.g., significant at a 95 percent confidence level using a two-tailed test.

Examining the table, we find that age, sex, owning a smartphone, employment status, and income are not significant predictors of concern for the potential transmission of COVID-19. However, African American participants reported significant concern compared to other racial groups. Compared to White respondents, African American respondents have a 76% higher probability of being concerned about COVID-19 transmission when riding the bus. Additionally, those who identified themselves as being of another racial group were 36% more likely to be concerned about COVID-19 transmission compared to White respondents.

Our findings suggest that if BC Transit wishes to further build trust with their riders on responded to the COVID-19 pandemic, connecting and working with riders of these racial backgrounds would be most beneficial.

Table: COVID-19 Concern by Demographic Characteristics

	Coefficient (Standard Error)	Substantive Effect Size
COVID-19 Concern		
Age	-0.011	
	(0.011)	
Female	0.170	
	(0.155)	
Race: White (Reference Category)	0.000	
	(.)	
Race: African American	0.764*	76%
	(0.285)	
Race: Hispanic/Latino	0.334	
	(0.352)	
Race: Asian	0.276	
	(0.294)	
Race: Other	1.360*	36%
	(0.516)	
Smartphone Owner	-0.471	
	(0.458)	
Employed full time (Reference Category)	0.000	
	(.)	
Employed part time	-0.052	
	(0.311)	
Unemployed	-0.395	
	(0.467)	
Student	-0.235	
	(0.343)	
Retired	1.033	
	(0.644)	
Income less than $14,999 (Reference Category)	0.000	
	(.)	
Income $15,000 to $24,999	-0.167	
	(0.280)	
Income $25,000 to $49,999	-0.467	
	(0.317)	
Income $50,000 to $74,999	-0.345	
	(0.346)	
Income more than $75,000	-0.126	
	(0.360)	
Constant	-0.556	
	(0.782)	
N. of observations	521	
AIC	625.107	
BIC	693.199	

Notes: * indicates a variable that is statistically significant at the $p<0.05$ level. Two-tailed tests. As coefficient values from a logistic regression are not directly interpretable, first difference values are reported in the right-hand column of statistically significant variables.

Who is most reliant on BC Transit Services?

Question 9 of the survey asked participants, "If bus service were not available, how would you make this trip?" Options included: drive, ride with someone, taxi or rideshare (i.e. Uber), bicycle, walk, or would not make this trip. We recode this question so that respondents who indicated that they "would not make [the] trip" is equal to 1. And all other responses are coded as 0. We recode this question so that we can understand which demographic variables may correlate with respondents being more reliant on BC Transit service compared to others.

Our model is reported in the table below, we find that employment status is a significant predictor of those who have no other transportation option without the bus service. Compared to respondents who are employed full-time, a respondent who is unemployed is 20% less likely to be able to make their trip if they did not have access to BC Transit. Similarly, respondents who identified as students were 75% less likely to be able to make their trip if it was not for the service provided by BC Transit. Respondent's race, income, age, sex, owning a smartphone, or bus riding frequency were not correlated to reliance on bus service.

This analysis highlights the critical role BC Transit plays within the local community. Potential policy recommendations from this analysis are: 1) that BC Transit plays a critical role for economically restricted segments of the local population, and; 2) the services provided by BC Transit could not be easily replaced without creating substantial hardship for certain local populations.

Table: Participants Who Could Not Make Trip Without Bus Service

	Coefficient (Standard Error)	Substantive Effect Size
Bus Ride Frequency	-0.064	
	(0.149)	
Race: White	0.000	
	(.)	
Race: African American	-0.419	
	(0.335)	
Race: Hispanic/Latino	-0.005	
	(0.365)	
Race: Asian	-0.165	
	(0.303)	
Race: Other	-0.983	
	(0.630)	
Sex	0.259	
	(0.166)	
Age	0.008	
	(0.013)	
Income	-0.106	
	(0.086)	
Smartphone Owner	0.514	
	(0.606)	
Employed full time	0.000	
	(.)	
Employed part time	-0.220	
	(0.386)	
Unemployed	1.202*	20%
	(0.426)	
Student	0.751*	75%
	(0.368)	
Retired	0.220	
	(0.683)	
Constant	-2.078	
	(1.007)	
N. of observations	447	
AIC	502.933	
BIC	560.369	

Notes: * indicates a variable that is statistically significant at the $p<0.05$ level.
Two-tailed tests. As coefficient values from a logistic regression are not directly interpretable, first difference values are reported in the right-hand column of statistically significant variables.

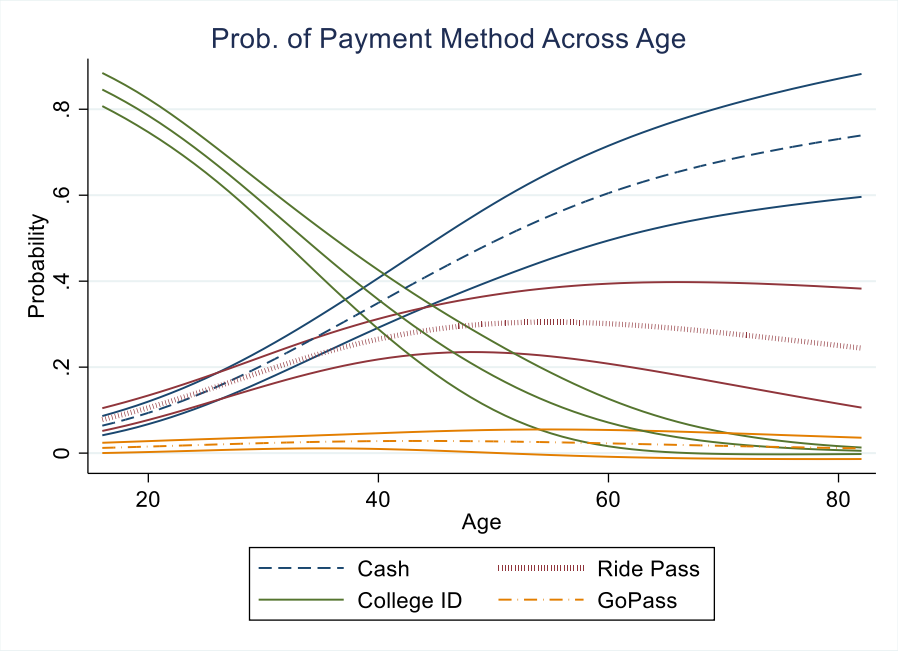
How do Demographics Influence Payment Methods?

Broome County Transit has many options for riders to pay for their bus fare. These options include cash, ride passes (single ride pass, 2-way ride pass, 12-ride pass, 1-day pass, 7-day pass, 31-day pass), college identification cards from Binghamton University or Broome County Community College, and using the GoPass app or card. In the analysis below, we estimate a multinomial logistic regression model to identify how demographic correlate with various forms of payment. A multinomial logistic regression is used when the outcome of interest – in this case payment method – is a nominal variable (an outcome that cannot be ranked or ordered). We report the Table with our model estimates at the bottom of this section, however these models can be challenging to interpret. Instead, we encourage readers to examine the figures below. These figures are more directly interpretable.

Each figure illustrates the likelihood that an individual will select each type of payment method (cash, ride pass, university ID, or GoPass) given a demographic variable of interest – while accounting for all other demographic factors in the model. Higher values on the y-axis indicate a greater likelihood that a particular payment method would be selected, while lower values indicate a decreased likelihood of the method being selected by a rider.

We find many demographic characteristics correlate with how people pay for their bus fare. Age (age range of 18-82) is one of the strongest predictors of how individuals pay for their bus fare.

Figure A: Probability of Payment Method by Age



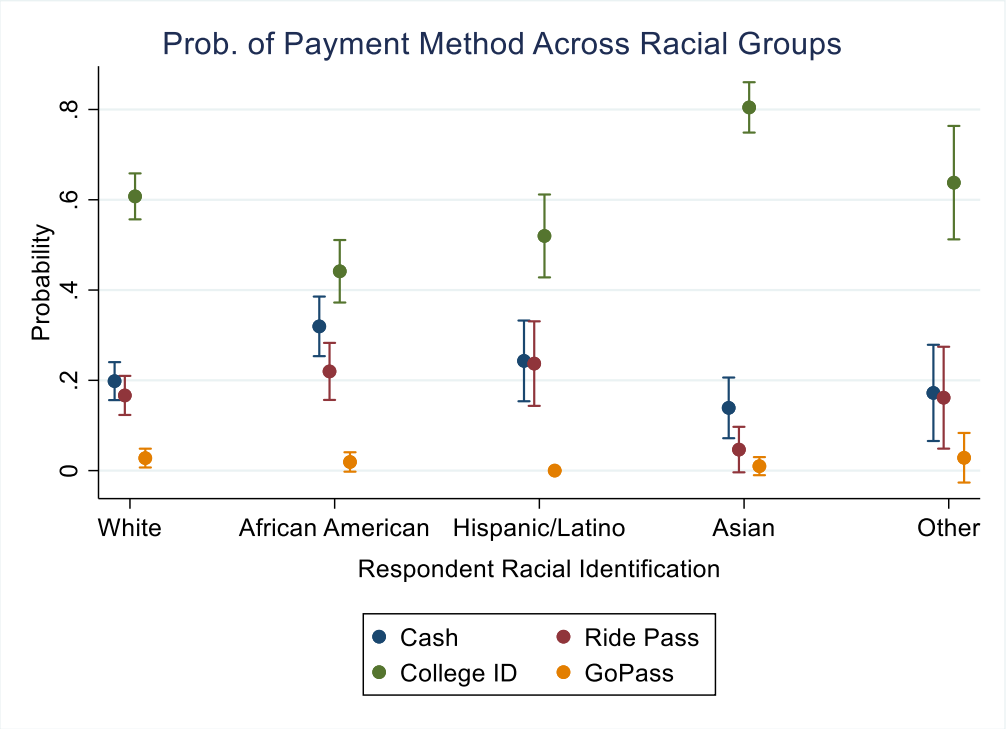
As illustrated in Figure A, younger riders a significantly more likely to pay using a college or university ID. For example, a rider who is 20 years old has a roughly 80 percent chance of using a SUNY ID to board the bus. A rider who is this old has around a 10 percent chance of paying with cash and a 10 percent chance of paying using a ride pass. They have a very low probability of paying using the GoPass.

As riders age the probability that they will pay using a SUNY ID significantly decreases, while the probability of paying using a ride pass or cash increases. For example, a rider who is 40 years old has a 20 percent chance of boarding using a ride pass and a 30 percent chance of paying with cash.

Senior riders are the most likely riders to pay using cash. An 80-year-old rider has around a 70 percent chance of paying with cash when boarding and a 20 percent chance of using a ride pass.

Our findings indicate that college IDs are an incredibly popular means of boarding for young users of BC Transit. While ride passes are increasingly popular whit older riders, seniors are significantly more likely to board using cash. If BC Transit were to explore changing payment methods – for example, evaluating moving to a cashless system – our findings indicate that special outreach, attention, and education would need to be paid to riders over 50 years of age.

Figure B: Probability of Payment Methods by Race/Ethnicity



We also find the race of respondents to be a significant predictor of how they pay their bus fare. These findings are reported in Figure B.

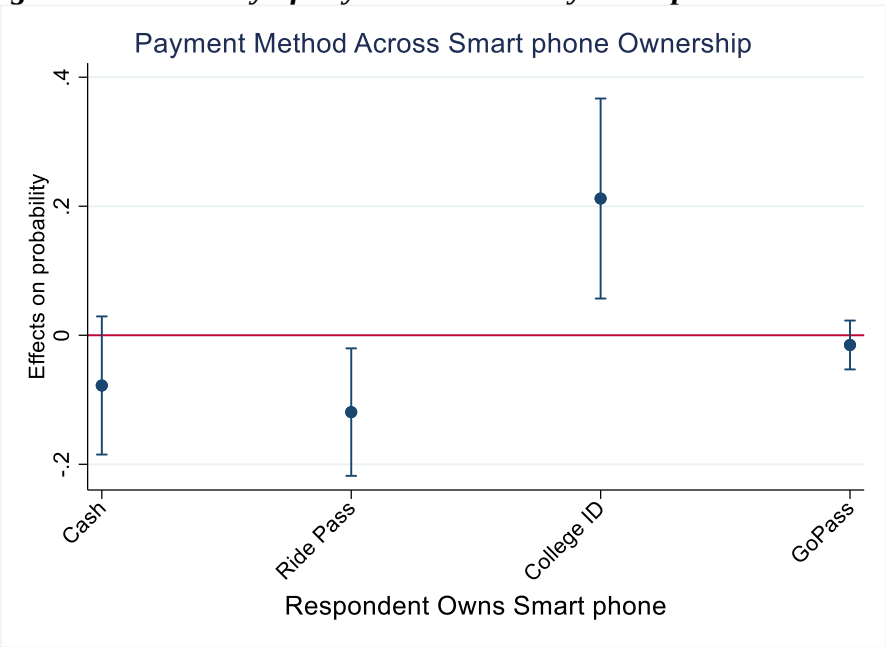
In our sample, participants of all racial identities are most likely to pay for their fare using a SUNY ID. Respondents who identified as Asian were the most likely to board using this method of payment – they have around an 80 percent chance of paying using a SUNY ID. Conversely, African American riders only report around a 45 percent chance of paying using this method.

African American respondents are the most likely to pay with cash among all groups reporting a 32 percent chance that they will pay using cash. Asian riders are the least likely to select cash as

a payment method, with under a 20 percent chance of selecting this method.

Respondents who are White, Hispanic/Latino or of another racial category are just about as likely to pay with cash as they are with a ride pass. GoPass remains the least likely way for participants to pay for their fare across all racial categories.

Figure C: Probability of Payment Methods by Smartphone Ownership



Another predictor of payment method is whether participants own a smart phone. Figure C illustrates how owning a smartphone changes the probability of selecting a various payment method compared to respondent who do not own a smartphone.

Our findings indicate that smartphone owners are significantly less likely to pay using a ride pass – a 10 percent reduction in selecting this payment option – compared to those that do not own a smartphone. Conversely, smartphone owners are around 20 percent more likely to pay using a SUNY ID compared to non-owners. Interestingly, smartphone ownership does not significantly impact the chance that a rider will pay using either cash or a GoPass.

Table: How do Participants Pay for Transit?

	Coefficient (Standard Error)
Cash	
Age	0.130*
	(0.012)
Sex	-0.289
	(0.198)
Race: African American	1.192*
	(0.427)
Race: Hispanic/Latino	0.526
	(0.448)
Race: White	0.040
	(0.424)
Race: Asian	-1.653*
	(0.564)
Race: Other	-0.247
	(0.672)
Smartphone Owner	-1.588*
	(0.697)
Constant	-2.986
	(0.934)
Ride Pass	
Age	0.111*
	(0.012)
Sex	-0.184
	(0.193)
Race: African American	0.978*
	(0.441)
Race: Hispanic/Latino	0.693
	(0.454)
Race: White	0.137
	(0.436)
Race: Asian	-2.299*
	(0.688)
Race: Other	-0.018
	(0.662)
Smartphone Owner	-1.979*
	(0.682)
Constant	-2.297*
	(0.926)
GoPass	
Age	0.087*
	(0.023)
Sex	-0.194
	(0.466)
Race: African American	0.267
	(1.461)
Race: Hispanic/Latino	-14.262
	(100.645)
Race: White	0.109

	(1.374)
Race: Asian	-1.643
	(1.681)
Race: Other	0.151
	(1.634)
Smartphone Owner	-1.761
	(1.239)
Constant	-3.456
	(2.218)
N. of observations	694
AIC	1035.453
BIC	1158.100

Notes: * indicates a variable that is statistically significant at the $p<0.05$ level. Two-tailed tests. As coefficient values from a multinomial logistic regression are not directly interpretable, we report substantive affects in figures above. Riders who pay using a college ID are not reported in this table as they serve as the reference category for model estimation.

Appendix A. Methodology

Methodology

The survey instrument was designed by Gregory Kilmer, Commissioner of B.C. Transit; Jennifer Yonkoski, Senior Transportation Planner at the Binghamton Metropolitan Transportation Study; George Homsy, professor at Binghamton University; and the PAFF 510 Research Methods class. There are substantial changes to the survey from the 2014 and 2022 versions.

One question was included to account for how Covid-19 impacted bus riders' experience. The question regarding race and ethnicity was expanded to include "Asian" as one of the answer choices. The question regarding gender was expanded to include responses beyond male and female.

The survey contained mostly close-ended questions with multiple-choice answers. However, for the questions designed to gauge rider satisfaction (questions 21-32) a Likert Scale was used which contained five choices: "strongly agree", "agree", "disagree", "strongly disagree", and "don't know." The Likert Scale enables respondents to quickly answer questions in a time sensitive and sometimes-uncomfortable setting (i.e. a bus) while also providing more depth of detail than might be found with multiple choice.

Bus route and times for the survey were chosen randomly after being weighted for ridership levels. BC Transit provided raw ridership levels for each route by time. These were totaled across Monday-Friday and separately for Saturday-Sunday. We used these totals to increase or decrease the chance of each route/time being selected for participation in the study. The day that each route/time in the sample would be surveyed was assigned randomly, and 68 bus routes were included in our sample.

The surveys were conducted from October 14 to October 21, and 862 surveys were collected. These surveys had various levels of completion. Students were instructed to approach every bus rider they encountered to ask him or her to take the survey. This protocol was not followed in cases where it was unsafe to do so, such as when the bus was overcrowded or when a passenger was standing.

Students were also instructed not to interview anyone under the age of 18.

Ethical Guidelines

Prior to the survey process, students underwent an online training program via the CITI (Collaborative Institutional Training Initiative) website regarding "Ethics in Research'. Students were expected to pass a series of online exams in order to attain IRB certification. The

certification granted students the legal right to conduct the survey process (distribution and collection of surveys via BC transit riders). It is important to note that this process involved the use of human subjects but did not require IRB approval because it was the type of research that posed no more than minimal risk to its survey participants (Exempt Approval, Category Five). The following list provides the details of the survey distribution and collection process: • Survey participants needed to appear to be 18 years or older •

- Participation was voluntary
- Prospects were left alone if participation was declined
- Participants could decline filling out any portion of the survey
- Participants did not need to finish the survey
- Participants were given information disclosing surveyors affiliation to Binghamton University and reasoning for conducting the survey (to analyze ridership trends)

Our survey was completed with 42 MPA students acting as surveyors on 15 diversified Broome County Public Transport bus lines. In order to ensure our sample mirrors the population riding the bus, we surveyed different routes multiple times during many different times of the day.

Description of Survey Instrument

The survey was divided into three sections: Today's ride, Who is riding, and Evaluation of the ride. The first section (Today's Ride) addressed questions regarding where riders were coming from and their destination (including starting and ending bus stop points), how fare was paid, and the frequency of which both BC transit and taxi services were used in the past week. The second section (Who is Riding) addressed questions regarding rider demographics (age, gender, race, employment status, vehicle status, smartphone status, annual income) and the most important reason riders used bus services. The third section (Evaluation of the Ride) addressed rider opinion on the actual bus services. The survey questions were designed at a third grade reading level and intended to be both clear and comprehensive.

Limitations

All surveys were distributed and collected at the completion of each assigned survey route. The ordering of the survey questions was intentional; beginning with questions deemed most important (Today's Ride Information) and ending with the Evaluation of the Ride (assessment of bus services) statements. Survey questions and assessment statements were compiled to be short and to-the-point to strengthen the likelihood of full survey completion. It is important to note that data from incomplete surveys was included in this analysis. It is also

important to note that data from cases where respondents checked more than answer was included in this analysis as well. Overall, 862 riders participated in this analysis (including partially completed surveys) which is 287 more respondents than noted in the 2014 bus survey report.

Appendix B. Survey Instrument

BC TRANSIT
We Go Where You Go!

Thank you for your time! Your input will help improve B.C. Transit Services!

- Please take a few minutes to complete this survey. Ask us for help if you need it.
- The survey is anonymous. Nothing can identify you. You do not have to answer all questions and may stop at any time.
- Before you leave the bus, please return the survey to the person who gave it to you.
- For more information, contact the Binghamton Metropolitan Transportation Study at: bmtsmail@broomecountyny.gov

1. **Regarding this bus trip – where are you COMING FROM?**
   ☐ Home ☐ Work ☐ Shopping ☐ Medical appointment ☐ School / College
   ☐ Social services appointment ☐ Visiting friends/relatives ☐ Other_____

2. **How did you get to the bus stop today?**
   ☐ Walked ☐Bicycle ☐ Got a ride in a car ☐ Used a wheelchair ☐ Other_____

3. **How long did it take you to reach the bus stop today?**
   ☐ 1 - 5 minutes ☐ 6 - 10 minutes ☐11 - 15 minutes ☐16 - 20 minutes ☐21 - 25 minutes ☐26 min. or more

4. **Where did you get on the bus**? (e.g. street name, intersection, store name)_____

5. **How did you pay your fare today?** ☐ Cash ☐ Single ride pass ☐ 2-way ride pass ☐ 12-ride pass ☐ BU ID
   ☐ Medical voucher ☐ 1-day bus pass ☐ 7-day bus pass ☐ 31-day bus pass ☐ GoPass app ☐ GoPass smart card

6. **Regarding this bus trip – where are you GOING?**
   ☐ Home ☐ Work ☐ Shopping ☐ Medical appointment ☐ School / College
   ☐ Social services appointment ☐ Visiting friends/relatives ☐ Other_____

7. **Where will you get off of the bus?** (e.g. street name, intersection, store name) _____

8. **Do you need to transfer buses today?** ☐ Yes ☐ No
   If yes, how many times did you/will you transfer? _____
   If yes, where? ☐ BC Junction/Downtown Binghamton ☐ Binghamton University
   ☐ Endicott/Washington Ave ☐ Oakdale Mall

9. **If bus service were not available, how would you make this trip?** ☐ Drive ☐ Ride with someone
   ☐ Taxi/Rideshare (ex. Uber) ☐ Bicycle ☐ Walk ☐ Would not make this trip ☐ Other _____

10. **How often have you used BC Transit in the past week?** ☐ 1 – 2 times ☐ 3 – 5 times ☐ More than 5 times

PLEASE TURN OVER

11. **How often have you used a taxi/rideshare in the past week?** ☐ 0 times ☐ 1 - 2 times ☐ 3 - 5 times ☐ More than 5 times

12. **What is the most important reason you ride the bus?**

☐ No car available ☐ Bus is more convenient ☐ Bus is cheaper ☐ No convenient parking

☐ Protect the environment ☐ I would rather ride the bus then drive a car. ☐ Other_____

13. **Is the potential transmission of COVID-19 a concern when riding the bus?**

☐ Yes ☐ No If yes, please explain: _____

14. **How old are you?** _____ (Enter age in years.)

15. **Are you…** ☐male ☐ female ☐ nonbinary ☐ transgender ☐ prefer not to say?

16. **Race / ethnicity?** ☐African-American ☐Hispanic/Latino ☐ White ☐ Asian ☐Other_____

17. **Do you own a smart phone?** ☐ Yes ☐ No 16A. **Do you have Internet access at home?** ☐ Yes ☐ No

18. **Is there a car in your household?** ☐ Yes ☐ No

19. **What is your employment status?**

☐ Employed full time ☐ Employed part time ☐ Unemployed ☐ Student ☐ Retired ☐ Other_____

20. **What is the annual income of your household?**

☐ Less than $14,999 ☐ $15,000 to $24,999 ☐ $25,000 to $49,999 ☐ $50,000 to $74,999 ☐ More than $75,000

How strongly do you agree or disagree with each statement?	Strongly agree	Agree	Disagree	Strongly disagree	Don't know
21. The bus fare is reasonable.	☐	☐	☐	☐	☐
22. It is easy to purchase swipe cards.	☐	☐	☐	☐	☐
23. The bus schedule is easy to understand.	☐	☐	☐	☐	☐
24. The bus schedule is easy to obtain.	☐	☐	☐	☐	☐
25. The BC Transit website is easy to use.	☐	☐	☐	☐	☐
26. Bus service is frequent enough to meet my needs.	☐	☐	☐	☐	☐
27. The buses are consistently on time.	☐	☐	☐	☐	☐
28. Bus drivers are knowledgeable about services.	☐	☐	☐	☐	☐
29. Bus drivers are courteous.	☐	☐	☐	☐	☐
30. Buses are clean inside.	☐	☐	☐	☐	☐
31. I feel safe on the bus.	☐	☐	☐	☐	☐
32. I feel safe at the bus stop.	☐	☐	☐	☐	☐

33. Where would you like to go that currently does not have bus service? Write other comments you have about BC Transit?

Surveyor use only Route: Date: Start time: