ECONOMIC IMPACT STUDY

of Bike Lanes in Toronto's Bloor Annex and Korea Town Neighbourhoods

tcat
toronto centre for
active transportation

Clean Air
Partnership

Project Team:
Project Lead: Nancy Smith Lea, Toronto Centre for Active Transportation
Research Lead/Data Collection Lead (Pre-test): Dr. Beth Savan, Principal Investigator, Toronto Cycling Think & Do Tank, School of the Environment, University of Toronto
Data Collection Lead (Post-tests): Lee Vernich, Director, Office of Research, Dalla Lana School of Public Health, University of Toronto
Data Analysis Lead: Dr. Steven Farber, Department of Human Geography, University of Toronto Scarborough
Writer/Research Assistant: Yvonne Verlinden, Toronto Centre for Active Transportation
Study Design: Daniel Arancibia, Toronto Cycling Think & Do Tank, School of the Environment, University of Toronto
Research Assistant: Jeff Allen, Department of Geography and Planning, University of Toronto

Survey Teams:
Toronto Cycling Think & Do Tank, School of the Environment and Planning, University of Toronto (Pre-test)
Office of Research, Dalla Lana School of Public Health, University of Toronto (Post-tests)

Report Design:
Clara Romero

Icon Credits:
freepik.com + flaticon.com

Cover Photo:
Anthony Galloro

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Executive Summary

In 2016, the City of Toronto installed a bike lane as a pilot project along a 2.4 km stretch of Bloor Street, a busy downtown commercial street and east-west thoroughfare. One traffic lane and some on-street parking were removed. The Toronto Centre for Active Transportation (TCAT) was commissioned by the City of Toronto, the Metcalf Foundation, the Bloor Annex BIA and the Korea Town BIA to investigate the economic impacts – positive, negative or neutral – of the bike lane, as well as its effect on the travel patterns and attitudes of visitors and merchants. TCAT partnered with academic researchers from the University of Toronto to collect and analyze the data.

Data was collected before and after the bike lane installation over three time periods (fall 2015, fall 2016, and spring 2017) including 3,005 visitor surveys, 525 merchant surveys, and 15 bicycle counts. A scan of business vacancies was conducted before the bike lane's installation and one year later as well. Data was also collected on Danforth Avenue, a comparable shopping street with no bike lane.

Four different sources of data were used to estimate economic impact before and after the installation of the bike lane (after three months, and again after eight months): 1) estimated customer counts from merchant surveys, 2) estimated spending from visitor surveys, 3) visit frequency from visitor surveys, and 4) business vacancy counts from a street level scan. Overall, these four indicators point to increased economic activity on Bloor Street. Most merchants reported a higher number of customers than before the bike lane's installation, visitors gave higher estimates of spending and visit frequency, and vacancy rates were stable.

However, these four indicators also showed similar growth on Danforth Avenue, so the positive outcomes may be attributable to other factors, and not the bike lane. Nevertheless, these early indicators point to a positive, or at least neutral, economic impact of the bike lane.

KEY FINDINGS

CUSTOMER COUNTS

- The number of businesses that reported 100 customers or more per day increased in the study area on both streets.
- Reported spending increased on Bloor and Danforth at a similar rate.
- Both before and after the bike lane, customers who arrived by foot or on bike reported higher levels of spending on Bloor Street than those arriving by car or transit.
- On both streets, locals (those living or working in the area) were 2.6 times more likely than those coming from further away to spend at least $100 per month.

CUSTOMER FREQUENCY AND VACANCY RATES

- After accounting for contributing factors (such as age, gender and proximity), visitors reported coming to Bloor three days more per month after the bike lane was installed, while on Danforth visit frequency was unchanged.
- People who arrived on foot or on bike visited Bloor the most often, and people who drove or took transit visited nearly four days less per month.
- Vacancy rates held steady at 6% in Bloor Annex and Korea Town. On Danforth, they declined from 5.2% to 3.4%.

Figure 1. Bloor Street looking east at Borden Street, before and after the installation of the pilot bike lane (Photo Credit: Nancy Smith Lea (left), Yvonne Verlinden (Right)

SHIFTS IN TRAVEL PATTERNS AND PARKING

- The percentage of customers cycling to Bloor nearly tripled (from 7% to 20%), a substantially higher increase than on Danforth Avenue, which has no bike lane.
- Walking remained the most popular travel choice, used by nearly half (48%) of visitors on Bloor, and driving is now the least (10%).
- Merchants on Bloor Street preferred to drive (49%) and there was no increase in cycling, which remained the least preferred travel choice (6%).
- The majority of merchants believed that at least 25% of their customers are driving to Bloor; however fewer than 10% of customers reported arriving by car.
- Parking difficulty increased on both streets for visitors who drove, growing by four times on Bloor (from 8% to 33%) and nearly doubling on Danforth (from 14% to 25%), though this street did not have any on-street parking removed.
- When looking at all visitors, the percentage who needed to find car parking and experienced difficulty remained small: 3% of all visitors on Bloor and 4% on Danforth.

PERCEPTIONS OF SAFETY AND FEEDBACK ON BIKE LANE

- After the installation of the bike lane, the proportion of visitors who perceived Bloor Street as safe for cycling more than tripled (from 17% to 61%) and doubled among merchants (from 13% to 27%), while perceptions of safety on Danforth dropped (from 22% to 10%).
- The percentage of women who reported they now feel safe cycling on Bloor increased significantly more than men, from 12% to 58%.
- The majority of visitors (86%) and merchants (90%) provided feedback in response to an open-ended question soliciting thoughts or comments about the bike lane.
- While visitor comments were generally positive, the most common feedback related to the bike lane's configuration and safety. Merchants raised more concerns than visitors, especially over impacts to business, but safety, parking, and traffic were also important issues.

Introduction

Bloor Street was identified as a major corridor in the City of Toronto's Ten Year Cycling Network Plan (2016). The street represents a priority east-west bicycle route, with relatively flat terrain, a lack of streetcar tracks, and important linkages to existing cycling facilities and to many vibrant Toronto neighbourhoods. Even before the installation of a bike lane, the street was already used by approximately 3,000 people on bicycles per day (City of Toronto, 2016).

Bloor Street has, however, experienced a high number of collisions involving people on bicycles (City of Toronto, 2016). In cities across North America, recent research has found that extending the bikeway network is associated with a drop in crashes, fatalities and severe injuries for people on bicycles, as well as an increase in bicycle trips (Pucher & Buehler, 2016). In Toronto, cycle tracks which are adjacent to and physically separated from traffic have been shown to provide the highest safety benefit, with one ninth the risk of injury in comparison to a route like Bloor, a major street with parked cars and previously with no cycling infrastructure. Painted bike lanes along major streets without parked cars can also reduce the risk of injury by half (Teschke et al., 2012).

Figure 2. A narrower section of Bloor without flexi-post bollards and with parking on the opposite side (Photo Credit: Anthony Galloro)

Road space on Bloor Street is limited, though, meaning a bike lane can only be installed by reducing traffic and parking lanes. Questions regarding the impacts on traffic flow and parking availability have in the past prevented this initiative from moving forward, with concerns particularly being raised about the effects of such changes on Bloor Street's small businesses.

Cities across North America are grappling with the same question, and emerging academic and professional literature has reported numerous examples where the removal of traffic lanes or on-street parking to install a bike lane has not resulted in negative economic effects; rather, it has often produced local benefits. Examples include Los Angeles (McCormick, 2012), Seattle (Rowe, 2013), and San Francisco (Drennen, 2003). New York City in particular has made effective use of retail sales data to evaluate the economic impacts of streetscape changes (NYC DOT, 2013). In addition, research looking at customer spending and travel choices, including past studies conducted by TCAT on Bloor Street in both the Annex and Bloor West Village, found that customers arriving on foot, by bicycle or on transit visit more frequently than those arriving by car and have similar spending habits or spend more, findings which contradict the notion that on-street parking is essential for the survival of

Figure 3. An example of the bike lane's typical design (Photo Credit: Anthony Galloro)

main street businesses (Clifton, Muhs, Morrissey & Currans, 2016; Smith Lea, Forkes & Sztabinski, 2010).

Each street presents a unique context, however, with its own complex set of factors contributing to its vibrancy, and decision-makers and business leaders in Toronto and in cities across North America continue to be apprehensive about potential adverse effects of bike lanes. The pilot bike lane on Bloor Street, installed in August 2016, provided an ideal opportunity to shed light on this emerging issue and is the first study in Toronto to examine the local economic impact of a major streetscape change.

While this report focuses on a single factor – economic vitality – it is important to remember that benefits can be measured many ways, including efficiency (highest throughput of people), safety (fewest collisions and conflicts), environmental (lowest greenhouse gas emissions), and community vibrancy (public use of the space). As just one of a number of assessment tools available, these findings should be considered together with all available evidence when measuring the impact of the new streetscape.

STUDY PURPOSE

This study set out to investigate the local economic outcomes – positive, negative or neutral – of installing a bike lane along an important main street in Toronto, and the roles played by the travel patterns and attitudes of visitors and merchants.

STUDY OBJECTIVES

Before and after the installation of the Bloor bike lane, the study conducted visitor and merchant surveys, bicycle counts and vacancy counts of storefronts on Bloor Street, between Madison Avenue and Montrose Avenue, and compared with surveys, bicycle counts, and vacancy counts on Danforth Avenue, a comparable shopping street where bike lanes had not been installed.

STUDY TIMELINE

This study was originally commissioned by the Bloor Annex BIA, the Korea Town BIA and the Metcalf Foundation in October 2015, in anticipation that a pilot bike lane would be installed on Bloor the following summer (see Figure 4 for a study timeline).

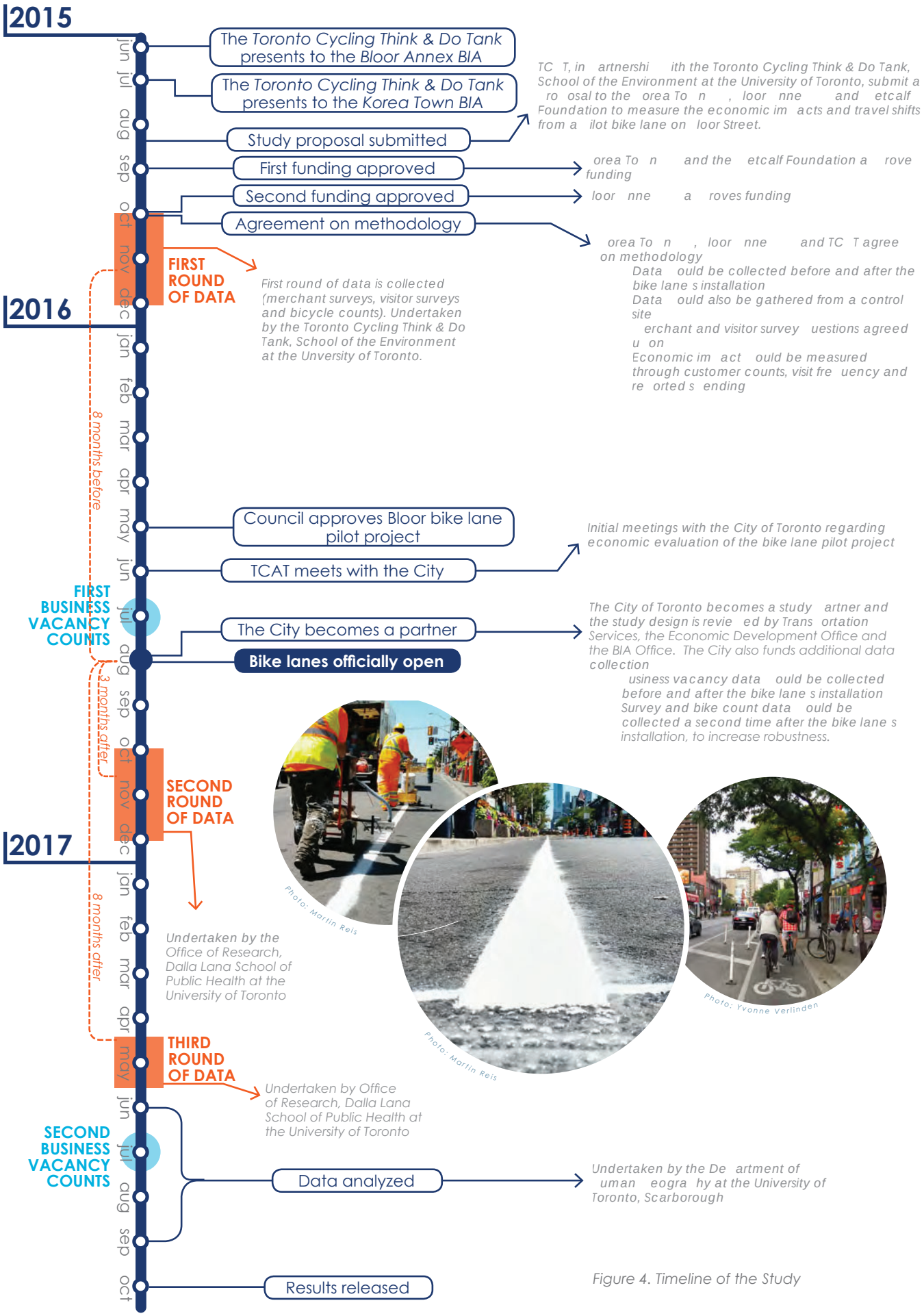


Figure 4. Timeline of the Study

Context

The pilot bike lane was installed along 2.4 km of Bloor Street in August 2016. Stretching from Avenue Rd to Shaw St, it runs through vibrant and diverse neighbourhoods that are also rapidly changing.

BIKE LANE CONFIGURATION & STUDY AREA

The pilot includes the narrowest sections of Bloor Street, which originally had two traffic lanes in each direction, with off-peak parking allowed in the curbside lane. For the pilot project, the street was re-configured to include a curbside bike lane protected by flexi-post bollards. Traffic was reduced to one lane in each direction, with turning lanes at intersections. Between intersections, one lane of parking was maintained and alternated sides. Altogether, approximately 160 on-street parking spots were removed for the new design. This reduction represents a loss of less than 10% in convenient customer parking, when nearby Green P lots and privately-run public parking lots are also taken into account (City of Toronto, 2017).

The study area is a 1.5 km section of Bloor Street, from Madison Ave to Montrose Ave (the borders of the Bloor Annex and Korea Town BIAs), and falls within the 2.4 km bike lane pilot area (see Figure 5). Danforth Avenue, from Broadview Ave to Chester Ave (to Playter Blvd for merchant surveys), was selected as a control site, due to its comparability of business typology, street scale, public transit access, and location (see Figure 8 for a map of the control site). The study was commissioned in 2015, before City Council had approved the installation and boundaries of the bike lane pilot. To maintain consistency, the borders of the study remained the same for all three data collection time periods.

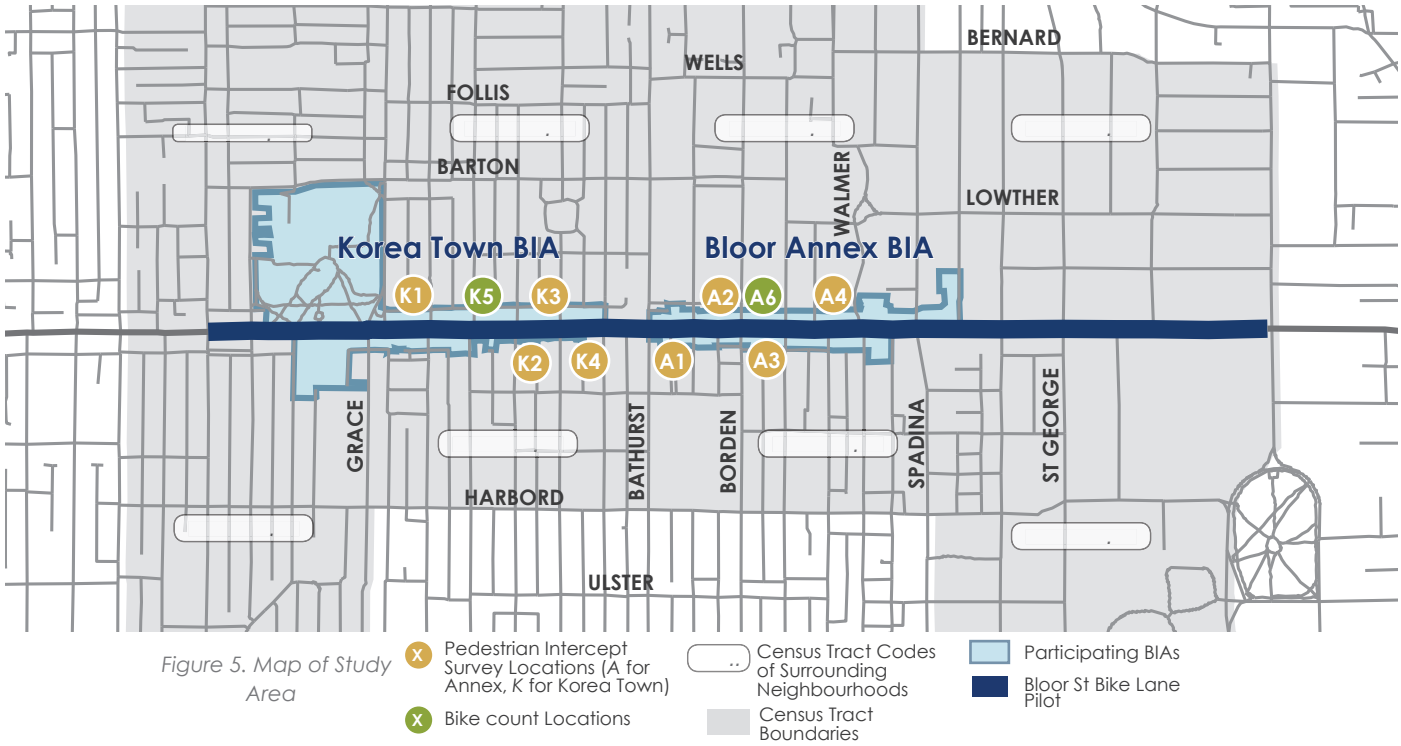


Figure 5. Map of Study Area

NEIGHBOURHOOD CONTEXT

To gain an understanding of the neighbourhoods which surround this section of Bloor Street, the research team looked at census data from census tracts to the north and south of Bloor Street (see Figure 5 above). These neighbourhoods are well-established but evolving demographically. While Toronto experienced growth of 4.5% between 2011 and 2016, the census tracts bordering Bloor Street to the north and south of the study area saw a 0.5% decrease in population (Statistics Canada, 2017). Nearly half of residents live in low rise apartment buildings (less than five storeys), which are relatively rare in the City overall and help give the neighbourhood its unique character. With the University of Toronto close by, young people in particular find the area attractive, with 16% of residents aged 25 to 29, compared to 9% in the City overall (Statistics Canada, 2017; see Figure 6). There are also fewer families in the area, with a lower proportion of children and more people living alone than in Toronto as a whole (Statistics Canada, 2017).

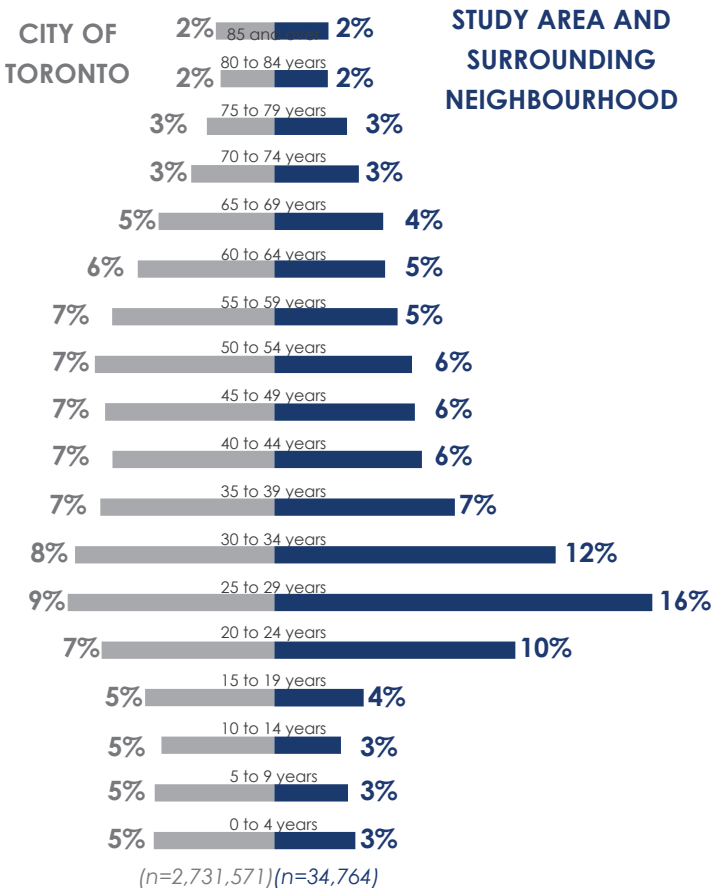


Figure 6. Comparison of population age between study area and the City of Toronto

These neighbourhoods are changing, however. Although their population density is already twice as high as the City's overall (8,700 people per square kilometre, versus 4,334; Statistics Canada, 2017), development pressures are being felt due to the neighbourhood's proximity to downtown and its easy access to transit. In particular, the Mirvish Village redevelopment at Bloor Street and Bathurst Street promises to substantially transform the area, adding rental accommodation and commercial sites. This major mixed-use project is currently in the final stages of planning approvals. It should be noted that commercial tenants on one block on Bloor (with the bike lane) and on three adjacent blocks were required to vacate on Jan 31, 2017, five months following the installation of the pilot bike lane. Like other parts of Toronto, residential real estate values in the Bloor Annex and Korea Town areas have escalated rapidly. Once relatively affordable housing prices, especially south of Bloor Street, have increased by 30% over the past two years (Toronto Real Estate Board, 2015 and 2017). The surrounding neighbourhoods are now home to wealthier residents, with the median income growing by 28% between 2006 and 2016, compared with 19% in the City overall (Statistics Canada, 2017 and 2006).

In addition, the area's past character as an ethnic enclave has receded, with only 32% of residents claiming a mother tongue other than English in 2016, down from 35% in 2011. The non-English mother tongues reported are wide-ranging (see Figure 7), and Korean accounts for only 1% of residents (2% in 2011) (Statistics Canada, 2017 and 2012). This trend is common in Toronto and across North American cities as central neighbourhoods which once welcomed immigrants become more expensive, and new arrivals instead settle in the suburbs (Wang & Zhong, 2013).

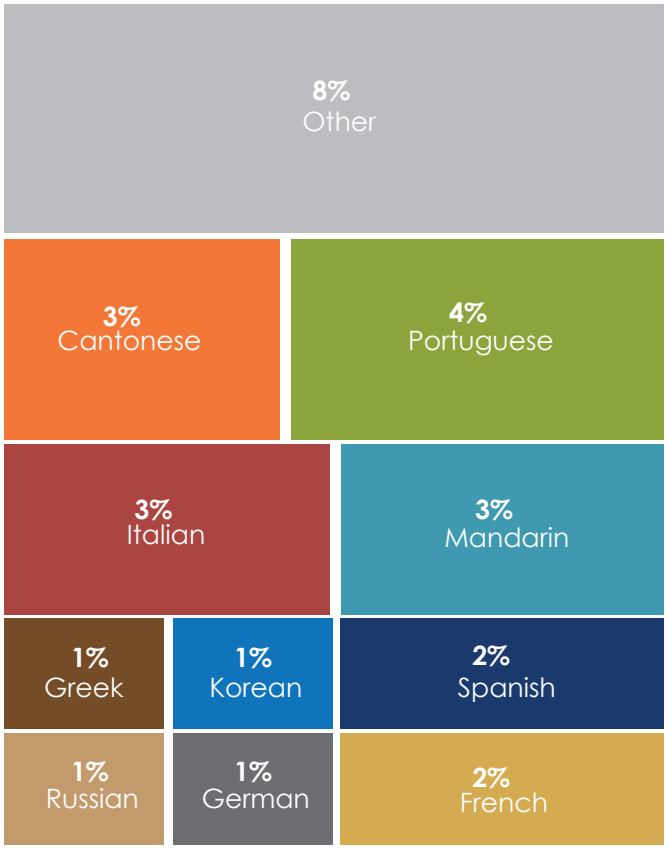


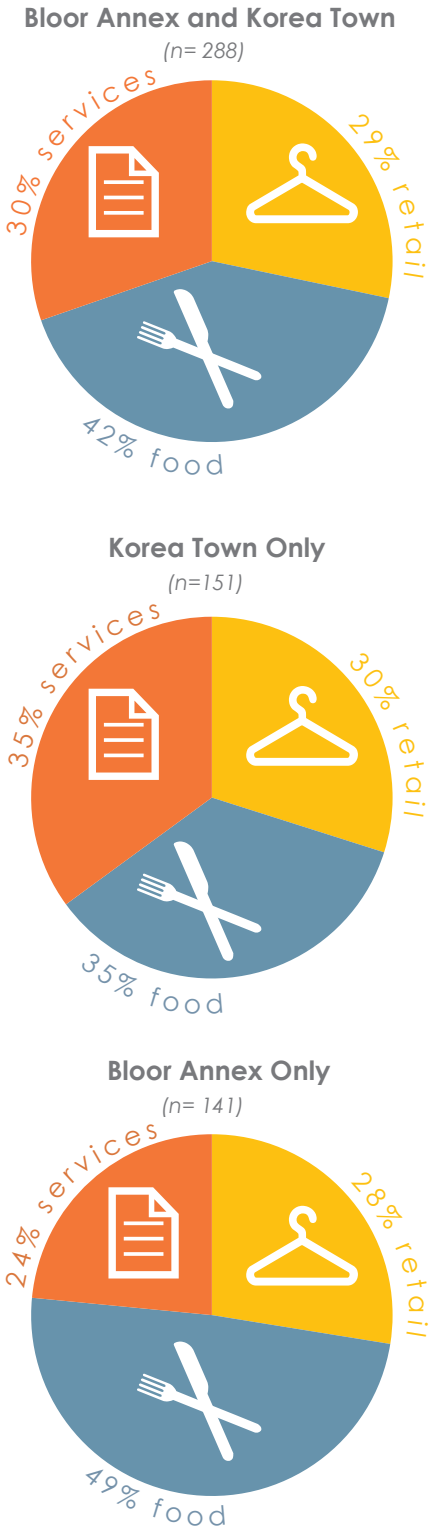
Figure 7. Top Mother Tongues Other Than English in the Study Area and Surrounding Neighbourhoods, 2016

Figure 8. Map of control site, Danforth Avenue

BUSINESS CONTEXT

The bike lane touches on five Business Improvement Areas (BIAs): Bloorcourt, Korea Town, Mirvish Village, Bloor Annex, and Bloor Street, although the majority of its length is found in Korea Town and Bloor Annex, both of which are funding partners for this study. In these areas, the Bloor streetscape is made up of two-storey buildings, with shops, restaurants and services on the ground floor, giving it the character of a main street.

In 2015, Toronto's Employment Survey recorded the composition of businesses in the Korea Town and Bloor Annex sections of Bloor Street to be just over one third bar and restaurant establishments, and just under one third each retail and service establishments (see Figure 9 below). Bloor Annex has a particularly strong restaurant presence, while Korea Town offers more services. The section of Danforth Avenue used as a control is similar to



the corridor as a whole, but offers more retail and fewer restaurants (note that merchant surveys were conducted between Broadview Ave and Playter Blvd only).

EXTERNAL PRESSURES

Small businesses in the Bloor Annex and Korea Town BIAs, and along all of Toronto's main streets, are facing considerable threats from rapidly rising property values and the growth of e-commerce. A recent study by the City of Toronto, using Toronto Real Estate Board data, found that the value of non-residential properties in Toronto's BIAs had risen, on average, by 40.9% between 2012 and 2016 (City of Toronto, 2017a). The Bloor Annex BIA and Korea Town BIA experienced increases of 37.5% and 32.8% respectively, while the Danforth BIA in the control area saw an increase of 28.4% (City of Toronto, 2017). The higher property taxes that result from these increases translate into higher rents for small business owners, who often pay a set base rent, plus taxes, maintenance and insurance which may vary from year to year. While residential tenants are protected by a cap on possible yearly

Figure 9. Breakdown of Business Sector Along Bloor St in Study Area and Control Site (Toronto Employment Survey, 2015, All businesses including at, below and above street level)

rent increases, commercial tenants are not, and businesses can face sudden, dramatic increases when property values are re-assessed (Yonge Street Small Business Association, 2017).

As noted above, residential housing prices are also rising, and the surrounding neighbourhoods are changing demographically. Incoming residents may bring different consumer habits which could have an effect on the business composition of the street. In general, gentrifying neighbourhoods have turnover rates which are similar to more stable neighbourhoods, but the businesses coming in are more likely to offer new types of services and to be chains (Meltzer, 2016). A study looking at ethnically-themed commercial strips in Toronto found that where the neighbourhood's population had become less reflective of the label of the BIA, as in the case of Little Italy, Greektown on the Danforth, and Corso Italia, the composition of businesses had also shifted, with restaurants replacing grocers and apparel stores. At the same time, the proportion of businesses with ethnically identifiable names often increased, as these areas cultivated a distinct identity to attract a new, more diverse clientele interested in a cultural dining experience (Hackworth & Rekers, 2005).

A final threat to retailers in particular is the recent, rapid growth of e-commerce. Growth in online retail is expected to be five times higher than traditional retail, reaching $39.9 billion annually by 2019, and accounting for 9.5% of all retail transactions in Canada (Forrester, 2014). The breadth of purchases online is expanding along with the volume, with items ranging from clothes, to travel and media, household goods and government services (CIRA, 2016); however, electronics, books and gifts, office supply, sporting goods and toy stores are expected to suffer the most from online growth (Cook & McDonnough Virtue, 2017). In the US, e-commerce

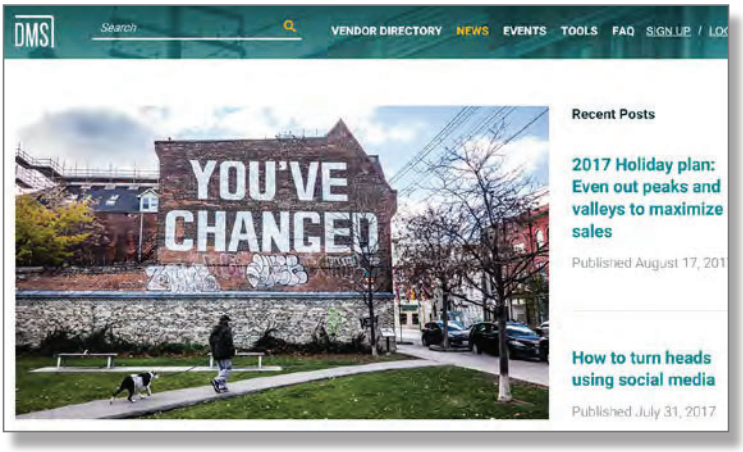


Figure 10. Digital Main Site website portal

is being cited as a primary cause of the most significant wave of retail closures since the 2008 recession, with major bankruptcies up 40% at the beginning of 2017 (Cushman & Wakefield, 2017).

Small businesses face additional barriers to online participation, such as a lack of the technical expertise or financial resources required to build a website (CIRA, 2016; GoDaddy and Redshift Research, 2015). Only 42% of Canadian small businesses report having a website, compared with 91% of large companies (CIRA, 2015). Both the City of Toronto and the provincial government have taken steps to address this disparity, through free training and grants intended to help small businesses establish an online presence, such as Digital Main Street (see Figure 10).

Methodology

The study's methodology was agreed upon with the first three project partners, the Korea Town BIA, the Bloor Annex BIA, and the Metcalf Foundation, in 2015, before data collection began and before the installation of the bike lane. The methodology was approved by the City of Toronto in 2016 when it joined the study.

STUDY PRECEDENTS

In 2009, the Clean Air Partnership (CAP), TCAT's parent organization, published a groundbreaking study titled "Bike Lanes, On-Street Parking and Business. A Study of Bloor Street in Toronto's Annex Neighbourhood" (Sztabinski, 2009). The study examined the public acceptability and potential economic implications of reallocating road space from on-street parking to widened sidewalks or bike lanes. This report received widespread attention, both nationally and internationally because it investigated the importance of on-street parking to local business, an area that was virtually unexplored at the time. In 2010, CAP published a second report that described the replication of the study in a different location on Bloor Street (Bloor West Village), which found similar results (Forkes & Smith Lea, 2010). CAP's studies have created a snowball effect of similar studies being conducted in Toronto (Taillon et al, 2014; Chan et al, 2016), and in other cities including New York (Transportation Alternatives, 2012), San Francisco (SFMTA, 2013), Portland (Clifton et al., 2012) and Calgary (City of Calgary, 2016).

STUDY DESIGN

The study design incorporated the following elements to ensure the most reliable and objective information possible:

- **Vetted Study Protocol:**
  The research team worked together with the initial funding partners to develop an evidence-based methodology to assess economic impact, as well as changes in travel patterns and attitudes for both merchants and visitors.

Figure 11. Small businesses along Bloor Street (Photo Credit: Yvonne Verlinden)

The agreed-upon methodology consisted of a merchant survey, a visitor survey, and bicycle counts. Survey questions were developed in consultation with the initial funding partners. The first round of data collection occurred in the fall of 2015. In 2016, Toronto City Council approved the pilot bike lane and directed staff to measure a host of impacts, such as safety, parking and traffic flow. The City of Toronto commissioned TCAT to provide assistance on the evaluation of economic impacts and reviewed the study's methodology. To increase confidence in the study results, the City funded an additional data collection period (in spring 2017), over and above the two originally funded by the BIAs and Metcalf, and also requested the collection and analysis of new data regarding vacancies.

- **Before and After Data:**
  The opinions people currently hold can affect the way they recall the past, particulary over a long time period. For this reason, the study collected data before and after the bike lane's installation. In order to make responses consistent and comparable, the same questions were used for all three time periods.
- **Non-Leading Questions:**
  The surveys were designed to avoid people's responses being influenced by their support or disapproval of the bike lane. Specifically, the survey script did not mention the bike lanes, but instead introduced itself as "a survey regarding local business and how people get here". Questions which mentioned the bike lane were not asked until after the economic data (customer counts, visit frequency and spending) had been gathered.
- **Random and Representative Samples:**
  The study was designed to capture the full spectrum of possible responses, and not only those of a specific subset. For visitor surveys, every third person walking along the sidewalk was approached and asked if they would like to participate in the survey. For the merchant surveys, every street-level business was approached.
- **A Control Site:**
  Changes along a commercial street can happen for many reasons (such as shifts in neighbourhood demographics, increasing property taxes, and the rise of e-commerce). Data was collected along Danforth Avenue, a comparable shopping street with no bike lane, to determine whether changes on Bloor Street were due to the bike lane or to other factors common to both streets.
- **Third Party Data Collection and Analysis:**
  To ensure impartial data collection and analysis, TCAT partnered with researchers from the University of Toronto. Dr. Beth Savan, Inaugural Sustainability Director at the University of Toronto and past Research Director at the School of the Environment, was involved in the study design and led the 2015 pre-test data collection, supervising an 8-member team who conducted the surveys, bike counts and translation. Lee Vernich, Director of the Office of Research in the School of Public Health, led and supervised a 15-member team for the 2016 and 2017 post-test data collection. Dr. Steven Farber, a quantitative transportation geographer, led the data analysis and supervised all statistical tests.
- **Multiple Data Sources:**
  The study used multiple data sources to estimate economic impact. The indicators are: estimated customer counts from the merchant surveys, estimated spending and visit frequency from the visitor surveys, and business vacancy counts from a street level scan.

DATA COLLECTED AND MERCHANT RESPONSE RATES

During the three data collection periods (fall 2015, fall 2016 and spring 2017), 3,005 visitors to Bloor Street and Danforth Avenue were surveyed. Sixty-two percent of businesses approached participated in the study, completing 525 surveys. As well, 15 bicycle counts and two vacancy counts were undertaken.

	Pre-Test (Fall 2015)	Post-Test #1 (Fall 2016)	Post-Test #2 (Spring 2017)
Visitor Surveys	1016 completed Oct 17-Nov 26, 2015 ▪ 429 in Bloor Annex ▪ 414 in Korea Town ▪ 173 at control site	1025 completed Oct 28-Nov 16, 2016 ▪ 407 in Bloor Annex ▪ 407 in Korea Town ▪ 211 at control site	964 completed May 3-May 17, 2017 ▪ 400 in Bloor Annex ▪ 363 in Korea Town ▪ 201 at control site
Merchant Surveys	191 completed out of 285 businesses visited (67%) Nov 13-Dec 14, 2015 ▪ 68 in Bloor Annex (65%) ▪ 95 in Korea Town (73%) ▪ 28 at control site (56%)	175 completed of 287 businesses visited (61%) Oct 21-Dec 2, 2016 ▪ 72 in Bloor Annex (69%) ▪ 81 in Korea Town (64%) ▪ 22 at control site (40%)	159 completed out of 276 businesses visited (58%) May 1-May 15, 2017 ▪ 84 in Bloor Annex (70%) ▪ 52 in Korea Town (52%) ▪ 23 at control site (41%)
Bicycle Counts	5 completed Oct 26-Nov 28, 2015	5 completed Oct 11-Nov 12, 2016	5 completed May 2-May 27, 2017
Vacancy Counts	July 26-27, 2016	-	July 5, 2017

Figure 12. Data Collection Summary

In calculating the response rate for the merchant surveys, addresses that were closed, vacant or under construction were not included in the total number of businesses visited. Of those merchants that did not complete the survey, the primary reason was that the owner/manager was unavailable or refused to answer.

Figure 13. Bloor Street on a sunny winter day, February 2017 (Photo Credit: Anthony Galloro)

DATA COLLECTION TIMING

The study followed as closely as possible the bicycle count and survey methodology established by the National Bicycle & Pedestrian Documentation Project, co-sponsored by Alta Planning and Design and the Institute of Transportation Engineers (2010) and designed to achieve consistent methods and practices. According to this recommended methodology, counts and surveys should be conducted during the second week in September on different days of the week to obtain a sampling of activity. For this study, data collection began as soon it was approved by our funding partners (October, 2015). For comparability purposes data was collected at the same time of year the following year (October 2016). The final data collection was conducted at a different time of year (May 2017) to accommodate the City's timelines for reporting on the bike lane pilot project (see Appendix A for a detailed breakdown of data collection dates and times). Spring was selected as being the most comparable time frame for cycling ridership, according to the seasonal cycling incidence from the City of Toronto's Cycling Study (see Figure 14). According to the City's study, 68% of people in Toronto who regularly bike do so in the spring, and 71% in the fall.

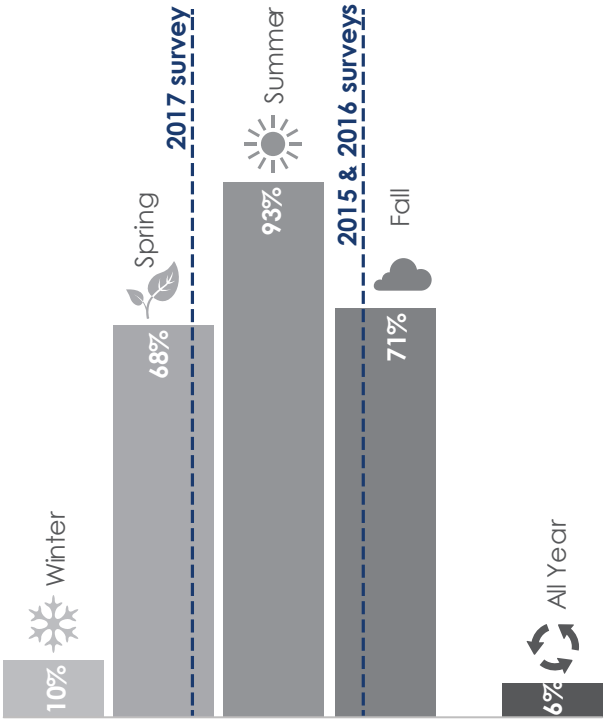


Figure 14. Data collection dates compared to reported seasonal cycling behaviour of people who bike in Toronto (City of Toronto Cycling Study – Tracking Report, 1999 and 2009)

MERCHANT SURVEYS

The merchant survey was designed to capture the economic metric of customer counts, as well as merchant travel patterns and feedback on the bike lanes. Comments about the bike lane were recorded verbatim by the surveyors. Surveyors were instructed to approach all ground level merchants in the study area and the control area and to interview the business owner or manager, making up to four visits to each business. If no owner or manager was available, an information sheet was left for the merchant containing contact information to conduct the survey by phone. A few took advantage of this opportunity. In 2015 and 2016, if the owner or manager was unavailable after the initial visits, surveyors interviewed employees instead; however, the research team discontinued this practice in 2017. Surveys indicating that a regular empolyee had responded, not a manager or owner, were subsequently removed from the study. A dedicated Korean translator was on hand for all merchant and visitor surveys in Korea Town. See Appendix B for the complete merchant survey questions and script.

VISITOR SURVEYS

The visitor survey was designed to capture two of the metrics used to measure economic impact – estimated customer spending and visit frequency. It also measured changes in visitor travel patterns and attitudes towards the bike lanes. The survey was introduced using a script which did not reference the bike lane pilot project, in order to avoid influencing responses. Comments were recorded verbatim. Surveys were conducted at different times of the day and week in order to capture a variation of traffic. Surveyors were dispatched in teams and were instructed to approach the third person who passed after the completion of a survey. A Korean translator was on hand in Korea Town. For the complete visitor survey script and questions, see Appendix B.

VACANCY COUNTS

The vacancy count represents the final metric used to measure economic impact. The entire length of the pilot bike lane installation area and the control site was walked by researchers to note which ground level businesses were in use. The first count was in July 2016, and the second in July 2017.

BICYCLE COUNTS

Counters were dispatched in teams to both the study area and control site simultaneously. People riding their bicycles were counted by hand, including estimating their gender and age. Counts were conducted at different times of the day and week in order to capture the full variation of traffic.

DATA ENTRY AND CODING

For the pre-test, a paper version of the surveys was used by the surveyors. Following the completion of the data collection, the data was entered into Excel spreadsheets. For the post-tests, tablets were used for data collection, and data was then transferred into Excel spreadsheets.

All responses to the open-ended question were examined and commonly stated thoughts were coded. For respondents who provided more than one type of response, each response was coded and counted with the result that some surveys received multiple response codes. Two researchers independently coded the open text responses and then compared their coding. There was between a 1-2% correction rate in how they each chose to code the text. They discussed every discrepancy and found a consensus on how each one should be coded.

DATA ANALYSIS

Researchers at the University of Toronto with statistical testing expertise were hired to carry out the data analysis. Using the data collected, two types of analyses were conducted. First, a descriptive analysis compared the results between the two time frames of pre and post installation. For the visitor survey, the post installation time frame combined results from the 2016 and 2017 collection cycles (see Figure 15); however, for the merchant survey, which collected responses from the same people multiple times, each time frame was kept separate (Figure 16). The analysis also compared results between the study area (Bloor) and the control (Danforth). However as noted below in the "Study Limitations" section, due to the small size of the control site, some of the more detailed comparisons were not possible for Danforth Avenue, particularly for the merchant surveys. Detailed data, broken down by BIA (Bloor Annex and Korea Town) is found in Appendix D.

The research team looked in particular for findings where the changes were significant, that is, the statistical proof is strong enough that, had the study surveyed every single visitor on Bloor Street, one would expect to see the same results. Throughout the report, results in which we have a high level of confidence are noted by including their significance level, or p-value, in parentheses. Generally, any result with a p-value that is 0.05 or less is considered to be a significant one, while a result with a p-value up to 0.1 may be interesting, especially if the sample size is small. For an explanation of this statistical test, see Appendix C.

Recognizing that many factors influence people's spending habits and visiting patterns, including age, gender, trip purpose and transportation choices, the research team also undertook a regression analysis to capture the effect of the bike lane itself on spending and visit frequency, and to control for (or remove the influence of) any other differences in the survey samples. For a complete description of how this analysis was undertaken, see Appendix C.

Location	Pre-Test Fall 2015	Post-Test Fall 2016 + Spring 2017	Total
Bloor (Bloor Annex + Korea Town)	843	1577	2420
Danforth	173	412	585
Total	1016	1989	3005

Figure 15. Visitor Survey Analysis Categories and Sample Sizes

Location	Pre-Test Fall 2015	Post-Test		Total
		Fall 2016	Spring 2017	
Bloor (Bloor Annex + Korea Town)	163	153	136	452
Danforth	28	22	23	73
Total	191	175	159	525

Figure 16. Merchant Survey Analysis Categories and Sample Sizes

STUDY LIMITATIONS

Although every effort was made to ensure robustness, this study, like all studies, has a number of limitations.

- **Timing and Seasonality**
  The timing of data collection was subject to project approvals and the City of Toronto's reporting requirements for the Bloor pilot project. The first post-implementation collection period occurred only three months after installation. This short time frame reduces the likelihood that this round of data collection fully captured changes in travel behaviour, consumer patterns, or attitudes. As well, because of the City of Toronto's reporting timelines, the second post-implementation data collection could not occur in the fall of 2017 (and thus align with the previous two data collection periods, in fall 2015 and fall 2016). Spring was chosen as being the most comparable time period seasonally, but a number of significant differences may have impacted survey and count results.

  First, the May 2017 visitors' survey on Bloor Street contained fewer respondents from the 30-years-or-less age category than the first two data collection cycles. There were also fewer cyclists in the 15-30 age group recorded in the 2017 bicycle count than in previous counts, particularly in the Bloor Annex area. This difference is likely because the University of Toronto, which borders the study area, has fewer students taking classes in May than in October.

  Second, a number of survey questions require respondents to report on their experience (i.e. how do you usually get here? In a typical month, how many days do you visit this area? On average, how many customers do you serve per day? etc.). Respondents would likely have based their answers on the previous months, and one could expect both their retail and transportation experiences in the late summer/early fall to be different from those in the late winter/early spring.

  Finally, one year is a short time frame in which to capture broad economic changes, both positive and negative. The New York City Department of Transportation recommends monitoring economic impact for two to three years following the implementation of a change in streetscape, to account for possible anomalies (NYC DOT, 2013).

- **Retail Data**
  Retail sales data were not available to the study team. Unlike in the U.S., in Canada, we do not have easy access to such data, and it thus has to be obtained directly from business owners or third party payment providers.

  A recent study by the Ontario Business Improvement Area Association (OBIAA) recorded no BIAs that are currently using the retail sales data of its membership as an indicator of economic vitality. The report found that challenges with data sourcing, transparency and accuracy all present barriers to collecting and using this data (OBIAA, 2017). Business owners are often reluctant to share actual retail sales information; in its absence, surveys may be used, but ensuring uniformity of reporting methods is difficult (OBIAA, 2017).

  Moreover, surveys may contain a response bias in that those members experiencing benefits or no impact are less likely to participate. Indeed,

an early study on the economic impact of bike lanes in Vancouver found that few businesses were willing to share their actual sales data, but that the data obtained showed negative impacts that were less than what was estimated by business owners through qualitative surveys (Stantec, 2011).

Recently, interest is growing in using data from third party payment platforms, such as Visa, Moneris or Apple Pay, which, while not comprehensive, may provide an indication of sales trends (OBIAA, 2017). In the summer of 2017, the City of Toronto initiated talks with Moneris to obtain this type of data for the Bloor Street pilot project.

Although the BIAs and the research team initially considered the collection of retail sales data in the merchant survey, they collectively felt it would be difficult to ensure that a majority of businesses participated and provided supporting documentation. The BIAs also raised concerns regarding their members' privacy. The difficulty of obtaining comparable data in the control site, whose BIA was not a study partner, also presented another obstacle.

- **Control Sample**
  Due to budget limitations, the control site is smaller than the study area. For the merchant survey in particular, responses were collected from Broadview Avenue to Playter Boulevard only, rather than to Chester Avenue as was done for the visitor survey, bicycle counts and vacancy count. As a result, the sample size for the merchant survey is small, and while the data demonstrates larger trends in customer counts, merchant travel patterns and attitudes, a more detailed comparison with the study area, such as customer counts by sector, is not possible.

Figure 17. Bloor Street in March 2017 (left) and October 2016 (right) (Photo Credits: Anthony Galloro)

Findings

MERCHANT SECTOR PROFILES

The merchant surveys completed in 2015 were compared with Toronto Employment Survey data from 2015 (the most recent year available). Although the Toronto data comprise all businesses (including below street level and upper storey) and this study focused on ground floor businesses only, the merchant survey data for Bloor Street were found to be representative of the corridor (see Figure 18). The breakdown of survey responses by sector was on average only 2.5% different from the make up of all businesses on the street, with proportionally slightly fewer restaurants and slightly more retailers responding.

On Danforth, the smaller number of respondents led to a sample that was less representative. The breakdown by sector of survey responses from merchants was on average 9% different from the make up of the street, with retailers more likely to answer the survey than restuarants. These differences should be kept in mind when interpreting merchant survey data from Danforth.

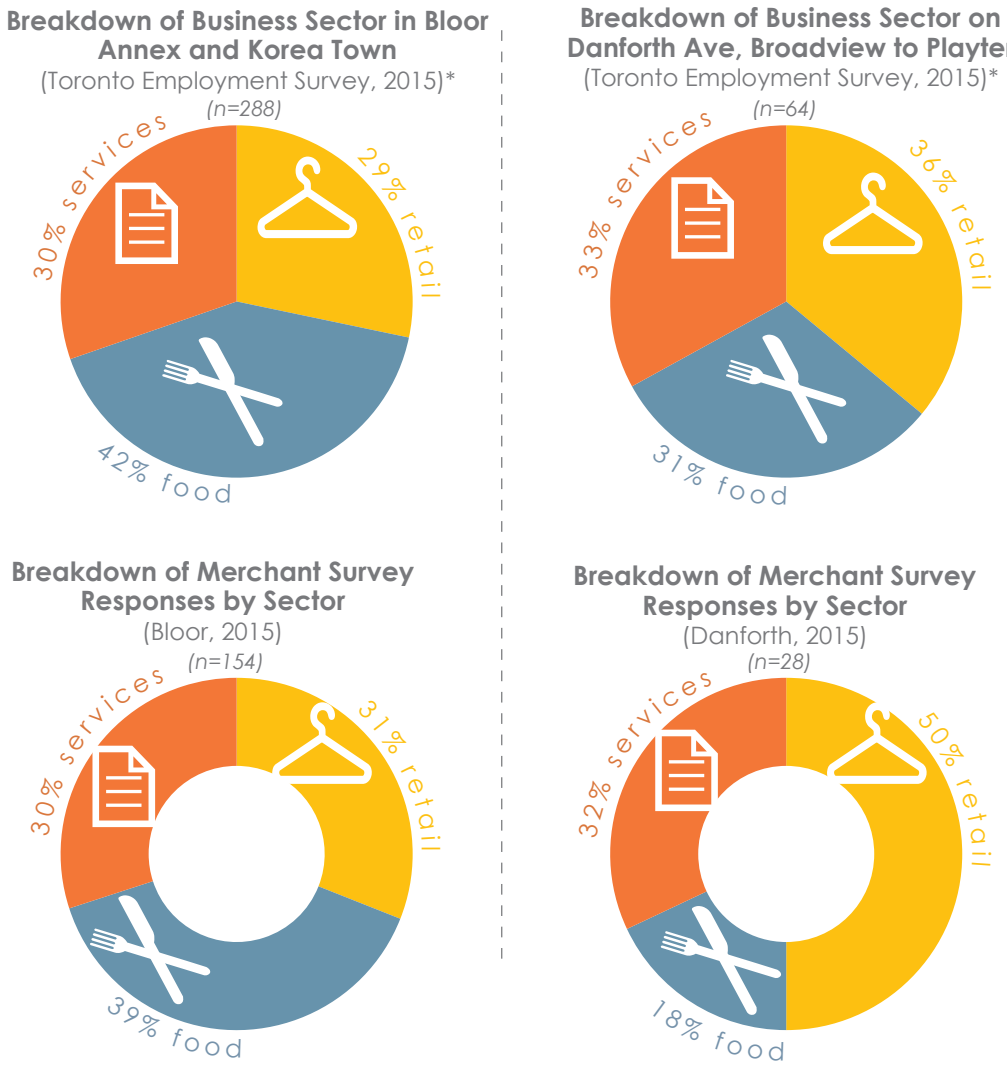


*Figure 18. Sector Comparison of Existing Businesses and Survey Responses Received, for Bloor Street and Danforth Avenue (*Note the Toronto Employment Survey data reports on all businesses, including at, below and above street level, while this study includes street level businesses only)*

CUSTOMER COUNTS

Customer counts increased on both streets, with Danforth Avenue seeing stronger growth than Bloor Street. In particular, the number of businesses reporting 200 customers or more rose substantially.

Merchants were asked to estimate their number of customers on weekdays and on Saturdays. On both Bloor Street and Danforth Avenue, merchants generally reported more customers on Saturday (see Appendix D for data on weekdays). On Bloor Street in 2015, approximately half (54%) of merchants saw less than 100 customers on a Saturday, and half (46%) saw 100 or more. Using this threshold, it is possible to see the overall growth in customers on Bloor Street since 2015 (Figure 19). By 2017, 62% of merchants reported seeing at least 100 customers on a Saturday.

Customer counts on Danforth Avenue also increased, and the growth appears to be stronger than on Bloor Street. The street started with only one quarter (25%) of merchants seeing 100 customers or more on a Saturday, and this rate essentially held stable in 2016. By 2017, though, 81% of merchants surveyed had reached or surpassed this threshold. Because of the smaller sample size on Danforth Avenue, it is possible that increases are not representative of changes on the street overall, or had already begun to occur in 2016 but were not captured, and became more readily apparent in 2017.

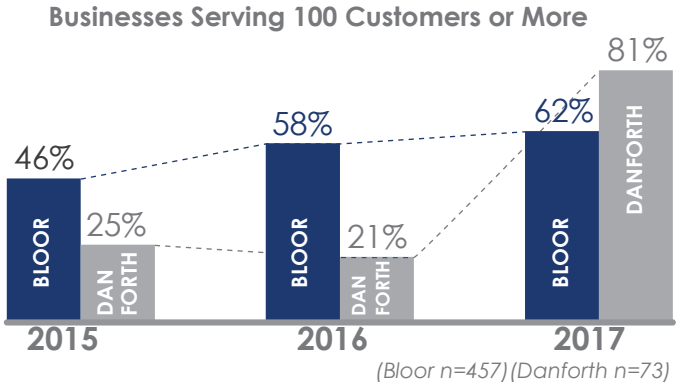
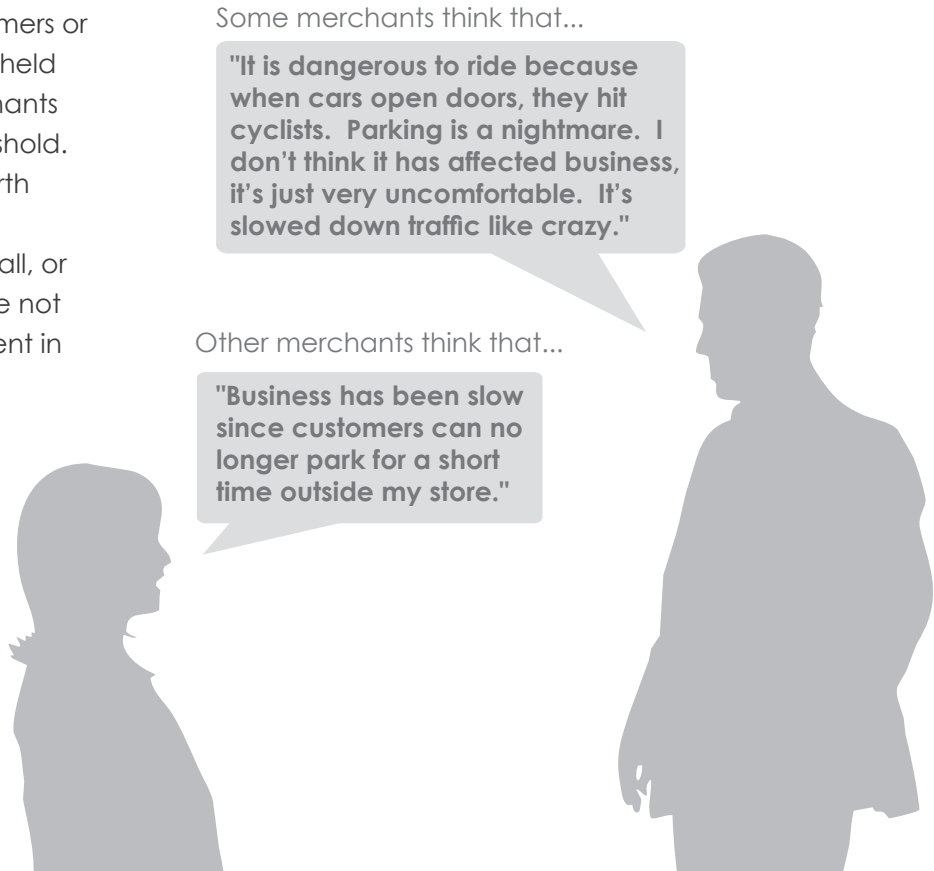


Figure 19. Changes in Businesses Serving 100 Customers or More on a Saturday
Question: On average, about how many customers do you serve per day? 1) Weekday 2) Saturday



Looking more closely at the change in businesses reporting the most customers on a Saturday, there was substantial growth between 2015 and 2017 in the number of merchants reporting 200 customers or more in all locations (see Figure 20), but most dramatically on Danforth (from 39% to 50% in Bloor Annex, from 19% to 30% in Korea Town, and from 14% to 71% on the Danforth).

As the number of customers grew overall between 2015 and 2017, there was a corresponding decrease in businesses reporting fewer than 25 customers on a Saturday, particularly on Danforth (from 6% to 5% in Bloor Annex, from 32% to 20% in Korea Town, and from 36% to 5% on Danforth).

Overall, merchants in Bloor Annex reported more customers than Korea Town, likely due to their different commercial compositions. Nearly half (49%) of the businesses in Bloor Annex are restaurants, bars and cafés, while in Korea Town, one third (35%) are small service providers (Toronto Employment Survey, 2015).

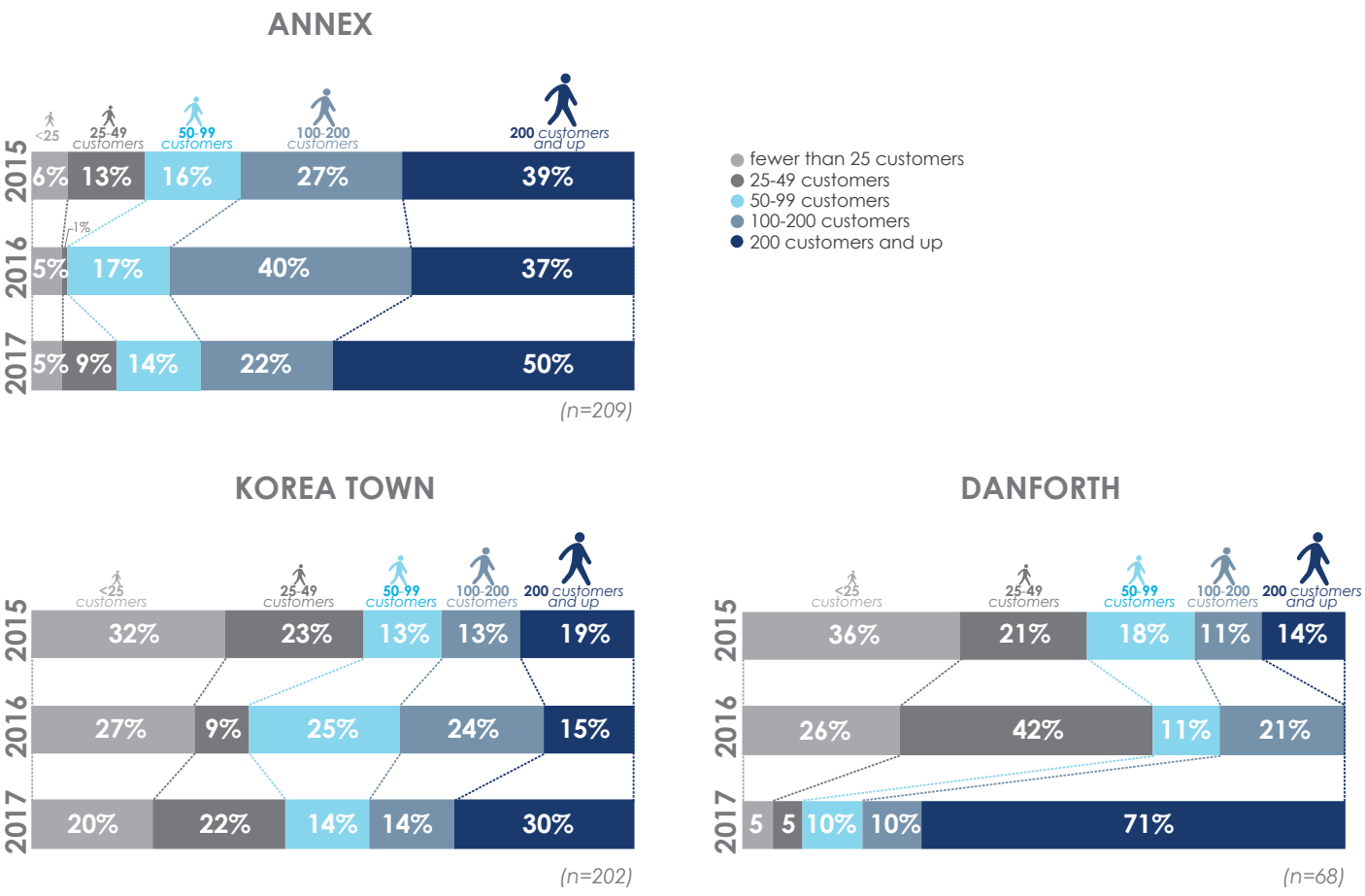


Figure 20. Changes in Saturday Customer Counts, Bloor Annex, Korea Town and Danforth
Question: On average, about how many customers do you serve per day? 1) Weekday 2) Saturday

SPENDING

Reported spending was higher on Danforth Avenue than on Bloor Street, both before and after the bike lane's installation. Spending increased on both streets at a similar rate.

Visitors were asked to estimate how much they spend per month on either Bloor Street or Danforth Avenue. In 2015, approximately half (44%) of visitors reported spending at least $100, and so this amount was used as a threshold of comparison for the data analysis. Overall, visitors reported spending more on Danforth Avenue than on Bloor Street, both before and after the bike lane's installation. Spending increased on both streets at similar rates, with the proportion of visitors who were spending $100 or more per month reaching 53% on Bloor (p<0.001) and 70% on Danforth (p≤0.01) (see Figure 21).

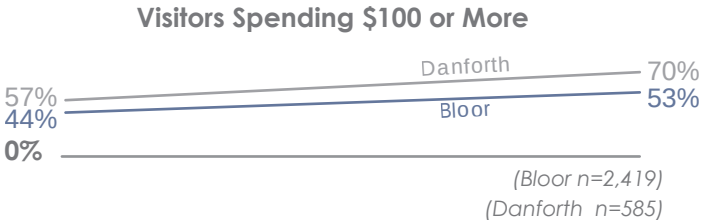


Figure 21. Changes in the percentage of visitors spending $100 or more per month on Bloor and Danforth

The research team further analyzed the findings to remove the effects of other factors which could influence spending, such as differences in age, gender and transportation mode. The test found that, when all these factors were accounted for, visitors were 48% more likely than before on Bloor Street (p<0.1) and 72% more likely on Danforth Avenue to spend $100 or more (p<0.05). A test on the rates of change found that spending on the two streets is increasing at a similar rate (see Appendix C for more information on these statistical tests).

Increases in spending were reported across all transportation choices except transit. (Figure 22) On both Bloor Street and Danforth Avenue, the largest increases were from people who drove, with 50% and 41% more respectively reporting they spent at least $100 per month (p<0.05). Both before and after the bike lane's installation, however, people who walked or biked reported the highest levels of spending on Bloor Street. An analysis controlling for other factors found that people who biked were 16% more likely than people who walked of spending at least $100 (<0.05). People using transit remained the lowest spenders on both streets.

The high spending rates of people who walked or biked are likely related to the higher proportion of these respondents who live or work in the area and their high visit frequency to Bloor Street. Spending was found to increase with proximity and visit frequency. Those living and working in the area were 2.6 times more likely than others to spend at least $100 per month (p<0.001), and for each additional day per month visited, the likelihood of spending $100 or more increased by 7.3% (p<0.001).

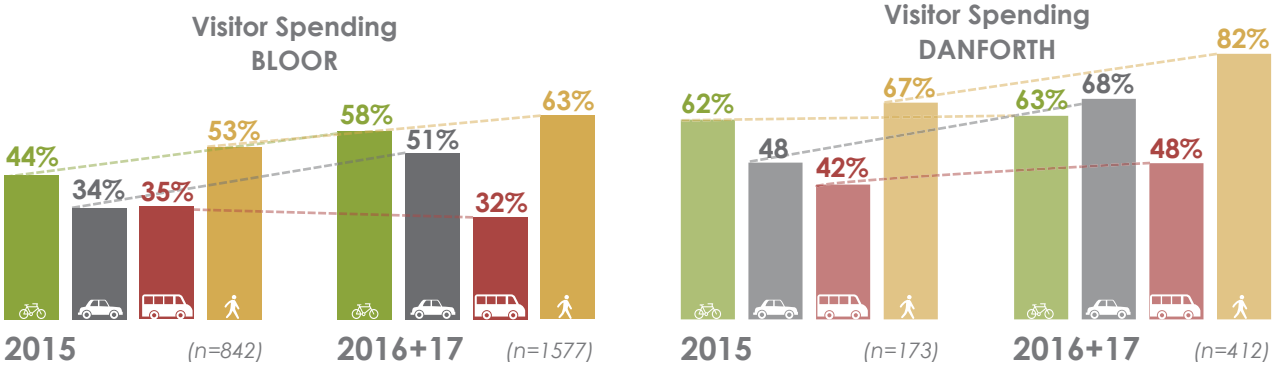


Figure 22. Changes in the Percentage of Visitors Spending $100 or More, by Travel Choice on Bloor and Danforth
Questions: How did you get here today? & About how much money do you spend in [the Annex, Korea Town, the Danforth] in a typical month?

VISIT FREQUENCY

Visitors reported coming to Bloor Street three days more per month after the bike lane was installed, and increases in frequency occurred across all transportation choices. On Danforth Avenue, visit frequency was unchanged.

Survey respondents were asked to estimate how many days per month they visited Bloor Street or Danforth Avenue. In order to capture only the independent effects of the bike lane, the research team analyzed the visitor survey data and removed the effects of any other characteristics (such as gender, age, and trip purpose) on reported visit frequency (see Appendix C for a detailed explanation). This analysis provided an estimate of whether or not the bike lane itself was associated with people visiting more often. We found that, once these factors had been controlled for in the analysis, the visit frequency on Bloor Street increased by three days per month after the bike lane was installed ($p<0.001$), while visit frequency on Danforth Avenue remained unchanged over the same time period.

On Bloor Street, visitors who reported coming to the street at least 15 days per month increased across all transportation choices ($p<0.001$) (see Figure 23). In particular, the proportion of people arriving by car who visited this often doubled ($p<0.001$). Despite this increase, people who arrived by bike or on foot still visited the most often, at an average of 20 and 21 days per month respectively. The analysis found that the difference between people biking and people walking was not significant. People who drove or took transit visited nearly four days less per month ($p<0.001$). These findings are closely related to proximity, as the analysis also found that those who live or work in the area visited 13 days more per month than those who live or work further away ($p<0.001$), and people who biked or walked make up the highest proportion of local respondents.

The research team also investigated the subset of customers only (i.e. those survey respondents who reported that the purpose of their trip that day included shopping, visiting a restaurant, café or bar, or receiving a service), and found that they visited with a frequency similar to all visitors overall.

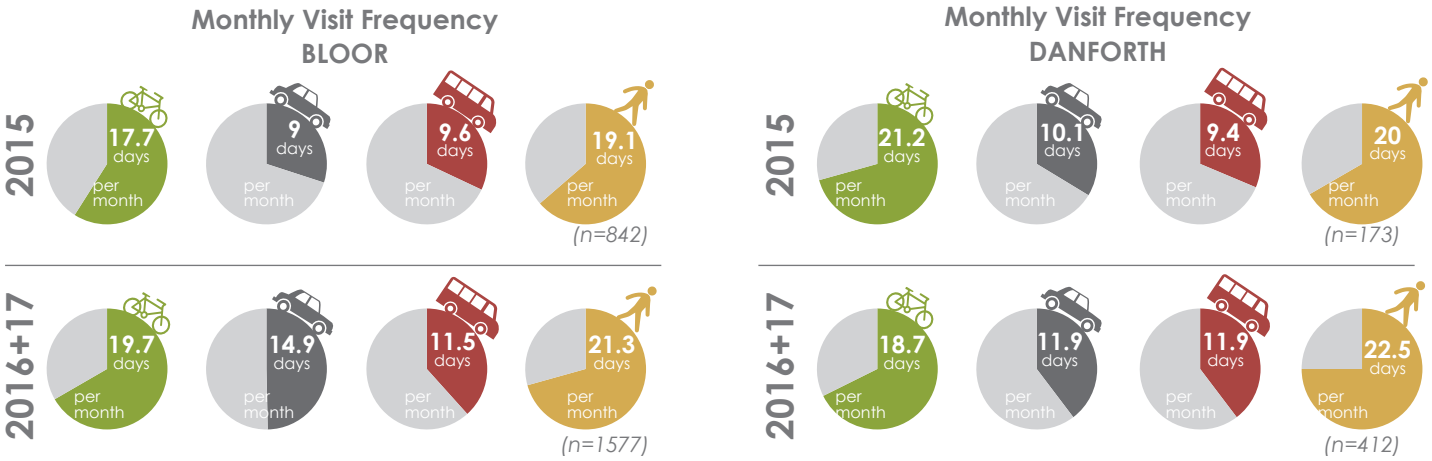


Figure 23. Changes in Average Days Visited Per Month on Bloor and Danforth, by Travel Choice
Questions: In a typical month, how many days do you visit this area of [Bloor Street, Danforth Avenue]?

VACANCY RATES

Vacancy rates held nearly steady at 6% on Bloor Street in the study area.

The research team conducted two street level scans to count the number of businesses that were vacant. In 2016, before the bike lane was installed, 16 (6.5%) of the 247 ground-level commercial spaces within the Bloor Annex and Korea Town BIA boundaries were vacant, and 6 (5.2%) of 116 in the control area. In 2017, following the installation of the bike lane on Bloor, there were 15 (6.1%) vacancies observed in the Bloor study area and 4 (3.4%) in the control area. Across the entire bike lane pilot project area, from Avenue Road to Shaw Street, in 2016 there were 24 (7.0%) vacancies observed, and in 2017 there were 25 (7.2%). Overall these represent slight variations in vacancy rates from one year to the next, regardless of location.

	Pre July 2016	Post July 2017
Bloor, entire length of bicycle lane (Avenue Rd to Shaw St) *(n=345)*	7.0% *(24)*	7.2% *(25)*
Bloor in Korea Town and Bloor Annex (n=247)	6.5% *(16)*	6.1% *(15)*
Danforth (Broadview to Chester) (n=116)	5.2% *(6)*	3.4% *(4)*

Figure 24. Changes in Vacancy Rates, Bloor and Danforth

Figure 25. Honest Ed's in February 2017, shortly after it closed (Photo Credit: Anthony Galloro)

PARKING

Parking difficulty increased on both streets, growing by four times on Bloor Street, and nearly doubling on Danforth Avenue, but the majority of visitors arriving by car still found parking easily. Parking difficulty was lower among customers on Bloor.

Those visitors and merchants who had arrived that day by car or by bicycle were specifically asked whether they had had any difficulty finding parking. For those arriving by bicycle, the majority reported no difficulty. Indeed, bicycle parking difficulty decreased on Bloor Street ($p \leq 0.05$) (see Figure 26), despite the higher number of people riding them, likely as a result of 78 new bicycle parking spots installed by the City along Bloor Street during the pilot project. Compared to Danforth Avenue, however, bicycle parking on Bloor Street continued to be more difficult ($p \leq 0.05$).

Car parking difficulty increased on both streets, growing by four times on Bloor Street (from 8% to 33% of visitors who drove, see Figure 27) ($p<0.001$), where 160 parking spots had been removed, and nearly doubling on Danforth Avenue (from 14% to 25% of visitors who drove), though this street did not have any parking removed. Merchants on both streets also found it more difficult to find parking (see Figure 28). Part of these increases may be attributable to growth on both streets in visitors choosing to arrive by car, and the high percentage of merchants who drive and park on the street (56% in 2017) may be further pinching availability. On both streets, however, the majority of visitors and merchants who drove still found parking easily.

The research team further investigated the changes in parking difficulty experienced by a subset of customers only. Those who came to Bloor Street by car to shop, visit a food establishment or receive a service (rather than to visit friends, commute, just pass through or for other reasons) reported a smaller increase in parking difficulty compared with all visitors who drove (from 10% to 19%, see Figure 30). On Danforth, the customer subset also had slightly more difficulty parking in the post-test (from 14% to 25%, subset not shown).

It is important to note that on both streets, a small number of visitors arrive by car. When looking at visitors overall, the percentage who needed to find car parking and experienced difficulty is small: 3% of all visitors on Bloor and 4% of all visitors on Danforth.

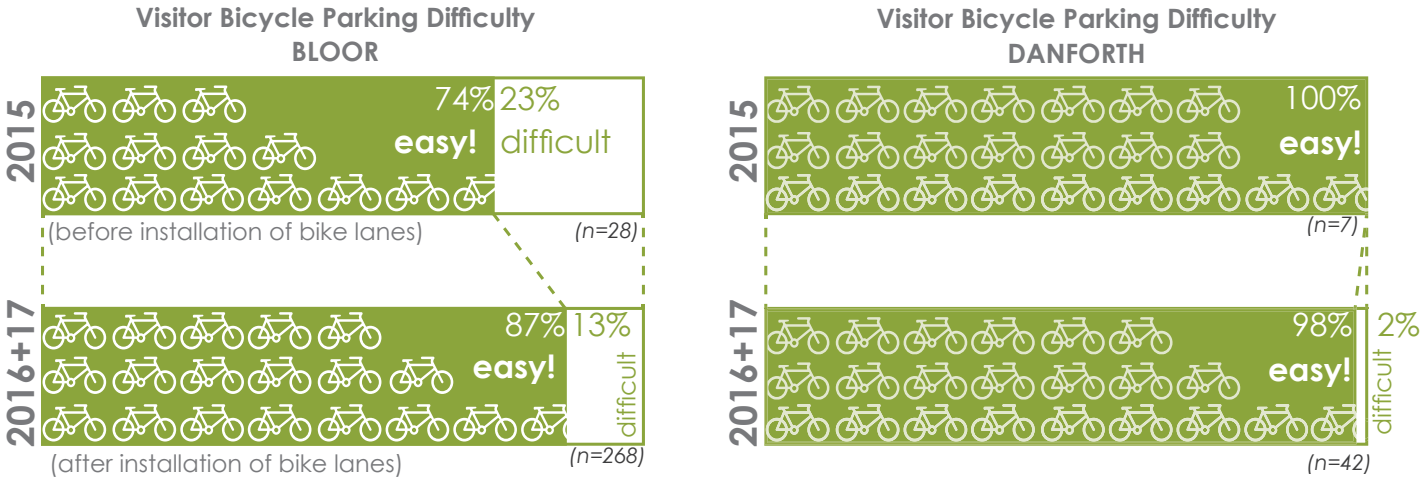
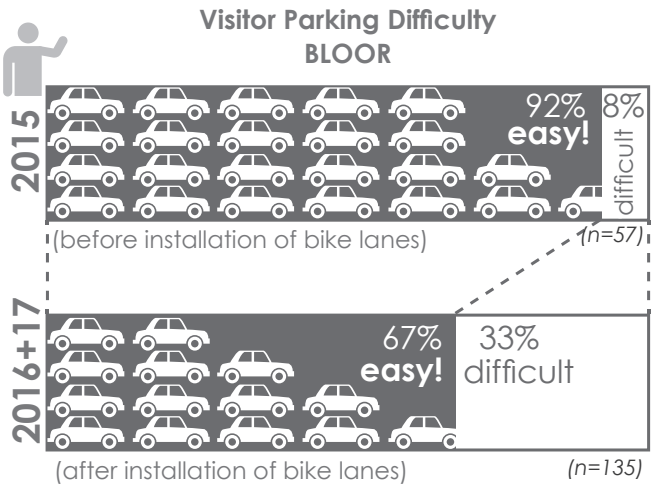


Figure 26. Changes in Visitors' Difficulty in Finding Bike Parking on Bloor Street and Danforth Avenue
Questions: How did you get here today? & If you parked, what was your level of ease in finding parking today?



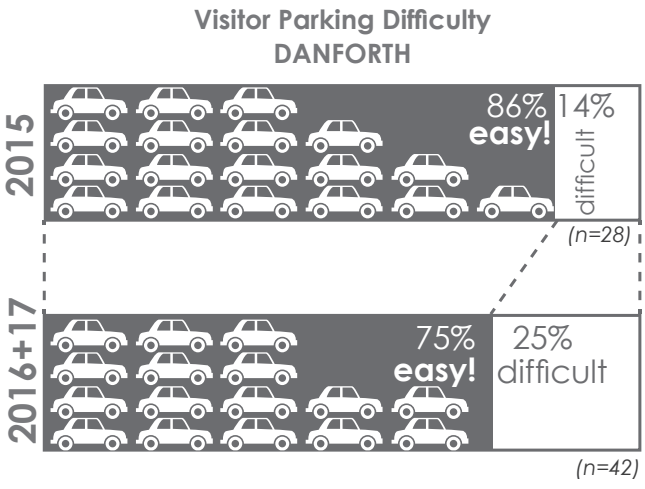
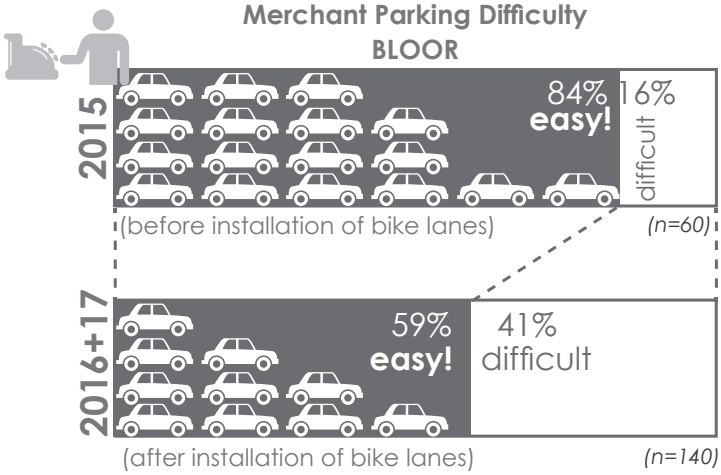


Figure 27. Changes in Visitors' Difficulty of Finding Car Parking on Bloor Street and Danforth Avenue (includes all trip purposes)
Questions: How did you get here today? & If you parked, what was your level of ease in finding parking today?



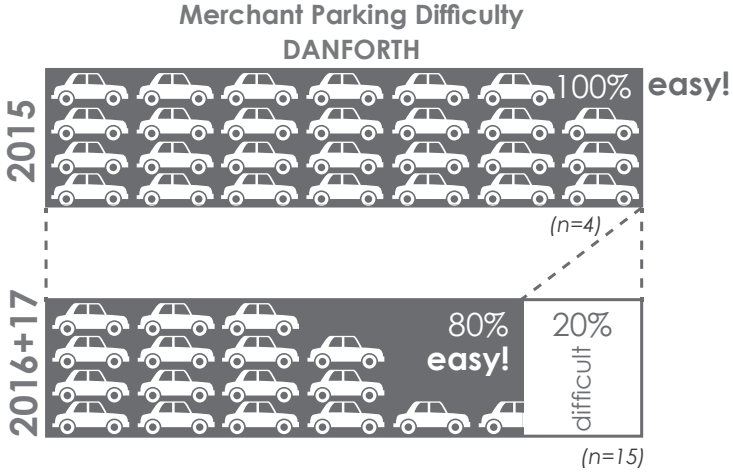


Figure 28. Changes in Merchants' Difficulty of Finding Car Parking on Bloor Street and Danforth Avenue
Questions: How did you get here today? & If you parked, what was your level of ease in finding parking today?

Merchant Parking Locations
BLOOR

Year	*N*	Green P or Other Lot	Street (Bloor or Side Street)	Private
2015	65	28%	42%	31%
2016	64	38%	42%	20%
2017	62	19%	56%	24%

Figure 29. Merchants' Car Parking Locations on Bloor
Question: If by car, where did you park?

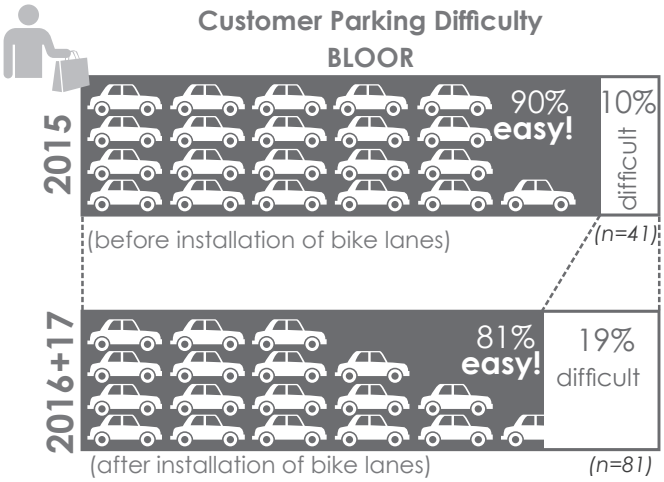
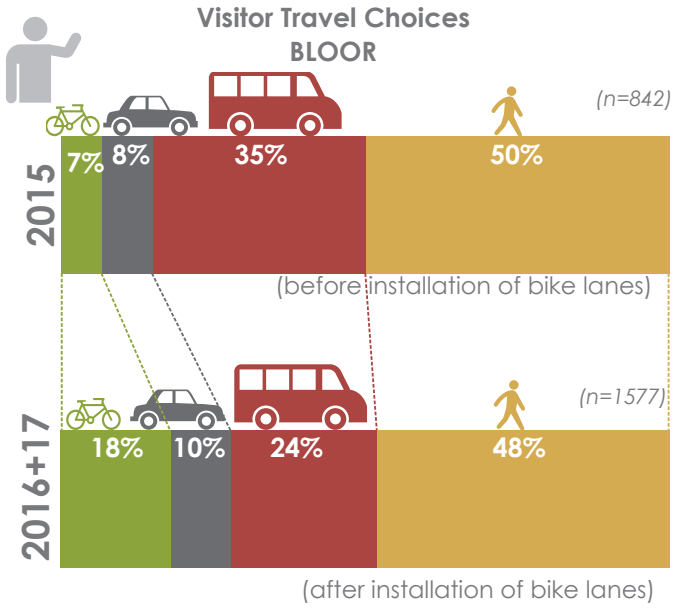


Figure 30. Changes in Difficulty of Finding Car Parking on Bloor Street, Customer Subset (shopping, food or service trips only)
Questions: How did you get here today? & If you parked, what was your level of ease in finding parking today? What is the purpose of your trip to [the Annex, Korea Town]?

TRAVEL PATTERNS

The percentage of visitors cycling to Bloor Street more than doubled, a substantially higher increase on Danforth Avenue. Conversely, transit use declined. Almost half of visitors to Bloor Street walk, and driving is now the least popular choice (10%), even though car use grew by 19%. Merchants prefer to drive (49%) or take transit (29%). Few choose to walk (15%) or cycle (6%).



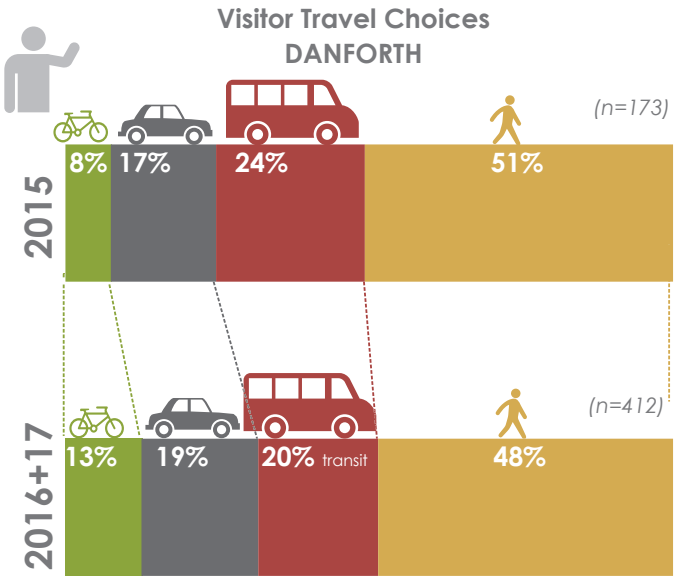


Figure 31. Changes in Visitor Travel Choices on Bloor and Danforth (includes all trip purposes Question: How did you get here today?

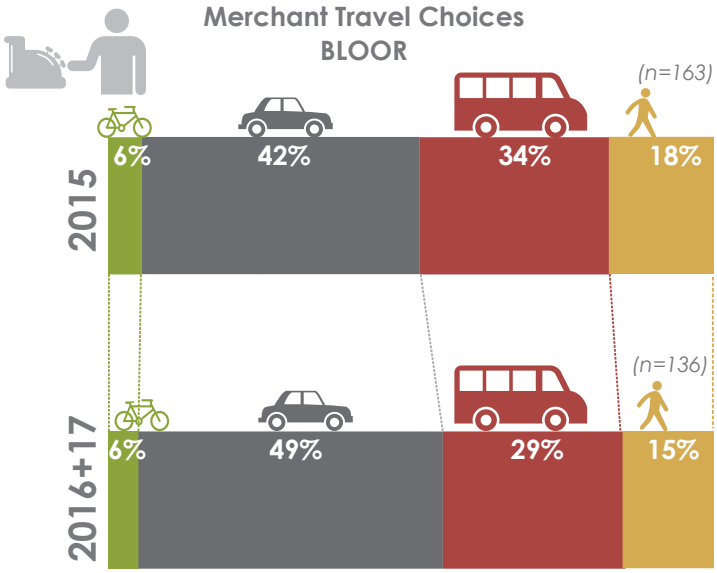


Figure 32. Changes in Merchant Travel Patterns on Bloor Question: How did you get to work today?

Overall, walking remains the most popular method for visitors traveling to Bloor Street (48%), followed by transit (24%), cycling (18%) and driving (10%) (see Figure 31). The percentage of people who cycled increased by 162% on Bloor Street ($p<0.001$), from 7% to 18%. This increase was substantially more than on Danforth Avenue, which saw 65% growth in people cycling ($p<0.1$). Moreover, each street experienced significantly different changes in the proportion of visitors who reported cycling on that street at least one day a week ($p<0.001$). On Bloor Street this number grew by 42% ($p<0.001$), while Danforth saw this measure drop by 13%.

The proportion of people arriving by car also grew on both streets (by 19% on Bloor and by 11% on Danforth). Walking and transit use decreased on both streets, with the most substantial reduction among transit trips to Bloor Street ($p<0.001$). This shift is not unexpected, as external research has shown that in dense, urban areas well-serviced by transit, people are most likely to switch to cycling from transit (Piatkowski, Krizek, & Handy, 2015; Mitra,

Ziemba, & Hess, 2017). The two travel choices are often complementary to one another; for example, transit offers security and options to people who bike, potentially allowing them to avoid a car purchase (Singleton & Clifton, 2014).

Merchants' travel patterns on Bloor are quite different from those of visitors (see Figure 32). Driving was the most popular travel choice (49%) in 2017, followed by transit (30%), then walking (15%), and lastly cycling (6%). Shifts to merchant travel patterns moved in the same direction as those of visitors, with one exception: merchant cycling did not increase.

Businesses are most interested in trips that involve some form of expenditure, whether shopping, stopping in a restaurant, café or bar, or receiving a service. In the survey, visitors were asked the purpose of their trip that day. To explore the travel patterns of a customer-only subset, trips that involved spending were separated from other trip purposes (such as visiting friends, commuting, just passing through or other reasons) for separate analysis. Shopping trips were also examined on their own, as the need to carry items purchased could affect travel choices and potentially lead to higher automobile use. In both cases, there was not a significant change in the number of people choosing to arrive by car (see Figures 33 and 34). Customers, including those coming to Bloor to shop, were not found to drive more frequently than visitors in general. Shoppers, however, were found to arrive by bike more frequently than visitors in general ($p<0.05$). After the bike lane's installation, the proportion of shoppers arriving by bicycle grew by 175% ($p<0.001$), nearly tripling the cycling rate on Bloor.

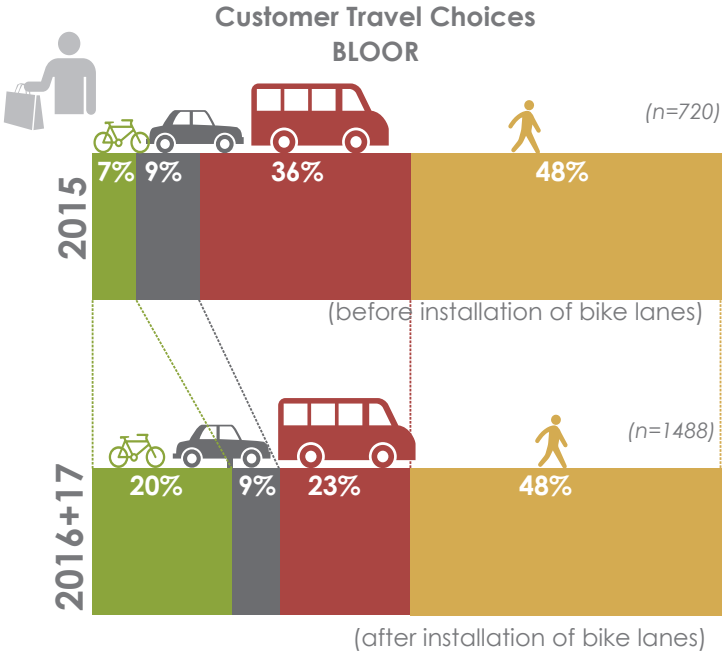


Figure 33. Changes in Visitor Travel Choices on Bloor, Customer Subset (shopping, food or service trips only)
Questions: How did you get here today? & What is the purpose of your trip to [the Annex, Korea Town]?

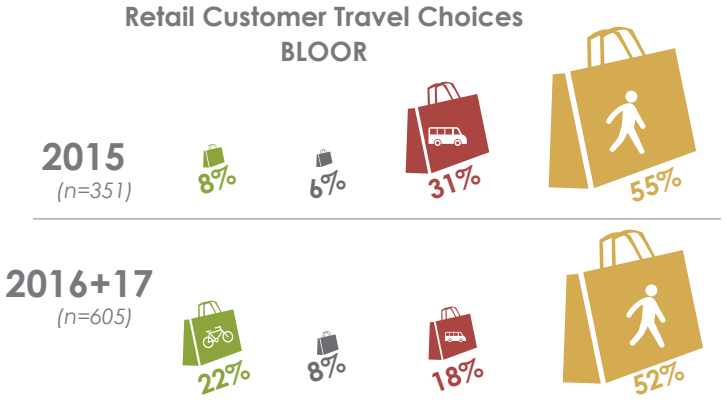


Figure 34. Changes in Visitor Travel Choices on Bloor, Retail Customer Subset (shopping trips only)
Questions: How did you get here today? & What is the purpose of your trip to [the Annex, Korea Town]?

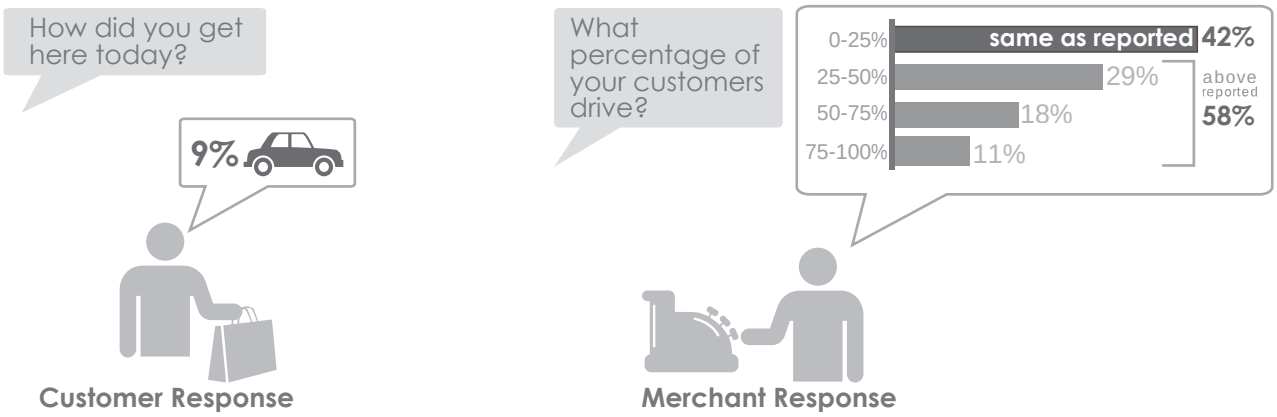


Figure 35. Merchant Estimates of Customers who Drive Compared with Customer-Reported Travel Choices
Questions: How did you get here today? What is the purpose of your trip to [the Annex, Korea Town]? What percentage of your customers or clients would you estimate come to [the Annex, Korea Town] by car?

Merchants were asked to estimate the travel choices of customers to their own individual businesses. While merchants may not track this information, the question was intended to capture their perceptions of each travel option's importance to the success of their business. Merchants estimated travel choices in ranges (e.g. 0-25% of my customers come by bike). These responses were then compared with the reported travel choices of visitors to the street who also reported that their trip that day involved an expenditure (e.g. shopping, a restaurant, bar or cafe, or a service) (see Figure 35). The majority of merchant estimates of transit and motor vehicle use are higher than the travel choices reported by Bloor Street customers. In particular, between 2015 and 2017, there was 56% growth in merchants who believed that over half their customers arrive by car. The merchants' perceptions may be influenced by their own travel patterns, which depend mostly on driving and taking transit.

Over half of merchants believe that 25% or more of their customers drive to Bloor Street.

Fewer than 10% of visitors who came to shop, visit a restaurant or receive a service reported arriving by car.

PERCEPTIONS OF SAFETY

After the installation of the bike lanes, over three and a half times more visitors perceived Bloor Street as safe for cyclists.

Visitors and merchants were both asked whether they felt safe, or would feel safe, cycling on either Bloor Street or Danforth Avenue. The proportion of visitors who perceived Bloor Street as safe for cyclists more than tripled% ($p<0.001$), from 17% to 61%, and increases were seen across all travel choices, with the majority of people who walked, drove, took transit, or cycled reporting safer cycling conditions (see Figure 36). The number of merchants who perceived Bloor Street as safe for cycling also increased, doubling from 13% in 2015 to 27% in 2017 ($p<0.01$), but still representing a minority. As perceptions of cycling safety increased on Bloor Street, they decreased on Danforth Avenue, dropping by more than half ($p<0.001$), although this street underwent no change in configuration.

Our visitor survey results correspond closely to the City of Toronto public perception survey results, released in June 2017. With feedback from over 14,000 members of the public, 58% strongly agreed that Bloor Street now provides a safer and more comfortable environment for cyclists. The City's survey also found that the driving experience on Bloor Street is more comfortable after the installation of the bike lane and the walking experience is about the same or better (City of Toronto, 2017). The City has also undertaken an analysis of near-misses to further evaluate safety.

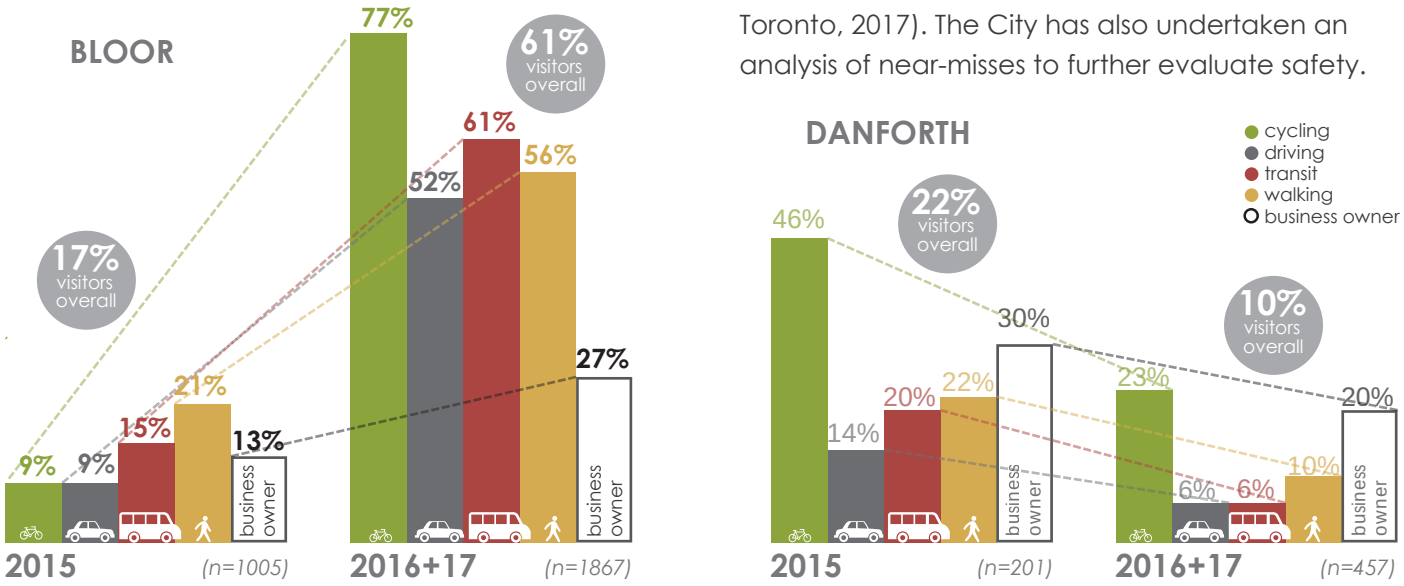


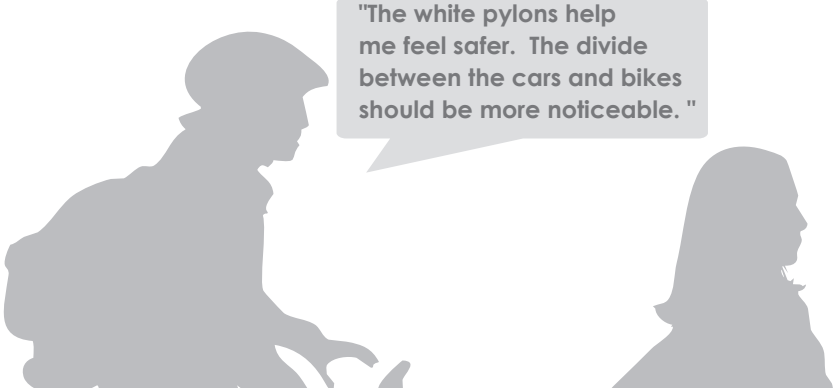
Figure 36. Changes in Perceptions of Cycling as Safe on Bloor and Danforth
Questions: How did you get here today? & With the current street configuration, how safe do you feel (or would you feel) riding a bicycle on [Bloor St, Danforth]?

Some think that...

"The white pylons help me feel safer. The divide between the cars and bikes should be more noticeable. "

Others think that...

"As a cyclist and pedestrian, I love the bike lanes. But as a driver, it's hard to drive on Bloor street and make turns. You can't see cyclists when turning."



AGE AND GENDER

Research shows that women and older adults are under-represented among people who cycle in cities across North America, likely because of heightened safety concerns (Dill & Voros, 2007; Twaddle, Hall & Bracic, 2010; Damant-Sirois & El-Geneidy, 2015). As part of the bicycle counts undertaken for this study, counters estimated the age and gender of people cycling to examine whether these gaps exist along Bloor Street and whether the bike lane had helped to close them. The number of women and older adults cycling increased by 91% and 69% respectively along Bloor Street, compared with 80% overall, and age and gender gaps still exist. Women are close to parity, representing 43% of people counted cycling on Bloor Street after the bike lane was installed. The proportion of riders aged 50 and older remained at 12%, though they make up 31% of the population in the surrounding neighbourhoods (Statistics Canada, 2017).

In the responses to the visitor survey, some additional differences came to light. The number of women who reported cycling on Bloor Street at least once per week grew by 65% (from 24% to 40%, see Figure 37)($p<0.001$), a rate that was nearly three times higher than among men ($p<0.01$) (see Figure 39). Before the bike lane was installed, very few women reported that they would feel safe cycling along Bloor (12%). This number grew by 379% (p-value <0.001), increasing significantly more than men ($p<0.01$) and nearly reaching the same level as men (58% for women versus 64% for men, see Figures 38 and 39).

Children did not complete the visitor survey, so similar data is not available for this age category. For older adults, the proportion who reported cycling on Bloor Street at least once a week remained quite a bit lower than other visitors (30% versus 45%, p-value <0.01), but this number represented a growth of 89% ($p<0.001$), nearly three times the increase seen in other age groups (see Figure 38). A majority (56%) of respondents over 50 years old said they would feel safe cycling on Bloor Street, a number which was close to, but still lower than other visitors (63%, see Figures 39 and 40) ($p<0.05$).

These findings indicate that the Bloor Street bike lane has made progress towards addressing gender and age disparities among people who cycle, but has not closed these gaps entirely. An enhanced bike lane design would offer greater protection and may further encourage these groups.

	Pre *(n=842)*	Post *(n=1577)*	Change
All visitors	**29%**	**42%**	**12%**
Women	24%	40%	16%
Men	35%	43%	8%
under 30 years old	32%	43%	11%
30 to 50 years old	37%	47%	10%
50 and up	16%	30%	14%

Figure 37. Changes in Gender and Age for Visitors Cycling on Bloor Street At Least One Day Per Week
Question: From May to September, how many days per week do you ride a bike on Bloor Street in this location?

	Bloor		Danforth	
	Pre *(n=842)*	Post *(n=1577)*	Pre *(n=173)*	Post *(n=412)*
All visitors	**17%**	**61%**	**22%**	**10%**
Women	12%	58%	22%	8%
Men	22%	64%	24%	12%
under 30 years old	18%	62%	22%	8%
30 to 50 years old	19%	64%	21%	9%
50 and up	22%	55%	26%	15%

Figure 38. Changes in How Safe Visitors Feel It Is To Ride A Bicycle On Bloor Street or Danforth Avenue, By Gender and Age
Question:With the current street configuration, how safe do you feel (or would you feel) riding a bicycle on [Bloor St, Danforth]?

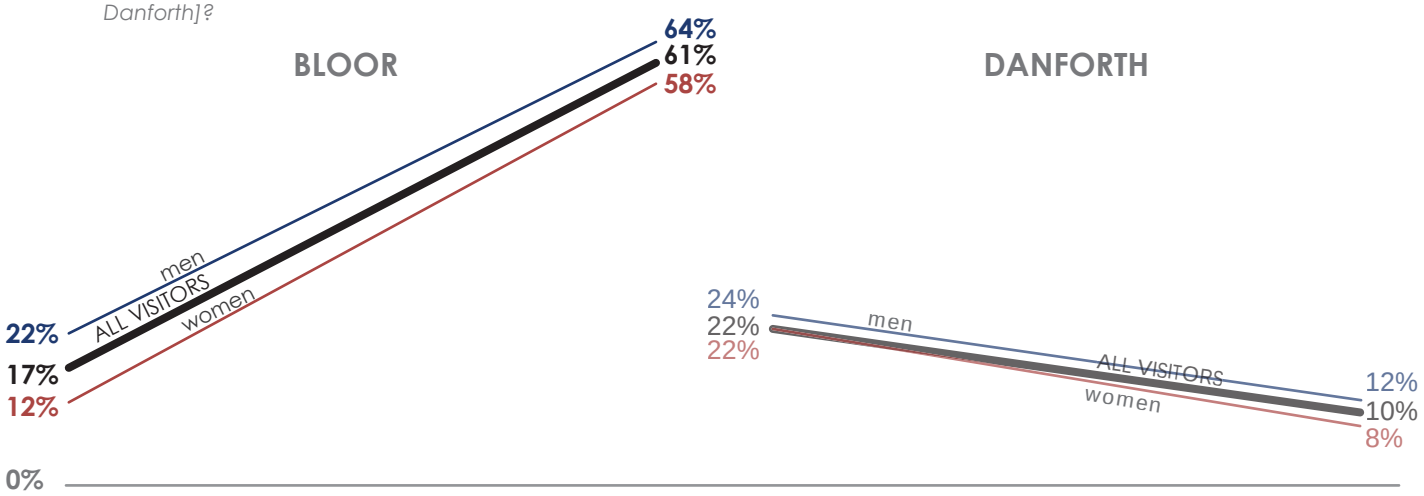


Figure 39. Changes in How Safe Visitors Feel It Is To Ride A Bicycle On Bloor Street or Danforth Avenue, By Gender

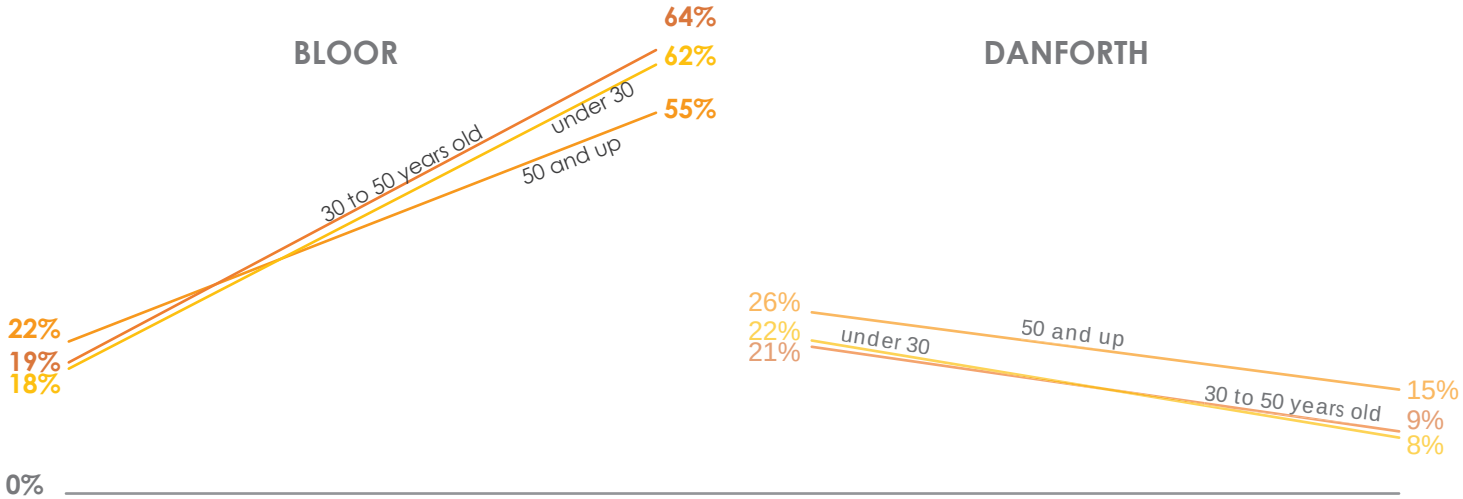


Figure 40. Changes in How Safe Visitors Feel It Is To Ride A Bicycle On Bloor Street or Danforth Avenue, By Age

BIKE LANE FEEDBACK

To gather people's reactions to the bike lanes in a non-leading way, both merchants and visitors were asked an open-ended question: In 2016 the City [is planning to install, installed] a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this? The majority of respondents, both merchants and visitors, gave comments (see Figure 41).

Merchants:	**2015** *(n=191)*	**2016** *(n=175)*	**2017** *(n=159)*
Provided comments	*94%*	*86%*	*90%*
Povided no comments	*6%*	*14%*	*10%*

Visitors:	**Pre** *(n=1015)*	**Post** *(n=1989)*
Provided comments	*96%*	*86%*
Provided no comments	*4%*	*14%*

Figure 41. Percentage of Visitors and Merchants who provided comments, Bloor and Danforth

Specific feedback was categorized according to the most common themes that emerged: safety (concerns and benefits), business (concerns, benefits and unaffected), traffic/congestion, parking (for self or others), deliveries, and bike lane configuration. The remaining feedback was categorized as positive non-specific, negative non-specific, other/unsure. Some respondents' feedback was multi-layered and covered more than one category. In these cases, the feedback was counted more than once, and therefore the percentages in Figure 42 below do not add up to 100%, but rather represent the percentage of thoughts or comments in each category. Because the question was open-ended, and respondents were not provided with a list of possible impacts, survey respondents only spoke about whatever immediately came to mind. As a result, the percentages may not be representative of respondents' opinions on every category.

Figure 42 provides a breakdown of each theme category, and Figure 43 provides some sample comments from each category from the two surveys after the bike lane was installed.

Visitor Feedback

Initially, in 2015, visitors did not offer very extensive feedback, with the average comment prior to the installation of the bike lane only 10 words long. While comments remained fairly short in 2016, by 2017, nine months after the bike lane was installed, visitors were providing more detailed feedback, and the average comment length increased to 19 words.

While visitor comments were generally positive, many also raised concerns or gave suggestions of how the bike lanes could be improved. The most common feedback related to the bike lane's configuration and the safety of the street. Traffic and parking concerns were raised less often. The research team also looked at comments from customers specifically (i.e. those reporting a trip for the purpose of shopping, visiting a food establishment, or receiving a service), but found their comments to be similar to those of all visitors.

Merchant Feedback

Overall, merchants gave more feedback than visitors, but their comments followed a similar pattern of being shorter for the first two surveys (average of 16 words in 2015 and 12 in 2016) and longer for the last one (average of 26 words in 2017). Merchants raised more concerns than visitors, the most common being over impacts to their own business or to businesses on the street in general. Retailers in particular raised the most concerns in this category. Many merchants, however, were also concerned about safety and the bike lane's configuration, and parking and traffic were important issues for them as well. Interestingly, while merchants expressed concern over the loss of on-street parking spots, specifically that it had discouraged those customers who drive, few visitors expressed similar concerns.

Feedback Category	Merchants			Visitors	
	2015 (n=153)	2016 (n=132)	2017 (n=123)	Pre (n=812)	Post (n=1363)
Safety (benefits)	14 (9%)	6 (5%)	8 (7%)	84 (10%)	128 (9%)
Safety (concerns)	10 (7%)	48 (36%)	43 (35%)	23 (3%)	317 (23%)
Business (benefits or unaffected)	6 (4%)	9 (7%)	8 (7%)	6 (1%)	12 (1%)
Business (concerns)	13 (8%)	41 (31%)	46 (37%)	10 (1%)	74 (5%)
Traffic/ Congestion	26 (17%)	11 (8%)	37 (30%)	42 (5%)	112 (8%)
Parking (for self and others)	19 (12%)	40 (30%)	44 (36%)	38 (5%)	92 (7%)
Deliveries	5 (3%)	12 (9%)	21 (17%)	3 (0%)	13 (1%)
Bike Lane Configuration	NA	15 (11%)	28 (23%)	NA	328 (24%)
Positive (non-specific)	74 (48%)	9 (7%)	16 (13%)	657 (81%)	587 (43%)
Negative (non-specific)	41 (27%)	8 (6%)	7 (6%)	73 (9%)	66 (5%)
Other/Unsure	23 (15%)	13 (10%)	27 (22%)	37 (5%)	354 (26%)

Figure 42. Categories of comments from visitors and merchants, Bloor

Visitors		Merchants
"They're great! Makes it safer."	Safety Benefits	"Like them. It feels safer. Don't like them as a driver, but still choose to keep them."
"A little unsafe for pedestrians." "As a cyclist and pedestrian, I love the bike lanes. But as a driver, it's hard to drive on Bloor Street and make turns. You can't see the cyclists when turning."	Safety Concerns	"Bike lanes are super unsafe for all parties. There are no lights at the Clinton intersection, so there's a lot of accidents. Bike lanes make it worse. Get rid of the bike lanes."
"Heard that it was causing problems for businesses in the area."	Business	"Average sales down 5-8% since the bike lanes were installed. That's a significant drop and sales were up the year previously." "Bad for business. We've seen a 30% decline, laid off staff, cut staff hours. I've heard customer complaints. Retailer morale is affected. Deliveries are difficult. 70% of my cycling clients are upset about the bike lanes." "It hasn't affected us."
"Too much traffic because of the bike lanes. Bloor is not the right street for bikes. Just expand the one on Harbord – that one is much safer and better."	Traffic/ Congestion	"Get rid of it. If there were two lanes, it would be different. The street is too busy. Rush hour gets backed up. Congested. Cars are year round, bikes are only 6 months a year. Customers complain. It affects business."
"Bike lanes should be on only one side of the road. The lane is good because I would ride on the sidewalk if it wasn't there, but parking is too hard now."	Parking	"They should have had one bike lane active at a time, so that East is open in the morning, and West in the evening. This allows cyclists to commute at times of rush hour, while keeping parking present. I like the bike lanes but the lack of parking affects businesses." "Ever since there was a bike lane, customers complain about finding parking on the streets, which is cheaper than the lots or underground parking."
"The bike lanes need divisions between the street and the lane." "Bike lanes are better than no bike lanes, but the cars opening doors are a problem. Cars making turns are also a huge problem. Some solutions are needed." "Would actually ride a bike with the extra lanes, but they need to have different safety features."	Bike Lane Configuration	"I think that it confuses everyone. Cars do not know how to park. People do not know where to drop off. Passengers do not know to check for bikes. The bike lanes are good but not the way they are. Bollards get run over a lot. It is hard to park in the lines. Bollards are in blind spots. Traffic is worse on Bloor."
	Deliveries	"Delivery is hard, so I don't like the bike lanes."
"Love them. Keep the bike lanes." "They seem to be working."	Positive, Non-Specific	"I like the bike lanes."
"They should be removed."	Negative Non-Specific	"I personally don't like them."
"People are still adjusting to the bike lane."	Other, Unsure	"Snow will be a challenge."

Figure 43. Sample of Visitor and Merchant Comments from 2016 and 2017
Question: In 2016, the City installed a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?

Discussion

Streets are a finite resource. In densely populated and growing Toronto neighbourhoods, such as Bloor Annex and Korea Town, the streets cannot expand to accommodate more users – there is simply no more room. As a result, the existing space on the street is precious and must be allocated carefully to achieve the highest level of benefit from a limited amount of space. To further complicate matters, benefits can be measured many ways, such as efficiency (highest throughput of people), safety (fewest collisions), environmental (lowest greenhouse gas emissions), community vibrancy (public use of the space) and economic vitality (success of local businesses).

By asking people about their travel patterns, the research team determined that over 70% of visitors walk or take transit to Bloor Street. Aside from some safety concerns when crossing Bloor Street, these visitors' journeys were mostly unaffected by the street's reconfiguration, and any changes in visiting and spending habits were likely in response to factors unrelated to the bike lane, such as changing demographics or the increasing ease and convenience of shopping online.

People arriving by bicycle or by car were more deeply affected by the bike lane. The new design had a positive benefit for people arriving by bike by substantially increasing how safe these visitors felt traveling in the area. As a result, more people chose to travel to the street by bicycle, with the percentage rising from 7% to 18%, an increase substantially higher than on Danforth Avenue. Moreover, people on bikes, like people on foot, are mostly locally-based, and as a result, they tended to visit more frequently and spend more per month than drivers or transit users.

Both Bloor Street and Danforth Avenue saw an increase in visitors choosing to arrive by car, although overall this subset remains small (10% on Bloor Street, 19% on Danforth Avenue). People who drove also reported visiting more frequently and spending more money than previously, even though parking difficulty increased on both Bloor Street and Danforth Avenue. The bike lane can provide a benefit to people driving by separating bicycles and motor vehicle traffic. The highest concern of people driving, and of all visitors generally, was safety. Visitors and merchants raised safety issues connected with the new design, including cycling-walking and cycling-driving conflicts. The frequency with which these concerns were raised reveals the priorities of visitors with respect to city streets: first and foremost, they expect them to be safe, and second, they expect them to be efficient. Few expect to find parking easily in a downtown neighbourhood.

The highest concern of people driving, and of all visitors generally, was safety.

These mostly positive travel outcomes help explain the positive results from the metrics used by the research team to measure economic impact.

The study found that spending was related to proximity, rather than parking as is commonly believed. Being close by makes it easier to visit, and those that live or work in the area were found to visit 13 days more per month than those who live or work further away. Visiting more results in more spending, and locally-based visitors were 2.6 times more likely to spend at least $100 per month. For each additional day visited, the likelihood of spending $100 or more increased by 7.3%.

The majority of people making these short, frequent trips chose to walk and, increasingly, to cycle. People who drove or took transit visited nearly four days less per month. More visiting affords more opportunities to spend, and on Bloor Street, people who walk or bike were the most likely to spend $100 or more per month, both before and after the bike lane's installation. After installation, people on bicycle had a 16% increased

likelihood over people who walked of spending at least $100. These findings align with the results of TCAT's 2009 study in the Bloor Annex neighbourhood, which also found that people on bike and on foot visited the most often and spent the most money per month (Sztabinski, 2009).

Of nearly 2,000 visitors surveyed in the post-test, 90% of those on Bloor Street and 81% on Danforth arrived without using a car. (Again, these findings correspond to earlier research, which found that only 10% of visitors to the Bloor Annex neighbourhood arrive by car (Sztabinski, 2009)). Despite the potential need to carry items purchased, shoppers were not more likely than other visitors to use a car. In 2015, parking was very easy to find on both streets, with 92% of those arriving on Bloor Street by car reporting no difficulty, and 86% on Danforth Ave. Parking difficulty has since grown on both streets, but the majority of people arriving by car still found parking easily (67% on Bloor, 75% on Danforth). Moreover, because the number of visitors choosing to arrive by car is small, when looking at visitors overall, the percentage who needed to find car parking and experienced difficulty is small: 3% on Bloor and 4% on Danforth.

Further economic indicators of customer frequency and vacancy rates also returned positive results. Most visitors reported coming to Bloor Street more often, and most, though not all, merchants reported seeing more customers, while vacancy rates held nearly steady, dropping from 6.5% to 6.1%. Danforth Ave saw increases in customer counts that were stronger than on Bloor Street, but reported visit frequency remained unchanged. Its vacancy rate declined from 5.2% to 3.4%, representing two fewer commercial vacancies, compared with one fewer in the Bloor study area.

Of nearly 2,000 visitors surveyed in the post-test, 90% of those on Bloor Street and 81% on Danforth arrived without using a car.

There is a discrepancy, however, between these positive economic indicators and the number of concerns raised among merchants regarding the bike lane and its impacts on their own businesses or on the economic vitality of the street in general. While there was variation in the number of daily customers between 2015 and 2017 in all three locations, overall, we saw an increase in the stated number of customers by merchants.

It's possible that the disconnect could be partly due to external pressures (e.g. rising rents, property taxes, the growth of e-commerce, etc.), or to the far greater proportion of merchants who drive to the area and as a result may have more negative travel experiences than their customers. More of them contend on a daily basis with the reduced traffic lanes and increased parking difficulty that over 90% of their customer base avoids by walking, taking transit or cycling. Merchants believe that a high number of their customers face these challenges; over half of merchants estimated that at least one quarter of their customers arrive by car. However, the street-level surveys found that less than 10% of those coming to Bloor Street to spend money did so by car, and of these, the majority had no difficulty finding parking.

The small business environment in Toronto is a difficult one, and the negative impacts reported by some businesses could be due to one or many of the threats that have materialized over the past couple of years. Bloor Street, as with many of Toronto's main streets, faces intense pressure from rising property values, which heighten the cost of running a business. The neighbourhood's demographic make-up is shifting, and even greater change is imminent with new, high-rise developments on the horizon. On a broader scale, the rapid growth of e-commerce has sparked a recent downturn in traditional, brick-and-mortar retail, and small businesses are particularly vulnerable. In the face of these challenges, supports for small business through programs such as Digital Main Street will become increasingly important in the future.

Conclusion

This study set out to investigate the economic impacts – positive, negative or neutral – of installing a bike lane on Bloor Street, as compared to a similar street with no bike lane (Danforth Avenue), and to understand the role played by shifts in travel patterns and attitudes of both visitors and merchants.

Four different sources of data were used to estimate economic impact before and twice after the installation of the bike lane (after three months, and again after eight months): 1) estimated customer counts from merchant surveys, 2) estimated spending from visitor surveys, 3) visit frequency from visitor surveys, and 4) business vacancy counts from a street level scan. Overall, these four indicators point to increased economic activity on Bloor Street. Most merchants reported a higher number of customers than before the bike lane's installation, visitors gave higher estimates of spending and visit frequency, and vacancy rates were stable.

However, these four indicators also showed similar growth on the Danforth, so the positive outcomes may be attributable to other factors, and not the bike lane. Nevertheless, these early indicators point to a positive, or at least neutral, economic impact of the bike lane.

Among customers to Bloor Street, cycling almost tripled as a travel choice (from 7% to 20%). Walking remained the most popular travel choice (48%) and driving is now the least (10%). Merchants, on the other hand, preferred to drive (49%) and there was no increase in cycling, which remained the least preferred travel choice (6%).

After the installation of the bike lane, the proportion of visitors who perceived Bloor Street as safe for cycling more than tripled (from 17% to 61%) and doubled among merchants (from 13% to 27%). However, safety remained a paramount concern of both visitors and merchants, and many made suggestions for how to improve the bike lane's configuration.

There is a discrepancy between the number of specific concerns raised among merchants and the overall positive economic indicators found in this study. Merchants raised many more concerns than visitors, the most common being over impacts to business, but safety, parking and traffic congestion were also important issues.

Additional Considerations

1. **Review third party payment platform data.**
Independent sales data from third party payment platforms, such as Visa, Moneris or Apple Pay, would help to provide a fuller picture of sales trends, and the City is currently working to attain this type of data. The City may also wish to investigate other sources of data which were not yet available at the time of this study's publication, for example the Centre for the Study of Commercial Activity's Toronto database and the Planning Division's Toronto Employment Survey. These sources could be used to explore shifts in retail composition and sizes of business, in addition to vacancies. Both of these datasets should be available in early 2018.

2. **Consider all factors.**
It is important that the economic impact be considered in context with other benefits. Economic analysis is just one of a number of study tools available to planners and politicians when measuring the benefits of a new street design. The findings should be weighed carefully against the City's priorities, particularly the 2017-2021 Vision Zero Road Safety plan, along with all available evidence.

3. **Extend economic impact tracking.**
While the bike lane itself was installed in a matter of weeks, it takes time for the street to respond. Particularly from the perspective of economic impact, it will likely take longer than one year for the full effect (positive or negative) of the bike lane to be felt. The Department of Transportation in New York City, a leader in this field, recommends tracking economic vitality for two to three years after a significant change has been made, and comparing the findings against neighbouring streets and the district as a whole (NYC DOT, 2013).

4. **Review bike lane design configuration.**
The study revealed the high priority Torontonians place on safety and found evidence that while the majority of visitors feel it is now safer to ride a bicycle on Bloor Street, some visitors (women and older adults in particular), still feel unsafe in the bike lane. The current design is a pilot and uses temporary materials, such as paint and flexi-posts. Many of these issues could be addressed through an enhanced design, and the safety analysis conducted by the City for the pilot project could be used to identify specific problem areas.

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Appendix A: Data Collection Dates and Times

Pre-Test (2015):

Date	Weather Conditions	Bicycle Counts	Visitor Survey	Business Survey
Saturday, October 17, 2015	5°C and cloudy with brief flurries		2-7pm	
Thursday, October 22, 2015	13°C and sunny		12-6pm	
Friday, October 23, 2015	10°C and sunny		12-6pm	
Monday, October 26, 2015	10°C and sunny	4-6pm		
Thursday, October 29, 2015	9°C and windy with partial sun		12-6pm	
Friday, October 30, 2015	8°C and sunny		12-6pm	
Saturday, October 31, 2015	8°C and cloudy	12-2pm		
Thursday, November 5, 2015	12°C and sunny		12-5:30pm	
Monday, November 9, 2015	8°C and sunny	4-6pm		
Friday, November 13, 2015	9°C and raining			12-4pm
Saturday, November 14, 2015	6°C and partial sun			12-5pm
Sunday, November 22, 2015	1°C and partial sun			12-3pm
Thursday, November 26, 2015	9°C and clear	8-10pm		
Saturday, November 28, 2015	1°C and sunny	12-2pm		
Monday, November 30, 2015	3°C and partial sun			11am-12pm
Wednesday, December 2, 2015	7°C and sunny			11am-1pm
Monday, December 14, 2015	12°C and partial sun			11am-4pm

Post-Test I (2016):

Date	Weather Conditions	Bicycle Counts	Visitor Survey	Business Survey
Tuesday, October 11, 2016	15 degrees and cloudy	4-6pm		
Friday, October 21, 2016	12 degrees and clear			1-4pm
Friday, October 28, 2016	8 degrees and cloudy		3-6pm	
Saturday October 29, 2016	17 degrees and cloudy	12-2pm	2-4pm	
Tuesday, November 1, 2016	12 degrees and clear	4-6pm		
Thursday, November 3, 2016	3 degrees and clear	8-10pm		6-8pm
Monday, November 7, 2016	15 degrees and clear		12-6pm	

Tuesday, November 8, 2016	14 degrees and cloudy		11-4pm	
Friday, November 11, 2016	6 degrees and cloudy		11-5pm	
Saturday November 12, 2016	10 degrees and clear	12-2pm	11-5pm	
Monday, November 14, 2016	14 degrees and clear		11-4pm	
Tuesday, November 15, 2016	12 degrees and cloudy		11-4pm	
Wednesday, November 16, 2016	12 degrees and clear		11-4pm	
Thursday, November 17, 2016	10 degrees and clear			11-4pm, 5-9pm
Friday, November 18, 2016	15 degrees and cloudy			12-4pm
Monday, November 28, 2016	7 degrees and cloudy			12-4pm
Tuesday, November 29, 2016	14 degrees and cloudy			12-5pm
Wednesday, November 30, 2016	11 degrees and rainy			12-3pm
Thursday, December 1, 2016	5 degrees and cloudy			10-3pm
Friday, December 2, 2016	5 degrees and cloudy			10-3pm

Post-Test II (2017):

Date	**Weather Conditions**	**Bicycle Counts**	**Visitor Survey**	**Business Survey**
Monday, May, 1, 2017	10 degrees on and off rain			12-4pm
Tuesday, May, 2, 2017	9 degrees windy and cloudy	4-6pm		12-4pm
Wednesday, May, 3, 2017	13 degrees clear and sunny		12-5pm	
Thursday, May, 4, 2017	8 degrees, cloudy and light rain		12-2pm	2-3pm
Friday, May, 5, 2017	11 degrees and sunny		12-5pm	
Saturday, May, 6, 2017	9 degrees and sunny	4-6pm	12-4pm	
Sunday, May, 7, 2017	10 degrees and sunny		12-5pm	
Monday, May, 8, 2017	12 degrees and cloudy	8-10pm	3-8pm	
Tuesday, May, 9, 2017	15 degrees and sunny	12-2pm	2-5pm	
Wednesday, May, 10, 2017	16 degrees and sunny		1-4pm	4-5pm
Thursday, May, 11, 2017	28 degrees and sunny		12-5pm	
Friday, May, 12, 2017	17 degrees and partial sun	12-2pm		

Appendix B: Survey Questions and Scripts

Bloor Annex Merchant Survey, Fall 2015

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how business owners and their customers get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. On average, about how many customers do you serve per day? (Choose one per question)
   (1) Weekday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more
   (2) Saturday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more

2. How did you get to work today?
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____
   - If by car, where did you park? [A]Intersection/block - Which one?_____
     [B]or Green **P** lot? - Which one?_____
   - If by bike, where did you park? _____
   - If you parked what was your level of ease in finding parking today?
     [A] Very easy [B] Easy [C] Difficult [D] Very difficult

3. How do you usually get to work in the Annex (choose one)?
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other

4. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

5. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
   [A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

6. What percentage of your customers or clients would you estimate come to the Annex by bike, car, transit or on foot?

Bike	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Car	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Transit	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Foot	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%

7. With the current street configuration, how safe do you feel (or *would* you feel) riding a bicycle on Bloor St.?
   [A] Very safe
   [B] Safe
   [C] Neither safe nor unsafe
   [D] Unsafe
   [E] Very unsafe

8. In 2016 the City is planning to install a bike lane on Bloor Street on a trial basis. As a business operator, do you have any thoughts or comments on this?
(Please comment on back)

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:
[0-30] [30-50] [50+]

Gender: [M] [F]

Please note type of business:
Retail Food service/bar Service
Other:

Korea Town Merchant Survey, Fall 2015

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how business owners and their customers get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. On average, about how many customers do you serve per day? (Choose one per question)
   (1) Weekday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more
   (2) Saturday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more

2. How did you get to work today?
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____
   - If by car, where did you park? [A]Intersection/block - Which one?_____
     [B]or Green **P** lot? - Which one?_____
   - If by bike, where did you park? _____
   - If you parked what was your level of ease in finding parking today?
     [A] Very easy [B] Easy [C] Difficult [D] Very difficult

3. How do you usually get to work in Korea Town (choose one)?
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other

4. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

5. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
   [A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

6. What percentage of your customers or clients would you estimate come to Korea Town by bike, car, transit or on foot?

Bike	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Car	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Transit	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Foot	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%

7. With the current street configuration, how safe do you feel (or *would* you feel) riding a bicycle on Bloor St.?
   [A] Very safe
   [B] Safe
   [C] Neither safe nor unsafe
   [D] Unsafe
   [E] Very unsafe

8. In 2016 the City is planning to install a bike lane on Bloor Street on a trial basis. As a business operator, do you have any thoughts or comments on this? (Please comment on back)

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:
[0-30] [30-50] [50+]

Gender: [M] [F]

Please note type of business:
Retail Food service/bar Service
Other:

한인 타운 자영업 종사자 설문조사

안녕하십니까? 블루어-에넥스와 코리아 타운 BIA 의 주도로 지역내 자영업 현황 및 자영업 종사자들과 고객들의 통행 실태에 대한 설문 조사를 진행하고 있습니다. 본 설문 조사는 약 2 분 정도 소요될 예정입니다. 여러분들의 많은 참여 부탁드립니다.

1. 평균적으로 하루 얼마나 많은 고객들이 찾아오십니까? (문항당 하나를 선택해주세요)
(1) 주중: [A] 25명 미만 [B]25-59 명 [C]50-99명 [D] 100-199명 [E] 200 명 이상
(2) 토요일:[A] 25명 미만 [B]25-59 명 [C]50-99명 [D] 100-199명 [E] 200 명 이상

2. 귀하는 오늘 이곳에 어떻게 오셨습니까?

[A] 도보 [B] 자전거 [C] 공공교통 [D] 택시 [E] 자동차 [F] 기타_____

- 만약 자동차라면 어디에 주차하셨습니까? [A] 교차로 또는 노변주차 _____
[B] 공공 주차장 _____

- 만약 자전거라면 어디에 주차하셨습니까? _____
- 오늘 주차하실때 주차 공간을 쉽게 찾을 수 있었습니까?
[A] 매우 쉬웠다 [B] 쉬웠다 [C] 어려웠다. [D] 매우어려웠다.

3. 귀하는 주로 어떤 방법을 통해 한인타운에 가십니까 (하나만 골라주세요)?
[A] 도보 [B] 자전거 [C] 공공교통 [D] 택시 [E] 자동차 [F] 기타

4. 귀하의 거주지는 어디십니까? [A]주요교차로_____[B]우편번호_____

5. 5 월부터 9 월 사이에, 귀하는 한 주에 며칠 블루어 거리에서 자전거를 타십니까?

[A] 거의 타지 않는다. [B]1 일 [C] 2-4 일 [D] 5-7 일 [E] 전혀 타지 않는다.

6. 귀하의 고객들 중 명 %의 고객들이 자전거, 자동차, 공공교통 또는 도보로 한인타운에 온다고 보십니까?

자전거	[A] 25% 미만	[B] 25-50%	[C] 50-75%	[D] 75% 이상
자동차	[A] 25% 미만	[B] 25-50%	[C] 50-75%	[D] 75% 이상
공공교통	[A] 25% 미만	[B] 25-50%	[C] 50-75%	[D] 75% 이상
도보	[A] 25% 미만	[B] 25-50%	[C] 50-75%	[D] 75% 이상

7. 지금의 상황을 고려했을때, 블루어 거리에서 자전거를 타는 것에 대해 귀하는 어떻게 생각하십니까?

[A] 매우 안전하다

[B] 안전하다

[C] 안전하지도 위험하지도 않다.

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:

[0-30] [30-50] [50+]

Gender: [M] [F]

[D] 위험하다
[E] 매우 위험하다.

8. 2016 년 토론토 시에서는 블루어 거리에 자전거 도로를 시범적으로 운영할 계획에 있습니다. 귀하의 의견은 무엇입니까?
(Please comment on below)

Please note type of business:
Retail Food service/bar Service
Other:

Danforth Merchant Survey, Fall 2015

Hello! We are students working on a project with the University of Toronto. We are conducting a survey regarding local business and how business owners and their customers get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. On average, about how many customers do you serve per day? (Choose one per question)
   (1) Weekday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more
   (2) Saturday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more

2. How did you get to work today?
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

   - If by car, where did you park? [A]Intersection/block - Which one?_____
     [B]or Green **P** lot? - Which one?_____
   - If by bike, where did you park? _____
   - If you parked what was your level of ease in finding parking today?
     [A] Very easy [B] Easy [C] Difficult [D] Very difficult

3. How do you usually get to work in the Danforth (choose one)?
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other

4. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

5. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
   [A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

6. What percentage of your customers or clients would you estimate come to the Danforth by bike, car, transit or on foot?

   Bike [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%
   Car [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%
   Transit [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%
   Foot [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%

7. With the current street configuration, how safe do you feel (or *would* you feel) riding a bicycle on the Danforth?
   [A] Very safe
   [B] Safe
   [C] Neither safe nor unsafe
   [D] Unsafe
   [E] Very unsafe

8. In 2016 the City is planning to install a bike lane on Bloor Street on a trial basis. As a business operator, do you have any thoughts or comments on this? (Please comment on back)

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:
[0-30] [30-50] [50+]

Gender: [M] [F]

Please note type of business:
Retail Food service/bar Service
Other:

Bloor Annex Pedestrian Survey, Fall 2015

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how people get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. Do you live or work in the area?
[A] Yes [B] No

2. In a typical month, how many days doyou visit this area of Bloor Street? _____

3. About how much money doyou spend in the Annex in a typical month?
[A] Less than $25 [B] $25-99 [C] $100-499 [D] $500-999 [E] $1,000 or more

4. What is the purpose of your trip to the Annex today? (Check all that apply)
[A] Shopping
[B] Restaurant / Bar / Café
[C] Services (e.g., copy centre, medical or legal)
[D] Visitingfriends
[E] I live here
[F] I work here
[G] I'm just passing through
[H] Other_____

5. How did you get to here today?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

- If by car, where did you park? [A]Intersection/block - Which one?_____
  [B]or Green **P** lot? - Which one?_____
- If by bike, where did you park? _____
- If you parked what was your level of ease in finding parking today?
  [A] Very easy [B] Easy [C] Difficult [D] Very difficult

6. How do you usually get to the Annex (choose one)?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other

7. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

8. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
[A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

9. With the current street configuration, how safe do you feel (or *would* you feel) riding a bicycle on Bloor St.?
[A] Very safe
[B] Safe
[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

10. In 2016 the City is planning to install a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?
(Please comment on back)

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:
[0-30] [30-50] [50+]

Gender: [M] [F]

Korea Town Pedestrian Survey, Fall 2015

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how people get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. Do you live or work in the area?
[A] Yes [B] No

2. In a typical month, how many days doyou visit this area of Bloor Street? _____

3. About how much money doyou spend in Korea Town in a typical month?
[A] Less than $25 [B] $25-99 [C] $100-499 [D] $500-999 [E] $1,000 or more

4. What is the purpose of your trip to Korea Town today? (Check all that apply)
[A] Shopping
[B] Restaurant / Bar / Café
[C] Services (e.g., copy centre, medical or legal)
[D] Visitingfriends
[E] I live here
[F] I work here
[G] I'm just passing through
[H] Other_____

5. How did you get to here today?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

- If by car, where did you park? [A]Intersection/block - Which one?_____
  [B]or Green **P** lot? - Which one?_____
- If by bike, where did you park? _____
- If you parked what was your level of ease in finding parking today?
  [A] Very easy [B] Easy [C] Difficult [D] Very difficult

6. How do you usually get to Korea Town (choose one)?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other

7. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

8. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
[A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

9. With the current street configuration, how safe do you feel (or *would* you feel) riding a bicycle on Bloor St.?
[A] Very safe
[B] Safe
[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

10. In 2016 the City is planning to install a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?
(Please comment on back)

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:
[0-30] [30-50] [50+]

Gender: [M] [F]

한인타운 보행자 통행 설문 조사

안녕하십니까? 지역 비즈니스와 통행실태를 조사하기 위해 블루어-에넥스와 코리아 타운 BIA 에서 공동 설문조사를 진행하고 있습니다. 본 설문 조사는 2 분 정도 소요될 예정이니 많은 참여 부탁드립니다.

1. 귀하는 이곳에서 거주하시거나 일을 하고 계십니까?
[A] 예 [B] 아니오

2. 귀하는 월평균 얼마나 자주 블루어 거리를 방문하십니까? _____

3. 귀하는 월평균 한인 타운에서 얼마를 소비하십니까?
[A] $25 미만 [B] $25-99 [C] $100-499 [D] $500-999 [E] $1,000 이상

4. 귀하께서 오늘 한인타운을 방문하신 이유는 무엇입니까 ? (해당사항 모두 선택)
[A] 쇼핑
[B] 레스토랑/술집/ 카페
[C] 서비스 - 예) 복사, 의료, 법률 서비스 등-
[D] 친구를 만나기 위해
[E] 거주
[F] 직장
[G] 지나가는 길
[H] 기타_____

5. 귀하는 오늘 이곳에 어떻게 오셨습니까?
[A] 도보 [B] 자전거 [C] 공공교통 [D]택시 [E] 자동차 [F] 기타_____

만약 자동차라면 어디에 주차하셨습니까? [A] 교차로 또는 노변주차 - _____
[B] 공공 주차장 - _____

만약 자전거라면 어디에 주차하셨습니까? _____

6. 오늘 주차하실때 주차 공간을 쉽게 찾을 수 있었습니까?
[A] 매우쉬웠다. [B] 쉬웠다. [C] 어려웠다. [D] 매우 어려웠다.

7. 귀하는 주로 어떤 방법을 통해 한인타운에 가십니까 (하나만 골라주세요)?
[A] 도보 [B] 자전거 [C] 공공교통 [D] 택시 [E] 자동차 [F] 기타

8. 귀하의 거주지는 어디십니까? [A] 주요교차로_____ [B] 우편번호_____

9. 5 월부터 9 월 사이에, 귀하는 한 주에 며칠 블루어 거리에서 자전거를 타십니까?

[A] 거의 타지 않는다. [B] 1 일 [C] 2-4 일 [D] 5-7 일 [E] 전혀 타지 않는다.

10. 블루어 거리에서 자전거를 타는 것에 대해 귀하는 어떻게 생각하십니까?

[A] 매우 안전하다

[B] 안전하다

[C] 안전하지도 위험하지도 않다

[D] 위험하다

[E] 매우 위험하다.

11. 2016 년 토론토 시에서는 블루어 거리에 자전거 도로를 시범적으로 운영할 계획에 있습니다. 귀하의 의견은 무엇입니까?

DATE: _____

TIME: _____ SURVEY

LOCATION:_____ SURVEYOR'S

NAME:_____

ID #	AGE: [0-30] [30-50] [50+] GENDER: [M] [F]

-감사합니다.-

Danforth Pedestrian Survey, Fall 2015

Hello! We are students working on a project with the University of Toronto. We are conducting a survey regarding local business and how people get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. Do you live or work in the area?
[A] Yes [B] No

2. In a typical month, how many days doyou visit this area of Bloor Street? _____

3. About how much money doyou spend on the Danforth in a typical month?
[A] Less than $25 [B] $25-99 [C] $100-499 [D] $500-999 [E] $1,000 or more

4. What is the purpose of your trip to the Danforth today? (Check all that apply)
[A] Shopping
[B] Restaurant / Bar / Café
[C] Services (e.g., copy centre, medical or legal)
[D] Visitingfriends
[E] I livehere
[F] I workhere
[G] I'm just passing through
[H] Other_____

5. How did you get to here today?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

- If by car, where did you park? [A]Intersection/block - Which one?_____
  [B]or Green **P** lot? - Which one?_____
- If by bike, where did you park? _____
- If you parked what was your level of ease in finding parking today?
  [A] Very easy [B] Easy [C] Difficult [D] Very difficult

6. How do you usually get to the Danforth (choose one)?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other

7. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

8. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
[A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

9. With the current street configuration, how safe do you feel (or *would* you feel) riding a bicycle on Bloor St.?
[A] Very safe
[B] Safe
[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

10. In 2016 the City is planning to install a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?
(Please comment on back)

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:
[0-30] [30-50] [50+]

Gender: [M] [F]

Bloor Annex Merchant Survey, Fall 2016/Spring 2017

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how business owners and their customers get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. On average, about how many customers do you serve per day? (*Choose one per question*)
   (1) Weekday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more
   (2) Saturday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more

2. How did you get to work today? (*Choose one*)
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____
   - If by car, where did you park? [A]Intersection/block - Which one?_____
     [B]or Green **P** lot? - Which one?_____
   - If by bike, where did you park? _____
   - If you parked what was your level of ease in finding parking today?
     [A] Very easy [B] Easy [C] Difficult [D] Very difficult

3. How do you usually get to work in the Annex? (*Choose one*)
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

4. Has there been a change in how you usually get to work in the Annex since the Bloor bike lane was installed?
   Yes / No
   If yes, how did you used to get to the Annex? (*Choose one*)
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

5. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

6. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
   [A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

7. What percentage of your customers or clients would you estimate come to the Annex by bike, car, transit or on foot?

Bike	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Car	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Transit	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Foot	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%

8. With the current street configuration, how safe do you feel (or *would* you feel if you don't currently ride) riding a bicycle on Bloor St.?
   [A] Very safe
   [B] Safe

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

9. In 2016 the City installed a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?

ID #

Age group:

[0-30] [30-50] [50+]

Gender: [M] [F]

Please note type of business:
Retail Food service/bar Service
Other:

Korea Town Merchant Survey, Fall 2016/Spring 2017

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how business owners and their customers get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. On average, about how many customers do you serve per day? (*Choose one per question*)
   (1) Weekday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more
   (2) Saturday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more

2. How did you get to work today? (*Choose one*)
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____
   - If by car, where did you park? [A]Intersection/block - Which one?_____
     [B]or Green **P** lot? - Which one?_____
   - If by bike, where did you park? _____
   - If you parked what was your level of ease in finding parking today?
     [A] Very easy [B] Easy [C] Difficult [D] Very difficult

3. How do you usually get to work in Korea Town? (*Choose one*)
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

4. Has there been a change in how you usually get to work in Korea Town since the Bloor bike lane was installed?
   Yes / No
   If yes, how did you used to get to Korea Town? (*Choose one*)
   [A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

5. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

6. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
   [A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

7. What percentage of your customers or clients would you estimate come to Korea Town by bike, car, transit or on foot?

Bike	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Car	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Transit	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%
Foot	[A] less than 25%	[B] 25-50%	[C] 50-75%	[D] over 75%

8. With the current street configuration, how safe do you feel (or *would* you feel if you don't currently ride) riding a bicycle on Bloor St.?
   [A] Very safe
   [B] Safe

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

9. In 2016 the City installed a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?

ID #

Age group:

[0-30] [30-50] [50+]

Gender: [M] [F]

Please note type of business:
Retail Food service/bar Service
Other:

Danforth Merchant Survey, Fall 2016/Spring 2017

Hello! We are students working on a project with the University of Toronto. We are conducting a survey regarding local business and how business owners and their customers get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. On average, about how many customers do you serve per day? (Choose one per question)

(1) Weekday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more

(2) Saturday: [A] Less than 25 [B] 25-49 [C] 50-99 [D] 100-199 [E] 200 or more

2. How did you get to work today?

[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

- If by car, where did you park? [A]Intersection/block - Which one?_____

[B]or Green **P** lot? - Which one?_____

- If by bike, where did you park? _____
- If you parked what was your level of ease in finding parking today?
  [A] Very easy [B] Easy [C] Difficult [D] Very difficult

3. How do you usually get to work in the Danforth (choose one)?

[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

4. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

5. From May to September, how many days per week do you ride a bike on the Danforth Street in this location?

[A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

6. What percentage of your customers or clients would you estimate usually use the following modes to get to the Danforth?

Bike [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%
Car [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%
Transit [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%
Foot [A] less than 25% [B] 25-50% [C] 50-75% [D] over 75%

9. In 2016 the City installed a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?

Please note type of business:
Retail Food service/bar Service
Other:

Bloor Annex Pedestrian Survey, Fall 2016/Spring 2017

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how people get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. Do you live or work in the Bloor Annex area?
[A] Yes [B] No

2. In a typical month, how many days doyou visit this area of Bloor Street? _____

3. About how much money doyou spend in the Annex in a typical month?
[A] Less than $25 [B] $25-99 [C] $100-499 [D] $500-999 [E] $1,000 or more

4. What is the purpose of your trip to the Annex today? (*Check all that apply*)
[A] Shopping
[B] Restaurant / Bar / Café
[C] Services (e.g., copy centre, medical or legal)
[D] Visitingfriends
[E] I livehere
[F] I workhere
[G] I'm just passing through
[H] Other_____

5. How did you get to Bloor Street today? (*Choose one*)
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

- If by car, where did you park? [A]Intersection/block - Which one?_____
  [B]or Green **P** lot? - Which one?_____
- If by bike, where did you park? _____
- If you parked what was your level of ease in finding parking today?
  [A] Very easy [B] Easy [C] Difficult [D] Very difficult

6. How do you usually get to the Annex? (*Choose one*)
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

7. Has there been a change in how you usually get to the Annex since the Bloor bike lane was installed?
Yes / No
- If yes, how did you used to get to the Annex? (*Choose one*)

[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

8. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

9. From May to September, how many days per week do you ride a bike on Bloor Street in this location?

[A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

10. With the current street configuration, how safe do you feel (or *would* you feel if you don't currently ride) riding a bicycle on Bloor St.?

[A] Very safe
[B] Safe
[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

11. In 2016 the City installed a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

LOCATION ID #

Age group:

[0-30] [30-50] [50+]

Gender: [M] [F]

LANGUAGE:

Did the survey require translation to Korean? (NOTE: ONLY DISPLAYED FOR KOREA TOWN SURVEYS)

Korea Town Pedestrian Survey, Fall 2016/Spring 2017

Hello! On behalf of the Bloor-Annex and Korea Town BIAs, we are conducting a survey regarding local business and how people get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. Do you live or work in the Korea Town area?
[A] Yes [B] No

2. In a typical month, how many days doyou visit this area of Bloor Street? _____

3. About how much money doyou spend in Korea Town in a typical month?
[A] Less than $25 [B] $25-99 [C] $100-499 [D] $500-999 [E] $1,000 or more

4. What is the purpose of your trip to Korea Town today? (*Check all that apply*)
[A] Shopping
[B] Restaurant / Bar / Café
[C] Services (e.g., copy centre, medical or legal)
[D] Visitingfriends
[E] I livehere
[F] I workhere
[G] I'm just passing through
[H] Other_____

5. How did you get to Bloor Street today? (*Choose one*)
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

- If by car, where did you park? [A]Intersection/block - Which one?_____
  [B]or Green **P** lot? - Which one?_____
- If by bike, where did you park? _____
- If you parked what was your level of ease in finding parking today?
  [A] Very easy [B] Easy [C] Difficult [D] Very difficult

6. How do you usually get to Korea Town? (*Choose one*)
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

7. Has there been a change in how you usually get to Korea Town since the Bloor bike lane was installed?
Yes / No
- If yes, how did you used to get to Korea Town? (*Choose one*)

[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

8. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

9. From May to September, how many days per week do you ride a bike on Bloor Street in this location?

[A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

10. With the current street configuration, how safe do you feel (or *would* you feel if you don't currently ride) riding a bicycle on Bloor St.?

[A] Very safe

[B] Safe
[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

11. In 2016 the City installed a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

LOCATION ID #

Age group:

[0-30] [30-50] [50+]

Gender: [M] [F]

LANGUAGE:

Did the survey require translation to Korean? (NOTE: ONLY DISPLAYED FOR KOREA TOWN SURVEYS)

Danforth Pedestrian Survey, Fall 2016/Spring 2017

Hello! We are students working on a project with the University of Toronto. We are conducting a survey regarding local business and how people get here. The survey will take about 2 minutes. Will you help us with the survey today?

1. Do you live or work in the area?
[A] Yes [B] No

2. In a typical month, how many days doyou visit this area of Bloor Street? _____

3. About how much money doyou spend on the Danforth in a typical month?
[A] Less than $25 [B] $25-99 [C] $100-499 [D] $500-999 [E] $1,000 or more

4. What is the purpose of your trip to the Danforth today? (Check all that apply)
[A] Shopping
[B] Restaurant / Bar / Café
[C] Services (e.g., copy centre, medical or legal)
[D] Visitingfriends
[E] I livehere
[F] I workhere
[G] I'm just passing through
[H] Other_____

5. How did you get to here today?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other_____

- If by car, where did you park? [A]Intersection/block - Which one?_____
  [B]or Green **P** lot? - Which one?_____
- If by bike, where did you park? _____
- If you parked what was your level of ease in finding parking today?
  [A] Very easy [B] Easy [C] Difficult [D] Very difficult

6. How do you usually get to the Danforth (choose one)?
[A] Walk [B] Bicycle [C] Public Transit [D] Taxi [E] Car [F] Other

7. Where do you live? [A] Nearest intersection_____[B] Postal Code_____

8. From May to September, how many days per week do you ride a bike on Bloor Street in this location?
[A] Rarely [B] Once a week [C] 2-4 days a week [D] 5-7 days a week [E] Never

9. With the current street configuration, how safe do you feel (or *would* you feel) riding a bicycle on Bloor St.?
[A] Very safe
[B] Safe
[C] Neither safe nor unsafe
[D] Unsafe
[E] Very unsafe

10. In 2016 the City installed a bike lane on Bloor Street on a trial basis. Do you have any thoughts or comments on this?
(Please comment on back)

Date: _____

Time: _____ Survey Location_____

Surveyor's Name:_____

ID #

Age group:
[0-30] [30-50] [50+]

Gender: [M] [F]

Appendix C: Detailed Explanation of Analysis[1]

DESCRIPTIVE STATISTICS

Statistical tests were used to analyze the findings from the visitor and merchant surveys and the bicycle counts. The aim of these tests was to determine whether the results were robust, in other words was there enough evidence to be reasonably confident that the same result would have been obtained if we had surveyed every single visitor to Bloor Street. In statistics, a robust result is said to be 'significant,' and significance is determined by finding the p-value, which gives a measure of how likely it is that a different result would be obtained. For example, a "p" that is 0.01 or less indicates that 99 times or more out of 100, you could expect to obtain the same result in the population, while one in 100 times or less, you might obtain a different result. Similarly, a "p" that is 0.05 indicates that 1 in 20 times, you might obtain a different result. Generally, any result with a p-value that is 0.05 or less is considered to be a significant one.

These tests compared the difference in two proportions, for example, between the percent (or proportion) of people who cycled on Bloor Street and the percent of people who cycled on Danforth Avenue, or between the percentages of people who cycled in 2015 and 2017. They also compared the difference in two rates of change, for example, between the increase in people cycling on Danforth Avenue and the increase on Bloor Street. By testing the difference between results from two different study areas or time periods, we can determine whether that difference represents a significant change in people's responses, or whether it is only due to chance, in which case we likely would not have seen the same change if we had surveyed every single visitor to Bloor Street. Essentially, these tests explore the hypothesis that though the two proportions or rates of change may appear to be different in our sample data, there is not enough statistical evidence to say with reasonable certainty that they are actually different in the population as a whole. The alternative is that significant statistical evidence indicates that these two proportions or rates of change are truly different from one another.

In order to run a test on two proportions, a pooled proportion (P) is first calculated, by adding, for example, the people who cycled on Bloor Street (x_1) and the people who cycled on Danforth Avenue (x_2), and dividing this result by all the people who answered this question on each street ($n_1 + n_2$).

$$P = \frac{x_1 + x_2}{n_1 + n_2}$$

Then we need to find the standard error (SE) of the pooled proportion.

$$SE = \sqrt{P(1-P)(1/n_1 + 1/n_2)}$$

The standard error is used to calculate the Z-score, which tells us how close our result is to what we would expect would be the result, based on a random normal distribution of responses. For this, we use the original two proportions, that is, the percent of people who cycled on Bloor Street (P_1) and the percent of people

[1]Similar explanations for these statistical tests previously appeared in Castel, E. & S. Farber. (2017). *Benchmarking the Health and Public Transit Connection in the GTHA: An Analysis of Survey Microdata.* Metrolinx.

who cycled on Danforth Avenue (P_2).

$$Z = \frac{P_1 - P_2}{SE}$$

The Z-score is converted into the p-value which, as explained above, tells us how confident we can be that the difference between the two results represents a significant change between the two sites in the proportion of people who reported cycling.

The process for testing the difference between two rates of change follows similar steps, but uses the rates rather than the proportions.

MODELS

Statistical models (also called multivariate models) are used to estimate the relationship between a single characteristic (e.g. visitor spending) and a set of independent characteristics (e.g. visitor gender, age, proximity, trip purpose, travel choice, etc). Our goal was to use the pre/post and study area/control site design of the study to estimate the independent effects of the bike lane on reported visitor spending and visit frequency on Bloor Street. We do this by removing the effects of the other visitor characteristics (e.g. age, gender, proximity, etc.) that are available in the data. The detailed results from these models can be found in Appendix D.

The first characteristic we explored, monthly visitor spending, was measured using an ordinal scale, meaning visitors picked their answer from a series of increasing options (less than $25, $25-$99, $100-$499, $500-$999, $1,000 or more). For the purposes of this analysis, these answers were combined into two groups: less than $100 and $100 or more, which allowed us to code responses using ones and zeros (0 – less than $100, and 1 – $100 or more). This method is called binary coding, and enabled us to then use binomial logistic regression models to estimate the impact of each independent characteristic on the probability of a visitor reporting spending of at least $100 per month. By doing this, we could capture the effect of the bike lane alone on visitor spending, apart from other changes in the results that were due to differences in the ages, genders, proximity, trip purposes and so on of the visitors in each round of data collection (pre/post and Bloor/ Danforth). We also used this method to test whether people who biked spent more or less than people using other transportation choices to visit Bloor Street.

There are several different equations that could be used for a binomial logistic regression model. The simplest one is:

$P(A \mid X)=1/(1+e^{-X\beta})$

where *A* represents the characteristic we are interested in (e.g. visitor spending of at least $100), and X represents the suite of independent characteristics (e.g. age, gender, proximity, trip purpose, travel choice, etc) that have an influence on the *A* characteristic. $P(A \mid X)$ represents the probability of the *A* characteristic occurring, given the suite of independent characteristics. The symbol *e* is a mathematical constant term that represents the base of the natural logarithm, while β is called a regression coefficient and represents

the relationships between the independent characteristics, *X*, and the *A* characteristic of visitor spending of at least $100.

The results of the model come in the form of odds ratios, telling us by how much the odds of *A* occurring is increased for every 1-unit increase in *X* (representing one of the other independent characteristics). For example, we found that for each additional day per month visited, the odds of spending $100 or more increased by 7.3%. For each odds ratio, we are also able to estimate its significance, or the level of confidence we can have that the same result would have been obtained, had we been able to sample the entire population of visitors to Bloor Street.

The second characteristic we explored was reported monthly visit frequency to the retail strips on Bloor Street and Danforth Avenue. This characteristic was measured using an open question, allowing the visitor to name any number of days per month. This type of data is called a continuous random variable, and allowed us to use an ordinary least squares regression model. The equation for this model is:

$$y=\beta_0+\beta_1 x_1+\beta_2 x_2+...\beta_k x_k$$

where y represents visit frequency, β_0 is called the regression constant and represents the expected value of y when all the other independent characteristics are equal to zero, and $\beta_1 \ldots \beta_k$ are called regression coefficients and represent estimates of the relationships between the independent characteristics, $x_1 \ldots x_k$, and visit frequency.

Table 1 provides a list of all the characteristics used in these two models. Although most visitors surveyed responded to every question, a few at times chose not to answer. For the descriptive statistics explained above, these surveys were included in the data except for the specific question or questions where that visitor chose not to answer. However, because regression models explore the relationships between individuals' responses, surveys missing answers to any questions needed to be entirely excluded. In all, 3,005 visitor surveys were completed. Ninety-three were missing at least one response and were removed, reducing the sample size by 3.1%, which is considered acceptable by sampling standards. Table 2 shows how many respondents chose not to answer each question, and the subsequent effect dropping these surveys had on the data overall. The data was not found to be substantially skewed in any particular direction as a result.

CHARACTERISTICS	*DESCRIPTION*
Spending	1 – Visitor spent more than $100 per month; 0 – Otherwise
Study Site and Time Period	
Pre-Bloor	1 – Visitor was in the Pre-Bloor Sample; 0 – Otherwise
Post-Bloor	1 – Visitor was in the Post-Bloor Sample; 0 – Otherwise
Pre-Danforth	1 – Visitor was in the Pre-Danforth Sample; 0 – Otherwise
Post-Danforth	1 – Visitor was in the Post-Bloor Sample; 0 – Otherwise
Days Visited per Month	Self-stated count days (0-31).
Lives or Works in the Area	
No	1 – Visitor does not live or work in the area; 0 – Otherwise
Yes	1 – Visitor lives or works in the area; 0 – Otherwise
Gender	
Male	1 – Visitor was male; 0 – Otherwise
Female	1 – Visitor was female; 0 – Otherwise
Age	
0 to 30	1 – Visitor was younger than 30 years; 0 – Otherwise
30 to 50	1 – Visitor was between 30 and 50 years; 0 – Otherwise
50 or more	1 – Visitor was older than 50 years; 0 – Otherwise
Days Biked per Week	Categorical response recoded into estimated # of days visitor cycles to the study area. Recoded as "never" = 0, "rarely" = 0.5, "once a week" = 1, "2-4 days a week" = 3, "5-7 days a week" = 6
Travel Choice on Day of Survey	
Walk	1 – Visitor walked to the study area; 0 – Otherwise
Bike	1 – Visitor biked to the study area; 0 – Otherwise (Also includes other active modes such as "Unicycle" and "Roller blades")
Car	1 – Visitor drove to the study area; 0 – Otherwise (Also includes other vehicular options like "Truck", "Taxi" and "Uber"
Transit	1 – Visitor took transit to the study area; 0 – Otherwise

Figure 1C. List of Characteristics Used in Regression Models

CHARACTERISTICS	Regression Sample (n=2912)	Total Sample (n=3005)	Excluded Responses (n=93)
Spending			28
Spent $100 per month or more	53.3%	52.8%	
Spent less than $100 per month	46.7%	47.2%	
Study Site and Time Period			1
Pre-Bloor	27.1%	28.0%	
Post-Bloor	53.3%	52.5%	
Pre-Danforth	5.5%	5.8%	
Post-Danforth	14.0%	13.7%	
Average # of Days Visited per Month	17.0	16.9	20
Lives or Works in the Area			16
No	42.1%	42.5%	
Yes	57.9%	57.5%	
Gender			33
Male	49.1%	49.1%	
Female	50.9%	50.9%	
Age			30
0 to 30	36.3%	36.3%	
30 to 50	40.3%	40.0%	
50 or more	23.4%	23.7%	
Average # of Days Biked per Week	1.5	1.5	21
Travel Choice on Day of Survey			37
Walk	48.8%	48.5%	
Bike	13.6%	13.8%	
Car	11.1%	11.3%	
Transit	26.5%	26.4%	

Figure 2C. Characteristics of Regression Sample Versus Total Sample

(Note some respondents chose not to answer more than one question)

Appendix D: Detailed Results

Bloor Annex, Merchant Surveys

Table 1: Customers per Weekday, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	66	68	81
<25	9%	3%	7%
25-50	12%	7%	7%
50-99	29%	35%	20%
100-199	20%	34%	28%
200+	30%	21%	37%

Table 2: Customers per Saturday, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	66	65	80
<25	6%	5%	5%
25-50	13%	2%	9%
50-99	16%	17%	14%
100-199	27%	40%	23%
200+	39%	37%	50%

Table 3: Travel Choices to Work, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	66	72	84
BIKE	9%	6%	5%
DRIVE	32%	36%	45%
TRANSIT	42%	42%	27%
WALK	17%	17%	20%

Table 4: Ease of Finding Car Parking, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	19	26	38
VERY EASY OR EASY	84%	42%	66%
DIFFICULT OR VERY DIFFICULT	16%	58%	34%

Table 5: Parking Locations, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	21	20	44
PRIVATE SPOT	52%	35%	23%
GREEN P OR OTHER PARKING LOT	19%	20%	18%
ON STREET	29%	45%	59%

Table 6: Days per Week Respondent Rides a Bicycle on Bloor Street, Bloor Annex Merchants

	2015	2016	2017
NUMBER OF RESPONDENTS	67	72	84
NEVER	67%	81%	73%
RARELY	3%	6%	5%
ONCE A WEEK	2%	1%	5%
2-4 DAYS A WEEK	12%	6%	11%
5-7 DAYS A WEEK	16%	7%	7%

Table 7: Merchant Estimates of the Percentage of Their Customers Who Arrive by Bicycle, Bloor Annex Merchants

	2015	2016	2017
NUMBER OF RESPONDENTS	65	71	80
<25%	74%	65%	88%
25-50%	23%	32%	9%
50-75%	0%	3%	3%
>75%	3%	0%	1%

Table 8: Merchant Estimates of the Percentage of Their Customers Who Arrive by Car, Bloor Annex Merchants

	2015	2016	2017
NUMBER OF RESPONDENTS	66	71	79
<25%	55%	38%	52%
25-50%	36%	42%	27%
50-75%	9%	11%	15%
>75%	0%	8%	6%

Table 9: Merchant Estimates of the Percentage of Their Customers Who Arrive by Transit, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	67	71	79
<25%	31%	21%	38%
25-50%	31%	49%	44%
50-75%	25%	20%	11%
>75%	9%	10%	6%

Table 10: Merchant Estimates of the Percentage of Their Customers Who Arrive on Foot, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	65	70	77
<25%	23%	19%	27%
25-50%	29%	40%	43%
50-75%	31%	29%	21%
>75%	20%	13%	9%

Table 11: How Safe Respondent Feels (or would feel) Riding a Bicycle on Bloor Street, Bloor Annex Merchants

	2015	2016	2017
Number of Respondents	68	72	82
VERY SAFE	2%	3%	5%
SAFE	21%	32%	24%
NEITHER SAFE NOR UNSAFE	18%	22%	22%
UNSAFE	47%	35%	28%
VERY UNSAFE	13%	8%	21%

Korea Town, Merchant Surveys

Table 12: Customers per Weekday, Korea Town Merchants

	2015	2016	2017
Number of Respondents	91	67	50
<25	34%	33%	26%
25-50	28%	15%	20%
50-99	17%	27%	16%
100-199	8%	19%	22%
200+	14%	6%	16%

Table 13: Customers per Saturday, Korea Town Merchants

	2015	2016	2017
Number of Respondents	91	67	50
<25	32%	27%	20%
25-50	24%	9%	22%
50-99	13%	25%	14%
100-199	13%	24%	14%
200+	19%	15%	30%

Table 14: Travel Choices to Work, Korea Town Merchants

	2015	2016	2017
Number of Respondents	91	81	52
BIKE	4%	4%	8%
DRIVE	47%	64%	48%
TRANSIT	28%	19%	35%
WALK	21%	12%	6%

Table 15: Ease of Finding Car Parking, Korea Town Merchants

	2015	2016	2017
Number of Respondents	41	52	24
VERY EASY OR EASY	83%	54%	79%
DIFFICULT OR VERY DIFFICULT	17%	46%	21%

Table 16: Parking Locations, Korea Town Merchants

	2015	2016	2017
Number of Respondents	44	45	20
PRIVATE SPOT	20%	18%	25%
GREEN P OR OTHER PARKING LOT	32%	47%	20%
ON STREET	48%	36%	55%

Table 17: Days per Week Respondent Rides a Bicycle on Bloor Street, Korea Town Merchants

	2015	2016	2017
NUMBER OF RESPONDENTS	95	81	52
NEVER	83%	85%	44%
RARELY	3%	6%	42%
ONCE A WEEK	5%	1%	2%
2-4 DAYS A WEEK	2%	5%	6%
5-7 DAYS A WEEK	6%	2%	6%

Table 18: Merchant Estimates of the Percentage of Their Customers Who Arrive by Bicycle, Korea Town Merchants

	2015	2016	2017
NUMBER OF RESPONDENTS	86	77	51
<25%	84%	86%	86%
25-50%	12%	13%	12%
50-75%	2%	1%	2%
>75%	1%	0%	0%

Table 19: Merchant Estimates of the Percentage of Their Customers Who Arrive by Car, Korea Town Merchants

	2015	2016	2017
NUMBER OF RESPONDENTS	87	78	51
<25%	41%	15%	27%
25-50%	33%	29%	33%
50-75%	13%	24%	22%
>75%	13%	31%	18%

Table 20: Merchant Estimates of the Percentage of Their Customers Who Arrive by Transit, Korea Town Merchants

	2015	2016	2017
Number of Respondents	84	77	49
<25%	26%	51%	39%
25-50%	38%	38%	39%
50-75%	20%	12%	20%
>75%	18%	0%	2%

Table 21: Merchant Estimates of the Percentage of Their Customers Who Arrive on Foot, Korea Town Merchants

	2015	2016	2017
Number of Respondents	86	77	50
<25%	38%	45%	38%
25-50%	24%	34%	34%
50-75%	24%	13%	18%
>75%	10%	8%	10%

Table 22: How Safe Respondent Feels (or would feel) Riding a Bicycle on Bloor Street, Korea Town Merchants

	2015	2016	2017
Number of Respondents	94	81	52
VERY SAFE	2%	0%	12%
SAFE	4%	14%	12%
NEITHER SAFE NOR UNSAFE	9%	17%	12%
UNSAFE	49%	37%	27%
VERY UNSAFE	36%	32%	38%

Danforth, Merchant Surveys

Table 23: Customers per Weekday, Danforth Merchants

	2015	2016	2017
Number of Respondents	28	21	21
<25	32%	33%	14%
25-50	36%	38%	10%
50-99	35%	24%	19%
100-199	4%	5%	14%
200+	4%	0%	43%

Table 24: Customers per Saturday, Danforth Merchants

	2015	2016	2017
Number of Respondents	28	19	21
<25	36%	26%	5%
25-50	21%	42%	10%
50-99	18%	11%	10%
100-199	11%	21%	10%
200+	14%	0%	67%

Table 25: Travel Choices to Work, Danforth Merchants

	2015	2016	2017
Number of Respondents	27	22	22
BIKE	0%	0%	9%
DRIVE	15%	36%	32%
TRANSIT	70%	41%	18%
WALK	15%	23%	41%

Table 26: Ease of Finding Car Parking, Danforth Merchants

	2015	2016	2017
Number of Respondents	4	8	7
VERY EASY OR EASY	100%	75%	86%
DIFFICULT OR VERY DIFFICULT	0%	25%	14%

Table 27: Days per Week Respondent Rides a Bicycle on Danforth Ave, Danforth Merchants

	2015	2016	2017
Number of Respondents	28	22	23
NEVER	79%	82%	65%
RARELY	11%	9%	13%
ONCE A WEEK	0%	0%	0%
2-4 DAYS A WEEK	4%	9%	13%
5-7 DAYS A WEEK	7%	0%	9%

Table 29: Merchant Estimates of the Percentage of Their Customers Who Arrive by Bicycle, Danforth Merchants

	2015	2016	2017
Number of Respondents	27	20	23
<25%	78%	65%	96%
25-50%	22%	30%	4%
50-75%	0%	5%	0%
>75%	0%	0%	0%

Table 30: Merchant Estimates of the Percentage of Their Customers Who Arrive by Car, Danforth Merchants

	2015	2016	2017
Number of Respondents	26	21	23
<25%	31%	29%	35%
25-50%	39%	43%	48%
50-75%	27%	5%	13%
>75%	4%	24%	4%

Table 28: Merchant Estimates of the Percentage of Their Customers Who Arrive by Transit, Danforth Merchants

	2015	2016	2017
Number of Respondents	27	20	23
<25%	33%	35%	57%
25-50%	33%	50%	30%
50-75%	30%	10%	13%
>75%	4%	5%	0%

Table 31: Merchant Estimates of the Percentage of Their Customers Who Arrive on Foot, Danforth Merchants

	2015	2016	2017
Number of Respondents	27	22	23
<25%	19%	45%	17%
25-50%	30%	36%	13%
50-75%	37%	14%	43%
>75%	15%	5%	26%

Table 32: How Safe Respondent Feels (or would feel) Riding a Bicycle on Danforth Ave, Danforth Merchants

	2015	2016	2017
Number of Respondents	27	22	23
VERY SAFE	11%	0%	4%
SAFE	19%	23%	13%
NEITHER SAFE NOR UNSAFE	11%	18%	26%
UNSAFE	37%	55%	43%
VERY UNSAFE	22%	5%	13%

Bloor Annex, Visitor Surveys

Table 33: Live or Work in the Area, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	425	407	400
YES	60%	62%	62%
NO	40%	38%	38%

Table 34: Days per Month that Respondent Visits the Street, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	429	406	398
AVERAGE DAYS VISITED PER MONTH	15.14	19.45	18.7

Table 35: Monthly Spending, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	424	406	399
<$25	20%	15%	9%
$25-99	33%	27%	31%
$100-499	40%	41%	47%
$500-999	6%	11%	9%
$1,000 OR MORE	2%	7%	4%

Table 36: Trip Purpose, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	429	407	400
SHOPPING	42%	43%	47%
RESTAURANT/BAR/ CAFE	31%	38%	48%
SERVICES	10%	22%	17%
VISITING FRIENDS	11%	18%	11%
I LIVE HERE	21%	37%	34%
I WORK HERE	15%	19%	24%
I'M JUST PASSING THROUGH	10%	16%	20%
OTHER	21%	7%	10%

Table 37: Travel Choice on Day of Survey, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	416	407	400
BIKE	10%	22%	11%
DRIVE	9%	8%	11%
TRANSIT	33%	22%	24%
WALK	48%	47%	52%

Table 38: Ease of Finding Car Parking, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	31	31	42
VERY EASY OR EASY	94%	68%	88%
DIFFICULT OR VERY DIFFICULT	6%	32%	12%

Table 41: Ease of Finding Bicycle Parking, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	20	80	45
VERY EASY OR EASY	70%	90%	91%
DIFFICULT OR VERY DIFFICULT	30%	10%	9%

Table 39: Days per Week Respondent Rides a Bicycle on Bloor St, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	427	406	399
NEVER	64%	40%	50%
RARELY	7%	14%	7%
ONCE A WEEK	5%	6%	8%
2-4 DAYS A WEEK	9%	18%	17%
5-7 DAYS A WEEK	15%	22%	18%

Table 40: How Safe Respondent Feels (or would feel) Riding a Bicycle on Bloor St, Bloor Annex Visitors

	2015	2016	2017
Number of Respondents	424	406	393
VERY SAFE	2%	13%	19%
SAFE	13%	53%	45%
NEITHER SAFE NOR UNSAFE	13%	14%	19%
UNSAFE	34%	14%	13%
VERY UNSAFE	38%	6%	5%

Korea Town, Visitor Surveys

Table 42: Live or Work in the Area, Korea Town Visitors

	2015	2016	2017
Number of Respondents	405	405	363
YES	49%	41%	48%
NO	51%	59%	52%

Table 43: Days per Month that Respondent Visits the Street, Korea Town Visitors

	2015	2016	2017
Number of Respondents	411	397	362
AVERAGE DAYS VISITED PER MONTH	14.3	17.52	15.96

Table 44: Monthly Spending, Korea Town Visitors

	2015	2016	2017
Number of Respondents	401	406	362
<$25	24%	22%	17%
$25-99	36%	30%	36%
$100-499	37%	38%	39%
$500-999	3%	6%	6%
$1,000 OR MORE	1%	3%	2%

Table 45: Trip Purpose, Korea Town Visitors

	2015	2016	2017
Number of Respondents	413	407	363
SHOPPING	36%	38%	25%
RESTAURANT/BAR/ CAFE	24%	33%	26%
SERVICES	17%	16%	15%
VISITING FRIENDS	6%	9%	7%
I LIVE HERE	17%	20%	12%
I WORK HERE	9%	24%	12%
I'M JUST PASSING THROUGH	19%	15%	26%
OTHER	9%	7%	6%

Table 46: Travel Choice on Day of Survey, Korea Town Visitors

	2015	2016	2017
Number of Respondents	400	404	363
BIKE	4%	30%	7%
DRIVE	7%	10%	7%
TRANSIT	38%	24%	27%
WALK	51%	35%	58%

Table 47: Ease of Finding Car Parking, Korea Town Visitors

	2015	2016	2017
Number of Respondents	26	38	24
VERY EASY OR EASY	89%	34%	83%
DIFFICULT OR VERY DIFFICULT	11%	66%	17%

Table 50: Ease of Finding Bicycle Parking, Korea Town Visitors

	2015	2016	2017
Number of Respondents	8	118	25
VERY EASY OR EASY	75%	83%	88%
DIFFICULT OR VERY DIFFICULT	25%	17%	12%

Table 48: Days per Week Respondent Rides a Bicycle on Bloor St, Korea Town Visitors

	2015	2016	2017
Number of Respondents	409	400	362
NEVER	65%	47%	39%
RARELY	6%	11%	26%
ONCE A WEEK	5%	3%	12%
2-4 DAYS A WEEK	10%	15%	13%
5-7 DAYS A WEEK	14%	24%	11%

Table 49: How Safe Respondent Feels (or would feel) Riding a Bicycle on Bloor St, Korea Town Visitors

	2015	2016	2017
Number of Respondents	401	403	363
VERY SAFE	4%	11%	16%
SAFE	16%	42%	44%
NEITHER SAFE NOR UNSAFE	18%	10%	15%
UNSAFE	43%	24%	17%
VERY UNSAFE	20%	13%	7%

Danforth, Visitor Surveys

Table 51: Live or Work in the Area, Danforth Visitors

	2015	2016	2017
Number of Respondents	171	211	201
YES	67%	66%	86%
NO	33%	34%	14%

Table 52: Days per Month that Respondent Visits the Street, Danforth Visitors

	2015	2016	2017
Number of Respondents	171	175	190
AVERAGE DAYS VISITED PER MONTH	15.85	19.10	16.05

Table 53: Monthly Spending, Danforth Visitors

	2015	2016	2017
Number of Respondents	169	209	200
<$25	16%	15%	1%
$25-99	27%	23%	21%
$100-499	47%	42%	55%
$500-999	8%	19%	23%
$1,000 OR MORE	2%	2%	1%

Table 54: Trip Purpose, Danforth Visitors

	2015	2016	2017
Number of Respondents	173	211	201
SHOPPING	52%	46%	44%
RESTAURANT/BAR/ CAFE	20%	6%	46%
SERVICES	14%	14%	13%
VISITING FRIENDS	8%	8%	8%
I LIVE HERE	7%	18%	50%
I WORK HERE	11%	14%	29%
I'M JUST PASSING THROUGH	11%	23%	2%
OTHER	19%	6%	3%

Table 55: Travel Choice on Day of Survey, Danforth Visitors

	2015	2016	2017
Number of Respondents	168	210	201
BIKE	8%	19%	6%
DRIVE	17%	15%	22%
TRANSIT	24%	25%	14%
WALK	51%	41%	56%

Table 56: Ease of Finding Car Parking, Danforth Visitors

	2015	2016	2017
Number of Respondents	28	29	44
VERY EASY OR EASY	86%	97%	61%
DIFFICULT OR VERY DIFFICULT	14%	3%	39%

Table 59: Ease of Finding Bicycle Parking, Danforth Visitors

	2015	2016	2017
NUMBER OF RESPONDENTS	8	29	13
VERY EASY OR EASY	100%	97%	100%
DIFFICULT OR VERY DIFFICULT	0%	3%	0%

Table 57: Days per Week Respondent Rides a Bicycle on Danforth Ave, Danforth Visitors

	2015	2016	2017
NUMBER OF RESPONDENTS	170	210	201
NEVER	59%	36%	45%
RARELY	9%	25%	39%
ONCE A WEEK	7%	6%	10%
2-4 DAYS A WEEK	7%	11%	4%
5-7 DAYS A WEEK	18%	22%	1%

Table 58: How Safe Respondent Feels (or would feel) Riding a Bicycle on Danforth Ave, Danforth Visitors

	2015	2016	2017
NUMBER OF RESPONDENTS	170	210	200
VERY SAFE	2%	0%	1%
SAFE	19%	18%	1%
NEITHER SAFE NOR UNSAFE	15%	18%	28%
UNSAFE	38%	55%	62%
VERY UNSAFE	25%	9%	8%

Regression Analysis, Visitor Spending

	Model 1		Model 2		Model 3	
			Includes additional testing of how cycling is affected by site and time period		Includes additional testing with trip purpose and attitudes	
n	2912		2912		2907	
AIC	3133		3131		3060	
Log Likelihood	-1555		-1550		-1513	
Pseudo R2	0.227		0.229		0.247	
Variable	**Odds Ratio**	**P-value**	**Odds Ratio**	**P-value**	**Odds Ratio**	**P-value**
Intercept	0.138	0.000	0.141	0.000	0.066	0.000
Site * Time						
Pre-Bloor	reference		reference		reference	
Post-Bloor	1.479	0.055	1.135	0.255	1.268	0.044
Pre-Danforth	1.236	0.045	1.434	0.090	1.402	0.118
Post-Danforth	2.129	0.000	2.215	0.000	2.237	0.000
Days Visit per Month	1.073	0.000	1.074	0.000	1.080	0.000
Lives or Works in the Area						
No	reference		reference		reference	
Yes	2.613	0.000	2.625	0.000	2.568	0.000
Gender						
Male	reference		reference		reference	
Female	0.928	0.399	0.931	0.422	0.899	0.236
Age						
0 to 30	reference		reference		reference	
30 to 50	1.780	0.000	1.815	0.000	1.720	0.000
50 or more	0.883	0.289	0.893	0.336	0.852	0.182
Days Bike per Week	NA	NA	NA	NA	NA	NA
Travel Mode on Day of Survey						
Walk	reference		reference			
Car	1.182	0.266	1.174	0.288		
Transit	0.848	0.152	0.849	0.154		
Bike	0.905	0.462	0.528	0.049		
Post-Bloor			2.188	0.029		
Pre-Danforth			1.490	0.606		
Post-Danforth			0.937	0.892		
Trip Purpose included shopping, restaurant or services						
No					reference	
Yes					2.170	0.000
Positive feedback about the bike lane						
No					reference	
Yes					1.238	0.028

Regression Analysis, Visit Frequency

	Model 4	
n	2912	
R2	0.436	
Variable	**Estimate**	**P-value**
Intercept	11.016	0.000
Site * Time		
Pre-Bloor	reference	
Post-Bloor	2.602	0.000
Pre-Danforth	-1.182	0.131
Post-Danforth	-0.215	0.707
Walk	reference	
Drive	-3.816	0.000
Transit	-3.973	0.000
Cycle	-0.294	0.813
Post-Bloor	0.880	0.518
Pre-Danforth	0.880	0.518
Post-Danforth	1.598	0.371
Lives or works in the area		
Yes	reference	
No	13.472	0.000
Gender		
Male	reference	
Female	-0.366	0.258
Age		
0 to 30	reference	
30 to 50	-0.350	0.354
50 or more	-0.005	0.991
Trip Purpose included shopping, restaurant or services		
No	reference	
Yes	-0.564	0.105
Positive feedback about the bike lane		
No		
Yes		