

Exploring the relationship between transit-
induced intensification and retail
gentrification in a mid-sized Canadian city

by

Kaitlin Webber

A thesis
presented to the University of Waterloo
in fulfillment of the
thesis requirement for the degree of
Master of Arts
in
Planning

Waterloo, Ontario, Canada, 2022

© Kaitlin Webber 2022

Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Over the last two decades, the back-to-the-city movement and a shift in planning ideals towards intensification have spurred a renewed interest in rapid transit systems. Modern rapid transit systems are predominantly developed in tandem with transit-oriented development (TOD) planning principles, which encourage, and often incentivize, compact, mixed-use development in station neighbourhoods. In response to the resurgence of rapid transit systems, a growing body of research explores the relationship between rapid transit systems, TOD planning, and gentrification. This “transit-induced gentrification” research focuses primarily on the impacts of new transit infrastructure and TOD and the often-resulting conditions of unaffordability, displacement, and demographic change. However, we argue that a fundamental component of transit-induced gentrification is missing from the literature, that is, transit’s impacts on commercial businesses.

In this thesis, we bridge the gap between transit-induced gentrification and commercial gentrification literature by investigating transit-induced *commercial* gentrification in the Region of Waterloo, Ontario, Canada, following the implementation of a light rail transit (LRT) system. Through a secondary data analysis of an employment survey presented in Manuscript 1, we explored compositional changes inside and outside the central transit corridor (CTC) between 2011 and 2018, and found significant evidence of commercial gentrification, especially in Stage 1 of the CTC, where the LRT is currently operational. In Manuscript 2, we interviewed business owners in Downtown Kitchener and UpTown Waterloo, which reinforced our quantitative findings and provided additional details not captured in our quantitative work. Our interview results also revealed the mechanisms fueling commercial gentrification in the urban cores, including the significant role of LRT construction in accelerating this process, and profiled how business owners have adapted to the demographic and built form changes associated with gentrification.

The results presented in this thesis are applicable both to the Region of Waterloo, as they begin planning for Stage 2 LRT implementation, and for other mid-sized municipalities considering rapid transit.

Acknowledgements

I am extremely grateful for all the support I have received during my time at UW and the experiences this degree has afforded me with. First and foremost, I would like to thank my supervisor, Professor Dawn Parker, for her patience and support inside school and out. From helping me navigate the research process, improving my academic writing, pushing me to apply for grants, conferences, and competitions that I otherwise would not have considered, and providing general life advice, your guidance throughout this journey has been invaluable. Second, I would like to thank my committee member, Professor Brian Doucet for his insightful feedback throughout this journey, most notably for sharing his expertise about the different facets of gentrification and qualitative research methods and providing valuable feedback on my draft reports. I would also like to acknowledge and thank the professors in the School of Planning for all being so willing to lend a helping hand whether it be coursework, thesis, planning, or life related. Lastly, I would like to thank the members of the Urban Growth and Change research group who remained a constant support system throughout my grad school experience.

This thesis draws on research supported by the Social Sciences and Humanities Research Council's Joseph Armand Bombardier Canada Graduate Scholarship and the University of Waterloo's President's Graduate Scholarship. This research wouldn't have been possible without the Workplace Count dataset provided by the Region of Waterloo. I would like to thank Tristan Wilkin and Margaret Parkin for sharing the data and their knowledge about rapid transit planning and commercial business change. Further, I would like to thank Hilary Abel from the City of Kitchener, Linda Jutzi from the Downtown Kitchener BIA, Tracey Van Kalsbeek from the UpTown Waterloo BIA, Sarah Bingham from the Region of Waterloo Small Business Centre, and Art Sinclair from the Greater Kitchener-Waterloo Chamber of Commerce for letting us pick their brains about commercial data and change. I would also like to sincerely thank the interview participants for their willingness to participate in this study, especially in the midst of a global pandemic.

Finally, I would like to thank my family and friends for being my cheerleaders throughout everything I do. To my parents for supporting me pursue my dreams (even when they change), my siblings and friends for providing comical relief and necessary breaks from schoolwork, and to my partner Chris for being there every step of the way, thank you.

List of Figures

Figure 1-1. Region of Waterloo's proximity to Toronto and the Greater Toronto Area (Broomfi, 2022; McMahon, 2018; Ministry of Transportation, 2020a).....	3
Figure 1-2. ION Rapid Transit Route and CTC Boundary (Region of Waterloo, 2011)	4
Figure 2-1. Study Area (Region of Waterloo, 2011).....	17
Figure 2-2. Downtown Kitchener and UpTown Waterloo (Region of Waterloo, 2022c).....	18
Figure 2-3: Comparison of Business Composition (2011-2018).....	24
Figure 3-1. Greater Golden Horseshoe (Ministry of Transportation, 2020b).....	55
Figure 3-2. Region of Waterloo ION LRT System (Region of Waterloo, 2011).....	56
Figure 3-3. Downtown Kitchener and UpTown Waterloo (Region of Waterloo, 2022c).....	57
Figure 2-4. 44-45: Retail Trade Business Composition (1 of 2: Stage CTC Subcategories) (2011-2018).....	104
Figure 2-5. 44-45: Retail Trade Business Composition (2 of 2: Stage 2 CTC, Outside CTC, Region Total) (2011-2018)	105
Figure 2-6. 51: Information & Cultural Industries Business Composition (2011-2018).....	106
Figure 2-7. 71: Arts, Entertainment & Recreation Business Composition (2011-2018).....	107
Figure 2-8. 72: Accommodation & Food Services Business Composition (2011-2018).....	108
Figure 2-9. 81: Other Services Business Composition (2011-2018).....	109

List of Tables

Table 1. Summary of Commercial Change Studies	12
Table 2. Two- and Three-Digit NAICS Codes Summary	19
Table 3. Workplace Count vs. Canadian Business Patterns/Counts, Waterloo Region	21
Table 4. Retail Trade: Percent Change 2011-2018.....	26
Table 5. Retail Trade: Count Change 2011-2018.....	28
Table 6. Information & Cultural Industries: Percent Change 2011-2018	30
Table 7. Information & Cultural Industries Count Change 2011-2018.....	31
Table 8. Arts, Entertainment & Recreation: Percent Change 2011-2018.....	33
Table 9. Arts, Entertainment & Recreation: Count Change 2011-2018.....	33
Table 10. Accommodation & Food Services: Percent Change 2011-2018	35
Table 11. Accommodation & Food Services: Count Change 2011-2018	35
Table 12. Other Services: Percent Change 2011-2018 (*No survey responses)	37
Table 13. Other Services: Count Change 2011-2018 (*No survey responses)	37

List of Abbreviations

Bus rapid transit (BRT)

Business improvement area (BIA)

Central transit corridor (CTC)

Light rail transit (LRT)

North American Industry Classification System (NAICS)

National Establishment Time Series (NETS)

Regional Growth Management Strategy (RGMS)

Transit-oriented development (TOD)

Workplace Count (WPC)

Table of Contents

Author’s Declaration	ii
Abstract	iii
Acknowledgements	iv
List of Figures	vi
List of Tables	vii
List of Abbreviations	viii
Chapter 1 Introduction	1
1.1 Background	1
1.2 Case Study Context	2
1.2.1 Planning for Rapid Transit	4
1.2.2 Signs of Gentrification in the Transit Corridor	5
1.3 Thesis Objectives	6
1.4 Research Questions	7
1.5 Thesis Outline.....	7
Chapter 2 Manuscript 1: Retail and Light Rail: Investigating the relationship between transit-induced intensification and commercial gentrification Waterloo Region’s transit corridor	9
2.1 Introduction	9
2.2 Literature Review	10
2.2.1 Defining Commercial Gentrification.....	10
2.2.2 Measuring Commercial Change	12
2.3 Case Study Profile	14
2.3.1 Gentrification in the CTC	15
2.3.2 Overview of Study Area	16
2.4 Methodology & Data	18
2.4.1 Introduction to the Workplace Count and NAICS	18
2.4.2 Data Analysis.....	21
2.5 Findings & Discussion	22
2.5.1 Death of Retail?.....	25
2.5.2 Tech Boom	29
2.5.3 A Cultural Desert.....	32
2.5.4 The Belly of the Gentrification Beast.....	34

2.5.5 Upscale Services.....	36
2.6 Conclusion.....	38
2.6.1 Implications for Planning Practice	40
2.6.2 Study Limitations and Opportunities for Future Research.....	41
Works Cited.....	42
Chapter 3 Manuscript 2: Transit-Induced Commercial Gentrification? Business owners’ perspectives of neighbourhood change in Kitchener-Waterloo	48
3.1 Introduction	48
3.2 Literature Review	49
3.2.1 Transit-Induced Gentrification	49
3.2.2 Commercial Gentrification.....	51
3.2.3 Transit-Induced Commercial Gentrification	53
3.3 Case Study Profile	54
3.3.1 Planning for Intensification	57
3.3.2 Signs of Gentrification	58
3.4 Methodology & Data.....	59
3.5 Findings & Discussion	60
3.5.1 Observations of Change	61
3.5.2 Mechanisms of Change	65
3.5.3 Adapting to Neighbourhood Change.....	72
3.6 Conclusion.....	74
3.6.1 Lessons Learned and Recommendations.....	75
3.6.2 Study Contributions, Limitations, and Opportunities for Future Research	76
Works Cited.....	78
Chapter 4 Conclusion.....	84
4.1 Answering Thesis Questions	84
4.2 Achieving Thesis Objectives.....	87
4.2.1 Transit-Induced Commercial Gentrification in the Region of Waterloo.....	87
4.2.2 Practical Applications of Qualitative Research Methods	88
4.3 Contributions and Implications for Planning Research and Practice	89
4.3.1 Planning Research	89
4.3.2 Planning Practice.....	90

4.4 Limitations and Future Work	92
Works Cited	95
Appendix A: Percent of Total Calculations – 3-Digit NAICS Subcategories.....	104
Appendix B Semi-Structured Interview Template	110

Chapter 1 Introduction

1.1 Background

Over the last two decades, rapid transit systems have experienced a renaissance in North America. As municipal planning departments grapple with issues of land supply, traffic congestion and climate change, transit-oriented development (TOD) has become a promising tool to mitigate some of these issues by intensifying land use and reducing auto-dependence. In addition to creating walkable, mixed-use communities supported by high quality transit (Jones & Ley, 2016), new transit and TOD has been increasingly recognized for its ability to revitalize station areas through increased investment and development activity (Duncan, 2011; Hewitt & Hewitt, 2012; Saxe & Miller, 2016). However, when used as a tool for economic revitalization, TOD has also been found to induce gentrification in station neighbourhoods (Dawkins & Moeckel, 2016; Deka, 2017; Kahn, 2007; Kramer, 2018). Coined “transit-induced gentrification”, a growing body of literature explores the relationship between new transit infrastructure, neighbourhood demographics (Baker & Lee, 2019; Deka, 2017; Dong, 2017), housing market activity (Cervero, 2006; Grube-Cavers & Patterson, 2015; Hess & Almeida, 2007; Hewitt & Hewitt, 2012; Higgins & Kanaroglou, 2018; Immergluck, 2009), and the lived experiences of residents (Elliott-Cooper et al., 2020; Ellis-Young & Doucet, 2021; Jackson & Buckman, 2020a; Jones & Ley, 2016; Shaw & Hagemans, 2015).

While acknowledging the complexity and debate around what constitutes gentrification, we generally subscribe to the definition presented by (Davidson & Lees, 2005, pp. 1170), who describe gentrification as the interconnected process of: 1) the reinvestment of capital; 2) the social upgrading of locale by incoming high-income groups; 3) landscape change; and 4) the direct or indirect displacement of low-income groups”. In the case of transit-induced gentrification, the process of gentrification is induced by new transit investment.

Commercial businesses are central to the success of TODs, as they improve residents’ access to goods, services, and employment opportunities (Dawkins & Moeckel, 2016; González et al., 2019), yet they are frequently overlooked in the transit-induced gentrification literature. Commercial gentrification can be understood as the process of business upgrading and related compositional changes caused by changing neighbourhood demographics (demand side) and/or

real or perceived increased demand for store frontage (supply side). When examining the causes of commercial gentrification, on the demand side, as a neighbourhood's demographics change under conditions of gentrification, business composition may change to reflect the incoming residents' tastes (Bridge & Dowling, 2001; Grier & Perry, 2018; Zukin et al., 2009). On the supply side, land value uplift may result in increased commercial rising rents caused by the influx of investors and higher-end businesses (Chapple et al., 2017; González et al., 2019; Meltzer, 2016). Through this process, existing businesses may find it difficult to maintain their place within a neighbourhood, as, through gentrification, their existing customer base may decrease and they may struggle to attract new residents as customers, and/or existing businesses may not be able to keep up with rising commercial rent prices. As with residential gentrification, research finds that lower-end, locally- and ethnically-owned businesses are most at risk of displacement (Deener, 2007; Haltiwanger et al., 2010; Komakech & Jackson, 2016; Sullivan & Shaw, 2011).

The aim of this thesis is to explore the phenomenon of transit-induced commercial gentrification in the Region of Waterloo, Ontario, following the implementation of its "ION" light rail transit (LRT) system.

1.2 Case Study Context

Our study takes place within the Region of Waterloo, a mid-sized municipality located in Ontario, Canada (about 100 kilometers from the City of Toronto) (Figure 1). The Region is comprised of three cities – Kitchener, Waterloo, and Cambridge – and four rural townships. As the 10th most populous Census Metropolitan Area, the Region had a population of 587,165 in 2021 (Statistics Canada, 2022), and is one of the fastest growing regions in Canada (Ministry of Municipal Affairs and Housing, 2019).

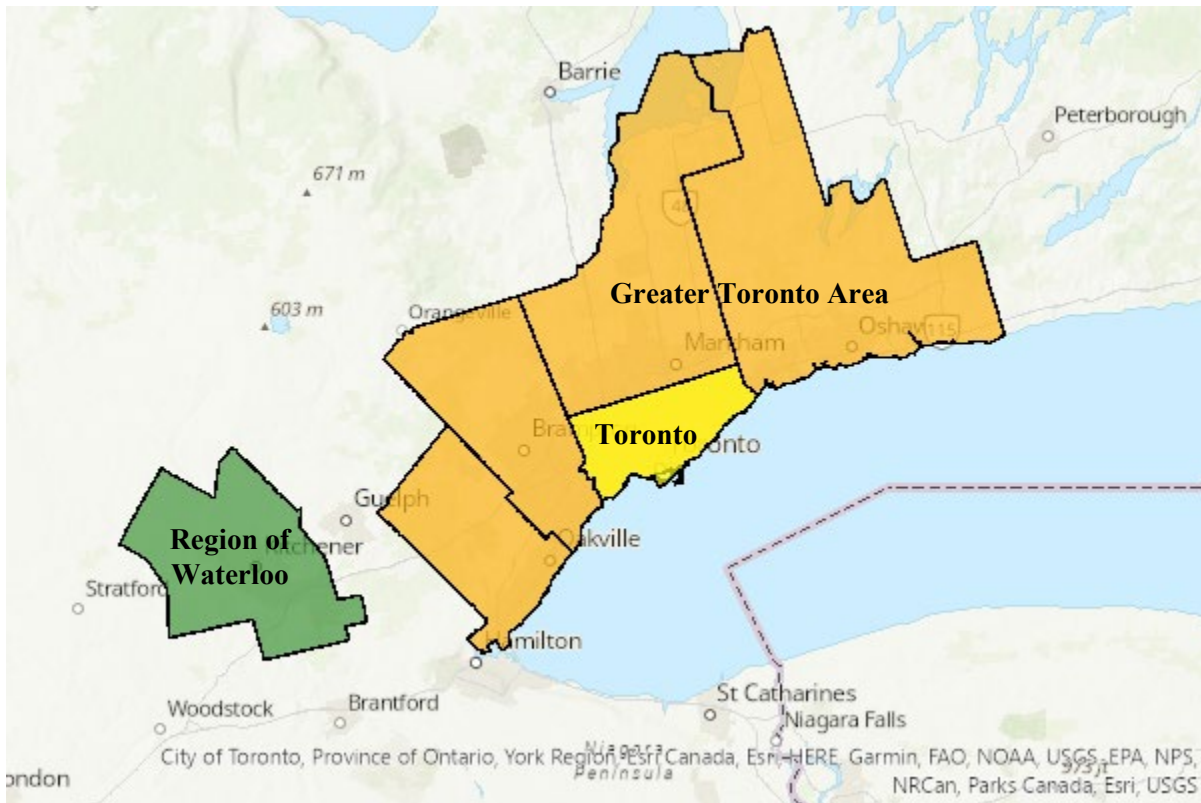


Figure 1-1. Region of Waterloo's proximity to Toronto and the Greater Toronto Area (Broomfi, 2022; McMahon, 2018; Ministry of Transportation, 2020a)

Like most North American municipalities, development in the Region was characterized by sprawling suburbs from the 1980s until the early 2000s, when sustainable population growth – and struggling downtown cores – became a key planning concern (Filion et al., 2015). The first step in the Region’s planning shift towards recentralization was the creation of the Regional Growth Management Strategy (RGMS) (2003), which revived the Region’s 1976 concept of a central transit corridor (CTC) served by a rapid transit system running between its historical downtown cores. Aligning with the province’s “Smart Growth” principles – which emphasize mixed-use, walkable, and transit-accessible neighbourhoods – the RGMS called for the re-urbanization of the Region to support a variety of environmental, social, and economic goals. Later, the Province’s *Places to Grow Act (2005)* and subsequent Growth Plan (2006) further echoed the need for intensification, designated the historic cores of Downtown Kitchener,

UpTown Waterloo and Downtown Galt (Cambridge) as urban growth centres, with assigned density targets to be achieved by 2031.

1.2.1 Planning for Rapid Transit

In 2011, Regional Council approved the “ION” LRT system, which formed the backbone of their recentralization plan. The system was established with goals to improve transit accessibility and intensify land-use (Region of Waterloo, 2016). Planned in two stages, Stage 1 consists of a 19-kilometre LRT route that runs from Waterloo to Kitchener, and in Stage 2 the LRT will be extended to the City of Cambridge, replacing the current bus rapid transit (BRT) line, and connecting the “Tri-Cities” by rail. Stage 1 construction occurred from 2014 to 2018, and the system became operational in June 2019. Stage 2 is anticipated to begin construction in 2028.

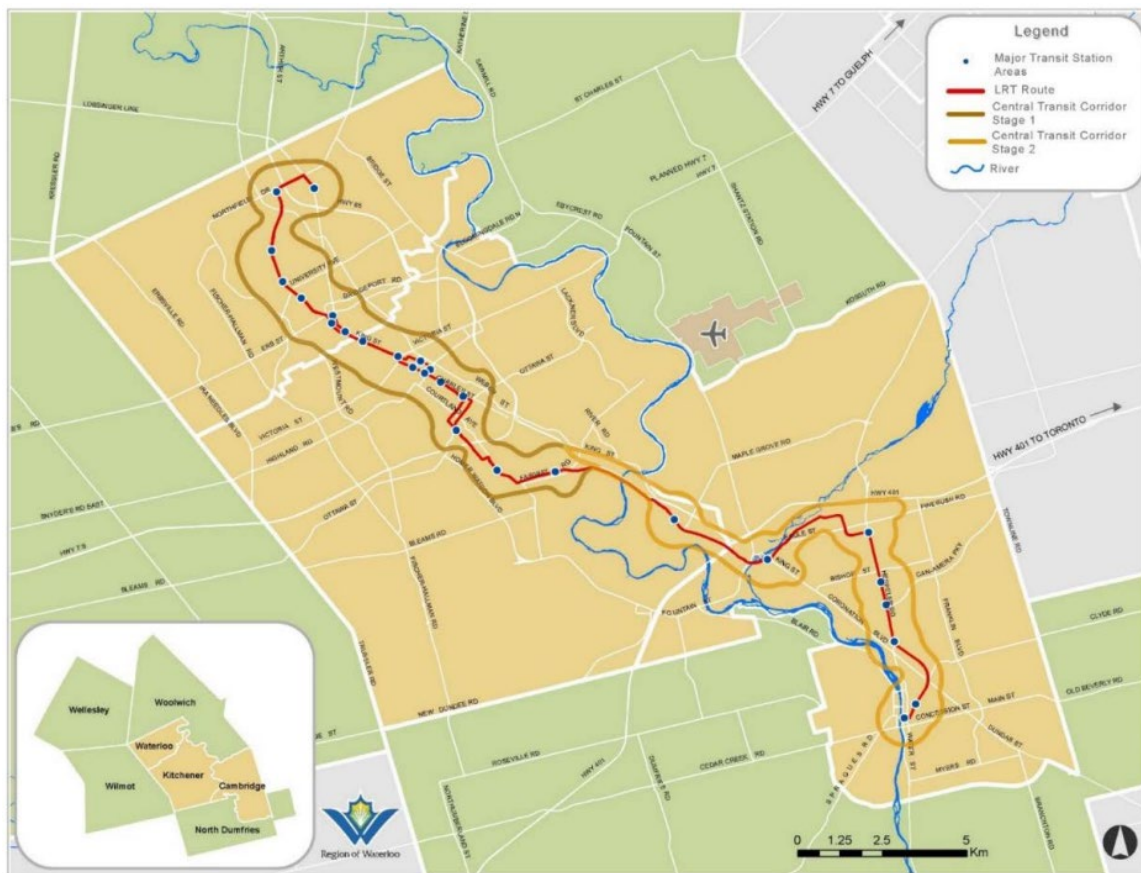


Figure 1-2. ION Rapid Transit Route and CTC Boundary (Region of Waterloo, 2011)

Throughout the planning and development of the ION, the Region and cities took several steps to encourage TOD, including up-zoning the CTC to accommodate higher densities, and waiving development charges and waiving cash-in-lieu of parkland requirements in the downtown cores (Owens et al., 2022). To track their progress, the Region also adopted a yearly monitoring program in 2011 with 18 core indicators ranging from transit ridership to demographic changes, to development activity. Of importance to this study, they monitor several metrics related to business composition, including the number of restaurants, grocery stores, and arts and culture establishments in the CTC, which are cited to be indicators of cultural vibrancy (Region of Waterloo, 2019, 2020a).

1.2.2 Signs of Gentrification in the Transit Corridor

Since the ION system was approved, the CTC has experienced some dramatic changes. The CTC has seen more than \$3.8 billion in new construction value, with more than \$3.2 billion occurring in Stage 1 alone (Region of Waterloo, 2022b). This new construction activity is concentrated in Downtown Kitchener and UpTown Waterloo and has materialized primarily in the form of luxury high-rise condominiums, many of which have ground floor retail. This building activity has resulted in almost 18,000 new residential units in the CTC between 2011 and 2021 (Region of Waterloo, 2022a), and a related population increase of approximately 12,688 new residents – with about 12,000 of those residents in Stage 1 (Region of Waterloo, 2022b) According to developers, planners and politicians, the LRT has functioned as a symbol of the municipality’s commitment to revitalization, which signals a safe investment to developers (Antanaitis, 2014; Tran, 2016). According to local realtors, young professionals and older adults are the most interested in condo living and are willing to pay a premium to live an amenity-rich urban lifestyle (Cook, 2018), which has resulted in a 17 percent purchasing premium (Huang, 2020) and 7 percent rental premium for units in the CTC (Pi, 2017).

Through the influx of higher-income residents and increasing property values, lower-income residents have found it increasingly difficult to maintain their place in the downtown cores (Ellis-Young & Doucet, 2021). Regarding commercial change, in the Region of Waterloo's most recent report (2020), the number of arts and culture establishments has increased from 241

in 2011 to 336 in 2018; and the proportion of the Region's restaurants located in the CTC increased from 50 percent to 54 percent, both signs of commercial gentrification (Region of Waterloo, 2022b). Altogether, the CTC, and in particular, Downtown Kitchener and UpTown Waterloo are showing significant signs of transit-induced gentrification, yet the full extent of commercial change remains unknown.

1.3 Thesis Objectives

This work is highly motivated by the increased implementation of rapid transit systems as a tool to facilitate economic revitalization in mid-sized cities across North America. While a growing body of research explores the residential aspects of transit-induced neighbourhood change, the impacts of rapid transit development on commercial businesses remains understudied. This brings us to *Objective 1: to explore the phenomenon of transit-induced commercial gentrification in the Region of Waterloo's CTC*. To achieve this objective, we first conducted a secondary data analysis of the Region of Waterloo's Workplace Count (WPC) to compare how commercial business composition has changed inside versus outside the CTC and to determine whether commercial gentrification is occurring inside and/or outside the CTC. Second, we conducted semi-structured interviews with business owners in Downtown Kitchener and UpTown Waterloo to learn about: 1) how commercial business composition has changed in the urban cores since LRT approval; 2) whether these changes represent commercial gentrifications; and 3) what mechanisms are fueling these changes, and how business owners have been able to adapt to changing conditions.

Transit-induced gentrification and commercial gentrification researchers favour quantitative methods in efforts to measure change. However, quantitative data cannot always tell the whole story. For residential studies of transit-induced gentrification, significant criticisms have arisen about the efficacy of census data and the difficulty of tracking displacement. Further, in studies of commercial change, quantitative data alone often misses important details such as ownership type (e.g., independently owned versus chain), business description (e.g., café, fast-food restaurant, full-service restaurant), and the products and services offered (e.g., no-frills barbershop versus specialty hair salon). Therefore, we present *Objective 2: to explore the*

practical applications of qualitative research methods in commercial gentrification research.

We address this objective in our second manuscript, where we use business owners' descriptions of commercial change to determine whether commercial gentrification is occurring in the downtown cores, and further, what business owners believe to be the mechanisms of these changes. We compare our qualitative findings to those of our quantitative analysis and related literature, and highlight the benefits and shortcomings of each method.

1.4 Research Questions

In alignment with our objectives, this thesis was guided by two main research questions and associated sub-questions, as outlined below.

Q1. Has the commercial business composition within Waterloo Region's transit corridor changed since the approval (2011) and launch (2019) of the ION light rail transit system? If so, what effects are seen?

Q1a. Do these changes relate to, or contribute to commercial gentrification? If so, how?

Q1b. What are the mechanisms behind these changes?

Q2. How have businesses been impacted by, and responded to, the demographic and built form changes associated with LRT implementation?

1.5 Thesis Outline

This thesis is organized into four chapters and proceeds as follows. Chapters 2 and 3 are based on two manuscripts. Chapter 2, titled "*Retail and Light Rail: Using business survey data to explore transit-induced commercial gentrification in Waterloo Region's transit corridor*" presents the results of our quantitative research, where we used the Region of Waterloo's WPC dataset to compare how business composition has changed inside versus outside the CTC, and whether these changes represent commercial gentrification. Chapter 2 addresses *Q1* and *Q1a*. In Chapter 3, titled "*Transit-induced commercial gentrification? Business owners' perspectives of neighbourhood change in Kitchener-Waterloo*", we use semi-structured interviews with business owners in Downtown Kitchener and UpTown Waterloo to explore their observations and perspectives of commercial change, whether these changes represent commercial gentrification,

what the mechanisms behind these changes are, and further, how business owners have adapted to the demographic and built form changes associated with LRT implementation. Chapter 3 addresses *Q1* inclusive and *Q2*. Lastly, in Chapter 4, we compare our quantitative and qualitative findings to present summative conclusions, and outline implications for planning practice and future research.

Chapter 2 Manuscript 1: Retail and Light Rail: Investigating the relationship between transit-induced intensification and commercial gentrification Waterloo Region's transit corridor

2.1 Introduction

Following the back-to-the-city movement and a shift in planning ideals towards recentralization (Dovey et al., 2017; Filion et al., 2016; Lee, 2018), municipalities across North America have recognized the potential of rapid transit systems to support revitalization goals (Baker & Lee, 2019; Cervero & Duncan, 2002). Planning departments play an active role in facilitating transit-oriented development (TOD) by encouraging (and often, incentivizing) compact, mixed-use development in station neighbourhoods to maximize economic benefits (Jones & Ley, 2016). In response to the increased use of rapid transit as an economic development tool, a growing body of literature highlights the relationship between rapid transit, TOD, and gentrification. This “transit-induced gentrification” refers to the process that occurs “when transit proximity is capitalized into TOD housing prices, resulting in higher-income households outbidding lower income households for housing in transit-proximate locations” (Dawkins & Moeckel, 2016, pp. 802-803).

Transit-induced gentrification research is conducted primarily from a residential lens and focuses on the increased cost of housing associated with transit proximity and the socioeconomic changes associated with gentrification. However, as a central component to the establishment of TOD neighbourhoods, we argue that commercial businesses are a key component of transit-induced gentrification, yet their study remain largely absent in the literature. In this research, we aim to close this gap by conducting a case study of transit-induced commercial gentrification in the Region of Waterloo's central transit corridor (CTC) – the planning area that encompasses an 800-metre radius around their “ION” light rail transit (LRT) line. More specifically, we use the following questions to guide our inquiry:

- 1) *How has business composition in the CTC changed since the approval of the Region of Waterloo's ION LRT system?*
- 2) *Do these changes relate to, or contribute to, commercial gentrification? If so, how?*

In this article, we begin with a review of commercial gentrification literature, where we highlight dominant methods, common indicators of commercial gentrification, and introduce the small body of literature that explores transit-induced commercial change. Next, we provide an overview of our case study area, followed by a description of our research methods and data. We will then present the findings of our secondary data analysis by business category with an integrated discussion. Lastly, we will conclude by providing an overview of our study's major findings, contributions to the literature, limitations, and opportunities for future research.

2.2 Literature Review

Transit-induced gentrification is a growing body of literature that focuses on the residential aspects of gentrification such as property values (Hess & Almeida, 2007; Hewitt & Hewitt, 2012; Higgins & Kanaroglou, 2018), neighbourhood demographics (Baker & Lee, 2019; Deka, 2017; Dong, 2017), and increasingly, the lived experiences of those in gentrifying neighbourhoods (Ellis-Young & Doucet, 2021; Jackson & Buckman, 2020b; Jones & Ley, 2016; Shaw & Hagemans, 2015). While transit-induced gentrification studies include general descriptions of changing commercial landscapes in gentrifying neighbourhoods, they seldom explore the implications of these changes or what they represent. Commercial businesses play a key role in establishing TOD neighbourhoods, as they provide goods, services, and employment opportunities in a walkable urban context.

2.2.1 Defining Commercial Gentrification

Commercial gentrification refers to the process of commercial district change characterized by business upgrading and other compositional changes caused by changing demographics and/or increased demand for commercial space (Chapple et al., 2017; González et al., 2019; Meltzer, 2016). Through this process, existing businesses may experience displacement caused by decreased patronage due to changes in consumer demand and/or by increased commercial rents due to higher demand for commercial space (Chapple et al., 2017; González et al., 2019; Meltzer, 2016). While existing businesses may benefit from the influx of new residents, most studies demonstrate their inability to bridge the gap between clientele (Grier & Perry, 2018; Zukin, 2008; Zukin et al., 2009). Further, as demand for commercial space increases in

gentrifying neighbourhoods, existing businesses may not be able to keep up with rising rents, forcing them to relocate or close their doors altogether (Chapple et al., 2017; González et al., 2019; Meltzer, 2016).

When examining how commercial districts change under conditions of gentrification, studies demonstrate inconsistent findings, suggesting that these changes are dependent on the local context and the identities and values of incoming residents and the neighbourhood's "brand" (Keatinge & Martin, 2016; Rankin & McLean, 2014). For example, Keatinge and Martin (2016) described the mismatch between a gentrified residential community abutting a non-gentrified commercial district following local rejection of a strip club in a "family-oriented" neighbourhood in Etobicoke, Toronto. There is also evidence that commercial gentrification occurs in phases, as a neighbourhood may transition from low-income, to "hipster", to middle- or upper-class (Zimmerman, 2008). Both Ley (1996) and Roth and Grant (2015) observed this transitional process in Kitsilano, Vancouver and the North End neighbourhood in Halifax, where the first wave of commercial gentrification saw increases in businesses such as second-hand stores, craft shops, cafés and bars, but as gentrification progressed, more substantial business upgrading occurred and higher-end restaurants, cafés, boutiques and arts and entertainment businesses – reflecting middle- and upper-class tastes – entered the area (see also Zukin et al., 2009).

Regarding middle- and upper-class tastes, Bridge and Dowling (2001) found that commodity-type retail (e.g., food and home goods stores) represented the largest proportion of businesses in gentrifying neighbourhoods in Sydney, Australia, followed by restaurants (mostly cafés and high-end ethnic restaurants) and personal services (e.g., gyms, beauty salons, hairdressers, alternative therapies, etc.). The ownership type of businesses in gentrifying neighbourhoods also varied across studies, with some citing an increased presence of chain stores (Meltzer, 2016; Zukin, 2008; Zukin et al., 2009), and others reporting increases in locally owned businesses (Bridge & Dowling, 2001; Ley, 1996; Roth & Grant, 2015). Overall, the fundamental indicator of commercial gentrification is the process of business upgrading, where "pubs become wine bars, corner shops become delis, the greasy spoon café becomes a barista-style coffee shop and so on" (Hubbard, 2017, pp. 5).

2.2.2 Measuring Commercial Change

Studies of commercial change use a variety of quantitative methods and data to identify and monitor trends. First, looking at the handful of studies that explore commercial change near transit, Cervero (2006) and Cervero and Duncan (2002) used commercial sales transaction data to estimate a hedonic price model. They found capitalization premiums for commercial properties located within 0.25 miles (~400 metres) of light rail and commuter rail stations, with higher premiums along TOD lines and near downtown stations. Chapple et al. (2017) created a gentrification index – using the parameters of business turnover rates, minority-owned establishment share, and non-chain small business establishment share – to identify and predict commercial gentrification in Los Angeles and the San Francisco Bay Area. Researchers assumed that commercially gentrified census tracts would see decreasing shares of frequent and necessary establishments (businesses that fill everyday needs i.e., grocery stores, gas stations, hardware stores), increasing shares of discretionary and infrequent establishments (luxury or specialty stores), and lower rates of minority-owned and non-chain small business shares. They found that the presence of a rail transit station was not a significant predictor of commercial gentrification. Lastly, Ray (2017), examined the impacts of new transit construction on business revenue and survival in Los Angeles, and found that despite insignificant changes in revenue, businesses within 400 metres of a station had an increased risk of failure, believed to be associated with increased rents. A summary table of the data and methods used in the above-noted studies is provided in Table 1.

Table 1. Summary of Commercial Change Studies

Study	Data/Methods
Cervero, R. (2006). Effects of Light and Commuter Rail Transit on Land Prices: Experiences in San Diego County.	Hedonic price model estimated using estimated parcel price and vectors for: <ol style="list-style-type: none"> 1) Proximity/accessibility to transit and highways; 2) Property characteristics (e.g., structure size, age) and location attributes (e.g., type of commercial); 3) Neighbourhood socio-demographic characteristics (e.g., racial composition, household income); and 4) Fixed-effects controls (e.g., municipality property located).

<p>Cervero, R., & Duncan, M. (2002). Transit’s Value-Added Effects: Light and Commuter Rail Services and Commercial Land Values.</p>	<p>Hedonic price model estimated using estimated parcel price and vectors for:</p> <ol style="list-style-type: none"> 1) Proximity to transit facilities; 2) Neighbourhood characteristics (e.g., presence of mixed land uses, median housing income); 3) Location and regional accessibility attributes (e.g., accessibility to jobs); and 4) Controls.
<p>Chapple, K., Loukaitou-Sideris, A., Gonzalez, S. R., Kadin, D., & Poirier, J. (2017). Transit-Oriented Development & Commercial Gentrification: Exploring the Linkages.</p>	<p>Created ‘commercial gentrification index’ using definition parameters that measured:</p> <ol style="list-style-type: none"> 1) Infrequent establishment churn; 2) Discretionary establishment churn; 3) Minority-owned business share; and 4) Non-chain small business share. <p>Rescaled parameter to 0-100 index, weighed according to interpretation of commercial gentrification. Applied index to Census Tracts defined as ‘commercial’.</p>
<p>Ray, R. (2017). Open for business? Effects of Los Angeles Metro Rail construction on adjacent businesses.</p>	<p>Used difference-in-difference technique to track effects of subway line construction for businesses within 150 metres, 305 metres, 400 metres and 800 metres using business location, sales, employment, and sector information between 1990-2011 (from NETS database).</p>

Zooming out to more general commercial gentrification studies, many researchers use the North American Industry Classification System (NAICS) – a standardized system of business identifier codes. The classification hierarchy begins with two-digit codes representing the broadest groups, to its most descriptive, six-digit codes (Statistics Canada, 2021) to generate a snapshot of business composition at a given time to explore business turnover (Agnew et al., 2010; Meltzer, 2016; Meltzer & Capperis, 2017). In both studies, researchers used the National Establishment Time Series (NETS) – a longitudinal establishment-level dataset – and use NAICS and demographic data to monitor business turnover in New York City Neighbourhoods. In their 2016 study, Meltzer found that although typical gentrifying neighbourhoods do not show higher rates of displacement, storefronts remain vacant for longer, and when they are eventually occupied, they are more likely to introduce new types of services or chain businesses. In their 2017 study, Meltzer and Capperis found that the most significant factor in commercial turnover

in mixed-use neighbourhoods was neighbourhood demographics, and that population growth was the strongest indicator of high turnover and commercial change. Alternatively, in their review of common methodological approaches and shortcomings to studies of retail change, Kosta (2019) suggested the use of business directories for their potential to compare business counts and to create a business census, which was employed previously by Roth and Grant (2015), who used business directories and other archival data to track the waves of change to a commercial street in Halifax, as described previously.

As demonstrated through this review, despite being a central component of TODs, commercial aspects of neighbourhood change are seldom explored in studies of transit-induced gentrification. Commercial gentrification literature emphasizes the contextual nature of changing commercial landscapes, but highlights common indicators including commercial upgrading (Jones & Ley, 2016; Roth & Grant, 2015) and the increased concentration of chain businesses (Zukin, 2008; Zukin et al., 2009), boutiques and high-end businesses, restaurants and personal care services (Bridge & Dowling, 2001). To complement and contribute to transit-induced gentrification literature, we explore commercial business change in the Region of Waterloo using NAICS data.

2.3 Case Study Profile

The Region of Waterloo is a mid-size municipality located in Southwestern Ontario, Canada with a population of 587,165 (Statistics Canada, 2022). It is comprised of three urban cities – Kitchener, Waterloo, and Cambridge – and four rural townships. Census data collected during our study period reports a Regional population of 535,154, with almost 90 percent of residents located within the “Tri-Cities” (Statistics Canada, 2017a, 2017b). The Region is also quickly growing and regularly tops the list as the fastest-growing urban area in Canada (Statistics Canada, 2020). It is anticipated that the Region will reach 923,000 residents by 2051 (Region of Waterloo, 2021).

To facilitate this population growth, over the last two decades, development in the Region has shifted away from predominantly suburban greenfield development towards urban intensification. Directly related to their goals of intensification and improving transit

accessibility, the Region approved the ION LRT system in 2011 (Region of Waterloo, 2016). The ION's development was divided into two stages as seen below in Figure 1. Stage 1 – which was constructed between 2014 and 2018 and became operational in June 2019 – is a 19-kilometre route that runs between Waterloo and Kitchener, with half of its 16 stops strategically located in the downtown cores to facilitate redevelopment. Currently a bus rapid transit (BRT) route, in Stage 2, the LRT line will be extended to Cambridge, connecting the Tri-Cities by rail.

2.3.1 Gentrification in the CTC

Since the LRT's approval, the CTC has experienced significant changes related to the built form and neighbourhood demographics. Between our study period of 2011 and 2018, the CTC saw more than \$2.5 billion in new construction value, with more than \$2 billion of that value concentrated in Stage 1 of the CTC (Region of Waterloo, 2019). Most recent data to the year 2020 reports more than \$3.8 billion in new construction value, with over \$3.2 billion occurring in Stage 1 (Region of Waterloo, 2022b). This development has materialized primarily in the form of high-rise luxury condominiums with ground floor retail and is occurring primarily in the cities' two urban cores, Downtown Kitchener, and UpTown Waterloo. According to developers, planners and politicians, the LRT has functioned as a symbol of the municipality's commitment to revitalization, which has motivated developers to invest in the area (Antanaitis, 2014; Tran, 2016). While according to realtors, those interested in condo living are primarily young professionals and older adults (Cook, 2018), there is also a strong desire for medium-density housing (e.g., single- and semi-detached, duplexes and townhomes) in core areas, resulting in a premium for current stock (Babin, 2016). The increased interest in urban living is reflected in the 7 percent rental premium (Pi, 2017) and 17 percent purchasing premium (Huang, 2020) for residential properties in the corridor.

Regarding commercial change, the Region of Waterloo does include some analysis of commercial change in their yearly CTC monitoring report. For example, their most recent report cites an increase in the number of arts and culture establishments from 241 in 2011 to 336 in 2018, and an increased proportion of the Region's restaurants located in the CTC from 50 percent to 54 percent (Region of Waterloo, 2022b). Through our companion qualitative study (Webber et al., 2022) involving semi-structured interviews with business owners, we find strong

evidence of commercial gentrification in Downtown Kitchener and UpTown Waterloo through reported losses of locally-owned businesses paired with increases in chain businesses and strong evidence of commercial upgrading, through the influx of high-end and discretionary businesses including food establishments, personal services, and entertainment-based businesses. Therefore, through this study, we aim to contribute to the Waterloo case study by exploring LRT-induced change through a commercial business lens.

2.3.2 Overview of Study Area

This study is a single instrumental case study with embedded units of analysis. We use the exploration of commercial change in the Region of Waterloo to generate a better understanding of transit-induced commercial gentrification. To achieve this, we use the Region's established CTC area as the bounded system and divide it into five subcases, as identified and described below (Figure 1, Figure 2), to compare changes occurring inside and outside the CTC.

- 1) Stage 1 CTC:** the 800-metre radius around the LRT line that runs from Conestoga Mall in Waterloo to Fairview Park Mall in Kitchener.
 - a) Outside Urban Cores: the area within Stage 1 of the CTC that excludes UpTown Waterloo and Downtown Kitchener.
 - b) UpTown Waterloo
 - c) Downtown Kitchener
- 2) Stage 2 CTC:** the 800-metre radius around the proposed LRT route that will connect Fairview Park Mall in Kitchener to Downtown Cambridge.
- 3) Outside CTC:** all other areas in the Region of Waterloo outside the CTC, including the Region's rural townships.

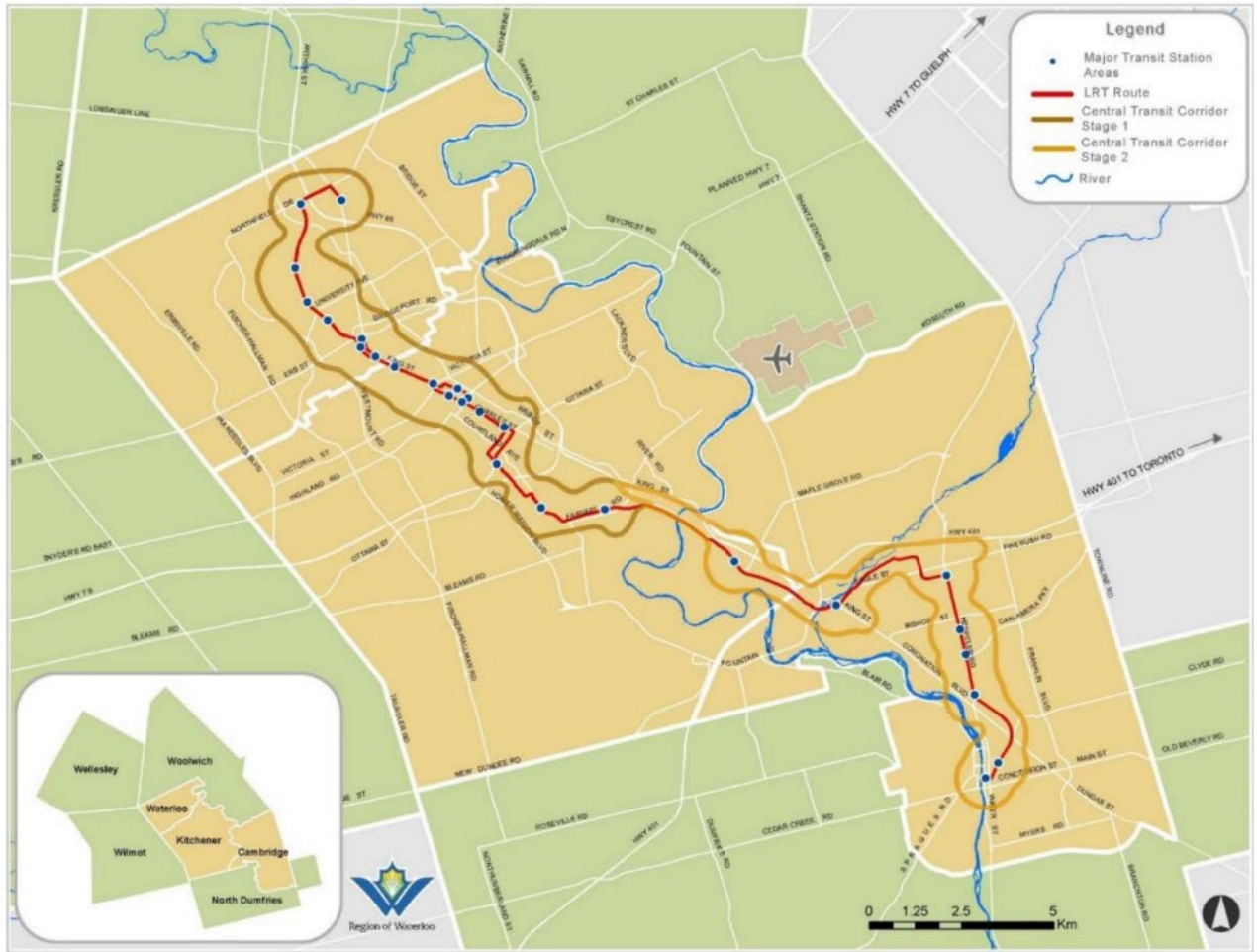


Figure 2-1. Study Area (Region of Waterloo, 2011)

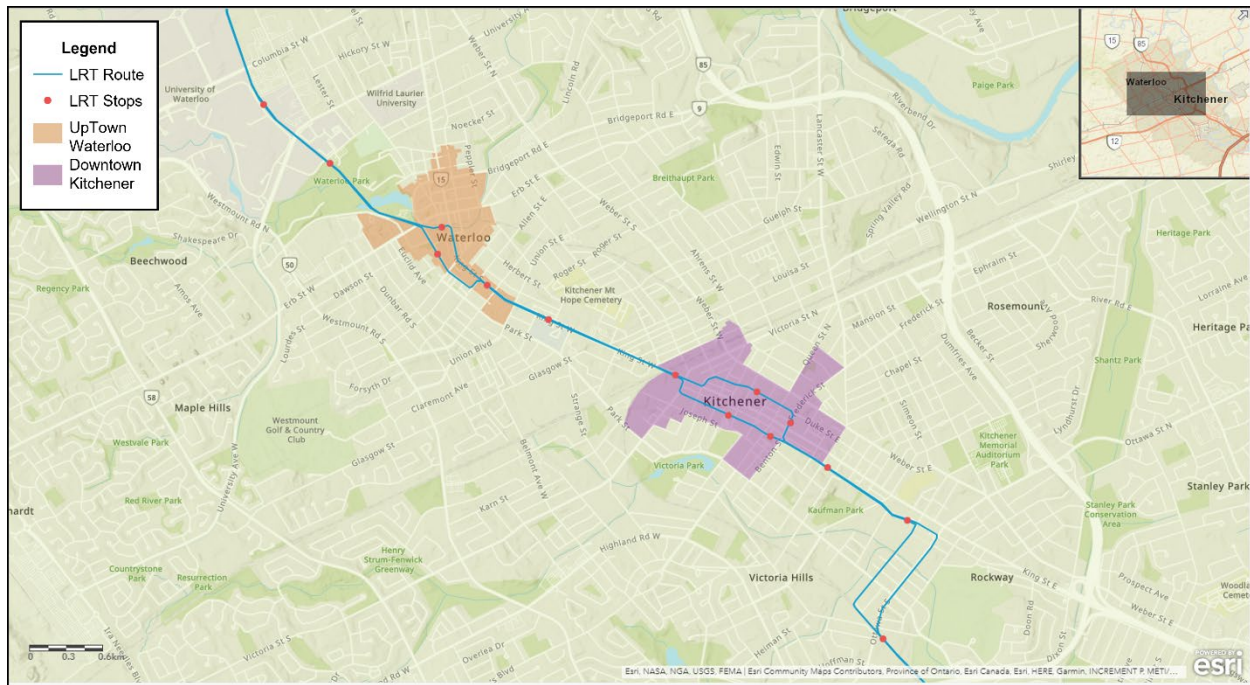


Figure 2-2. Downtown Kitchener and UpTown Waterloo (Region of Waterloo, 2022c)

2.4 Methodology & Data

2.4.1 Introduction to the Workplace Count and NAICS

To achieve our aims, we conducted a secondary data analysis of the Region’s Workplace Count (WPC) survey to analyze business change across the Region since LRT approval. The WPC is a voluntary survey of places of employment used to provide a snapshot of business distribution in the Region, which helps planners and policymakers plan for future growth (Region of Waterloo, 2020b). In this survey, business owners are asked to describe the products and services they offer, which allows surveyors to determine their NAICS code.

Due to the scope and interests of this research, we analyzed five two-digit NAICS groups at the two- and three-digit level. A list of the two- and three-digit NAICS business descriptions used in this study are included in Table 2 below. The selected codes generally align with the NAICS codes included in studies cited previously (e.g. Agnew et al., 2010; Chapple et al., 2017; Meltzer, 2016; Meltzer & Capperis, 2017), with the exception of Information & Cultural

Industries, which we included as a specific industry of interest due to the Region’s reported tech boom over the last decade (Davis, 2020).

Table 2. Two- and Three-Digit NAICS Codes Summary

NAICS Code	Description
44-45	Retail Trade
441	Motor Vehicle & Parts Dealers
442	Furniture & Home Furnishings Stores
443	Electronics & Appliance Stores
444	Building Material & Garden Equipment & Supplies Dealers
445	Food & Beverage Stores
446	Health & Personal Care Stores
447	Gasoline Stations
448	Clothing & Accessories Stores
451	Sporting Goods, Hobby, Book & Music Stores
453	Miscellaneous Store Retailers
454	Non-Store Retailers
51	Information & Cultural Industries
511	Publishing Industries
512	Motion Picture & Sound Recording Industries
515	Broadcasting (Except Internet)
517	Telecommunications
518	Data Processing, Hosting & Related Services
519	Other Information Services
71	Arts, Entertainment & Recreation
711	Performing Arts, Spectator Sports & Related Industries
712	Heritage Institutions
713	Amusement, Gambling & Recreation Services

72	Accommodation & Food Services
721	Accommodation Services
722	Food Services & Drinking Places
81	Other Services
811	Repair & Maintenance
812	Personal & Laundry Services
813	Religious, Grant Making, Civic & Professional & Similar Organizations
814	Private Households

While the NAICS code descriptions are helpful in narrowing down each category, as seen in Table 1, some of the descriptions are quite general and might not give us the answers we are searching for in terms of specific business types associated with commercial gentrification (e.g., for food establishments, fast food, dine-in, bars, cafes, etc.). In addition, it is important to note that while the WPC is effective in providing a snapshot of business composition, since this survey is voluntary and response rates are unknown as it is not possible to verify whether the sample represents all businesses in the Region without a special Statistics Canada compilation that is outside the scope of this work. We were, however, able to compare the number of businesses surveyed for each sector and compare them to the available Canadian Business Patterns (pre-2014) (Statistics Canada, 2011) and Canadian Business Counts (2015-present) (Statistics Canada, 2018) available at the Census Division level for to put response rates in context. This comparison is presented in Table 3, and highlights discrepancies ranging from 44 to 1536 fewer (or 0% to 6% difference when viewed as a percent of total) businesses represented in the WPC than the total number of businesses present in the Region. When comparing the percent change between 2011 and 2018 for the Workplace Count and Canadian Business Patterns/Count data, we can see quite significant discrepancies for each two-digit NAICS category.

Table 3. Workplace Count vs. Canadian Business Patterns/Counts, Waterloo Region

	2011		2018		Percent Change 2011-2018	
	Workplace Count (Summer)	Canadian Business Patterns (June)	Workplace Count (Summer)	Canadian Business Counts (June)	Workplace Count	Canadian Business Counts
44-45: Retail Trade	2313 (42%)	3099 (41%)	2232 (36%)	3535 (37%)	-4%	14%
51: Information & Cultural Industries	148 (3%)	287 (4%)	494 (8%)	538 (6%)	234%	87%
71: Arts, Entertainment & Recreation	261 (5%)	393 (5%)	324 (5%)	713 (7%)	24%	81%
72: Accommodation & Food Services	1052 (19%)	1142 (15%)	1314 (21%)	1417 (15%)	25%	24%
81: Other Services	1763 (32%)	2654 (35%)	1791 (29%)	3327 (35%)	2%	25%
TOTAL	5537 (100%)	7575 (100%)	6155 (100%)	9530 (100%)	11%	26%

2.4.2 Data Analysis

We used WPC data from the years 2011 and 2018 for our analysis. As 2011 was the year the LRT was approved, the data provides us with a good baseline of business composition prior to LRT construction and operation. While the LRT was not operational until June 2019, by mid-2018 when the survey was conducted, construction was reaching an end, and as previously described, the CTC had already experienced significant changes.

We began our analysis by exploring the proportional changes occurring in Stage 1 and 2 of the CTC compared to those occurring outside the CTC and in the Region as a whole. By investigating proportional changes, we can paint a clear picture of the growth or decline within

each business sector. To calculate proportional changes, we took the count of businesses surveyed for each category and divided it by the total number of businesses in that survey year, then multiplied our result by 100 to achieve the proportion. These results are presented in Figure 3. We also calculated proportional changes for three-digit NAICS codes, with results presented in Appendix A.

We then zoomed in further to compare the changes within each sector from 2011 to 2018. For this analysis, we used the business counts for two- and three-digit codes to calculate the proportional change from 2011 to 2018. Our results are presented using percent change and business count change. Again, it is important to note that the business count results presented do not accurately represent the total number of businesses lost or gained, but rather the difference in the number of businesses within that category surveyed each year. We also examined the changes occurring within Stage 1 of the CTC in more detail by breaking this category into three subcategories: Downtown Kitchener, UpTown Waterloo, and outside the urban cores. Again, we compared these trends against those occurring in Stage 2 of the CTC, outside the CTC, and in the Region at large. These results are presented in Tables 4-13.

2.5 Findings & Discussion

Figure 3 provides an overview and comparison of business distribution in Stage 1 and 2 of the CTC, outside the CTC, and the Region, between 2011 and 2018. Overall, business composition trends in Stage 1 and 2 of the CTC and outside the CTC align with Regional trends – with the exception of Retail Trade and Information and Cultural Services. Beginning with the most similar category, Arts, Entertainment and Recreation businesses represents a constant 5% of businesses between 2011 and 2018 and across all geographies, except Stage 2 of the CTC – which saw an increase from 3% to 5%. Within the Accommodation and Food Services category, the proportion of businesses ranges from 17% to 25%, with all showing modest increases of 2% in Stage 2 (19% to 21%) and outside the CTC (17% to 19%), and a 3% increase in Stage 1 of the CTC (22% to 25%). Stage 1 of the CTC has the highest proportion of Accommodation and Food services businesses in both years, followed by Stage 2, then outside the CTC. The proportion of Other Service businesses ranges from 25% to 36%, with decreases observed everywhere except Stage 2 of the CTC – who saw a 1% increase. Stage 1 of the CTC experienced a 2% decrease

(27% to 25%), and the largest decrease of 3% occurred outside the CTC (36% to 33%). The first major anomaly between the CTC and Regional trends falls within the Information and Cultural Industries. Information and Cultural Industries represents 1% to 15% across all locations, with increases of 2% outside the CTC (3% to 5%), 3% in Stage 2 of the CTC (1% to 4%), and 12% in Stage 1 of the CTC (3% to 15%). The second major anomaly between CTC and Regional trends is presented in the Retail Trade category. Where the proportion of Retail Trade businesses remains the same outside the CTC at 38%, Stage 2 sees a 9% decrease (52% to 43%), and Stage 1 experiences the most significant decrease of 13% (43% to 30%). For the remainder of this section, we will identify and discuss the major findings for each business sector.

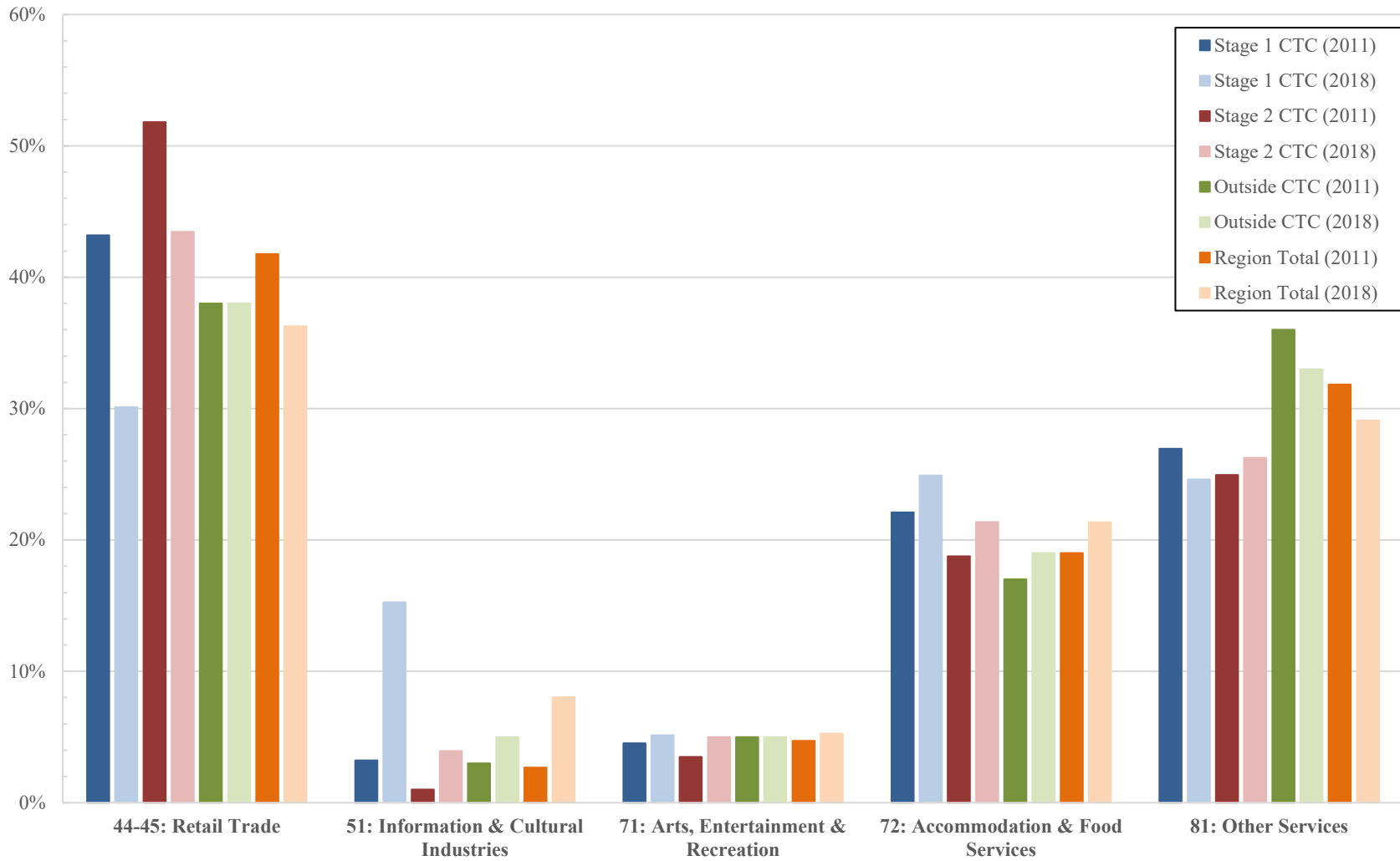


Figure 2-3: Comparison of Business Composition (2011-2018)

2.5.1 Death of Retail?

The Retail Trade category comprises the largest proportion of businesses surveyed across all years and locations. As seen in Figure 3, the proportion of retail businesses has declined in all locations, except outside the CTC. This decline is most pronounced in Stage 1, with a 13% decrease from 2011 to 2018, followed by Stage 2, with a 9% decrease. While these results may not seem particularly surprising considering the growing shift towards online retail and associated “death” of brick-and-mortar retail (Talen & Jeong, 2019), they are in direct contradiction to dominant results of commercial gentrification studies, which report retail as a growing sector in gentrifying neighbourhoods (Bridge & Dowling, 2001; Zukin et al., 2009).

In the context of our case study, Stage 1 and 2 of the CTC encompass three of the Region’s urban cores – Downtown Kitchener and UpTown Waterloo in Stage 1 and Downtown Cambridge in Stage 2, all of whom have experienced a development boom over the last decade – and all the Region’s major malls – Fairview Park Mall and Conestoga Mall in Stage 1 and the Cambridge Centre in Stage 2. While the Region’s malls are no exception to the mass exodus of anchor retail stores such as Zellers, Target and Sears, and other mall-based retail businesses like Payless Shoes and Forever 21, all of Region’s malls have either undergone or are currently undertaking major renovations. For example, at Fairview Park Mall, the former Sears is going to be converted into new retail and office space, and a new four-storey office building and several freestanding restaurants will be constructed on the site (Davis, 2019a). Therefore, perhaps in 2018, the WPC data captured a retail slump associated with the initial loss of retail businesses and the renovation period, which may not be reflective of current numbers.

Another factor that may be contributing to the more pronounced decline of retail businesses in the CTC is the rise of car-oriented SmartCentre-type retail outlets in the Region, which may help explain why the proportion of retail businesses remained the same outside the CTC from 2011 to 2018. Perhaps the most extreme of examples is located on a 100-acre parcel of land at the border of Kitchener and Waterloo, “The Boardwalk” shopping centre began its first phase of construction in 2009 (Desmond, 2020). This sprawling low-rise development is comprised of big-box and chain retailers with several traditionally mall-based businesses, including clothing and accessories stores, mobile service providers, and hobby stores. While in direct competition with malls, SmartCentres may also hurt urban core businesses, as their

abundance of free parking in front of each business make them generally easier to access by car than their urban counterparts.

Table 4. Retail Trade: Percent Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
44-45: Retail Trade	-17.2%	-11.0%	-25.2%	-11.3%	8.0%	-3.5%
441: Motor Vehicle & Parts Dealers	-25.5%	0.0%	0.0%	-6.5%	70.0%	15.5%
442: Furniture & Home Furnishings Stores	18.2%	-40.0%	-57.1%	-10.5%	19.1%	17.1%
443: Electronics & Appliance Stores	-65.0%	-28.6%	100.0%	-27.3%	-31.0%	-38.8%
444: Building Material & Garden Equipment & Supplies Dealers	-18.8%	-33.3%	0.0%	7.7%	9.1%	3.6%
445: Food & Beverage Stores	0.0%	0.0%	-25.0%	7.3%	-4.6%	-2.8%
446: Health & Personal Care Stores	7.3%	0.0%	-28.6%	15.2%	38.8%	23.0%
447: Gasoline Stations	0.0%	-100.0%	0.0%	-25.0%	0.0%	-4.3%
448: Clothing & Accessories Stores	-35.5%	-20.0%	-42.9%	-28.8%	12.1%	-22.4%
451: Sporting Goods, Hobby, Book & Music Stores	-7.4%	-11.1%	0.0%	15.4%	18.6%	8.8%
452: General Merchandise Stores	-18.2%	0.0%	0.0%	7.7%	7.5%	3.8%

453: Miscellaneous Store Retailers	8.3%	-5.6%	-4.8%	-9.1%	-14.1%	-9.0%
454: Non-Store Retailers	0.0%	0.0%	0.0%	-100.0%	14.3%	25.0%

Table 5. Retail Trade: Count Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
44-45: Retail Trade	-85	-11	-26	-52	93	-81
441: Motor Vehicle & Parts Dealers	-12	2	0	-3	56	29
442: Furniture & Home Furnishings Stores	4	-2	-4	-4	18	26
443: Electronics & Appliance Stores	-26	-2	1	-9	-18	-54
444: Building Material & Garden Equipment & Supplies Dealers	-3	-1	0	1	7	4
445: Food & Beverage Stores	0	0	-2	3	-12	-11
446: Health & Personal Care Stores	4	0	-2	5	40	47
447: Gasoline Stations	0	-1	0	-3	0	-4
448: Clothing & Accessories Stores	-54	-5	-18	-40	13	-104
451: Sporting Goods, Hobby, Book & Music Stores	-2	-1	0	4	11	12
452: General Merchandise Stores	-2	0	0	1	4	3
453: Miscellaneous Store Retailers	4	-1	-1	-6	-27	-31
454: Non-Store Retailers	2	0	0	-1	1	2

When we examine the three-digit retail NAICS codes and further subdivide our Stage 1 CTC category, some other interesting trends emerge, as seen in Tables 4 and 5. While our results overwhelmingly highlight the stagnancy or decline of retail businesses across the Region, this trend is much more prominent in Downtown Kitchener and UpTown Waterloo, which saw either

no change or a decline in all retail business categories except one per location. Looking at NAICS businesses that align with the literature such as furniture and home furnishing stores, food and beverage stores, health and personal care stores, and clothing and accessories stores, we again see that these categories either stay the same or decline in Downtown Kitchener and UpTown Waterloo. Interestingly, the decline of retail was also found in our qualitative work in the urban cores, however, participants reported that despite many retail businesses closing, the new ones entering are higher-end and represent the commercial upgrading of the area – a sign of commercial gentrification (Webber et al., 2022).

Outside the urban cores, there are increases in several retail business categories. First, retail businesses that generally take up a larger footprint, such as furniture and home furnishings stores, building material and garden equipment and supplies dealers, and sporting goods, hobby, book and music stores, have all increased outside the CTC and in some cases, in Stage 2 of the CTC as well. While the growth of these categories outside the CTC could be linked to new stores opening in these areas, it may also be caused by stores relocating from Stage 1 of the CTC, and more specifically, the urban cores, to more suburban locations where large commercial space is abundant and perhaps cheaper.

2.5.2 Tech Boom

While not directly linked to signs of commercial gentrification as many tech businesses cannot be categorized as commercial businesses, the Information & Cultural Industries group is of particular interest to this study. The tech industry, and more specifically, the tech workers themselves, are deeply entrenched in the field of gentrification literature. Of specific relevance to this study is the idea of place-based branding whereby municipalities and business owners cater to a specific demographic, excluding others in the process. Examples of this are in the works of Deener (2007), Grier and Perry (2018), and Rankin and McLean (2014) who describe place-based branding through narratives of inclusion and exclusion. Commercial businesses play a key role in fueling these narratives through the products and services selected and their price points, and the aesthetic environment of the business (Bridge & Dowling, 2001; Deener, 2007).

Over the last decade, there has been a reported “tech boom” in the Region, with the establishment of major tech hubs like the Tannery (opened 2010) and firms such as Google

(opened 2017). The tech boom in Waterloo Region is also captured in CBRE’s annual “Scoring Tech Talent” reports Waterloo as one of North America’s most concentrated tech markets – with tech jobs representing 9.6% of the Region’s total employment – and importantly, North America’s fastest growing tech market among millennials (CBRE, 2022) As seen in Figure 3, while an increase in tech companies is evident in the Region with a 3% increase in Stage 2 and a 2% increase outside the CTC, the “boom” is the most pronounced in Stage 1, where there was a 12% increase between 2011 and 2018.

Table 6. Information & Cultural Industries: Percent Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
51: Information & Cultural Industries	248.4%	1440.0%	163.6%	311.1%	90.8%	233.8%
511: Publishing Industries	385.7%	2380.0%	100.0%	0.0%	137.8%	388.7%
512: Motion Picture & Sound Recording Industries	200.0%	50.0%	50.0%	-25.0%	-30.0%	10.0%
515: Broadcasting (Except Internet)	-50.0%	0.0%	0.0%	-100.0%	200.0%	-14.3%
517: Telecommunications	360.0%	200.0%	0.0%	700.0%	143.8%	241.7%
518: Data Processing, Hosting & Related Services	0.0%	300.0%	0.0%	-100.0%	-72.7%	-44.1%
519: Other Information Services	0.0%	0.0%	0.0%	0.0%	2000.0%	5700.0%

Table 7. Information & Cultural Industries Count Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
51: Information & Cultural Industries	77	144	18	28	79	346
511: Publishing Industries	54	119	6	11	51	241
512: Motion Picture & Sound Recording Industries	4	1	1	-1	-3	2
515: Broadcasting (Except Internet)	-2	0	0	-1	2	-1
517: Telecommunications	18	2	1	14	23	58
518: Data Processing, Hosting & Related Services	0	3	0	-2	-16	-15
519: Other Information Services	3	18	10	6	20	57

When looking at the three-digit NAICS businesses codes in Table 3, we can see that tech sector growth is the strongest in Downtown Kitchener. We can also see that this growth looked different from location to location. For example, the locations within Stage 1 of the CTC saw the largest growth in Publishing Industries, which include newspaper, book, and periodical publishers, and most notably, software publishers. Telecommunications represented the largest growing sector in Stage 2 of the CTC, and other information services (libraries, archives, and internet publishing, broadcasting and web search portals) was the largest growing sector outside the CTC.

Altogether, our findings of a major growth in tech businesses in the CTC, and most significantly, Downtown Kitchener, align with local rhetoric about the growth of the Region’s tech sector and its concentration in Downtown Kitchener (Davis, 2020). In efforts to capitalize on this growth, the local municipalities, together with the Region and business associations have made a concerted effort to advertise the Region as a high-tech, forward-thinking place that

fosters creativity, where tech workers will feel welcome. The growth of this sector alone can have major implications for surrounding local businesses as they attempt to cater to this theoretically promising demographic, which may contribute to the gentrification of local commercial districts, especially in the urban cores, as this is where the tech companies are concentrated. The implications of the perceived tech customers are currently being experienced in Downtown Kitchener and UpTown Waterloo, as informed by our qualitative work, where businesses anticipated that the rise in tech companies would equal the rise in tech worker patrons, but that has not been the reality (Webber et al., 2022).

2.5.3 A Cultural Desert

According to the literature, neighbourhoods that undergo gentrification generally observe an increase in entertainment businesses (Ley, 1996; Roth & Grant, 2015; Zukin et al., 2009). However, as seen in Figure 3, the Arts, Entertainment and Recreation NAICS category is not only the smallest group of businesses studied, but it also remains stable as a proportion of business composition between 2011 and 2018, with only a 2% increase observed in Stage 2. The Region's 2018 monitoring report cites an increase from 43% to 47% of the Region's cultural establishments being located in the CTC, but include a variety of other business types that fall into different NAICS categories, not just the Arts, Entertainment and Recreation category as included in this study (Region of Waterloo, 2019). An additional contextual factor is that the Region of Waterloo is located near other major cultural hubs, most notably being the City of Toronto, but also neighbouring theatre hotspot Stratford, Ontario. Despite this, however, that is not to say that there is not local demand for these experiences locally.

Table 8. Arts, Entertainment & Recreation: Percent Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
71: Arts, Entertainment & Recreation	45.5%	20.0%	11.1%	51.6%	14.0%	24.1%
711: Performing Arts, Spectator Sports & Related Industries	28.6%	-25.0%	66.7%	133.3%	66.7%	42.4%
712: Heritage Institutions	0.0%	100.0%	50.0%	400.0%	-33.3%	8.7%
713: Amusement, Gambling & Recreation Industries	52.9%	40.0%	-50.0%	29.6%	14.6%	22.9%

Table 9. Arts, Entertainment & Recreation: Count Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
71: Arts, Entertainment & Recreation	20	4	1	16	22	63
711: Performing Arts, Spectator Sports & Related Industries	2	-2	2	4	8	14
712: Heritage Institutions	0	2	1	4	-5	2
713: Amusement, Gambling & Recreation Industries	18	4	-2	8	19	47

While this category remains stable as a proportion of overall businesses as seen in Figure 3, the number of businesses in this category is growing year-over-year, as demonstrated in Tables 8 and 9. This growth is the most substantial outside the urban cores in Stage 1 and in Stage 2 but is below the regional average everywhere else.

Additionally, changes from 2011 to 2018 are overall inconsistent, with performing arts, spectator sports and related industries increasing everywhere except Downtown Kitchener, heritage institutions increasing everywhere except outside the CTC, and amusement, gambling and recreation industries increasing everywhere except UpTown Waterloo. These inconsistent changes may be evidence of each area developing their own niche in terms of entertainment experiences offered, as Downtown Kitchener and UpTown Waterloo have made concerted efforts to differentiate themselves from each other. This may also be due to the nature of this category in that some cultural experiences are not true brick-and-mortar businesses, and many cultural events are hosted at locations that would fall within another business category, such as churches.

2.5.4 The Belly of the Gentrification Beast

Looking next at the Accommodation and Food Services NAICS category, this category experienced a minor increase between 2011 and 2018 across all geographies as seen in Figure 3. However, where Stage 2 mirrors the regional trend, increasing from 19% to 21% of businesses surveyed and outside the CTC from 17% to 19%, Stage 1 starts at a higher 22% and increases by an additional percentage point, to 25% of businesses in 2018.

While accommodation services are not frequently cited in the literature reviewed for this study, they are not immune from gentrification. Like other business types, they can too experience upgrading, where a low-end motel is replaced by an upscale boutique one, for example. An excellent instance of this is seen in Downtown Kitchener, where the historic Walper Hotel was redeveloped into an upscale, boutique hotel (McPherson, 2019). Additionally, while smaller “no-name” accommodation services were previously common in the downtown cores, this recently changed following the opening of a Delta hotel in UpTown Waterloo.

Despite these local examples, when examining the change in accommodation businesses between 2011 and 2018, we can see a decrease in both urban cores, but an increase in Stage 1 of

the CTC outside of these areas. This decrease in accommodation services may be due to the nature of this land use, and its reliance on parking, resulting in selected locations close to the amenities of the cores without being restricted by parking. It is important to note that while these changes seem substantial in the Stage 1 subgroups, there is a very low business count for accommodation services in these areas, so a gain or loss of a few establishments makes a big difference in terms of percent change. Despite these data concerns, there was a loss overall in accommodation businesses across the Region. One factor that may be contributing to this decline is the rise of informal accommodation services such as Airbnb. These accommodation services are especially popular in core areas and would not be captured by the WPC survey.

Table 10. Accommodation & Food Services: Percent Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
72: Accommodation & Food Services	42.3%	23.9%	16.1%	20.4%	20.6%	24.9%
721: Accommodation Services	150.0%	-66.7%	-50.0%	0.0%	-16.7%	-12.0%
722: Food Services & Drinking Places	41.3%	27.0%	18.5%	21.3%	23.3%	26.7%

Table 11. Accommodation & Food Services: Count Change 2011-2018

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
72: Accommodation & Food Services	88	22	9	34	109	262
721: Accommodation Services	3	-2	-1	0	-6	-6
722: Food Services & Drinking Places	85	24	10	34	115	268

In contrast to the understudied role of accommodation services in gentrification literature, Food Services and Drinking Places represent one of the most discussed indicators of commercial gentrification. In gentrifying business districts, researchers report increases in upscale restaurants and bars, trendy cafés, and chain restaurants (Hubbard, 2017; Roth & Grant, 2015; Zukin et al., 2009). Across all locations, there has been a notable increase in restaurants between 2011 and 2018, with the largest change occurring within Stage 1, outside the urban cores. UpTown Waterloo experienced the smallest increase, and Downtown Kitchener’s growth was only a few tenths more than the regional average. This suburban phenomenon of restaurant growth may be because the areas outside the urban cores have more space to build new restaurants, whereas the urban cores are restricted to their boundaries that have largely been built out. Therefore, business turnover would be a key indicator in this instance, which could differentiate between net and gross gains. Additionally, even looking beyond the three-digit codes, the NAICS system is especially limiting in this category for what we are interested in, as its descriptions of businesses are general (e.g., restaurants are categorized as either full-service or limited-service). Our qualitative work helps shed light on the challenges of business turnover and general NAICS codes, as our interviews revealed an influx of food services in both downtown cores – most notably, with higher-end and chain restaurants flocking to UpTown Waterloo (Webber et al., 2022)

2.5.5 Upscale Services

The final NAICS category we examined for this study is that of Other Services. The literature states that gentrifying commercial districts see increases in high-end personal service businesses, as new residents have both an interest in these services and the income to afford them (Bridge & Dowling, 2001). When examining the services category in Figure 3, we can see small decreases between 2011 and 2018, except for Stage 2, which saw a 1% increase. Again, this may be due to the inability to track business upgrading through the WPC. For example, the Walper Barbershop in Downtown Kitchener was recently “renovicted” – evicted via the renovation process – from its location of over 126 years and replaced with a high-end barbershop tenant (Davis, 2019b).

Table 12. Other Services: Percent Change 2011-2018 (*No survey responses)

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	UpTown Waterloo	Downtown Kitchener			
81: Other Services	15.3%	8.7%	-20.0%	11.3%	-2.9%	1.6%
811: Repair & Maintenance	25.5%	-80.0%	-58.3%	3.8%	0.2%	3.2%
812: Personal & Laundry Services	10.7%	27.6%	-14.9%	25.0%	5.6%	8.9%
813: Religious, Grant Making, Civic & Professional & Similar Organizations	8.6%	0.0%	-9.5%	-4.2%	-16.3%	-10.3%
814: Private Households*	N/A	N/A	N/A	N/A	N/A	N/A

Table 13. Other Services: Count Change 2011-2018 (*No survey responses)

	Stage 1 CTC			Stage 2 CTC	Outside CTC	Region Total
	Outside Urban Cores	Downtown Kitchener	UpTown Waterloo			
81: Other Services	308	80	46	222	1107	1763
811: Repair & Maintenance	106	12	5	78	417	618
812: Personal & Laundry Services	121	47	29	96	358	651
813: Religious, Grant Making, Civic & Professional & Similar Organizations	81	21	12	48	332	494
814: Private Households*	N/A	N/A	N/A	N/A	N/A	N/A

However, when looking at the three-digit codes within this category, in Tables 12 and 13, it becomes apparent that this decreased proportion is primarily associated with the decrease in repair and maintenance businesses – with the largest declines in UpTown Waterloo and Downtown Kitchener – and in the religious and grant making organizations. The smaller proportion and yearly decline of repair and maintenance facilities may be due to the closure/movement of large shops (e.g., automotive repair) associated with increased scarcity of suitable land parcels or decreased demand from transit-oriented residents. However, it also represents possible losses in smaller-scale repair shops such as cobblers, tailors, appliance, furniture, and jewelry repair businesses, etc.– which are historically located in downtowns – due to demographic changes. For example, a higher-income individual may choose to replace an item when it breaks rather than getting it repaired.

The personal and laundry services group comprises several business types from beauty salons to laundromats. These businesses have increased everywhere except Downtown Kitchener. However, in our qualitative interviews, business owners in both Downtown Kitchener and UpTown Waterloo described a significant increase in high-end personal service businesses (Webber et al., 2022). Downtown Kitchener aside, all other areas of the CTC have increased more than the regional average, which might be an indicator of these services being associated with an urban lifestyle, and/or entrepreneurs selectively locating their businesses in neighbourhoods with residents who can afford to pay for these services.

2.6 Conclusion

As the adoption of rapid transit systems in mid-sized municipalities across North America increases, it is important for planners and policymakers to have a holistic understanding about how rapid transit and TOD policies affect those living and working in the area. Transit-induced gentrification is a growing area of scholarship that has shed light on the outcomes of new transit investment from a resident and residential perspective. However, as a key component to the walkability and livability goals of TODs, commercial businesses should be more meaningfully included in discussions of transit-induced gentrification. This study contributes to the research by using quantitative data to explore: 1) how the commercial business composition of the CTC has

changed since the approval of the Region of Waterloo's ION LRT system; and 2) whether and how these changes relate to or contribute to commercial gentrification. Our research provides a snapshot of business composition the year the LRT was approved, and the year before the LRT became operational, providing us with a good baseline to monitor changes following the commencement of LRT operation.

Returning to our research questions, we can conclusively say that yes, the commercial business composition of the CTC has changed since the approval of the Region's LRT system, and some of these changes represent commercial gentrification as defined in the literature. While proportionally, trends occurring in the CTC mirror those occurring at the regional scale, changes in the CTC are more drastic especially in Stage 1, and especially in the retail and tech business categories. The more dramatic changes in the CTC may indicate the occurrence of gentrification as it indicates the scale and rapidity of change, which is often more substantial in gentrifying commercial districts (Chapple et al., 2017; Meltzer, 2016; Meltzer & Capperis, 2017).

Aside from the decline in retail, which was the most substantial in Stage 1 of the CTC and contradictory to commonly cited indicators of gentrification (e.g. Bridge & Dowling, 2001; Zukin et al., 2009), results from the rest of the NAICS groups align with other commercial gentrification indicators. A classic indicator of commercial gentrification as cited in the works of Ley (1996), Roth and Grant (2015), and Zukin et al. (2009) is demonstrated in the higher-than-average increase in arts and entertainment businesses in Stage 1 outside the urban cores and in Stage 2 of the CTC. Growth in the restaurant sector is also highest in Stage 1 of the CTC, with the most growth outside the urban cores. Lastly, personal services have seen much higher than average increases in both Stage 1 and 2 of the CTC, with the biggest increase observed in UpTown Waterloo, another sign of gentrification.

The above-listed findings of increased arts and entertainment businesses, restaurants, and personal services is likely the physical manifestation of the demographic changes that have occurred in the CTC over the last decade – markedly, young professionals (who likely work in the tech sector, according to our findings) and older adults (Cook, 2018). Coming back to the core definition of commercial gentrification as being fueled by changing demographics and/or increased demand for commercial space (González et al., 2019; Meltzer, 2016), the increased

presence of discretionary businesses, as defined by Chapple et al. (2017). These discretionary businesses are contrary to necessary establishments that fill everyday needs, but rather are service or experience-based businesses for those who value, and who have the financial ability to afford these non-essential expenses. Therefore, retail businesses aside, the changes occurring in Stage 1 of the CTC, and to a lesser extent, Stage 2 of the CTC, are reflective of commercial gentrification traits, and perhaps reflect the changing consumption patterns and habits of the CTC's new and residents.

2.6.1 Implications for Planning Practice

As rapid transit systems become an increasingly popular planning and economic development tool in mid-sized municipalities, it is important that planning departments consider the wider implications of transit implementation. Through transit-induced gentrification research, our awareness of the potential impacts of transit investment and TOD on local residents and housing markets has improved, but our knowledge about how new transit infrastructure and associated redevelopment impacts commercial businesses remains limited. Through the significant changes documented in our findings and their alignment with commercial gentrification indicators, our study demonstrates that commercial businesses are not immune from transit-induced gentrification. Therefore, when undertaking a major capital project such as a rapid transit system, municipalities may consider implementing a monitoring program that tracks business composition from the outset of the project, during construction, and following the system's launch. Our research begins this process in the Region of Waterloo, but is missing a key component, that is the post-construction and LRT operational phase. The Region of Waterloo also does this to an extent through their *Monitoring Change in the CTC* program by tracking the number of grocery stores, restaurants, and arts and cultural establishments as they relate to their "Cultural Vibrancy" indicator, however; alone, they do not paint a comprehensive picture of business composition in the CTC. When municipalities track changes to business composition from the onset of a project, they can respond appropriately when signs of gentrification become apparent.

2.6.2 Study Limitations and Opportunities for Future Research

While our results indicate commercial gentrification in the CTC, it is important to highlight the limitations of this study and opportunities for future research. First, while the WPC is an effective dataset in providing a snapshot of business composition, as we do not know survey response rates, our results may not be representative of the entire business population. Therefore, future research may consider using other data, such as Statistics Canada's Canadian Business Counts to reproduce and verify our results. Another caveat worth noting relates to the risk of relying on business counts data altogether to identify commercial gentrification. Undoubtedly, we have undergone a transformation in the way we consume over the last decade, and business count data may be reflective of these trends, rather than gentrification alone. For example, the increase in larger format stores may result in larger catchment areas per business, resulting in a decreased business count, but a maintenance in level of service.

Second, although the NAICS is effective in providing information about business classification, some of these classifications are quite general, which limits our ability to find certain business types of interest (e.g., cafés, ethnic restaurants, second-hand stores). Additionally, the data does not tell us about ownership type (e.g., chain versus independently owned), or about business characteristics (e.g., a traditional no-frills barbershop versus a modern contemporary one) that may signal gentrification. In the future, researchers may consider using other quantitative data which may provide further detail about the composition of businesses. Alternatively, as verified through our companion qualitative study, there is a major opportunity to integrate qualitative methods into this area of research, which can capture elements of gentrification that are difficult to measure, including business upgrading and demographic change, thereby supporting a more holistic understanding of neighbourhood change. In the context of this case study, future research should explore the composition of businesses now that the LRT is operational.

Works Cited

- Agnew, S., Baum, P., Croaston, M., Janzen, A., Jerabek, E., Jorgenson, B., Senn, A., & Yang, J. (2010). The Potential Impact of Central Corridor LRT on Existing University Avenue Businesses. *University of Minnesota: Humphrey Institute*.
- Antanaitis, A. (2014). Developing Up and not Out: Understanding the Barriers to and Opportunities for Reurbanization along Waterloo's Central Transit Corridor. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/9022>
- Babin, R. M. (2016). Estimating Homebuyer Preferences Under Intensification: Hedonic Modelling of Open Space and Multimodal Transit Amenities Preceding Light Rail in Kitchener-Waterloo. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/10936>
- Baker, D. M., & Lee, B. (2019). How Does Light Rail Transit (LRT) Impact Gentrification? Evidence from Fourteen US Urbanized Areas. *Journal of Planning Education and Research*, 39(1), 35–49. <https://doi.org/10.1177/0739456X17713619>
- Bridge, G., & Dowling, R. (2001). Microgeographies of Retailing and Gentrification. *Australian Geographer*, 32(1), 93–107. <https://doi.org/10.1080/00049180020036259>
- CBRE. (2022). Scoring Tech Talent: North American Report. *Evolving Workforces: Scoring Tech Talent, July*. <https://www.cbre.us/research-and-reports/Scoring-Tech-Talent-in-North-America-2021?article=%7BD3EA4CC8-B064-4CEB-A696-26B6B84F9BF6%7D>
- Cervero, R. (2006). Effects of Light and Commuter Rail Transit on Land Prices: Experiences in San Diego County. *UC Berkley: University of California Transportation Center*.
- Cervero, R., & Duncan, M. (2002). Transit's Value-Added Effects: Light and Commuter Rail Services and Commercial Land Values. *Transportation Research Record*, 1805(1), 8–15.
- Chapple, K., Loukaitou-Sideris, A., Gonzalez, S. R., Kadin, D., & Poirier, J. (2017). Transit-Oriented Development & Commercial Gentrification: Exploring the Linkages. *UCB Center for Community Innovation & UCLA Lewis Center*.
- Cook, J. (2018). Light Rail Transit in the Region of Waterloo: A qualitative examination of urban rail's effects on real estate, development and urban identities. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/14345>
- Davis, B. (2019a, February 25). Fairview Park redevelopment in Kitchener to begin this spring. *The*

- Record*. <https://www.therecord.com/business/2019/02/25/fairview-park-redevelopment-in-kitchener-to-begin-this-spring.html>
- Davis, B. (2019b, April 3). Weeks left for historic Walper Hotel barbershop in Kitchener. *The Record*. <https://www.therecord.com/business/2019/04/03/weeks-left-for-historic-walper-hotel-barbershop-in-kitchener.html>
- Davis, B. (2020, July 18). Waterloo Region tops list of “up-and-coming” North American tech markets. *The Record*. <https://www.therecord.com/business/technology/2020/07/18/waterloo-region-tops-list-of-up-and-coming-north-american-tech-markets.html#:~:text=Waterloo Region has one of,growth among the 25 locations.>
- Dawkins, C., & Moeckel, R. (2016). Transit-Induced Gentrification: Who Will Stay, and Who Will Go? *Housing Policy Debate*, 26(4–5), 801–818. <https://doi.org/10.1080/10511482.2016.1138986>
- Deener, A. (2007). Commerce as the Structure and Symbol of Neighborhood Life: Reshaping the Meaning of Community in Venice, California. *City & Community*, 6(4), 291–314.
- Deka, D. (2017). Benchmarking gentrification near commuter rail stations in New Jersey. *Urban Studies*, 54(13), 2955–2972. <https://doi.org/10.1177/0042098016664830>
- Desmond, P. (2020, January 29). Next phase of Boardwalk shopping complex approved in Waterloo. *The Record*. <https://www.therecord.com/news/waterloo-region/2013/01/29/next-phase-of-boardwalk-shopping-complex-approved-in-waterloo.html?rf#:~:text=More than one kilometre in, straddles both Kitchener and Waterloo>
- Dong, H. (2017). Rail-transit-induced gentrification and the affordability paradox of TOD. *Journal of Transport Geography*, 63, 1–10. <https://doi.org/10.1016/j.jtrangeo.2017.07.001>
- Dovey, K., Pike, L., & Woodcock, I. (2017). Incremental Urban Intensification: Transit-oriented Re-development of Small-lot Corridors. *Urban Policy and Research*, 35(3), 261–274. <https://doi.org/10.1080/08111146.2016.1252324>
- Ellis-Young, M., & Doucet, B. (2021). From “Big Small Town” to “Small Big City”: Resident Experiences of Gentrification along Waterloo Region’s LRT Corridor. *Journal of Planning Education and Research*, December 2020. <https://doi.org/10.1177/0739456X21993914>
- Filion, P., Kramer, A., & Sands, G. (2016). Recentralization as an Alternative to Urban Dispersion: Transformative Planning in a Neoliberal Societal Context. *International Journal of Urban and*

Regional Research, 40(3), 658–678. <https://doi.org/10.1111/1468-2427.12374>

- González, S. R., Loukaitou-Sideris, A., & Chapple, K. (2019). Transit neighborhoods, commercial gentrification, and traffic crashes: Exploring the linkages in Los Angeles and the Bay Area. *Journal of Transport Geography*, 77, 79–89. <https://doi.org/10.1016/j.jtrangeo.2019.04.010>
- Grier, S. A., & Perry, V. G. (2018). Dog parks and coffee shops: Faux diversity and consumption in gentrifying neighborhoods. *Journal of Public Policy and Marketing*, 37(1), 23–38. <https://doi.org/10.1509/jppm.16.230>
- Grube-Cavers, A., & Patterson, Z. (2015). Urban rapid rail transit and gentrification in Canadian urban centres: A survival analysis approach. *Urban Studies*, 52(1), 178–194. <https://doi.org/10.1177/0042098014524287>
- Hess, D. B., & Almeida, T. M. (2007). Impact of Proximity to Light Rail Rapid Transit on Station-area Property Values in Buffalo, New York. *Urban Studies*, 44(5–6), 1041–1068.
- Hewitt, C. M., & Hewitt, W. E. (2012). The Effect of Proximity to Urban Rail on Housing Prices in Ottawa. *Journal of Public Transportation*, 15(4), 43–65.
- Higgins, C. D., & Kanaroglou, P. S. (2018). Rapid Transit, Transit-oriented Development, and the Contextual Sensitivity of Land Value Uplift in Toronto. *Urban Studies*, 55(10), 2197–2225. <https://doi.org/10.1177/0042098017712680>
- Huang, Y. (2020). Analyzing the housing market dynamics and residential location choices along with the light-rail transit investment in Kitchener-Waterloo Phd candidate : Yu Huang. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/15801>
- Hubbard, P. (2017). *The Battle for the High Street: Retail Gentrification, Class and Disgust*. Palgrave Macmillan.
- Immergluck, D. (2009). Large Redevelopment Initiatives, Housing Values and Gentrification: The Case of the Atlanta Beltline. *Urban Studies*, 46(8), 1723–1745. <https://doi.org/10.1177/0042098009105500>
- Jackson, S. L., & Buckman, J. (2020). Light rail development with or without gentrification?: Neighborhood perspectives on changing sense of place in Denver, Colorado. *Journal of Transport Geography*, 84(1), 102678. <https://doi.org/10.1016/j.jtrangeo.2020.102678>
- Jones, C. E., & Ley, D. (2016). Transit-oriented development and gentrification along Metro Vancouver's

- low-income SkyTrain corridor. *The Canadian Geographer*, 60(1), 9–22.
<https://doi.org/10.1111/cag.12256>
- Keatinge, B., & Martin, D. G. (2016). A ‘Bedford Falls’ kind of place: Neighbourhood branding and commercial revitalisation in processes of gentrification in Toronto, Ontario. *Urban Studies*, 53(5), 867–883. <https://doi.org/10.1177/0042098015569681>
- Kosta, E. B. (2019). Commercial Gentrification Indexes: Using Business Directories to Map Urban Change at the Street Level. *City & Community*, 18(4), 1101–1122.
<https://doi.org/10.1111/cico.12468>
- Kramer, A. (2018). The unaffordable city: Housing and transit in North American cities. *Cities*, 83, 1–10.
<https://doi.org/10.1016/j.cities.2018.05.013>
- Lee, H. (2018). Are Millennials Coming to Town? Residential Location Choice of Young Adults. *Urban Affairs Review*, 56(2), 565–604. <https://doi.org/10.1177/1078087418787668>
- Ley, D. (1996). “Follow the Hippies”: The Cultural Politics of Gentrification. In *The New Middle Class and the Remaking of the Central City* (pp. 191–221). Oxford University Press.
- McPherson, D. (2019, April 23). Refreshed Walper Hotel a symbol of downtown Kitchener’s resurgence. *The Globe and Mail*. <https://www.theglobeandmail.com/business/industry-news/property-report/article-refreshed-walper-hotel-a-symbol-of-downtown-kitcheners-resurgence/>
- Meltzer, R. (2016). Gentrification and Small Business: Threat or Opportunity? *Cityscape*, 18(3), 57–85.
- Meltzer, R., & Capperis, S. (2017). Neighbourhood differences in retail turnover: Evidence from New York City. *Urban Studies*, 54(13), 3022–3057. <https://doi.org/10.1177/0042098016661268>
- Pi, X. (2017). Exploring Rental Housing Market in Kitchener-Waterloo, Ontario. *University of Waterloo: UWSpace*. <https://doi.org/http://hdl.handle.net/10012/12431>
- Rankin, K. N., & McLean, H. (2014). Governing the Commercial Streets of the City: New Terrains of Disinvestment and Gentrification in Toronto’s Inner Suburbs. *Antipode*, 47(1), 216–239.
<https://doi.org/10.1111/anti.12096>
- Ray, R. (2017). Open for business? Effects of Los Angeles Metro Rail construction on adjacent businesses. *The Journal of Transport and Land Use*, 10(1), 725–742.
- Region of Waterloo. (2011). *Central Transit Corridor Monitoring Program: Baseline Monitoring Report*.

https://www.regionofwaterloo.ca/en/resources/Monitoring_Change_in_the_CTC__Baseline_Report-June-Update.pdf

Region of Waterloo. (2016). *The ION Story*.

<https://rapidtransit.regionofwaterloo.ca/en/resourcesGeneral/ION-Story-Fall-2016-access.pdf>

Region of Waterloo. (2019). *Monitoring Change in the CTC: 2018 Report*.

https://www.regionofwaterloo.ca/en/shared-content/resources/Monitoring_Change_in_the_CTC_2018_Report.pdf

Region of Waterloo. (2020). *Workplace Count*. <https://www.regionofwaterloo.ca/en/doing-business/workplace-count.aspx>

Region of Waterloo. (2021). *Demographics*. <https://www.regionofwaterloo.ca/en/doing-business/demographics.aspx>

Region of Waterloo. (2022a). *Monitoring Change in the CTC: 2020 Report*.

https://www.regionofwaterloo.ca/en/regional-government/resources/LandUse_BuildingActivity/3868173-PDL-CPL-22-02_Attachment_1_Monitoring_Change_in_the_CTC_2020_Report.ACCESS.pdf

Region of Waterloo. (2022b). *Open Data Portal*. <https://rowopendata-rmw.opendata.arcgis.com/>

Roth, N., & Grant, J. L. (2015). The story of a commercial street: growth, decline, and gentrification on Gottingen Street, Halifax. *Urban History Review*, 43(2), 38–53.

Shaw, K. S., & Hagemans, I. W. (2015). “Gentrification Without Displacement” and the Consequent Loss of Place: The Effects of Class Transition on Low-income Residents of Secure Housing in Gentrifying Areas. *International Journal of Urban and Regional Research*, 39(2), 323–341. <https://doi.org/10.1111/1468-2427.12164>

Statistics Canada. (2011). Location Counts by PROV/CD, Sectors & Employment Size Ranges NAICS 2-digit. *Canadian Business Patterns, June*. <http://odesi2.scholarsportal.info/documentation/CBP/cbp-en.html>

Statistics Canada. (2017a). *Kitchener, CY [Census subdivision], Ontario and Waterloo, CY [Census subdivision], Ontario (table)*. Census Profile. 2016 Census.

Statistics Canada. (2017b). *Waterloo, RM [Census division], Ontario and Cambridge, CY [Census subdivision], Ontario (table)*. Census Profile. 2016 Census.

- Statistics Canada. (2018). Location Counts by NAICS and Employment Size Ranges for all PROV/CD's. *Canadian Business Counts, June*. <http://odesi1.scholarsportal.info/documentation/CBC/cbc-en.html>
- Statistics Canada. (2020). *Canada's population estimates: Subprovincial areas, July 1, 2019*. The Daily. <https://www150.statcan.gc.ca/n1/daily-quotidien/200213/dq200213a-eng.htm>
- Statistics Canada. (2021). *North American Industry Classification System (NAICS) Canada 2017 Version 3.0*. Statistical Classifications. <https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553>
- Statistics Canada. (2022). *Statistics Canada Catalogue no. 98-316-X2021001*. Census Profile. 2021 Census of Population. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=waterloo&DGUIDlist=2021S0503541&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>
- Talen, E., & Jeong, H. (2019). Street rules: does zoning support main street? *Urban Design International*, 24(3), 206–222. <https://doi.org/10.1057/s41289-018-0076-x>
- Tran, J. (2016). Understanding Developer's Decision Making in the Region of Waterloo. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/11163>
- Webber, K., Parker, D. C., & Doucet, B. (2022). Transit-Induced Commercial Gentrification? Local business owners' perspectives of neighbourhood change in Kitchener-Waterloo. *University of Waterloo*.
- Zukin, S. (2008). Consuming Authenticity. *Cultural Studies*, 22(5), 724–748. <https://doi.org/10.1080/09502380802245985>
- Zukin, S., Trujillo, V., Frase, P., Jackson, D., Recuber, T., & Walker, A. (2009). New Retail Capital and Neighborhood Change: Boutiques and Gentrification in New York City. *City & Community*, 8(1), 47–65.

Chapter 3 Manuscript 2: Transit-Induced Commercial Gentrification? Business owners' perspectives of neighbourhood change in Kitchener-Waterloo

Kaitlin Webber, Dawn Cassandra Parker & Brian Doucet

3.1 Introduction

Rapid transit systems have regained popularity over the last two decades as municipalities shift towards recentralization-based planning models. When implemented alongside transit-oriented development (TOD) policies, which encourage mixed-use densification around transit stops (Jones & Ley, 2016); rapid transit has been increasingly recognized for its ability to revitalize station neighbourhoods (Baker & Lee, 2019; Dong, 2017; Duncan, 2011; Kahn, 2007; Saxe & Miller, 2016; Zuk et al., 2018). More recently, rapid transit and TOD have been connected to gentrification when used as a tool for economic revitalization (Higgins & Kanaroglou, 2018; Immergluck, 2009; Kramer, 2018). Such “transit-induced gentrification” can be understood as the process of gentrification – characterized by neighbourhood upgrading and demographic change – wherein the catalyst for neighbourhood change is new transit investment. Transit-induced gentrification scholarship is a growing field and focuses primarily on the impacts of new transit investment on residents and housing markets. However, as a central component to the establishment of TODs, commercial businesses should be included more meaningfully in transit-induced gentrification research. We define commercial gentrification as the process of commercial district change, generally characterized by business upgrading and compositional changes caused by changing demographics (demand side) and/or increased demand for commercial space (supply side).

Through this study, we aim to close the gap between the transit-induced gentrification and commercial gentrification literatures by qualitatively exploring the phenomenon of transit-induced *commercial* gentrification in the core areas of Downtown Kitchener and UpTown Waterloo, located in the Region of Waterloo, in Ontario, Canada. To explore this phenomenon, we interviewed business owners in Downtown Kitchener and UpTown Waterloo to learn about

their observations of, and experiences with, neighbourhood change. This study is guided by the following research questions:

- 1) *How has business composition in Downtown Kitchener and UpTown Waterloo changed over the last decade (2011-2021)?*
 - a) *Do these changes relate to, or contribute to, commercial gentrification? If so, how?*
 - b) *What are the mechanisms behind these changes?*
- 2) *How have businesses in Downtown Kitchener and UpTown Waterloo responded to the demographic and built form changes associated with LRT implementation?*

This article will begin with a review of transit-induced gentrification and commercial gentrification literature, highlighting dominant methods and findings. Next, we will provide an overview of the case study area, including the Region's land use planning context, journey with rapid transit development, and current signs of transit-induced gentrification. Next, we will introduce our research method (semi-structured interviews) and provide an overview of our respondents. We will then present the results of our interviews, beginning with business owners' observations of change, then discussing the mechanisms behind these changes, and ending with how they have adapted to these changes, providing commentary and connections to the literature – including our quantitative study (Webber & Parker, 2022) – along the way. Concluding remarks will include an overview of findings, contributions and limitations of this study, and opportunities for future research.

3.2 Literature Review

3.2.1 Transit-Induced Gentrification

As a growing area of literature, transit-induced gentrification research focuses primarily on the residential aspects of neighbourhood change. Transit-induced gentrification can simply be defined as gentrification caused by new transit investment (Dawkins & Moeckel, 2016). Where there remains much debate around what defines and drives gentrification, for the purposes of this paper, we refer to gentrification generally as the physical (i.e., built form) and social upgrading of a neighbourhood generated by an influx of capital (Davidson & Lees, 2005).

Favouring quantitative methods, many researchers have attempted to measure gentrification by evaluating changes to residential property values and resident demographics (Baker & Lee, 2019; Deka, 2017; Dong, 2017). Looking first at property values, many studies employ hedonic price modelling to estimate the capitalization effects of housing near transit (e.g. Cervero, 2006; Duncan, 2011; Hess & Almeida, 2007; Hewitt & Hewitt, 2012; Higgins & Kanaroglou, 2018; Kahn, 2007; Knaap et al., 2001). While most of these studies report capitalization premiums for housing near transit, these premiums are dependent on a number of factors, including housing type (Cervero, 2006; Duncan, 2011), neighbourhood demographics (Hess & Almeida, 2007), and station context (Cervero, 2006; Higgins & Kanaroglou, 2018; Kahn, 2007). Moving to resident demographics, researchers make assumptions about the demographic characteristics of gentrifying neighbourhoods (e.g., income, education level, race) to determine whether station areas are undergoing gentrification, and produce mixed findings (Baker & Lee, 2019; Deka, 2017; Dong, 2017). Overall, however, these studies highlight the importance of local planning agendas (i.e., embedded economic and development goals) to the outcomes of transit projects, as municipalities who approach new transit projects as an economic opportunity and introduce programs to facilitate new development are more likely to spark gentrification (Baker & Lee, 2019; Cervero, 2006; Duncan, 2011; Kahn, 2007).

In response to a variety of criticisms about the efficacy of quantitative methods in capturing the different facets of gentrification, most notably being their inability to measure the displacement of residents, there have been calls for the integration of qualitative methods into this area of study (Baker & Lee, 2019; Dawkins & Moeckel, 2016; Deka, 2017; Jackson & Buckman, 2020b). Researchers are now using qualitative methods to explore the lived experiences of those in gentrifying neighbourhoods (Ellis-Young & Doucet, 2021; Jackson & Buckman, 2020b; Jones & Ley, 2016; Shaw & Hagemans, 2015), to better understand causality (Filion et al., 2016) and as a means of triangulation to complement quantitative research (Loukaitou-Sideris et al., 2019). The integration of qualitative methods has enhanced our understanding of transit-induced gentrification, by helping researchers paint a more holistic picture of neighbourhood change, and to capture the nuances of gentrification not easily captured quantitatively.

3.2.2 Commercial Gentrification

Commercial gentrification represents another sub-field of gentrification literature, with scholars exploring the role that commercial businesses play in fuelling gentrification (Deener, 2007; Sullivan & Shaw, 2011; Zukin, 2008; Zukin et al., 2009), how businesses are impacted by gentrification (Grier & Perry, 2018; Keatinge & Martin, 2016; Komakech & Jackson, 2016; Meltzer, 2016; J. N. Parker, 2018), and how commercial districts themselves can undergo gentrification and what that looks like (Bridge & Dowling, 2001; Haltiwanger et al., 2010; Hubbard, 2017). Commercial gentrification is described as the physical transformation of commercial spaces as a result of changing customer demographics and/or increased demand for commercial space in a neighbourhood (Chapple et al., 2017; Meltzer, 2016).

Looking first at the defining characteristics of commercial gentrification, the main sign of commercial gentrification is business upgrading. Business upgrading can be understood as the replacement of businesses with the same product category, but the demographic served is of higher income. As described by Hubbard (2017), business upgrading is when “pubs become wine bars, corner shops become delis, the greasy spoon café becomes a barista-style coffee shop and so on” (Hubbard, 2017, pp. 5). In addition to business upgrading, there are several compositional changes associated with commercial gentrification, such as the increased concentration of chain businesses (Meltzer, 2016; Zukin, 2008; Zukin et al., 2009), boutiques, restaurants and personal care services (Bridge & Dowling, 2001).

While there are some hallmark signs of commercial gentrification, the literature also emphasizes the contextual nature of changing commercial landscapes, with changes being dependent on the identities and consumption habits of the incoming residents (Jones & Ley, 2016; Rankin & McLean, 2014; Roth & Grant, 2015; Zimmerman, 2008). For example, Roth and Grant (2015) described the evolution of a commercial district in the North End neighbourhood in Halifax as a reflection of changing demographics, where the early stages of gentrification saw the influx of “hipsters” and related businesses – second-hand stores, craft shops, cafes and bars – but as gentrification progressed and more middle- and upper-class residents entered the area, these businesses were replaced with higher-end restaurants, boutiques, and arts and entertainment businesses. Therefore, as a neighbourhood’s demographics change,

existing businesses may not yet reflect the consumption patterns and identities of incoming residents (e.g., fast food restaurants for health-conscious gentrifiers) (Bridge & Dowling, 2001; Zukin et al., 2009). Additionally, research demonstrates that many businesses are not able to bridge the gap between clienteles, meaning they are unable to maintain their current customer base while also gaining new customers from a different demographic group (Grier & Perry, 2018; Zukin, 2008; Zukin et al., 2009).

In addition to changing demographics affecting local businesses, a commercial district's "branding" – created and fostered by residents, business associations and municipalities – can exclude certain types of businesses that do not fit the mould (Deener, 2007; Keatinge & Martin, 2016; Rankin & McLean, 2014). An example of this exclusion is highlighted by Keatinge and Martin (2016), who explored the friction between a gentrified residential neighbourhood and its abutting non-gentrified commercial district in response to the local outrage in reaction to the presence of a strip club in their "family-friendly" branded neighbourhood. Similarly, in their study of Venice, California, Deener (2007) described how new residents and businesses created a new brand identity for Abbot Kinney Boulevard, which has effectively turned the area's long-time businesses and lower-income residents into the "outsiders", inducing feelings of exclusion and social (and physical) displacement.

The other key component of commercial gentrification is demand for commercial space. Connecting back to upgrading demographics, interest in a neighbourhood's commercial space may increase, as new business owners and investors seek to capitalize on the incoming, more profitable, demographic (Meltzer, 2016). However, as discovered by Chapple et al. (2017), residential and commercial gentrification do not occur simultaneously, meaning that the commercial spaces within a neighbourhood may gentrify before the residential spaces do, or vice versa. Because over the last two decades, large municipal investments – like rapid transit – have been a proven revitalization tool as they spur a domino effect of investment (Immergluck, 2009; McLellan & Collins, 2014; Padeiro et al., 2019), it is probable that these large capital projects trigger investments even prior to notable demographic changes. This phenomenon of transit investment triggering development was found in the Region of Waterloo, with Antanaitis (2014) and Tran (2016) finding that the LRT functioned as a symbol of the municipality's commitment

to revitalization, therefore signalling a safe investment for stakeholders. In sum, through increased demand (or speculation) for commercial space, the often-resulting higher rent prices may be unattainable for existing businesses, with minority- and locally-owned businesses being most at-risk for displacement (Chapple et al., 2017; Komakech & Jackson, 2016; Meltzer, 2016).

3.2.3 Transit-Induced Commercial Gentrification

Thus far, we have discussed transit-induced gentrification and commercial gentrification as two separate phenomena. However, commercial businesses play an integral role in the success of TODs by improving residents' access to goods, services, and employment opportunities (Chapple et al., 2017; Dawkins & Moeckel, 2016). Therefore, we argue that an exploration of the impacts of transit investment and related neighbourhood change on commercial businesses is necessary.

At the time of this research, few studies have explicitly explored transit-induced gentrification's impacts on commercial businesses. These studies also produce mixed results. For example, Cervero (2006) and Cervero and Duncan (2002) studied the effects of proximity to light and commuter rail stations in San Diego County and Santa Clara County, California using commercial sales transaction data to estimate a hedonic price model. They found significant price premiums for commercial properties located within 0.25 miles (~400 metres) of both commuter and light rail station stops, with the highest premiums observed along newer TOD lines and near downtown stations. In their study of the impacts of new transit construction on business revenue and survival in Los Angeles, Ray (2017) reported that despite experiencing insignificant changes in revenue, businesses within 400 metres of a station had higher chances of failure. Lastly, Chapple et al. (2017) created a gentrification index in attempts to identify and predict the presence of commercial gentrification in Los Angeles and the San Francisco Bay Area. They created the index based on the assumption that commercially gentrified census tracts would see decreasing shares of frequent and necessary establishments (businesses that fill everyday needs i.e., grocery stores, gas stations, hardware stores), increasing shares of discretionary and infrequent establishments (luxury or specialty stores), and lower rates of minority-owned and non-chain small business shares. However, they found that the presence of a rail transit station was not a significant predictor of commercial gentrification per their

definition. Through this study, we aim to contribute to this small body of literature by integrating discussions of transit-induced gentrification and commercial gentrification.

3.3 Case Study Profile

Kitchener and Waterloo are mid-sized municipalities in the Region of Waterloo, Ontario, Canada with populations of 256,885 and 121,436, respectively. Approximately 100 kilometers from the City of Toronto (Figure 1), Kitchener and Waterloo are located within the province's Greater Golden Horseshoe (GGH) and comprise one of the fastest growing regions in North America (Statistics Canada, 2020), with an almost 10 percent increase in population between 2016 and 2021 (Statistics Canada, 2022). Despite being referred to as the “twin cities”, there are key differences in the history and development of each city, which are especially prevalent in the historic downtown cores, Downtown Kitchener and UpTown Waterloo. While both cities have industrial roots, Downtown Kitchener's economy was dominated by the manufacturing industry – representing 40% of the city's workforce in 1971 (Filion et al., 2015) – whereas UpTown Waterloo became a hub for insurance and other service-based industries. As a result, Downtown Kitchener experienced much more devastating effects associated with deindustrialization that began in the 1980s, including increased unemployment, closing businesses, and surging homelessness (Filion et al., 2015; Miller, 2019).



Figure 3-1. Greater Golden Horseshoe (Ministry of Transportation, 2020b)

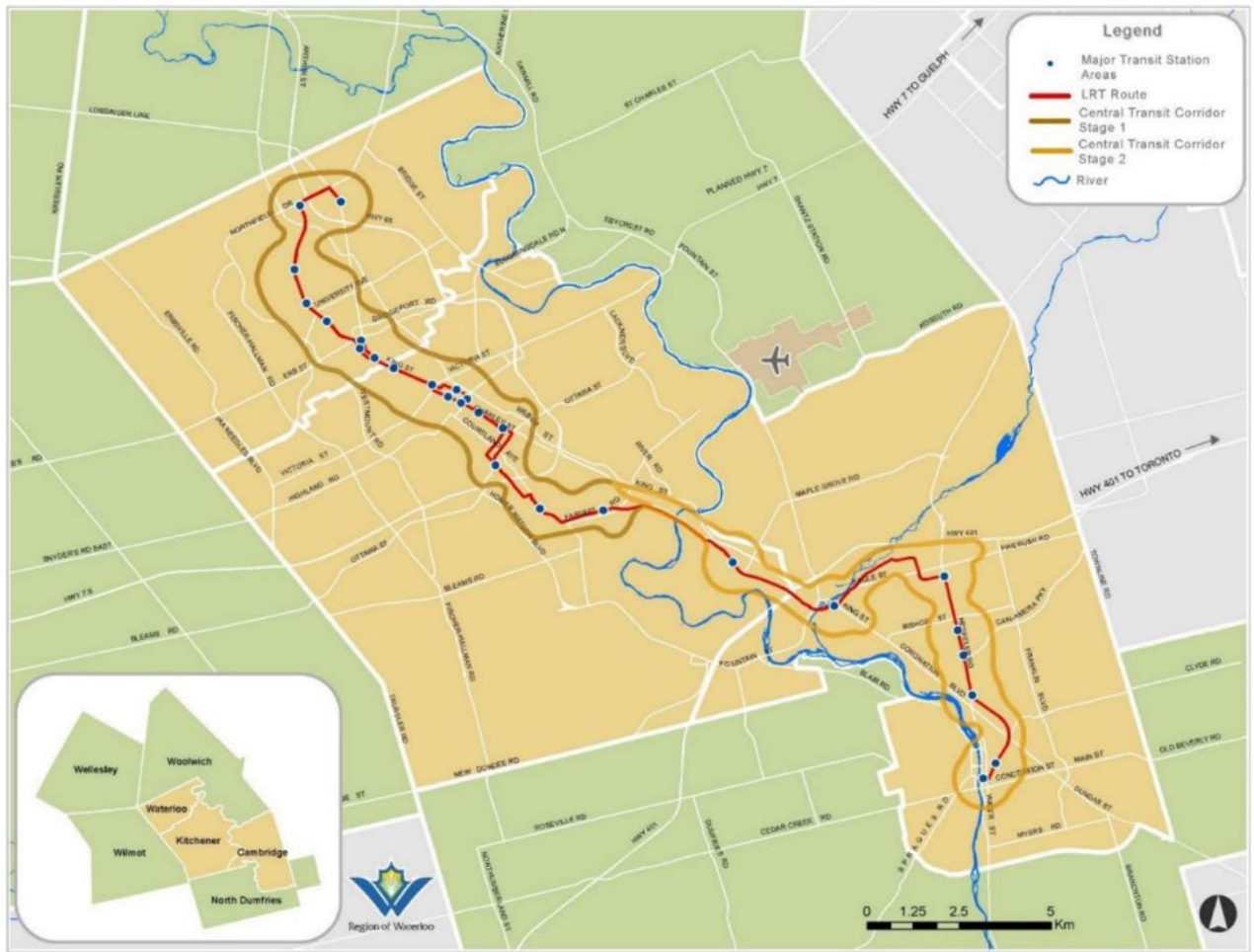


Figure 3-2. Region of Waterloo ION LRT System (Region of Waterloo, 2011)

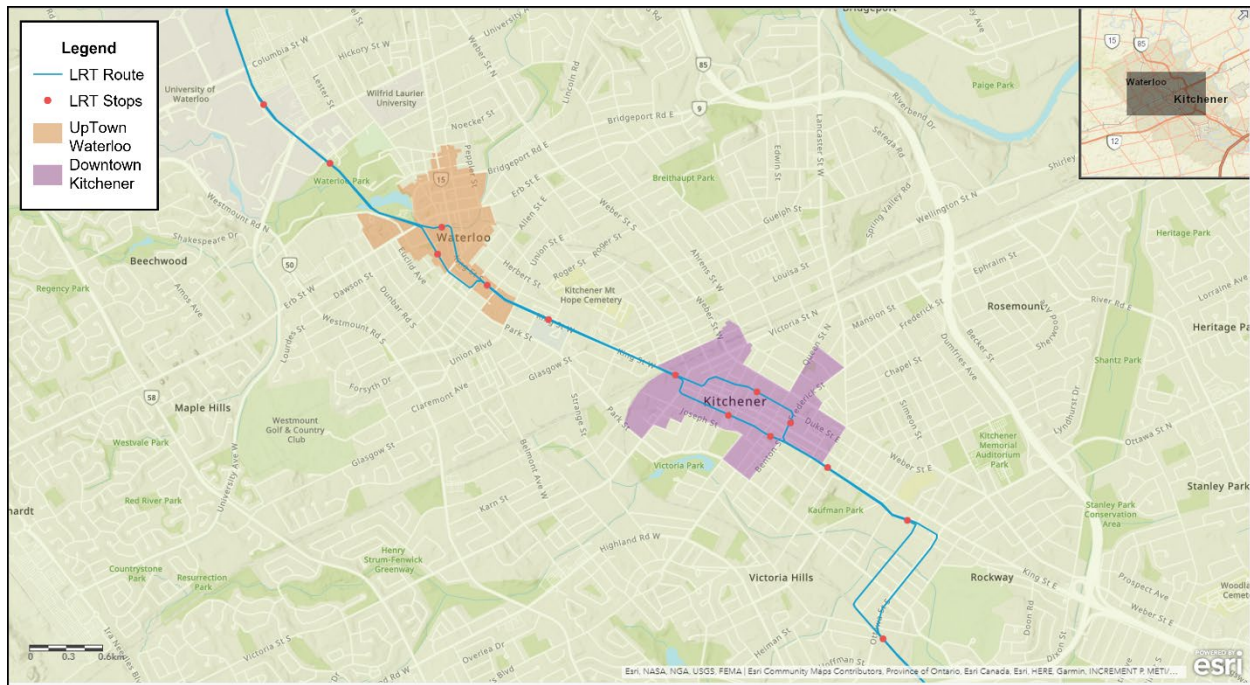


Figure 3-3. Downtown Kitchener and UpTown Waterloo (Region of Waterloo, 2022c)

3.3.1 Planning for Intensification

The stagnant state of Downtown Kitchener, and to some extent, UpTown Waterloo, remained for decades following deindustrialization as local and regional planning authorities focused their attention on suburban expansion. However, beginning in the early 2000s, attention began to return to the neglected downtown cores, as sustainable population growth (i.e., limiting sprawl) became a key planning concern. The concept of a central transit corridor (CTC) served by a rapid transit system became the backbone of subsequent plans and policies, leading eventually to the approval of the “ION” light rail transit (LRT) system in 2011.

The Region’s LRT system was established with the fundamental goals of: (1) improving transit accessibility; and (2) intensifying land-use by prioritizing higher density residential and commercial development in the transit corridor (Region of Waterloo, 2016). Supporting both the Province’s and the Region’s emphasis on intensifying urban areas, the ION route runs through Downtown Kitchener and UpTown Waterloo, with half of its 16 stops located in these core areas. Construction took twice as long as anticipated, occurring from 2014 to 2018, and the line

became operational in June 2019. To track their progress towards reaching their goals, the Region adopted a yearly monitoring program with 16 core indicators ranging from transit ridership to demographic changes, to development activity (Region of Waterloo, 2011). Of importance to this study, they monitor several metrics related to business composition, including the number of grocery stores, restaurants, and arts and culture establishments in the CTC, which are cited to be indicators of neighbourhood attractiveness and cultural vibrancy (Region of Waterloo, 2011).

3.3.2 Signs of Gentrification

As local and regional planning departments adapted to a recentralization-based planning regime and supporting ION-related affairs, Downtown Kitchener and UpTown Waterloo began to transform. While it is important to note that Downtown Kitchener was already experiencing some major changes following the influx of major tech companies and start-ups beginning in the 2000s (Miller, 2019) the rate of change accelerated significantly following LRT approval. Since the ION's approval, Stage 1 of the CTC – defined as the area within an 800-metre radius of the LRT line – has seen more than \$3.2 billion in new building permit value, largely concentrated in the downtown cores (Region of Waterloo, 2022b). This new development has materialized primarily in the form of luxury 1- and 2-bedroom condominiums with moderate ground floor retail. This building activity has resulted in almost 18,000 new residential units in the CTC between 2011 and 2021 (Region of Waterloo, 2022a), and a related population increase of approximately 12,688 new residents – with about 12,000 of those residents in Stage 1 (Region of Waterloo, 2022b). According to local realtors, young professionals and older adults are the most interested in condo living and are willing to pay a premium to live an amenity-rich urban lifestyle (Cook, 2018; Huang, 2020). Through this process, lower-income residents have found it increasingly difficult to maintain their place in the downtown cores as property values increase and higher-income residents move into the area (Ellis-Young & Doucet, 2021).

In a companion quantitative study of commercial gentrification in the Region of Waterloo (Webber & D. C. Parker, 2022), we found some evidence of commercial gentrification in Stage 1 of the CTC. In this study, we used business survey data collected in 2011 and 2018 to determine how business composition has changed. It is important to note that the LRT was not operational

until June 2019; therefore, our data gave us a snapshot of business composition the year the LRT was announced, and the year before the LRT became operational. Business type in the survey was collected according to the North American Industry Classification System (NAICS) – a standardized system of business identifier codes (Statistics Canada, 2021). Through our analysis, we found increases in business types that align with the gentrification literature, including arts and entertainment businesses, restaurants, and personal services. These business types are all examples of “discretionary businesses”, which are non-essential service- or experience-based businesses, and therefore, may be reflective of the demographic changes occurring in the CTC. Perhaps fueling demographic changes, as a proportion of business composition, tech businesses (including Google) increased 12% between 2011 and 2018, and it is therefore likely that the “gentrifiers” in Kitchener-Waterloo are the tech workers. We also found that business changes were more dramatic in Stage 1 of the CTC, which may indicate higher turnover rates, another sign of commercial gentrification. One anomaly was the significant decline in retail businesses in Stage 1 of the CTC, which goes against common findings in other studies.

However, limitations of the data itself made it difficult to gain a clear picture of commercial change in the urban cores and prevented us from exploring specific businesses of interest and business upgrading due to the limitations of the NAICS data. By integrating qualitative methods into this study, we aim to complement our past research by learning about the aspects of commercial gentrification that remain unseen using quantitative data alone, including business upgrading, ownership, turnover, and rent prices. Additionally, through the integration of qualitative interviews, we can learn about how business owners experienced and adapted to the built form and demographic changes that have occurred in the urban cores over the last decade.

3.4 Methodology & Data

For this study, we conducted semi-structured interviews with business owners in Downtown Kitchener and UpTown Waterloo. While business owners are in a unique position to observe neighbourhood change over the course of their business’ lifespan, they are also vulnerable to the effects of gentrification, as we have described thus far. As highlighted by J. N. Parker (2018) business owners “are the ones with the most financial stake in the commercial development of

the surrounding neighbourhood” (pp. 443), despite being underrepresented in commercial gentrification literature. Further, as previously mentioned, qualitative research methods can illuminate aspects of commercial gentrification that are difficult to measure quantitatively, providing us with the opportunity to gain a more holistic understanding of neighbourhood change.

Our sample comprised 18 interviews representing 21 businesses (one participant owned 4 businesses) – 11 in Downtown Kitchener and 10 in UpTown Waterloo. To recruit participants, we started with a purposive sample by approaching businesses who made headlines for speaking out about their experiences. Next, we generated a simple random sample with the Region’s Workplace Count survey data for the years 2011, 2016 and 2018 using the “select random” function in Microsoft Excel (Region of Waterloo, 2020b). Participants were contacted via email, and after three attempts with no response, we moved on to the next participant. Altogether, we interviewed 4 participants from our purposive sampling and 14 from our simple random sampling. We used an interview guide (Appendix B) to manage the conversation, but ultimately followed the participants’ lead about their subjects of interest. As interviews occurred during the COVID-19 pandemic, following provincial and university guidelines, all interviews were conducted remotely, either over the phone or via video conferencing software. Conversations were recorded and transcribed using the “Otter.ai” software, and a thematic analysis was conducted to establish recurring trends, which will be introduced in our findings and discussion.

The businesses in our sample are diverse in terms of establishment and relocation history, product and service offerings, and customer base. Businesses were established from 1893 to 2019, with 4 Downtown and 9 UpTown businesses operating before LRT approval. Participants also represented a variety of business types, including restaurants, cafés, specialty food stores, retail stores, personal services, and entertainment/experience-based businesses. Importantly, through our interview sample, we captured a diverse range of observations and experiences related to commercial change and transit-induced gentrification.

3.5 Findings & Discussion

In this section, we will present and discuss the key findings from our semi-structured interviews with business owners. First, we will focus on business owners’ observations of commercial

change over the last decade. Next, we will discuss what business owners believe to be the mechanisms fueling commercial change in Downtown Kitchener and UpTown Waterloo. Lastly, we will shift to focus on how business owners have responded to the built form and demographic changes following LRT implementation.

3.5.1 Observations of Change

According to business owners, the composition of businesses in Downtown Kitchener and UpTown Waterloo has changed significantly over the last decade. In this section, we will identify the main changes identified, provide examples from our participants, and connect these observations to our quantitative research where applicable, and to the literature.

3.5.1.1 1. Loss of Legacy and Locally Owned Businesses and the Rise of Chains

The first major change observed is the rapid departure of “legacy” and locally owned businesses, paired with the increase of chain businesses. This change in ownership style is commonly cited as an indicator of commercial gentrification in the literature (Meltzer & Capperis, 2017; Zukin, 2008; Zukin et al., 2009). Where locally owned businesses are self-explanatory – owned by local residents – legacy businesses can be defined as generational businesses who have been landmark features of the downtown cores for decades. Notable closures include Petsche’s Shoes (1954-2018), Budds department store (1926-2016) and Fritsch Fragrances (1959-2018) in Downtown Kitchener and Marbles restaurant (1977-2020), Harmony Lunch restaurant (1930-2020) and Angie’s restaurant (1962-2021) in UpTown Waterloo. Interestingly, for many participants who are local business owners themselves, it was the concentration of unique and independently owned businesses that attracted them to Downtown Kitchener or UpTown Waterloo in the first place, as highlighted by the following participant:

A lot of businesses left, and I think they were the very businesses I described at the beginning of this as to why I chose UpTown Waterloo, the independently owned, the authentic, the unique businesses have left.

While participants described an increase in chain businesses in both Downtown Kitchener and UpTown Waterloo, this phenomenon is much more prevalent in UpTown Waterloo, with higher-end chains opening such as Starbucks, Freshii (health food restaurant), Copper Branch (a plant-

based restaurant) and Score Pizza (think Subway, but for personal pizzas). As a result, many described Downtown Kitchener as a more attractive place to open a local business, because it has done a better job of maintaining its identity as a unique commercial district, where UpTown Waterloo has become more boring and corporate:

Waterloo is always safe, and vanilla. Like, safe is good, but vanilla is bad, right?

Kitchener has always been sort of dangerous but also gritty and Kitchener has only grown in that way in a positive way, and Waterloo has unfortunately, in my opinion, only continued to go the route of more vanilla, more corporate. This could be any town in Canada, this could be Oakville, could be Burlington, this could be whatever. I personally would rather be like Hamilton or Kitchener, or a place that's got this uniqueness about it and this sense of place.

As this participant describes, through the influx of chain businesses into UpTown Waterloo, the neighbourhood has arguably lost its unique identity that previously set it apart from other cities in Ontario. While Downtown Kitchener has been able to hold on to its identity by maintaining a higher proportion of local businesses, owners still worry about how this identity might change through continued development. This worry felt by business owners is described by Deener (2007), who identifies the friction between old and new businesses, and the feelings of uncertainty when caught in the middle of the transitional process associated with commercial gentrification.

3.5.1.2 2. Declining, yet Upgrading Retail Businesses

The loss of retail businesses is the second key change reported in both core areas, with participants describing the “death” of retail over the last decade. This decline is also represented in our quantitative work, where we found that between 2011 and 2018, the proportion of retail businesses in Downtown Kitchener and UpTown Waterloo has decreased by 11 and 25 percent, respectively (Webber & D. C. Parker, 2022). Interestingly, this result directly contradicts dominant findings from the commercial gentrification, with Bridge and Dowling (2001) reporting higher proportions of retail stores gentrifying neighbourhoods in Sydney, and Zukin et al. (2009) reporting more boutiques in gentrified New York City neighbourhoods.

While new retail businesses have opened over the last decade, they are vastly different from their predecessors. In Downtown Kitchener, new retail businesses echo Ley (1996) and Roth and Grant's (2015) findings of early phases of gentrification, with the influx of hipster businesses including second-hand and vintage clothing stores. In contrast, in UpTown Waterloo, which has a higher proportion of retail businesses, new businesses are predominantly high-end specialty boutiques and food stores which cater to a higher-income clientele, as highlighted by the following owner of an organic beauty store:

I think that my avatar would be somebody like me, somebody who is mid- to late-30s up to their 50s. They're educated, they want organic products, they're living a conscious life. They've got the means to spend \$90 on a face cream and \$30 on a shampoo.

The increase of high-end retail stores and boutiques in UpTown Waterloo also aligns with indicators of commercial gentrification (Chapple et al., 2017; Zukin, 2008; Zukin et al., 2009). The dichotomy between the caliber of these establishments suggests that perhaps Downtown Kitchener is in an earlier phase of gentrification than UpTown Waterloo and is an indicator of the demographic differences between the new residents of each respective core.

3.5.1.3 3. Rise in Personal Services, Entertainment, and Restaurants – “discretionary businesses”

The third major finding related to business composition was the increase in discretionary businesses, which are which are non-essential service- or experience-based businesses, as opposed to necessary businesses that fulfill daily needs (Chapple et al., 2017). Participants reported parallel increases in personal services (e.g., barbershops, hair salons, nail salons, lash boutiques and gyms) and experience-based businesses (e.g., themed restaurants and cafés, cooking studios, escape rooms), and an overwhelming growth in restaurants. These findings are echoed in our quantitative work (Webber & D. C. Parker, 2022), where we found increases in all of these business types, with the exception of service businesses in Downtown Kitchener.

While increases in personal service-based businesses is definitely an earmark of commercial gentrification (Bridge & Dowling, 2001; Meltzer & Capperis, 2017), the increased presence of experience-based businesses is unique to this case study, but due to the nature of

these businesses described, could perhaps be grouped with entertainment-based businesses, which are linked to commercial gentrification (Kosta, 2019; Roth & Grant, 2015; Tolfo, 2019).

The increase in food establishments is also an example of commercial gentrification (Bridge & Dowling, 2001). What is interesting in this case, again, is the dichotomy between Downtown Kitchener and UpTown Waterloo, as participants highlighted the opening of cafés and bars in Downtown Kitchener and high-end restaurants in UpTown Waterloo. These differences could point to the downtown cores being in different stage of gentrification, as highlighted in the works of Ley (1996) and Roth and Grant (2015), with UpTown Waterloo being in a more advanced stage, and/or may point to differences in the consumption patterns and values of the gentrifiers themselves (Bridge & Dowling, 2001; Zukin et al., 2009).

While the new personal service and entertainment businesses seem to be a welcome or neutral addition to the community – aside from the off-hand jokes about “how many barbershops does one town need?” – the domination of food establishments has generated some feelings of resentment from businesses outside this category. For example, one participant described their businesses as “a single retail store in a sea of bars” and another described UpTown Waterloo as a “food court”. Many retail business owners believe the increasing proportion of restaurants to be a hindrance because, due to the lack of retail density, the critical mass does not exist to facilitate window shopping and walk-in customers, in turn, hurting their business.

As we demonstrate through this section, according to the observations of local business owners, the commercial composition of Downtown Kitchener and UpTown Waterloo has changed substantially over the last decade. Aside from the decline in the number of retail businesses, changes are in line with characteristics of commercial gentrification. Our findings also point to the conclusion that perhaps Downtown Kitchener and UpTown Waterloo are at different stages of gentrification – with Downtown Kitchener being at an earlier stage and UpTown Waterloo being at a more advanced stage. For example, while both Downtown Kitchener and Uptown Waterloo are experiencing the loss of legacy and locally owned businesses, Downtown Kitchener seems to be retaining a higher proportion of locally owned businesses and is still seeing new local businesses open, whereas UpTown Waterloo has become a hotspot for chain businesses. Further, looking at business caliber, Downtown Kitchener is

experiencing an increase in hipster-type businesses – such as bars, cafes and second-hand shops – in contrast to high-end specialty boutiques catering to middle-and upper-class tastes in UpTown Waterloo, which has changed the perception of UpTown Waterloo for business owners. Where UpTown Waterloo has traditionally been the “safer option” of the two due to neighbourhood demographics and pedestrian traffic, Downtown Kitchener is becoming increasingly attractive for business owners due to the concentration of local businesses and maintenance of a unique identity.

3.5.2 Mechanisms of Change

In this section, we will discuss what business owners believe to be the mechanisms driving commercial change in Downtown Kitchener and UpTown Waterloo described in the previous section. Turning back to our definition of commercial gentrification, we were expecting to learn predominantly about demographic changes and increased demand for store frontage (Chapple et al., 2017; Meltzer, 2016; Ray, 2017), and while these mechanisms are a factor in the case of Kitchener-Waterloo, LRT construction proved to be the gentrification tipping point.

3.5.2.1 1. Demographic Changes and the “Tech People”

Over the last decade, the tech industry has expanded rapidly in Downtown Kitchener and UpTown Waterloo. This expansion is reflected in our quantitative work (Webber & D. C. Parker, 2022), where we found a 1440% and 100% increase in tech businesses from 2011 to 2018 in Downtown Kitchener and UpTown Waterloo respectively. For business owners, the influx of tech workers living in and commuting to the downtown cores was believed to be a promising demographic to capitalize on. In fact, the tech workers and industries in Kitchener-Waterloo have been used as a marketing technique in efforts to attract new businesses. In Downtown Kitchener especially, many new businesses opened with the hope of capitalizing on the area’s incoming tech workers and young professionals. However, as described by one business owner, “Kitchener seems to be targeting and smelling this tech money that isn't there” and many business owners have been left disappointed as tech workers represent a negligible proportion of their customer base. In the commercial gentrification literature, researchers generally describe the evolution of commercial districts to reflect a neighbourhood’s changing demographics

(Bridge & Dowling, 2001; Zukin et al., 2009) and associated branding (Deener, 2007; Keatinge & Martin, 2016; Rankin & McLean, 2014), but in our case, businesses entered following the neighbourhood's re-branding and anticipated demographic changes, which did not materialize.

When discussing why business owners believe the tech workers are not patronizing local businesses, it largely boiled down to the perceived habits of the tech workers themselves, and the amenities provided at their workplaces, as captured by the owner of a board game cafe in Downtown Kitchener:

The problem that I've discovered and that a lot of other businesses have as well, is that the tech folks that do live in town don't really go out. They don't really need to go out, because these tech companies have such fantastic amenities in their buildings that they don't need to go out for lunch, they don't need to go to a board game cafe, because they have board games and video games in their place of work.

In addition to not needing to leave work due to the abundance of amenities provided, participants also described the mobility of tech workers, noting that, as they are likely young and childless, they are perhaps more likely to go out to dinner or spend the day shopping in Toronto, rather than dining and shopping locally.

While the tech workers may not be patronizing local businesses themselves, two experience-based businesses reported being hired by tech companies for team-building workshops and events. Especially in a post-pandemic landscape, the increased importance of supporting local businesses may serve as an opportunity for tech companies to partner with downtown businesses for the amenities they provide their employees – such as catered lunches, for example. In addition to supplementing their local traffic with out-of-towners and online shoppers, as we will discuss in the next section, businesses who have found the most success throughout the redevelopment of the downtown cores are those who cater to “everyday people” who live and play – rather than work – in the neighbourhood.

Tech workers aside, several businesses, predominantly legacy businesses, described that they have “aged out” of the neighbourhood, as their core customers have aged and visit the area less, and they have struggled to attract younger customers. While this challenge may be related to a business' overall life cycle, it also aligns with commercial literature, as a neighbourhood's

existing businesses struggle to stay in business as their clientele dwindles and they are unable to gain patronage from incoming residents (Grier & Perry, 2018; Zukin, 2008; Zukin et al., 2009). These mechanisms are highlighted by one legacy business owner when describing the increasing closures of legacy businesses:

I think some of it was just natural attrition, you know, or retiring, and some was just I think for a variety of reasons people are finding their customer base doing dwindling.

In addition to aging out and struggling to maintain their customer base, this same business owner described their increasing feelings of loneliness as other long-term businesses closed around them as being one of the factors leading to her decision to close:

We did feel a bit more isolated and alienated, [...] similar retail operations, one by one they were leaving, and every time it was just like a little dent in our fabric of community.

This participant, whose business was operational for more than 60 years, described the camaraderie amongst the business community since she began working at the store as a young girl. She talked about the sense of community they had established and the trust amongst business owners, recounting instances of being babysat by her parents' business owner friends, leaving the store keys with the neighbouring business, promoting each other's products, and always lending a helping hand. However, as their community changed, they were unable to develop the same relationships with new businesses and felt increasingly isolated. These experiences echo findings from Deener (2007), who described long-time business owners' increasing feelings of alienation as their community changes without them, and the cascading effect that occurs when longstanding businesses begin to close or relocate. Overall, our findings demonstrate that changing demographics – whether perceived or actual – are undoubtedly a factor contributing to commercial change in Downtown Kitchener and UpTown Waterloo.

3.5.2.2 2. “Demand” for Commercial Space

Commercial gentrification research frequently reports increased business turnover is a significant indicator of gentrification, as it indicates the demographic changes occurring (or anticipated) (Meltzer & Capperis, 2017) and the higher demand for commercial space near station areas (Ray, 2017). In our sample, many businesses reported increased business turnover in both Downtown Kitchener and UpTown Waterloo:

I observe new businesses come and go like J&P Grocery, there was a wellness shop. It's depressing when you see people put tons of money into an idea and launch it and it doesn't work and they close in like two years.

As this participant describes and others echoed, observing new businesses fail affects morale in the business district, as business owners are empathetic for the time and money these entrepreneurs have lost, and because business turnover and storefront vacancies are believed to negatively impact customer traffic, and, in turn, their bottom line. Business owners might also translate this information into a higher risk that their own business will fail, and the high turnover rate might scare away new businesses from opening altogether.

Related to increased business turnover and displacement is increasing commercial rent prices and changing landlord dynamics. Business owners began experiencing and/or worrying about how the LRT would affect commercial rents immediately following the LRT's approval, as described by the following bookstore owner in UpTown Waterloo:

Every business knew right away because development always means higher rent. The sun comes up, follows the moon. Higher rent follows development. It just does. So, every landlord is rubbing their hands because suddenly their crappy pile of bricks is worth 30% more for no reason, other than kickass development.

As participants observed neighbouring businesses close or relocate due to unaffordable rents, they felt uneasy waiting for it to be their turn. This was especially the case for longstanding businesses, many of whom had been renting month-to-month for years. It is also worth noting that unlike residential rents, commercial rent increases are not controlled, meaning a landlord can increase the rent as much as they please when a lease expires.

In addition to navigating increased rent prices, redevelopment brought an influx of new property owners, and therefore landlords, to the cores. For example, one participant described the influx of out-of-town investors purchasing commercial real estate and attempting to charge "Toronto prices" for commercial spaces. However, while rent increases are often the result of higher demand for store frontage (Meltzer, 2016; Ray, 2017), there are still many vacant commercial spaces in Downtown Kitchener and UpTown Waterloo, as described by the following business owner:

Property owners speculating on real estate along the corridor has kept rent and purchase values surprisingly high, on average about double to triple what they were 5-6 years ago when we were looking for spaces, despite the current downturn due to COVID closures and restrictions. The result is a lot of empty and vacant buildings, listed at high rates that most small businesses can't afford.

The influx of new property owners in the cores and increased speculation by existing property owners has also increased the frequency of “renovictions” as another factor contributing to business displacement. A term common in residential gentrification literature, renovictions occur when a developer or investor purchases a building and displaces tenants for building upgrades and not given the opportunity to renegotiate a lease and/or cannot afford the post-renovation rental rates (Ellis-Young & Doucet, 2021; Ong, 2020). Many participants have observed renovictions or have experienced them firsthand. For one business in our sample, the owners were not given the opportunity to renegotiate their lease following the building's redevelopment. Ironically, the same type of business filled the space, an example of business upgrading, as the new business is higher end offering the same services at a premium. Altogether (and taking into consideration natural attrition and changing demographics), increased business turnover, higher rents, and changing landlord dynamics contribute to owners' uncertainty about the future of their business, creating a hostile environment amongst business owners in the cores.

3.5.2.3 3. The Tipping Point: LRT Construction

While changing demographics and rising rents undoubtedly play a factor in business turnover and larger compositional changes, through our interviews, we discovered the true devastation caused by the LRT's construction. Despite being overlooked by many in the literature, construction plays a key role in the gentrification of commercial districts as businesses are faced with the additional obstacle of navigating an extreme period of disinvestment, where both current and potentially new customers are not visiting their business due to the disruption caused by construction (Ray, 2017). In our research, we found that the disruptions caused by LRT construction functioned as the tipping point for many businesses, who perhaps otherwise might have been able to withstand the demographic changes and rent increases.

In Kitchener-Waterloo, LRT construction took twice as long as originally anticipated – approximately four years in total. Business owners shared their frustrations with the construction process and attributed delays to the poor communication and coordination between local and regional staff, the construction company and the local business associations:

We were totally prepared for disruptions, and completely okay with them, understanding that they were a necessary part of a huge undertaking like this, but the lack of accurate communication on what was going on and how it would impact us was frankly stunning. It was an extremely stressful and damaging time for our business, and many others. Good communication would have made all the difference. We knew that we would lose access at times, but to be told we would be given notice, and then not to be given notice, made things really difficult. Contractors, subcontractors, and city staff all gave us different answers. It didn't seem like anyone was trying to mislead us, but rather that no one really knew what was going on, which was disconcerting.

As the above quote highlights, businesses were generally prepared for disruption, but not at this scale, and largely felt neglected throughout the construction process.

It should be noted that in efforts to mitigate the negative impacts during LRT construction, both the Downtown Kitchener and UpTown Waterloo business associations made various attempts to encourage residents to visit the downtown cores and support businesses. According to participants, the business associations held marketing campaigns and added wayfinding signage to help pedestrians navigate the construction zone. However, despite these attempts, businesses still struggled to stay afloat as customers opted to avoid the area under construction entirely, and the downtown cores became “no man’s land”:

It was eerie, we would joke that it was basically like Mad Max, you know, the roads were just full of dust and sand, blowing around [...] and it was just funny to sort of see this this weird, stripped out Kitchener. So naturally, our business numbers fell because people weren't coming Downtown, because they didn't want to navigate the confusing closures that were literally changing from week to week.

In our sample, all businesses that were operational during LRT construction reported declines in customer traffic to varying degrees. For businesses located directly on the line, this decline was

dramatic and was sustained for the entire duration of construction, whereas businesses located around the line experienced more fluctuation in their customer traffic, which they attributed to street closures and construction volume. Businesses on the LRT line also experienced reductions in physical access to their storefront, which impacted customer traffic and logistical operations such as product deliveries, which some businesses continue to face today.

While businesses continued to suffer as construction delays continued, business owners were encouraged to continue holding on, as it was believed that, when operational, the LRT would bring more customer traffic than ever before. However, at the time of this research, businesses have yet to reap the perceived benefits of the LRT. This is captured by the following participant who closed their business in 2020:

I would say like 30% of the reason we probably closed [name of business] was natural of its own demise, and 70% of it was in total direct result of construction, and just business not rebounding quick enough. And that's been a huge problem for us in Waterloo is that the business isn't returning to Waterloo, the way it was sort of believed that it would, or at least we had all hoped it would.

As this participant highlights, despite their expectations of customer traffic rebounding immediately after LRT construction, this simply was not the reality, which ultimately led to their closure.

In this section, we report a variety of mechanisms that are believed to be fueling commercial gentrification in Downtown Kitchener and UpTown Waterloo. First, we find a discrepancy between perceived clientele and actual clientele, debunking the idea that the incoming tech workers are the primary consumers. We also describe the phenomenon of “aging out” of the neighbourhood, where longstanding businesses are losing their older customers and have been unable to capture a younger clientele. On the supply and demand side, we report the mismatch between commercial supply and perceived demand – as landlords evict tenants and raise rent prices despite the relatively high commercial vacancy rates. However, we find that the most significant factor contributing to business closures in Downtown Kitchener and UpTown Waterloo was the disruption caused by LRT construction, and the lag in customer traffic returning to pre-construction levels as anticipated. It was during LRT construction and shortly

after that the downtown cores experienced a mass exodus of businesses who might have survived otherwise.

3.5.3 Adapting to Neighbourhood Change

As discussed, most businesses in Kitchener-Waterloo have still not seen their customer traffic return to pre-construction levels. Participants believe that they lost patronage because their customers found new places to shop to avoid road closures, confusing signage, and the stress of navigating a construction zone. Because the construction period was so long, business owners believe it will be difficult to regain these customers, as they have adapted to their new habits:

Customers are used to patterns; we don't go to many places. A, B, C, and D. They have the route and that's it. When you disrupt their route, it makes them a little hesitant to come and shop again. Do it once, you get away with it, but if you do it two or three times and keep changing the route all the time, people just get disturbed.

While many businesses in Downtown Kitchener and UpTown Waterloo closed during or soon following LRT construction, others have been able to defy the odds. Therefore, in this section, we aim to profile the ways that businesses have adapted to the challenges induced by LRT implementation. Considering that much of the literature on commercial gentrification reports existing businesses' relative inability to adapt to meet changing neighbourhood conditions (Grier & Perry, 2018; Zukin, 2008; Zukin et al., 2009), we were interested in learning about how businesses have been able to withstand, or adapt to, gentrification.

In our sample, we had the unique opportunity to interview a diverse group of businesses that may be considered gentrifiers or at risk of gentrification. Where businesses considered to be gentrifiers may be characterized as newer businesses who contribute to gentrification by catering to the tastes of incoming gentrifier residents, businesses at risk of gentrification are most likely to be pushed out of the neighbourhood by incoming gentrifying businesses or as a result of changing demographics – as they cater to the neighbourhood's outgoing residents and are unable to “bridge the gap between clienteles” (Zukin, 2008). However, through our interviews, we were able to profile several cases where at-risk businesses have been able to bridge this gap and withstand gentrification. In this section, we will discuss how business owners have adapted to LRT construction and subsequent neighbourhood change.

Every single business profiled in this article who has survived LRT construction and is still in business today has a strong online presence. For longstanding businesses who largely operated offline before LRT construction, they used the “opportunity” of the LRT-induced lull to create or expand their online platforms. Most traditionally, this meant creating or improving their e-commerce platforms, making it easier for customers to shop product lines. Additionally, businesses began offering a variety of delivery services, from porch drop-off, to mailing products, to partnering with delivery services, so customers could order online and have their products delivered. Businesses also created social media accounts and increased the frequency of their posts. The many steps taken by businesses to retain and attract customers is described by the owner of a longstanding bookstore in UpTown Waterloo:

We worked our asses off. Got the website up and going, got everything on it. We did all kinds of delivery, all kinds of promotion, we beat the hell out of our social media networks. And we, like most businesses in UpTown Waterloo, our marketing went directly to our core customers, and said look, this is it, this is what we can do, we can bring it right to your door. We'll cut your grass, we'll do your laundry, this is what we can do, and we will do it relentlessly.

Interestingly, social media seemed to function as a place to profile your business, product offerings and promotions, but many business owners also used their social media pages during LRT construction to post live updates about road closures and how to best access their storefront.

While, for many businesses, improving their e-commerce platforms, delivery options, and social media presence were methods to reach their regular customer base (as seen in the quote above) and perhaps attract new customers from the immediate neighbourhood – such as the tech-savvy young gentrifiers – these investments have proven to reach far beyond their immediate community. Increased online presence has also effectively expanded the catchment area for many of these businesses, turning them into “destination” businesses with customers coming from (or being delivered to) beyond the immediate neighbourhood. This factor has become essential to the survival of modern brick-and-mortar businesses, with one business owner explaining, “you can survive being the nearby store, but you'll only thrive when you're a destination store”.

Another, perhaps more coincidental factor that has undoubtedly contributed to the ability for gentrifiable businesses to survive in a gentrifying neighbourhood is if their products or services become popular amongst incoming residents. While that is not to say that these businesses have not also improved their online presence and marketing to do this, many businesses have seemingly stumbled into this new demographic. Examples of such businesses in our case study context include a bookstore, a rock music record store, an international grocery store, a bicycle repair shop, and second-hand stores. However, there are parallels between the businesses listed and commercial gentrification landscapes, as they generally reflect the hobbies, interests, and values of gentrifiers.

In this section, we profiled the resilience of business owners in Downtown Kitchener and UpTown Waterloo. As experiences from business owners demonstrate, owning a business in Downtown Kitchener or UpTown Waterloo has become more complicated over the last decade and throughout LRT construction. Disruptions caused by LRT construction and business traffic not rebounding as anticipated has pushed business owners to be creative in attempts to sustain and diversify their customer base. However, and in contrast to dominant narratives in the commercial gentrification literature (e.g., Grier & Perry, 2018; Zukin, 2008; Zukin et al., 2009) none of these businesses reported having to sacrifice their original customer base in the process, suggesting that it is in fact possible to “bridge the gap between clienteles”.

3.6 Conclusion

With the expansion of rapid transit systems across mid-sized cities in North America and increasing evidence transit systems inducing gentrification, it is imperative that planners and overlapping disciplines understand how transit and TOD policies impact their host neighbourhoods. While a growing body of literature explores transit-induced gentrification from a residential viewpoint, this study contributes to transit-induced gentrification literature by exploring how the implementation of an LRT system has impacted commercial businesses in Downtown Kitchener and UpTown Waterloo.

In the case of Kitchener-Waterloo, we find clear evidence of transit-induced commercial gentrification. Commercial gentrification in Downtown Kitchener and UpTown Waterloo is manifested through the declines in legacy and locally owned businesses, and increases in chain

businesses, food establishments, personal services, and entertainment-based businesses. Additionally, while the number of retail businesses has declined, new retail businesses are higher-end and demonstrate commercial upgrading. However, commercial gentrification has presented itself differently in each downtown core, echoing the idea that commercial gentrification occurs in phases (Ley, 1996; Roth & Grant, 2015).

In addition to being in a unique position to observe neighbourhood change, businesses are sensitive to the mechanisms contributing to the neighbourhood's gentrification, including demographic changes, demand for store frontage, and, the tipping point, LRT construction. In Kitchener-Waterloo, many longstanding businesses have aged out of the community, and businesses owners feel misled about the tech workers, as their patronage has not materialized. Increasing commercial rent prices, another telltale sign of gentrification, are also becoming more prevalent in both downtowns. However, while the literature suggests that higher rent prices are reflective of the increased demand for store frontage (Chapple et al., 2017; Meltzer, 2016; Ray, 2017) vacant storefronts are still prevalent in the downtown cores, and might be indicative of speculative investments, and foreshadowing for what's to come. The final straw for many businesses was LRT construction, as the prolonged disruption severely impacted businesses' bottom line. However, when customer traffic did not return as anticipated, business owners creatively adapted to changing consumption patterns by improving their online presence and shopping options, and, contrary to dominant perspectives, were successfully able to "bridge the gap" between clienteles adding new customers while maintaining their existing customer base.

3.6.1 Lessons Learned and Recommendations

Although 16 of the 21 businesses profiled in this research have come out victorious in the fight against (or with) gentrification and are still in business at the time of this writing, that is not to say that other cities implementing rapid transit systems should use this case as a model for their (in)action. Municipalities should consider the impacts of major infrastructure projects like rapid transit on proximate businesses before, during, and after construction, and implement programs and plans accordingly to protect business owners. As we described in our quantitative study (Webber & D. C. Parker, 2022), being aware of the potential impacts that a major capital project such as LRT can have on the surrounding neighbourhood is a key first step. Adopting monitoring

programs from the outset of such projects can help municipalities identify trends and intervene early.

As demonstrated through this study, LRT construction was an extremely challenging time for business owners. In efforts to reduce the disruption as much as possible, municipalities should actively engage business owners in the project planning process and develop effective processes to ensure business owners are well-informed about construction progress and delays so businesses can adequately prepare themselves (and their customers) for disruptions and reduced accessibility. To achieve this, open lines of communication should be established between regional and local municipalities, construction crews, business associations and business owners to facilitate the sharing of accurate and consistent information.

While business associations made efforts to encourage residents to support local businesses during LRT construction, marketing campaigns were no match for the financial devastation caused by LRT construction. Therefore, Municipalities and business associations may also consider implementing some financial relief programs for businesses within construction areas to reduce or eliminate construction-induced closures. These programs may be modelled off COVID-19 rental relief programs, for example. Alternatively, or in addition, municipalities and business associations should explore implementing grant programs to help businesses get online and diversify their business plans to supplement the lost foot traffic. These grant programs may be developed internally, through Community Improvement Plans, for example, but there are also external agencies that provide partnership opportunities, such as the “Digital Main Street” program, which provides workshops and grants for businesses to create, improve, or expand their online presence. To put it briefly, business owners should not be left to fight gentrification alone, especially when that gentrification is induced at the hands of a municipal rapid transit project.

3.6.2 Study Contributions, Limitations, and Opportunities for Future Research

This study contributes to the progression of transit-induced gentrification and commercial literature in several ways. First, it fills an important gap in the literature by integrating commercial businesses, an essential component of TODs, into the exploration of transit-induced neighbourhood change. We also contribute to the literature by investigating the impacts of major

infrastructure construction on proximate businesses, discovering that LRT construction functioned largely as the gentrification tipping point – pushing businesses to close that otherwise may have been able to adapt to changing neighbourhood conditions. Third, this study adds a new facet to commercial gentrification literature by investigating how commercial businesses successfully adapt to conditions of gentrification. Lastly, this study is an example of the practical applications of qualitative methods in not just determining how people perceive and react to a phenomenon, but also whether it is occurring, and identifying the underlying dynamics. Through the integration of qualitative methods in this study, we were able to both contextualize the results of our previous quantitative research and identify phenomena that could not have otherwise been captured by quantitative data.

It is also important to highlight some limitations of this study and opportunities for future research. First, while our sample includes a range of businesses in terms of establishment and relocation history, business types, and customer bases, despite our best efforts, our sample size only included locally owned businesses. Therefore, in future research, a more targeted approach to include chain and franchise businesses would help us understand why these businesses are choosing to expand to Downtown Kitchener and UpTown Waterloo, and why now. Second, this research was conducted during the COVID-19 pandemic, amid a series of lockdowns, store closures, and during a period of great uncertainty for business owners, which complicated our research in several ways, including recruitment, sample size and not being able physically visit the businesses. Lastly, and again related to the pandemic, it is difficult to paint a full picture of post-construction traffic as it takes time for people to become comfortable using transit again, learn the route and integrate it into their lives. Therefore, it would be beneficial to conduct this study again as we establish our “new normal”. Despite these limitations, our research effectively demonstrates the interconnected relationship between commercial businesses and gentrification induced by rapid transit investment in the Region of Waterloo.

Works Cited

- Antanaitis, A. (2014). Developing Up and not Out: Understanding the Barriers to and Opportunities for Reurbanization along Waterloo's Central Transit Corridor. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/9022>
- Baker, D. M., & Lee, B. (2019). How Does Light Rail Transit (LRT) Impact Gentrification? Evidence from Fourteen US Urbanized Areas. *Journal of Planning Education and Research*, 39(1), 35–49. <https://doi.org/10.1177/0739456X17713619>
- Bridge, G., & Dowling, R. (2001). Microgeographies of Retailing and Gentrification. *Australian Geographer*, 32(1), 93–107. <https://doi.org/10.1080/00049180020036259>
- Cervero, R. (2006). Effects of Light and Commuter Rail Transit on Land Prices: Experiences in San Diego County. *UC Berkley: University of California Transportation Center*.
- Cervero, R., & Duncan, M. (2002). Transit's Value-Added Effects: Light and Commuter Rail Services and Commercial Land Values. *Transportation Research Record*, 1805(1), 8–15.
- Chapple, K., Loukaitou-Sideris, A., Gonzalez, S. R., Kadin, D., & Poirier, J. (2017). Transit-Oriented Development & Commercial Gentrification: Exploring the Linkages. *UCB Center for Community Innovation & UCLA Lewis Center*.
- Cook, J. (2018). Light Rail Transit in the Region of Waterloo: A qualitative examination of urban rail's effects on real estate, development and urban identities. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/14345>
- Davidson, M., & Lees, L. (2005). New-build "gentrification" and London's riverside renaissance. *Environment and Planning A*, 37(7), 1165–1190.
- Dawkins, C., & Moeckel, R. (2016). Transit-Induced Gentrification: Who Will Stay, and Who Will Go? *Housing Policy Debate*, 26(4–5), 801–818. <https://doi.org/10.1080/10511482.2016.1138986>
- Deener, A. (2007). Commerce as the Structure and Symbol of Neighborhood Life: Reshaping the Meaning of Community in Venice, California. *City & Community*, 6(4), 291–314.
- Deka, D. (2017). Benchmarking gentrification near commuter rail stations in New Jersey. *Urban Studies*, 54(13), 2955–2972. <https://doi.org/10.1177/0042098016664830>
- Dong, H. (2017). Rail-transit-induced gentrification and the affordability paradox of TOD. *Journal of*

- Transport Geography*, 63, 1–10. <https://doi.org/10.1016/j.jtrangeo.2017.07.001>
- Duncan, M. (2011). The synergistic influence of light rail stations and zoning on home prices. *Environment and Planning A*, 43(9), 2125–2142. <https://doi.org/10.1068/a43406>
- Ellis-Young, M., & Doucet, B. (2021). From “Big Small Town” to “Small Big City”: Resident Experiences of Gentrification along Waterloo Region’s LRT Corridor. *Journal of Planning Education and Research*, December 2020. <https://doi.org/10.1177/0739456X21993914>
- Filion, P., Kramer, A., & Sands, G. (2016). Recentralization as an Alternative to Urban Dispersion: Transformative Planning in a Neoliberal Societal Context. *International Journal of Urban and Regional Research*, 40(3), 658–678. <https://doi.org/10.1111/1468-2427.12374>
- Filion, P., Moos, M., Vinodrai, T., & Walker, R. (2015). *Canadian Cities in Transition: Perspectives for an Urban Age* (5th ed.). Oxford University Press.
- Grier, S. A., & Perry, V. G. (2018). Dog parks and coffee shops: Faux diversity and consumption in gentrifying neighborhoods. *Journal of Public Policy and Marketing*, 37(1), 23–38. <https://doi.org/10.1509/jppm.16.230>
- Haltiwanger, J. C., Jarmin, R. S., & Krizan, C. J. (2010). Mom-and-Pop Meet Big Box: Complements or Substitutes? *Journal of Urban Economics*, 67(1), 116–134. <http://www.nber.org/papers/w15348>
- Hess, D. B., & Almeida, T. M. (2007). Impact of Proximity to Light Rail Rapid Transit on Station-area Property Values in Buffalo, New York. *Urban Studies*, 44(5–6), 1041–1068.
- Hewitt, C. M., & Hewitt, W. E. (2012). The Effect of Proximity to Urban Rail on Housing Prices in Ottawa. *Journal of Public Transportation*, 15(4), 43–65.
- Higgins, C. D., & Kanaroglou, P. S. (2018). Rapid Transit, Transit-oriented Development, and the Contextual Sensitivity of Land Value Uplift in Toronto. *Urban Studies*, 55(10), 2197–2225. <https://doi.org/10.1177/0042098017712680>
- Huang, Y. (2020). Analyzing the housing market dynamics and residential location choices along with the light-rail transit investment in Kitchener-Waterloo Phd candidate : Yu Huang. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/15801>
- Hubbard, P. (2017). *The Battle for the High Street: Retail Gentrification, Class and Disgust*. Palgrave Macmillan.

- Immergluck, D. (2009). Large Redevelopment Initiatives, Housing Values and Gentrification: The Case of the Atlanta Beltline. *Urban Studies*, 46(8), 1723–1745.
<https://doi.org/10.1177/0042098009105500>
- Jackson, S. L., & Buckman, J. (2020). Light rail development with or without gentrification?: Neighborhood perspectives on changing sense of place in Denver, Colorado. *Journal of Transport Geography*, 84(1), 102678. <https://doi.org/10.1016/j.jtrangeo.2020.102678>
- Jones, C. E., & Ley, D. (2016). Transit-oriented development and gentrification along Metro Vancouver’s low-income SkyTrain corridor. *The Canadian Geographer*, 60(1), 9–22.
<https://doi.org/10.1111/cag.12256>
- Kahn, M. E. (2007). Gentrification Trends in New Transit-Oriented Communities: Evidence from 14 Cities That Expanded and Built Rail Transit Systems. *Real Estate Economics*, 35(2), 155–182.
- Keatinge, B., & Martin, D. G. (2016). A ‘Bedford Falls’ kind of place: Neighbourhood branding and commercial revitalisation in processes of gentrification in Toronto, Ontario. *Urban Studies*, 53(5), 867–883. <https://doi.org/10.1177/0042098015569681>
- Knaap, G. J., Ding, C., & Hopkins, L. D. (2001). Do plans matter? The effects of light rail plans on land values in station areas. *Journal of Planning Education and Research*, 21(1), 32–39.
<https://doi.org/10.1177/0739456X0102100103>
- Komakech, M. D. C., & Jackson, S. F. (2016). A Study of the Role of Small Ethnic Retail Grocery Stores in Urban Renewal in a Social Housing Project, Toronto, Canada. *Journal of Urban Health*, 93(3), 414–424. <https://doi.org/10.1007/s11524-016-0041-1>
- Kosta, E. B. (2019). Commercial Gentrification Indexes: Using Business Directories to Map Urban Change at the Street Level. *City & Community*, 18(4), 1101–1122.
<https://doi.org/10.1111/cico.12468>
- Kramer, A. (2018). The unaffordable city: Housing and transit in North American cities. *Cities*, 83, 1–10.
<https://doi.org/10.1016/j.cities.2018.05.013>
- Ley, D. (1996). “Follow the Hippies”: The Cultural Politics of Gentrification. In *The New Middle Class and the Remaking of the Central City* (pp. 191–221). Oxford University Press.
- Loukaitou-Sideris, A., Gonzalez, S., & Ong, P. (2019). Triangulating Neighborhood Knowledge to Understand Neighborhood Change: Methods to Study Gentrification. *Journal of Planning Education*

- and Research*, 39(2), 227–242. <https://doi.org/10.1177/0739456X17730890>
- McLellan, A., & Collins, D. (2014). “If You’re Just a Bus Community... You’re Second Tier”: Motivations for Rapid Mass Transit (RMT) Development in Two Mid-sized Cities. *Urban Policy and Research*, 32(2), 203–217. <https://doi.org/10.1080/08111146.2014.882255>
- Meltzer, R. (2016). Gentrification and Small Business: Threat or Opportunity? *Cityscape*, 18(3), 57–85.
- Meltzer, R., & Capperis, S. (2017). Neighbourhood differences in retail turnover: Evidence from New York City. *Urban Studies*, 54(13), 3022–3057. <https://doi.org/10.1177/0042098016661268>
- Miller, C. (2019). *Prosperity through Reuse? Examining the Adaptive Reuse of Industrial Buildings in Kitchener’s Central, Core and Suburban Neighbourhoods* [University of Waterloo]. <https://doi.org/10.1049/ep.1980.0423>
- Ministry of Transportation. (2020). *Planning transportation for the Greater Golden Horseshoe*. Driving and Roads. <https://www.ontario.ca/page/planning-transportation-greater-golden-horseshoe>
- Ong, V. (2020). “Feeling out of place suddenly, and you haven’t even moved”: Food gentrification, alternative foods, and sociospatial justice in Downtown Kitchener, Ontario. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/15467>
- Padeira, M., Louro, A., & da Costa, N. M. (2019). Transit-oriented development and gentrification: a systematic review. *Transport Reviews*, 39(6), 733–754.
- Parker, J. N. (2018). Negotiating the Space between Avant-Garde and “Hip Enough”: Businesses and Commercial Gentrification in Wicker Park. *City & Community*, 17(2), 438–460. <https://doi.org/10.1111/cico.12294>
- Rankin, K. N., & McLean, H. (2014). Governing the Commercial Streets of the City: New Terrains of Disinvestment and Gentrification in Toronto’s Inner Suburbs. *Antipode*, 47(1), 216–239. <https://doi.org/10.1111/anti.12096>
- Ray, R. (2017). Open for business? Effects of Los Angeles Metro Rail construction on adjacent businesses. *The Journal of Transport and Land Use*, 10(1), 725–742.
- Region of Waterloo. (2011). *Central Transit Corridor Monitoring Program: Baseline Monitoring Report*. https://www.regionofwaterloo.ca/en/resources/Monitoring_Change_in_the_CTC__Baseline_Report-June-Update.pdf

- Region of Waterloo. (2016). *The ION Story*.
<https://rapidtransit.regionofwaterloo.ca/en/resourcesGeneral/ION-Story-Fall-2016-access.pdf>
- Region of Waterloo. (2020). *Workplace Count*. <https://www.regionofwaterloo.ca/en/doing-business/workplace-count.aspx>
- Region of Waterloo. (2022a). 2021 Building Permit Activity and Growth Monitoring. *Planning Information Bulletin, April 12*. https://www.regionofwaterloo.ca/en/regional-government/resources/LandUse_BuildingActivity/3978310-PDL-CPL-22-07_Appendix_A_2021_Building_Permit_Activity_and_Growth_Monitoring.ACCESS.pdf
- Region of Waterloo. (2022b). *Monitoring Change in the CTC: 2020 Report*.
https://www.regionofwaterloo.ca/en/regional-government/resources/LandUse_BuildingActivity/3868173-PDL-CPL-22-02_Attachment_1_Monitoring_Change_in_the_CTC_2020_Report.ACCESS.pdf
- Region of Waterloo. (2022c). *Open Data Portal*. <https://rowopendata-rmw.opendata.arcgis.com/>
- Roth, N., & Grant, J. L. (2015). The story of a commercial street: growth, decline, and gentrification on Gottingen Street, Halifax. *Urban History Review, 43*(2), 38–53.
- Saxe, S., & Miller, E. J. (2016). Transit and Land Value Uplift: An Introduction. *ICity: Urban Informatics for Sustainable Metropolitan Growth*.
- Shaw, K. S., & Hagemans, I. W. (2015). “Gentrification Without Displacement” and the Consequent Loss of Place: The Effects of Class Transition on Low-income Residents of Secure Housing in Gentrifying Areas. *International Journal of Urban and Regional Research, 39*(2), 323–341.
<https://doi.org/10.1111/1468-2427.12164>
- Statistics Canada. (2020). *Canada’s population estimates: Subprovincial areas, July 1, 2019*. The Daily.
<https://www150.statcan.gc.ca/n1/daily-quotidien/200213/dq200213a-eng.htm>
- Statistics Canada. (2021). *North American Industry Classification System (NAICS) Canada 2017 Version 3.0*. Statistical Classifications.
<https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553>
- Statistics Canada. (2022). *Statistics Canada Catalogue no. 98-316-X2021001*. Census Profile. 2021 Census of Population. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=waterloo&DGUIDlist=2021S0503541&GENDERli>

st=1,2,3&STATISTIClist=1&HEADERlist=0

- Sullivan, D. M., & Shaw, S. C. (2011). Retail Gentrification and Race: The Case of Alberta Street in Portland, Oregon. *Urban Affairs Review*, 47(3), 413–432.
<https://doi.org/10.1177/1078087410393472>
- Tolfo, P. G. S. (2019). Go on play with the words, the effect is the same: how gentrification and liveability feature in public discourses of neighbourhood change. *University of Waterloo: UWSpace*.
<http://hdl.handle.net/10012/15162>
- Tran, J. (2016). Understanding Developer’s Decision Making in the Region of Waterloo. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/11163>
- Webber, K., & Parker, D. C. (2022). Retail and Light Rail: Using business survey data to explore transit-induced commercial gentrification in Waterloo Region’s transit corridor. *University of Waterloo*.
- Zimmerman, J. (2008). From brew town to cool town: Neoliberalism and the creative city development strategy in Milwaukee. *Cities*, 25(4), 230–242. <https://doi.org/10.1016/j.cities.2008.04.006>
- Zuk, M., Bierbaum, A. H., Chapple, K., Gorska, K., & Loukaitou-Sideris, A. (2018). Gentrification, Displacement, and the Role of Public Investment. *Journal of Planning Literature*, 33(1), 31–44.
<https://doi.org/10.1177/0885412217716439>
- Zukin, S. (2008). Consuming Authenticity. *Cultural Studies*, 22(5), 724–748.
<https://doi.org/10.1080/09502380802245985>
- Zukin, S., Trujillo, V., Frase, P., Jackson, D., Recuber, T., & Walker, A. (2009). New Retail Capital and Neighborhood Change: Boutiques and Gentrification in New York City. *City & Community*, 8(1), 47–65.

Chapter 4 Conclusion

As the popularity of rapid transit systems and transit-oriented development (TOD) projects continues to grow in mid-sized cities, it is imperative that planners and policymakers understand the impacts of these projects on the recipient community. In response to the growing use of rapid transit as a tool for economic development, the study of transit-induced gentrification has made significant strides in exploring the relationship between new transit infrastructure and gentrification and is conducted primarily from a residential lens. While this research has been fundamental in improving our understanding of transit-induced gentrification, we argue that commercial businesses remain largely overlooked in this area of literature. Commercial businesses are an integral component to the success of TODs as they improve residents' access to goods, services and employment opportunities. Further, commercial districts can also undergo gentrification, in response to the changing consumer demands as neighbourhood demographics change, and also in response to increased demand for commercial space and resulting increased rents.

4.1 Answering Thesis Questions

In this thesis, we aimed to merge the sub-fields of transit-induced and commercial gentrification literature by exploring the phenomenon of transit-induced commercial gentrification in the mid-sized municipality of the Region of Waterloo, in Ontario, Canada. More specifically, addressed the following research questions:

Q1. Has the commercial business composition within Waterloo Region's transit corridor changed since the approval (2011) and launch (2019) of the ION light rail transit system? If so, what effects are seen?

Q1a. Do these changes relate to, or contribute to commercial gentrification? If so, how?

Q1b. What are the mechanisms behind these changes?

Q2. How have businesses been impacted by, and responded to, the demographic and built form changes associated with LRT implementation?

In Manuscript 1, titled “*Retail and Light Rail: Investigating the relationship between transit-induced intensification and commercial gentrification in Waterloo Region’s transit corridor*”, we address Q1 and Q1a through a secondary data analysis of the Region of Waterloo’s Workplace Count (WPC) survey to compare business compositional changes inside and outside the central transit corridor (CTC). In Manuscript 2, titled “*Transit-induced commercial gentrification? Business owners’ perspectives of neighbourhood change in Kitchener-Waterloo*”, we address Q1 inclusive and Q2 using semi-structured interviews with business owners in Downtown Kitchener and UpTown Waterloo.

Integrating our quantitative and qualitative findings and beginning with Q1 and Q1a, we found that yes, the commercial business composition within Waterloo Region’s transit corridor has changed since the approval and launch of the ION light rail transit system, and many of the changes indicate commercial gentrification. First, we uncover the CTC phenomenon of retail decline. Although the literature cites increasing concentrations of retail businesses in gentrifying neighbourhoods (e.g. Bridge & Dowling, 2001; Zukin et al., 2009), through our interviews with business owners, we find that despite a loss in retail businesses overall, new retail businesses are higher-end than those who close, an indicator of commercial upgrading. Second, we observe the rise in “discretionary” businesses, that is, non-essential and luxury goods, services and restaurants. In both studies, we find increases in the arts and entertainment, food services, and personal services categories, which indicate that new residents in the CTC, especially in the downtown cores, have more disposable income available to afford these non-essential services. Lastly, our qualitative results highlight a decline in local businesses and a rise in chains in the downtown cores, and especially in UpTown Waterloo, which is a key indicator of commercial gentrification as it can point to the desirability and perceived profitability of a location.

Moving to Q1b, our qualitative study helps us to identify the mechanisms causing the changes in the downtown core areas in Stage 1 of the CTC. While the literature highlights two key factors contributing to commercial gentrification – changing demographics and increased demand for commercial space – in our research, we revealed interesting caveats to these factors, and an additional significant contributing factor. Beginning with neighbourhood demographics, our quantitative results demonstrate the “tech boom” in Stage 1 of the CTC, and most

significantly, in Downtown Kitchener. Through this increase in tech companies, business owners reasonably assumed that the incoming tech workers would become a key part of their customer base. This assumption has undoubtedly contributed to new business openings in the area, as many hoped to capitalize on this incoming demographic. However, this has not been the case at all according to business owners, believed to be related to the amenities provided at the tech businesses and the consumption habits of the tech workers. Moving to demand for commercial space, while business owners reported substantial rent increases in the downtown cores and changing landlord dynamics which has generated increased business turnover, the presence of vacant storefronts indicates that perhaps demand for commercial space is not high. Overall, with regards to both demographics and commercial demand, our results indicate a difference between perceived and actual change, with perceived demographic and demand changes fueling commercial change in the CTC at present. The additional, and perhaps most significant, factor contributing to commercial change in the CTC is the role that LRT construction has played in fast-tracking commercial gentrification. We find that many businesses who might have been able to otherwise withstand changing demographics and increased rent prices largely did not have the chance to because they could not survive the prolonged decrease in customer traffic caused by LRT construction.

Lastly, we address Q2 through our qualitative interviews with business owners. Once LRT construction was complete, business owners anticipated that customer traffic would return to normal, or even might increase with more people travelling on the LRT. However, at the time of our interviews, most business owners reported that their customer traffic was still below pre-LRT levels. Additionally, the literature paints a grim picture of the success of pre-gentrification businesses, and largely suggests that businesses present in a neighbourhood prior to gentrification are bound to eventually succumb to their inability to cater to new residents or pay higher rent prices. However, 16 of the 21 businesses in our sample are still operational at the time of this writing, with two main factors cited contributing to their success. First, business owners reported the importance of having a strong online presence via social media and e-commerce platforms. Before the LRT, many of these businesses did not have a strong online presence, many used the “opportunity” of construction to improve their platforms. Interestingly,

while their intention was originally to reach their core customers, businesses found that they have been able to reach beyond their local customer base. Second, some pre-LRT businesses have been able to thrive because their products or services are popular amongst the new residents, such as the bike store, record shop, and bookstore. That is not to say that their success is by accident, as these businesses also have worked hard to establish a strong online presence, the popularity of their product by incoming residents is perhaps an added bonus.

4.2 Achieving Thesis Objectives

As set out in Chapter 1, this thesis had two main objectives:

Objective 1: to explore the phenomenon of transit-induced commercial gentrification in the Region of Waterloo's CTC

Objective 2: to explore the practical applications of qualitative research methods in commercial gentrification research

In this section, we will discuss our findings in relation to the objectives of this thesis.

4.2.1 Transit-Induced Commercial Gentrification in the Region of Waterloo

As discussed extensively, this thesis and associated manuscripts were highly motivated by the increased use of rapid transit systems as an economic development tool to support revitalization efforts in mid-sized municipalities across North America. In response to the growing body of research focusing on the residential aspects of transit-induced gentrification, this thesis aims to contribute to this body of literature by studying the impacts of rapid transit development on commercial businesses. Therefore, the first objective of this thesis was “*to explore the phenomenon of transit-induced commercial gentrification in the Region of Waterloo's CTC*”.

We achieved Objective 1 through our secondary data analysis and interviews with business owners. In Manuscript 1, we used WPC data to calculate changes in business composition inside and outside the CTC between 2011 (when the LRT was announced) and 2018 (when LRT construction was complete, but the system was not operational). We first used the most general two-digit North American Industry Classification System (NAICS) codes to calculate and compare industry-level changes in the Region as a whole and compared regional

trends to those occurring in Stage 1 and 2 of the CTC and outside the CTC. We then zoomed in further to study three-digit NAICS codes, and sub-divided Stage 1 of the CTC to examine changes within versus outside the urban cores of Downtown Kitchener and UpTown Waterloo. Stage 1 CTC outside urban cores, Downtown Kitchener and UpTown Waterloo; Stage 2 CTC; Outside CTC; and Region total. In Manuscript 2, we narrowed our study area to Downtown Kitchener and UpTown Waterloo – who undoubtedly have experienced the most LRT-induced change – and interviewed business owners to learn about their observations of change, the mechanisms fueling change, and how they have adapted to change. Our quantitative results make a strong case for the presence of commercial gentrification in the CTC, and our qualitative results reinforce the presence of this phenomenon in Downtown Kitchener and UpTown Waterloo. Through our study, we can contribute not only to the larger case study of LRT-induced neighbourhood change in the Region of Waterloo by reporting on an additional layer of change, but also to contribute to the small body of transit-induced commercial gentrification research by using the Region of Waterloo as a case study example of this phenomenon.

4.2.2 Practical Applications of Qualitative Research Methods

Studies of transit-induced gentrification and commercial gentrification conducted to date favour quantitative methods in efforts to measure change. However, as we discovered through our quantitative analysis in Manuscript 1, quantitative data cannot always tell us the whole story. Quantitative studies of transit-induced gentrification, highlight issues around the efficacy of census data and the difficulty of tracking displacement. Further, quantitative studies of commercial gentrification can important details related to commercial gentrification, including ownership type (e.g., independently owned versus chain), business type (e.g., café, fast-food restaurant, full-service restaurant), and business caliber (e.g., no-frills barbershop versus specialty hair salon). Therefore, the second objective of this thesis was *“to explore the practical applications of qualitative research methods in commercial gentrification research”*.

We address this objective in our second manuscript, where we use business owners’ descriptions of commercial change to determine whether commercial gentrification is occurring in the downtown cores, and further, what business owners believe to be the mechanisms of these changes. While our quantitative findings from Manuscript 1 do indicate the presence of

commercial gentrification in Stage 1 of the CTC, the restrictiveness of the data only allow us to make surface-level conclusions. However, through the integration of qualitative methods in Manuscript 2, we are able to paint a more detailed picture of commercial change in the Downtown Kitchener and UpTown Waterloo areas within Stage 1 of the CTC. Our qualitative findings functioned not only to triangulate our quantitative findings by adding additional detail and context, but they also added new aspects of change that otherwise would have been missed, including information about business ownership, type, and caliber, mechanisms fueling changes, and how business owners are able to adapt to conditions of gentrification. The rich results obtained through Manuscript 2 demonstrate the additional opportunities and flexibility available with qualitative research methods. Therefore, this thesis provides an example of the beneficial use of qualitative methods in a study of commercial gentrification and transit-induced commercial gentrification. Qualitative methods contribute to a more holistic understanding not only of the physical manifestation of commercial gentrification, but also its contributing factors and effects.

4.3 Contributions and Implications for Planning Research and Practice

The findings presented in this thesis contribute to the larger body of transit-induced gentrification and commercial gentrification literature and highlight several implications for planning research and practice. While we include a discussion of these contributions and implications in the conclusion sections of both Manuscript 1 and 2, in this section, we will provide a summary of implications for planning research, and implications for planning practice relevant for the Region of Waterloo and other mid-sized municipalities considering rapid transit.

4.3.1 Planning Research

The research presented in this thesis contributes to the small body of literature which seeks to integrate the fields of transit-induced gentrification and commercial gentrification. Through our study, we find that commercial businesses are sensitive to the effects of transit-induced gentrification. While these effects include demographic changes, business owners experience more significant disruption by the changes to the built form, through the implementation of the rapid transit system itself and through the development and investment booms generated by the

new infrastructure. Our research also highlights major discrepancies between perceived and actual change related to demographics and commercial demand, with supply-side perceived changes fast-tracking gentrification in the CTC. In addition, the substantial role that LRT construction played in acting as the “tipping point” for business closure is underrepresented in the literature at this time, and, as seen in the case of Kitchener-Waterloo, has played a significant role in increasing business turnover. Therefore, in addition to more meaningfully including changes in commercial business composition as an element of transit-induced gentrification, planning scholars should consider how the construction process can further displacement and gentrification in future research.

As mentioned in the previous section, this thesis is also a strong example of the benefits of integrating qualitative methods into transit-induced gentrification and commercial gentrification studies. While quantitative methods are perhaps more effective at gathering a large sample and producing easy-to-interpret results, qualitative methods provide an additional layer of detail and context to the phenomenon of transit-induced commercial gentrification that simply cannot be captured using quantitative methods alone. In addition to being able to triangulate results and complement quantitative studies, qualitative methods are strong enough to be used as a standalone data source. Our semi-structured interviews with business owners not revealed more details about the changes in business composition since LRT approval than our quantitative data, they also provided additional insight about what is causing these changes, and how they are experiencing and adapting to them. As such, planning scholars should consider use of qualitative methods in transit-induced gentrification and commercial gentrification studies, as they are effective for both identifying and describing the processes at work.

4.3.2 Planning Practice

This thesis contributes to the case study of LRT-induced change in the Region of Waterloo. While the Region of Waterloo conducts a yearly monitoring program in the CTC, and numerous scholars from the University of Waterloo have analyzed the LRT system from a variety of angles, our research provides a new perspective of change not otherwise considered. Therefore,

this thesis can be used to help inform future monitoring metrics reports and university-led research projects.

Waterloo Region is in a unique position, as it is not only the first mid-sized municipality in Ontario to develop an LRT system, but they are also developing its LRT system in two stages, with Stage 2 construction anticipated to begin in 2028. Therefore, in this section, we will present recommendations that are applicable both to the Region through Stage 2 implementation, and to other mid-sized municipalities in North America considering rapid transit.

This thesis finds that commercial businesses are impacted by rapid transit implementation. The data presented help tell the story of commercial change in the Region of Waterloo's CTC that has otherwise gone unreported. Therefore, moving forward knowing the potential impacts, monitoring change throughout the implementation of a major capital infrastructure such as LRT. Region of Waterloo staff may consider incorporating an analysis and discussion of commercial gentrification indicators in the CTC into their annual monitoring metrics report, as they have with housing and gentrification in the past. To achieve this, the Region could use their own WPC survey data or Statistics Canada's "Canadian Business Counts" data and identify and track key NAICS codes related to commercial gentrification. Along the same vein, planning staff may consider updating their WPC survey in future years to gain additional data related to business type, ownership, and rent prices to gather additional information not available using NAICS alone. Other municipalities could also use data available through their employment surveys, other data sources such as Statistics Canada or commercial real estate firms or generate their own tracking system to identify and monitor key indicators of commercial gentrification. By actively monitoring key indicators of commercial gentrification, municipal staff are in a better position to proactively plan and implement programs to support business retention.

As we discovered through Manuscript 2, LRT construction devastated business owners in the CTC. Inconsistent messaging from the Region, cities and construction team and prolonged delays were extremely frustrating for business owners, and the scale of construction and reduced accessibility scared customers away from the downtown cores, despite efforts from business associations. Therefore, Waterloo Region (through Stage 2) and other municipalities should

engage with business owners from the outset of the construction planning process and develop communication processes to ensure business owners are well-informed about construction progress and delays so they can adequately prepare themselves (and their customers) for disruptions and reduced accessibility. A communication plan should be established between regional and local municipalities, construction crews, business associations and business owners to facilitate the sharing of accurate and consistent information.

While improved communication will undoubtedly help, municipalities and local business associations should consider implementing financial relief programs for businesses within construction areas to minimize the number of establishments going out of businesses due to construction. These programs may be modelled off COVID-19 rental relief programs, for example. Alternatively, or in addition, municipalities and business associations should explore implementing grant programs to help businesses get online and diversify their business plans to supplement the lost foot traffic. These grant programs may be developed internally, through Community Improvement Plans, for example, or through partnership opportunities with external agencies, such as the “Digital Main Street” program, which provides workshops and grants for businesses to create, improve, or expand their online presence. Municipalities may also consider advocating for commercial rent control programs at the provincial and federal level to protect business owners from aggressive rent increases.

Lastly, municipalities should consider the practical applications of integrating business diversity into planning practice. To protect commercial rent affordability, municipalities may use the Inclusionary Zoning model as an example to frame policies that integrate affordable commercial units into new developments. At the site plan process, municipalities could request or require certain types of businesses as tenants in order to foster TOD neighbourhoods where residents can access essential businesses within walking distance.

4.4 Limitations and Future Work

In this section, we will describe the limitations of this thesis and highlight opportunities for future research. Looking first to our quantitative data in Manuscript 1, we found that while the Region of Waterloo’s WPC dataset is effective in providing a snapshot of business composition,

since response rates were not shared, it is unknown whether our results are representative of the entire business population in the Region. Therefore, future research may consider using other data, such as Statistics Canada's Canadian Business Counts. Also related to the WPC dataset, at the time of this research, the most recent survey was conducted in 2018, one year prior to LRT operation. While our 2011 data provides a good baseline of business composition the same year the LRT was announced, and our 2018 data provides a summary of business composition following LRT construction, future research may use WPC data collected in the year 2022, to truly show the beginning, middle, and end of LRT implementation – with the significant caveat being the COVID-19 pandemic. Second, and as described already, although the NAICS is effective in providing information about business classification, some of these classifications are quite general, which limits our ability to find certain business types of interest (e.g., cafés, ethnic restaurants, second-hand stores). Additionally, the data does not tell us about business ownership type (e.g., chain versus independently owned), additional business characteristics (e.g., a traditional no-frills barbershop versus a modern contemporary one), or rent prices, which are key components of commercial gentrification. In the future, researchers may consider using other quantitative data such as business directories which may provide further detail about business composition.

Moving to our qualitative data in Manuscript 2, while our sample includes a range of businesses in terms of establishment and relocation history, business types, and customer bases, despite our best efforts, our sample size only included locally owned businesses. Therefore, in future research, a more targeted approach to include chain and franchise businesses would help us understand why these businesses are choosing to expand to Downtown Kitchener and UpTown Waterloo, and why now. Second, this research was conducted during the COVID-19 pandemic, amid a series of lockdowns, store closures, and during a period of great uncertainty for business owners, which complicated our research in several ways, including recruitment, sample size and not being able physically visit businesses. Lastly, and again related to the pandemic, it is difficult to paint a full picture of post-construction traffic as it takes time for people to become comfortable using transit again, learn the route and integrate it into their lives. Therefore, it would be beneficial to conduct this study again as we establish our “new normal”.

Despite these limitations, our research effectively demonstrates the interconnected relationship between commercial businesses and gentrification induced by rapid transit investment in the Region of Waterloo. Overall, this thesis takes an important first step in integrating commercial businesses into discussions of transit-induced gentrification.

Works Cited

- Agnew, S., Baum, P., Croaston, M., Janzen, A., Jerabek, E., Jorgenson, B., Senn, A., & Yang, J. (2010). The Potential Impact of Central Corridor LRT on Existing University Avenue Businesses. *University of Minnesota: Humphrey Institute*.
- Antanaitis, A. (2014). Developing Up and not Out: Understanding the Barriers to and Opportunities for Reurbanization along Waterloo's Central Transit Corridor. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/9022>
- Babin, R. M. (2016). Estimating Homebuyer Preferences Under Intensification: Hedonic Modelling of Open Space and Multimodal Transit Amenities Preceding Light Rail in Kitchener-Waterloo. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/10936>
- Baker, D. M., & Lee, B. (2019). How Does Light Rail Transit (LRT) Impact Gentrification? Evidence from Fourteen US Urbanized Areas. *Journal of Planning Education and Research*, 39(1), 35–49. <https://doi.org/10.1177/0739456X17713619>
- Bridge, G., & Dowling, R. (2001). Microgeographies of Retailing and Gentrification. *Australian Geographer*, 32(1), 93–107. <https://doi.org/10.1080/00049180020036259>
- Broomfi, T. (2022). *City of Toronto Polygon Layer*. https://services1.arcgis.com/pMeXRvgWCILJZr3s/arcgis/rest/services/City_of_Toronto/FeatureServer/0
- CBRE. (2022). Scoring Tech Talent: North American Report. *Evolving Workforces: Scoring Tech Talent, July*. <https://www.cbre.us/research-and-reports/Scoring-Tech-Talent-in-North-America-2021?article=%7BD3EA4CC8-B064-4CEB-A696-26B6B84F9BF6%7D>
- Cervero, R. (2006). Effects of Light and Commuter Rail Transit on Land Prices: Experiences in San Diego County. *UC Berkley: University of California Transportation Center*.
- Cervero, R., & Duncan, M. (2002). Transit's Value-Added Effects: Light and Commuter Rail Services and Commercial Land Values. *Transportation Research Record*, 1805(1), 8–15.
- Chapple, K., Loukaitou-Sideris, A., Gonzalez, S. R., Kadin, D., & Poirier, J. (2017). Transit-Oriented Development & Commercial Gentrification: Exploring the Linkages. *UCB Center for Community Innovation & UCLA Lewis Center*.
- Cook, J. (2018). Light Rail Transit in the Region of Waterloo: A qualitative examination of urban

- rail's effects on real estate, development and urban identities. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/14345>
- Davidson, M., & Lees, L. (2005). New-build “gentrification” and London’s riverside renaissance. *Environment and Planning A*, 37(7), 1165–1190.
- Davis, B. (2019a, February 25). Fairview Park redevelopment in Kitchener to begin this spring. *The Record*. <https://www.therecord.com/business/2019/02/25/fairview-park-redevelopment-in-kitchener-to-begin-this-spring.html>
- Davis, B. (2019b, April 3). Weeks left for historic Walper Hotel barbershop in Kitchener. *The Record*. <https://www.therecord.com/business/2019/04/03/weeks-left-for-historic-walper-hotel-barbershop-in-kitchener.html>
- Davis, B. (2020, July 18). Waterloo Region tops list of “up-and-coming” North American tech markets. *The Record*. <https://www.therecord.com/business/technology/2020/07/18/waterloo-region-tops-list-of-up-and-coming-north-american-tech-markets.html#:~:text=Waterloo Region has one of,growth among the 25 locations.>
- Dawkins, C., & Moeckel, R. (2016). Transit-Induced Gentrification: Who Will Stay, and Who Will Go? *Housing Policy Debate*, 26(4–5), 801–818. <https://doi.org/10.1080/10511482.2016.1138986>
- Deener, A. (2007). Commerce as the Structure and Symbol of Neighborhood Life: Reshaping the Meaning of Community in Venice, California. *City & Community*, 6(4), 291–314.
- Deka, D. (2017). Benchmarking gentrification near commuter rail stations in New Jersey. *Urban Studies*, 54(13), 2955–2972. <https://doi.org/10.1177/0042098016664830>
- Desmond, P. (2020, January 29). Next phase of Boardwalk shopping complex approved in Waterloo. *The Record*. <https://www.therecord.com/news/waterloo-region/2013/01/29/next-phase-of-boardwalk-shopping-complex-approved-in-waterloo.html?rf#:~:text=More than one kilometre in,straddles both Kitchener and Waterloo>
- Dong, H. (2017). Rail-transit-induced gentrification and the affordability paradox of TOD. *Journal of Transport Geography*, 63, 1–10. <https://doi.org/10.1016/j.jtrangeo.2017.07.001>
- Dovey, K., Pike, L., & Woodcock, I. (2017). Incremental Urban Intensification: Transit-oriented Re-development of Small-lot Corridors. *Urban Policy and Research*, 35(3), 261–274.

<https://doi.org/10.1080/08111146.2016.1252324>

- Duncan, M. (2011). The synergistic influence of light rail stations and zoning on home prices. *Environment and Planning A*, 43(9), 2125–2142. <https://doi.org/10.1068/a43406>
- Elliott-Cooper, A., Hubbard, P., & Lees, L. (2020). Moving beyond Marcuse: Gentrification, displacement and the violence of un-homing. *Progress in Human Geography*, 44(3), 492–509. <https://doi.org/10.1177/0309132519830511>
- Ellis-Young, M., & Doucet, B. (2021). From “Big Small Town” to “Small Big City”: Resident Experiences of Gentrification along Waterloo Region’s LRT Corridor. *Journal of Planning Education and Research*, December 2020. <https://doi.org/10.1177/0739456X21993914>
- Filion, P., Kramer, A., & Sands, G. (2016). Recentralization as an Alternative to Urban Dispersion: Transformative Planning in a Neoliberal Societal Context. *International Journal of Urban and Regional Research*, 40(3), 658–678. <https://doi.org/10.1111/1468-2427.12374>
- Filion, P., Moos, M., Vinodrai, T., & Walker, R. (2015). *Canadian Cities in Transition: Perspectives for an Urban Age* (5th ed.). Oxford University Press.
- González, S. R., Loukaitou-Sideris, A., & Chapple, K. (2019). Transit neighborhoods, commercial gentrification, and traffic crashes: Exploring the linkages in Los Angeles and the Bay Area. *Journal of Transport Geography*, 77, 79–89. <https://doi.org/10.1016/j.jtrangeo.2019.04.010>
- Grier, S. A., & Perry, V. G. (2018). Dog parks and coffee shops: Faux diversity and consumption in gentrifying neighborhoods. *Journal of Public Policy and Marketing*, 37(1), 23–38. <https://doi.org/10.1509/jppm.16.230>
- Grube-Cavers, A., & Patterson, Z. (2015). Urban rapid rail transit and gentrification in Canadian urban centres: A survival analysis approach. *Urban Studies*, 52(1), 178–194. <https://doi.org/10.1177/0042098014524287>
- Haltiwanger, J. C., Jarmin, R. S., & Krizan, C. J. (2010). Mom-and-Pop Meet Big Box: Complements or Substitutes? *Journal of Urban Economics*, 67(1), 116–134. <http://www.nber.org/papers/w15348>
- Hess, D. B., & Almeida, T. M. (2007). Impact of Proximity to Light Rail Rapid Transit on Station-area Property Values in Buffalo, New York. *Urban Studies*, 44(5–6), 1041–1068.
- Hewitt, C. M., & Hewitt, W. E. (2012). The Effect of Proximity to Urban Rail on Housing Prices in

Ottawa. *Journal of Public Transportation*, 15(4), 43–65.

- Higgins, C. D., & Kanaroglou, P. S. (2018). Rapid Transit, Transit-oriented Development, and the Contextual Sensitivity of Land Value Uplift in Toronto. *Urban Studies*, 55(10), 2197–2225. <https://doi.org/10.1177/0042098017712680>
- Huang, Y. (2020). Analyzing the housing market dynamics and residential location choices along with the light-rail transit investment in Kitchener-Waterloo Phd candidate : Yu Huang. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/15801>
- Hubbard, P. (2017). *The Battle for the High Street: Retail Gentrification, Class and Disgust*. Palgrave Macmillan.
- Immergluck, D. (2009). Large Redevelopment Initiatives, Housing Values and Gentrification: The Case of the Atlanta Beltline. *Urban Studies*, 46(8), 1723–1745. <https://doi.org/10.1177/0042098009105500>
- Jackson, S. L., & Buckman, J. (2020a). Light rail development with or without gentrification?: Neighborhood perspectives on changing sense of place in Denver, Colorado. *Journal of Transport Geography*, 84, 1–14. <https://doi.org/10.1016/j.jtrangeo.2020.102678>
- Jackson, S. L., & Buckman, J. (2020b). Light rail development with or without gentrification?: Neighborhood perspectives on changing sense of place in Denver, Colorado. *Journal of Transport Geography*, 84(1), 102678. <https://doi.org/10.1016/j.jtrangeo.2020.102678>
- Jones, C. E., & Ley, D. (2016). Transit-oriented development and gentrification along Metro Vancouver’s low-income SkyTrain corridor. *The Canadian Geographer*, 60(1), 9–22. <https://doi.org/10.1111/cag.12256>
- Kahn, M. E. (2007). Gentrification Trends in New Transit-Oriented Communities: Evidence from 14 Cities That Expanded and Built Rail Transit Systems. *Real Estate Economics*, 35(2), 155–182.
- Keatinge, B., & Martin, D. G. (2016). A ‘Bedford Falls’ kind of place: Neighbourhood branding and commercial revitalisation in processes of gentrification in Toronto, Ontario. *Urban Studies*, 53(5), 867–883. <https://doi.org/10.1177/0042098015569681>
- Knaap, G. J., Ding, C., & Hopkins, L. D. (2001). Do plans matter? The effects of light rail plans on land values in station areas. *Journal of Planning Education and Research*, 21(1), 32–39. <https://doi.org/10.1177/0739456X0102100103>

- Komakech, M. D. C., & Jackson, S. F. (2016). A Study of the Role of Small Ethnic Retail Grocery Stores in Urban Renewal in a Social Housing Project, Toronto, Canada. *Journal of Urban Health*, 93(3), 414–424. <https://doi.org/10.1007/s11524-016-0041-1>
- Kosta, E. B. (2019). Commercial Gentrification Indexes: Using Business Directories to Map Urban Change at the Street Level. *City & Community*, 18(4), 1101–1122. <https://doi.org/10.1111/cico.12468>
- Kramer, A. (2018). The unaffordable city: Housing and transit in North American cities. *Cities*, 83, 1–10. <https://doi.org/10.1016/j.cities.2018.05.013>
- Lee, H. (2018). Are Millennials Coming to Town? Residential Location Choice of Young Adults. *Urban Affairs Review*, 56(2), 565–604. <https://doi.org/10.1177/1078087418787668>
- Ley, D. (1996). “Follow the Hippies”: The Cultural Politics of Gentrification. In *The New Middle Class and the Remaking of the Central City* (pp. 191–221). Oxford University Press.
- Loukaitou-Sideris, A., Gonzalez, S., & Ong, P. (2019). Triangulating Neighborhood Knowledge to Understand Neighborhood Change: Methods to Study Gentrification. *Journal of Planning Education and Research*, 39(2), 227–242. <https://doi.org/10.1177/0739456X17730890>
- McLellan, A., & Collins, D. (2014). “If You’re Just a Bus Community... You’re Second Tier”: Motivations for Rapid Mass Transit (RMT) Development in Two Mid-sized Cities. *Urban Policy and Research*, 32(2), 203–217. <https://doi.org/10.1080/08111146.2014.882255>
- McMahon, L. J. (2018). *Region of Waterloo Polygon Layer*. <https://services1.arcgis.com/qAo1OsXi67t7XgmS/arcgis/rest/services/RegionOfWaterloo/FeatureServer/0>
- McPherson, D. (2019, April 23). Refreshed Walper Hotel a symbol of downtown Kitchener’s resurgence. *The Globe and Mail*. <https://www.theglobeandmail.com/business/industry-news/property-report/article-refreshed-walper-hotel-a-symbol-of-downtown-kitcheners-resurgence/>
- Meltzer, R. (2016). Gentrification and Small Business: Threat or Opportunity? *Cityscape*, 18(3), 57–85.
- Meltzer, R., & Capperis, S. (2017). Neighbourhood differences in retail turnover: Evidence from New York City. *Urban Studies*, 54(13), 3022–3057. <https://doi.org/10.1177/0042098016661268>

- Miller, C. (2019). *Prosperity through Reuse? Examining the Adaptive Reuse of Industrial Buildings in Kitchener's Central, Core and Suburban Neighbourhoods* [University of Waterloo].
<https://doi.org/10.1049/ep.1980.0423>
- Ministry of Municipal Affairs and Housing. (2006). *Places to Grow: Growth Plan for the Greater Golden Horseshoe*.
- Ministry of Municipal Affairs and Housing. (2019). *A Place to Grow: Growth Plan for the Greater Golden Horseshoe*. <https://www.ontario.ca/document/place-grow-growth-plan-greater-golden-horseshoe>
- Ministry of Transportation. (2020a). *GTA Boundary Polygon Layer*.
<https://services.arcgis.com/6iGx1Dq91oKtcE7x/arcgis/rest/services/GTABoundary/FeatureServer/0>
- Ministry of Transportation. (2020b). *Planning transportation for the Greater Golden Horseshoe. Driving and Roads*. <https://www.ontario.ca/page/planning-transportation-greater-golden-horseshoe>
- Ong, V. (2020). “Feeling out of place suddenly, and you haven’t even moved”: Food gentrification, alternative foods, and sociospatial justice in Downtown Kitchener, Ontario. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/15467>
- Owens, C., Walton Roberts, M., & Wheeler, G. (2022, July 8). Funding community parks in Kitchener: The haves and have nots. *Waterloo Region Record*.
<https://www.therecord.com/opinion/2022/07/08/funding-community-parks-in-kitchener-the-haves-and-have-nots.html>
- Padeiro, M., Louro, A., & da Costa, N. M. (2019). Transit-oriented development and gentrification: a systematic review. *Transport Reviews*, 39(6), 733–754.
- Parker, J. N. (2018). Negotiating the Space between Avant-Garde and “Hip Enough”: Businesses and Commercial Gentrification in Wicker Park. *City & Community*, 17(2), 438–460.
<https://doi.org/10.1111/cico.12294>
- Pi, X. (2017). Exploring Rental Housing Market in Kitchener-Waterloo, Ontario. *University of Waterloo: UWSpace*. <https://doi.org/http://hdl.handle.net/10012/12431>
- Rankin, K. N., & McLean, H. (2014). Governing the Commercial Streets of the City: New Terrains of

- Disinvestment and Gentrification in Toronto's Inner Suburbs. *Antipode*, 47(1), 216–239.
<https://doi.org/10.1111/anti.12096>
- Ray, R. (2017). Open for business? Effects of Los Angeles Metro Rail construction on adjacent businesses. *The Journal of Transport and Land Use*, 10(1), 725–742.
- Region of Waterloo. (2003). *Regional Growth Management Strategy*.
<https://www.regionofwaterloo.ca/en/resources/RegionalGrowthManagementStrategy.pdf>
- Region of Waterloo. (2011). *Central Transit Corridor Monitoring Program: Baseline Monitoring Report*.
https://www.regionofwaterloo.ca/en/resources/Monitoring_Change_in_the_CTC__Baseline_Report-June-Update.pdf
- Region of Waterloo. (2016). *The ION Story*.
<https://rapidtransit.regionofwaterloo.ca/en/resourcesGeneral/ION-Story-Fall-2016-access.pdf>
- Region of Waterloo. (2019). *Monitoring Change in the CTC: 2018 Report*.
https://www.regionofwaterloo.ca/en/shared-content/resources/Monitoring_Change_in_the_CTC_2018_Report.pdf
- Region of Waterloo. (2020a). *Monitoring Change in the CTC: 2019 Report*.
https://www.regionofwaterloo.ca/en/shared-content/resources/PDL-CPL-20-31__Monitoring_Change_in_the_CTC_2019_Report.pdf
- Region of Waterloo. (2020b). *Workplace Count*. <https://www.regionofwaterloo.ca/en/doing-business/workplace-count.aspx>
- Region of Waterloo. (2021). *Demographics*. <https://www.regionofwaterloo.ca/en/doing-business/demographics.aspx>
- Region of Waterloo. (2022a). 2021 Building Permit Activity and Growth Monitoring. *Planning Information Bulletin*, April 12. https://www.regionofwaterloo.ca/en/regional-government/resources/LandUse_BuildingActivity/3978310-PDL-CPL-22-07_Appendix_A_2021_Building_Permit_Activity_and_Growth_Monitoring.ACCESS.pdf
- Region of Waterloo. (2022b). *Monitoring Change in the CTC: 2020 Report*.
https://www.regionofwaterloo.ca/en/regional-government/resources/LandUse_BuildingActivity/3868173-PDL-CPL-22-

Region of Waterloo. (2022c). *Open Data Portal*. <https://rowopendata-rmw.opendata.arcgis.com/>

Roth, N., & Grant, J. L. (2015). The story of a commercial street: growth, decline, and gentrification on Gottingen Street, Halifax. *Urban History Review*, 43(2), 38–53.

Saxe, S., & Miller, E. J. (2016). Transit and Land Value Uplift: An Introduction. *ICity: Urban Informatics for Sustainable Metropolitan Growth*.

Shaw, K. S., & Hagemans, I. W. (2015). “Gentrification Without Displacement” and the Consequent Loss of Place: The Effects of Class Transition on Low-income Residents of Secure Housing in Gentrifying Areas. *International Journal of Urban and Regional Research*, 39(2), 323–341. <https://doi.org/10.1111/1468-2427.12164>

Statistics Canada. (2011). Location Counts by PROV/CD, Sectors & Employment Size Ranges NAICS 2-digit. *Canadian Business Patterns, June*. <http://odesi2.scholarsportal.info/documentation/CBP/cbp-en.html>

Statistics Canada. (2017a). *Kitchener, CY [Census subdivision], Ontario and Waterloo, CY [Census subdivision], Ontario (table)*. Census Profile. 2016 Census.

Statistics Canada. (2017b). *Waterloo, RM [Census division], Ontario and Cambridge, CY [Census subdivision], Ontario (table)*. Census Profile. 2016 Census.

Statistics Canada. (2018). Location Counts by NAICS and Employment Size Ranges for all PROV/CD’s. *Canadian Business Counts, June*. <http://odesi1.scholarsportal.info/documentation/CBC/cbc-en.html>

Statistics Canada. (2020). *Canada’s population estimates: Subprovincial areas, July 1, 2019*. The Daily. <https://www150.statcan.gc.ca/n1/daily-quotidien/200213/dq200213a-eng.htm>

Statistics Canada. (2021). *North American Industry Classification System (NAICS) Canada 2017 Version 3.0*. Statistical Classifications. <https://www23.statcan.gc.ca/imdb/p3VD.pl?Function=getVD&TVD=1181553>

Statistics Canada. (2022). *Statistics Canada Catalogue no. 98-316-X2021001*. Census Profile. 2021 Census of Population. <https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/details/page.cfm?Lang=E&SearchText=waterloo&DGUIDlist=2021S0503541&GENDERlist=1,2,3&STATISTIClist=1&HEADERlist=0>

- Sullivan, D. M., & Shaw, S. C. (2011). Retail Gentrification and Race: The Case of Alberta Street in Portland, Oregon. *Urban Affairs Review*, 47(3), 413–432.
<https://doi.org/10.1177/1078087410393472>
- Talen, E., & Jeong, H. (2019). Street rules: does zoning support main street? *Urban Design International*, 24(3), 206–222. <https://doi.org/10.1057/s41289-018-0076-x>
- Tolfo, P. G. S. (2019). Go on play with the words, the effect is the same: how gentrification and liveability feature in public discourses of neighbourhood change. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/15162>
- Tran, J. (2016). Understanding Developer’s Decision Making in the Region of Waterloo. *University of Waterloo: UWSpace*. <http://hdl.handle.net/10012/11163>
- Webber, K., & Parker, D. C. (2022). Retail and Light Rail: Using business survey data to explore transit-induced commercial gentrification in Waterloo Region’s transit corridor. *University of Waterloo*.
- Webber, K., Parker, D. C., & Doucet, B. (2022). Transit-Induced Commercial Gentrification? Local business owners’ perspectives of neighbourhood change in Kitchener-Waterloo. *University of Waterloo*.
- Zimmerman, J. (2008). From brew town to cool town: Neoliberalism and the creative city development strategy in Milwaukee. *Cities*, 25(4), 230–242.
<https://doi.org/10.1016/j.cities.2008.04.006>
- Zuk, M., Bierbaum, A. H., Chapple, K., Gorska, K., & Loukaitou-Sideris, A. (2018). Gentrification, Displacement, and the Role of Public Investment. *Journal of Planning Literature*, 33(1), 31–44.
<https://doi.org/10.1177/0885412217716439>
- Zukin, S. (2008). Consuming Authenticity. *Cultural Studies*, 22(5), 724–748.
<https://doi.org/10.1080/09502380802245985>
- Zukin, S., Trujillo, V., Frase, P., Jackson, D., Recuber, T., & Walker, A. (2009). New Retail Capital and Neighborhood Change: Boutiques and Gentrification in New York City. *City & Community*, 8(1), 47–65.

Appendix A: Percent of Total Calculations – 3-Digit NAICS Subcategories

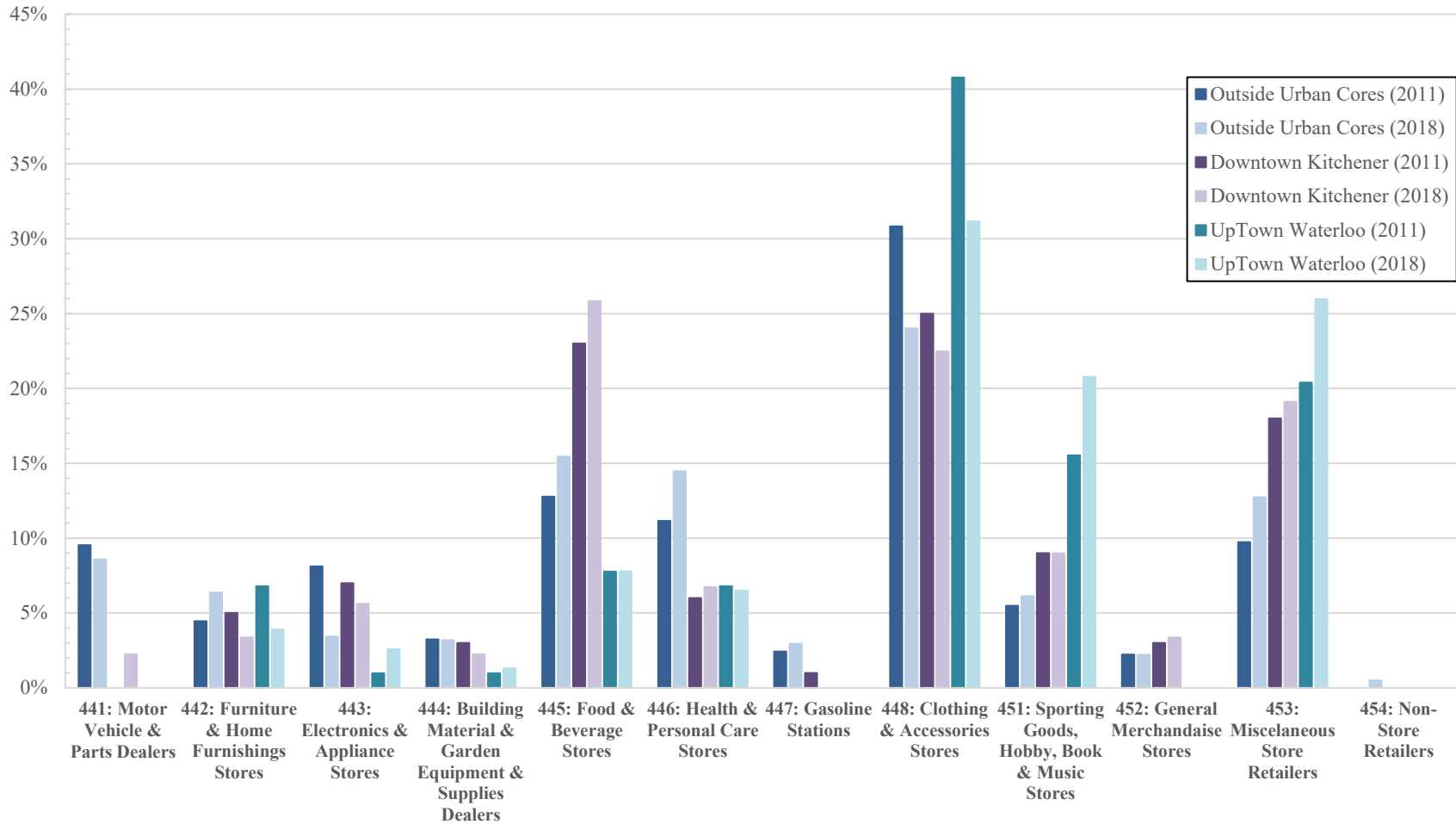


Figure 2-1. 44-45: Retail Trade Business Composition (1 of 2: Stage CTC Subcategories) (2011-2018)

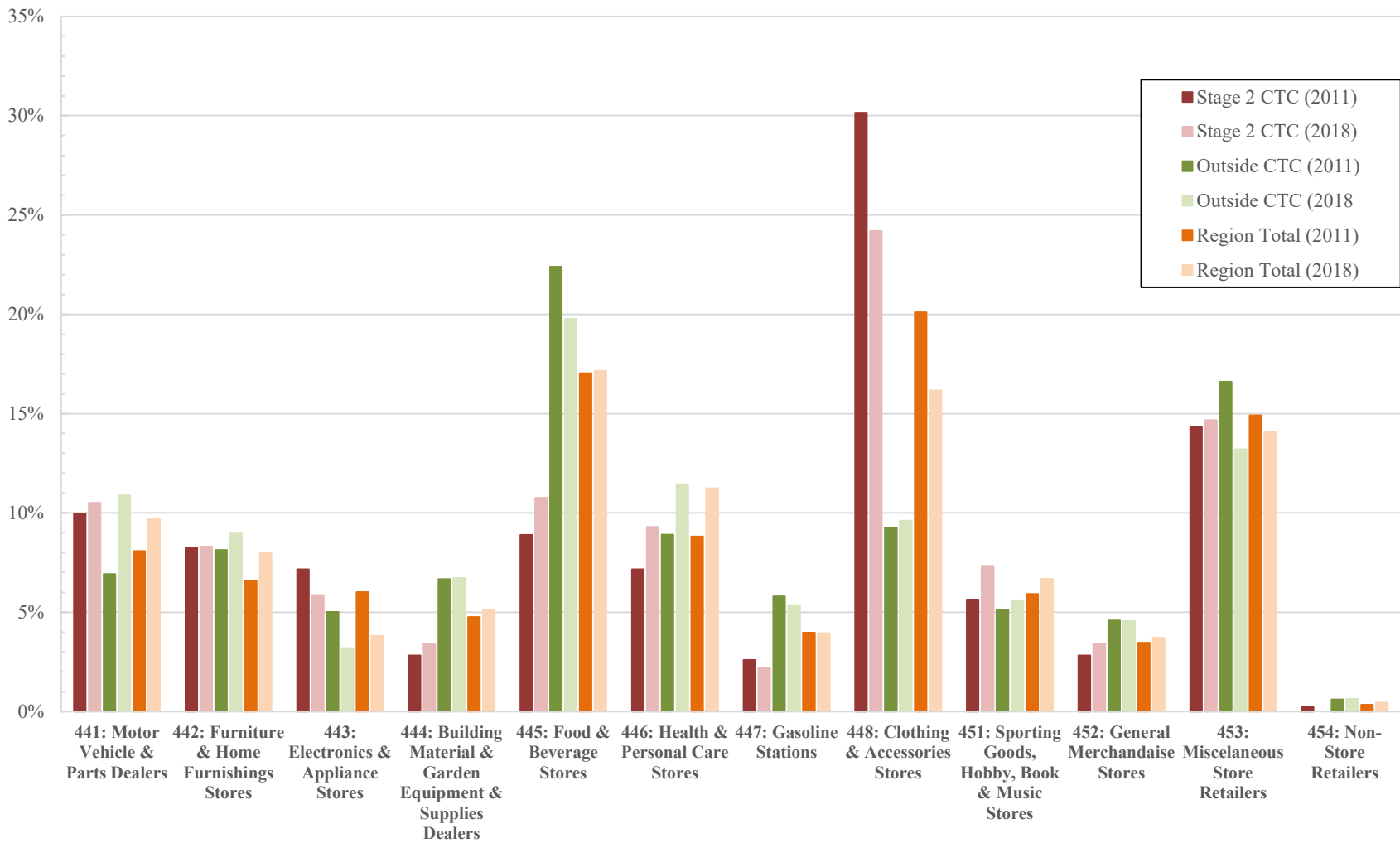


Figure 2-2. 44-45: Retail Trade Business Composition (2 of 2: Stage 2 CTC, Outside CTC, Region Total) (2011-2018)

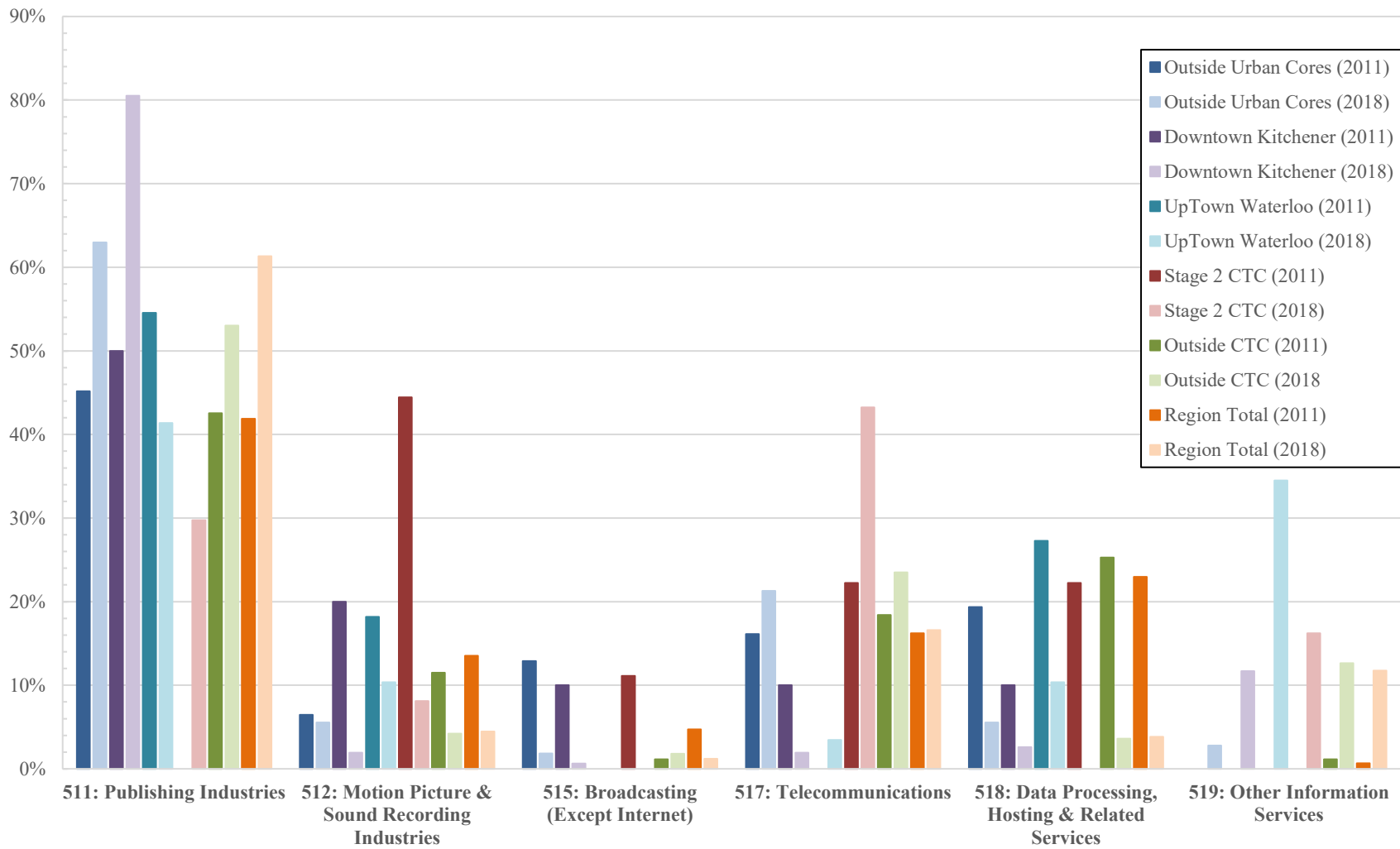


Figure 2-3. 51: Information & Cultural Industries Business Composition (2011-2018)

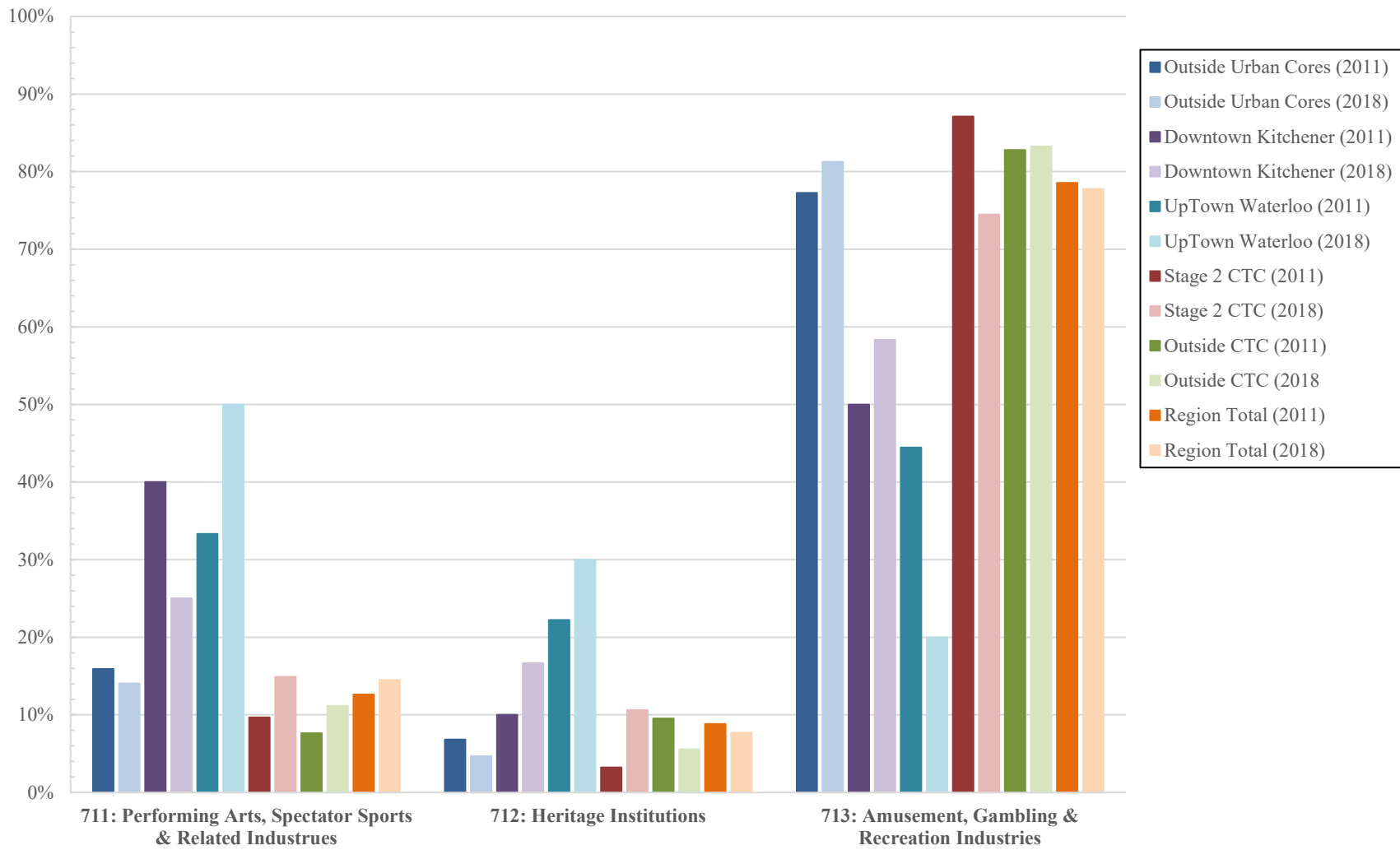


Figure 2-4. 71: Arts, Entertainment & Recreation Business Composition (2011-2018)

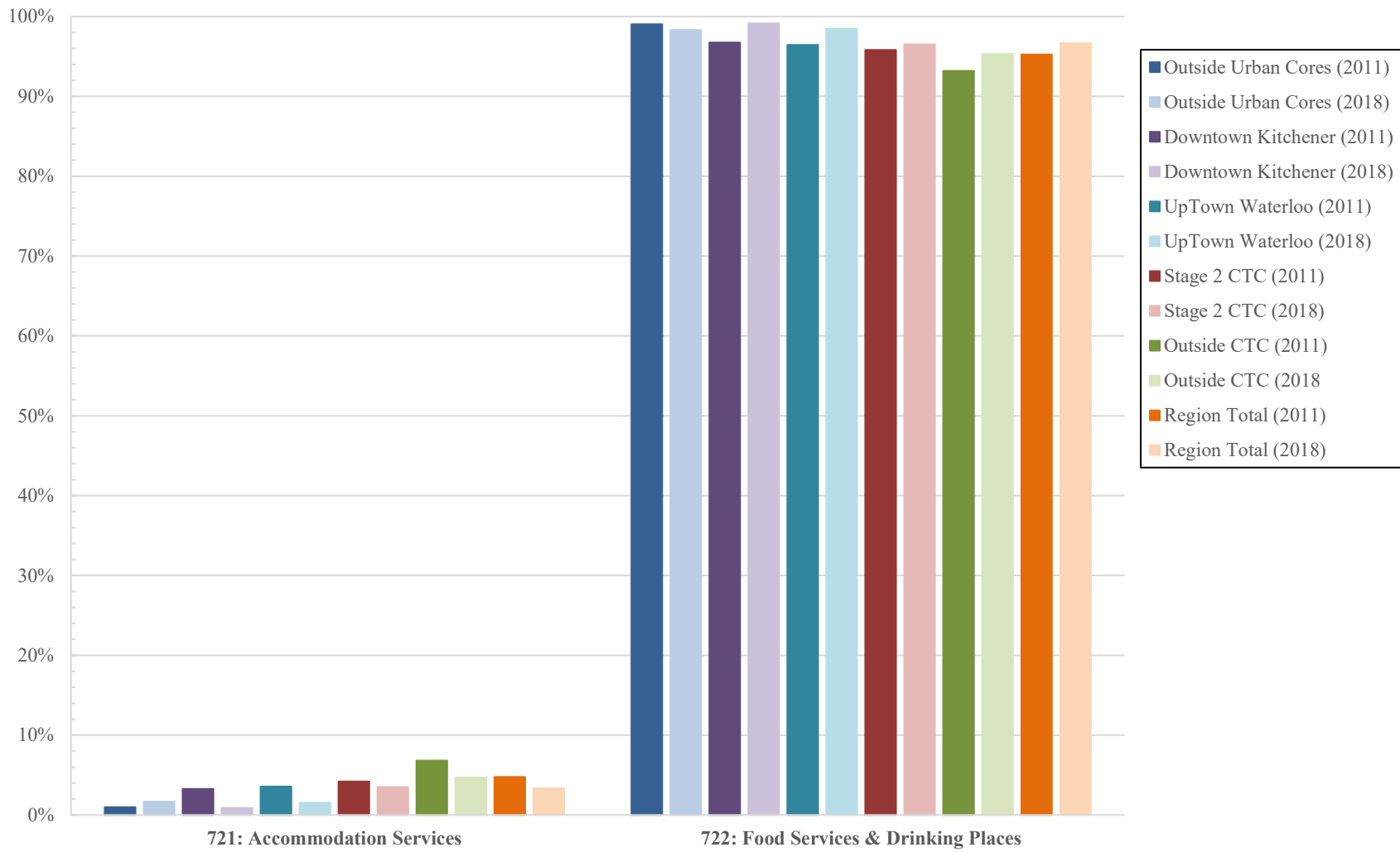


Figure 2-5. 72: Accommodation & Food Services Business Composition (2011-2018)

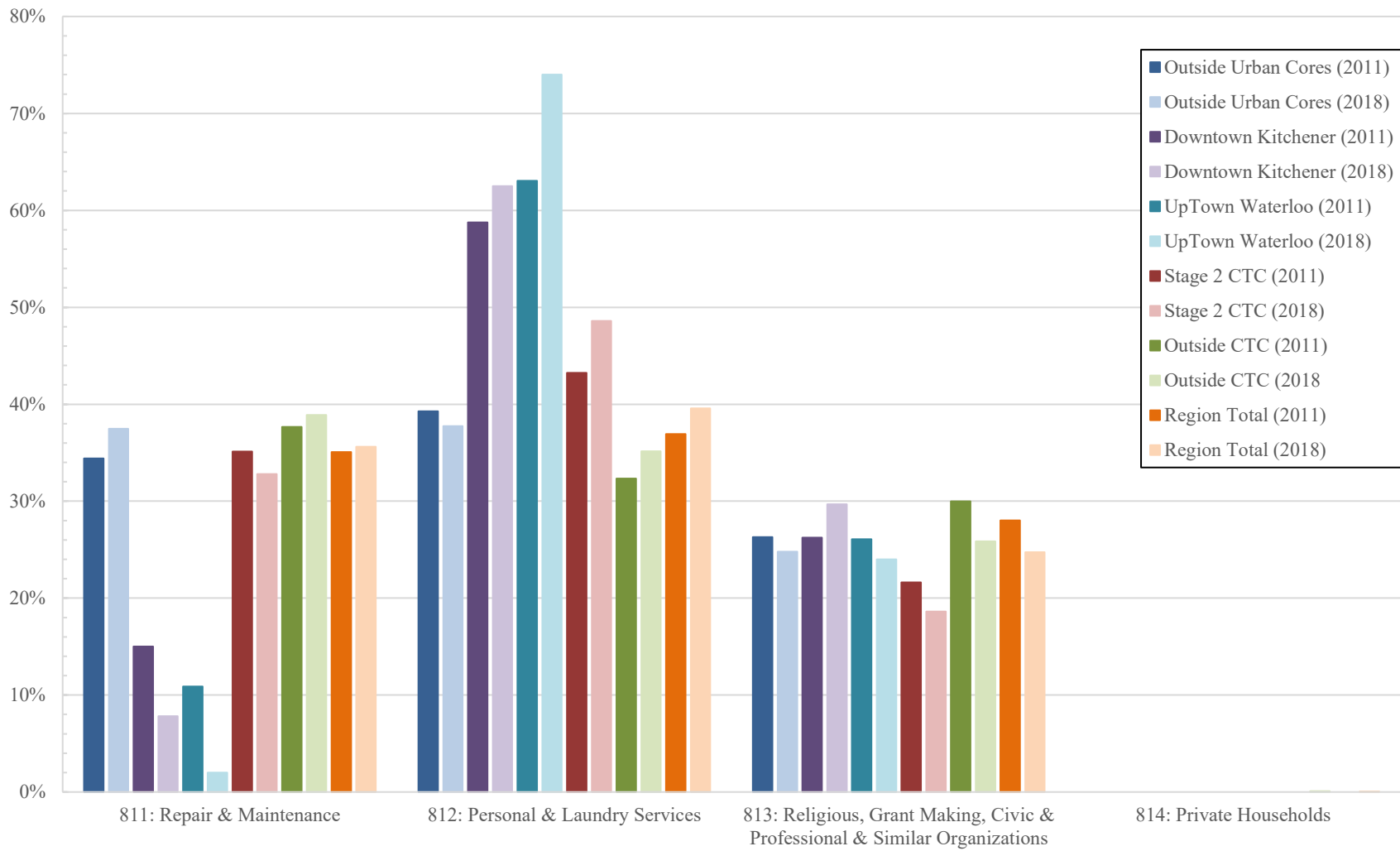


Figure 2-6. 81: Other Services Business Composition (2011-2018)

Appendix B Semi-Structured Interview Template

Goal: to obtain store owners' perspectives of neighbourhood change over the course of LRT development.

Theme	Primary Questions	Secondary Questions/Probes
History of business	Before we begin with the interview questions, I would first like to learn about the history of your business. Can you begin by telling me a brief history about the establishment of your business?	<ul style="list-style-type: none"> - Why did you decide to open this business? - What year was your business established? - Where did you locate? Why? - What products/services did you sell? - How many staff did you employ? - What demographic* did you serve? <p>Describe a typical customer.</p>
	How did your business evolve over time? Please be as specific as possible in regard to when and why changes occurred.	<ul style="list-style-type: none"> - Did you relocate? Why? - How did the products/services you offer change? - How did your staffing change? - How did your customers change? - How did the organization of your business change?
Location of business in Kitchener-Waterloo	<u>(If relocated to the Downtown Kitchener/UpTown Waterloo corridor)</u> Describe the area where your business was first located.	<ul style="list-style-type: none"> - Describe its physical and geographic location (e.g., strip mall, SmartCentre, main street). - What was the demographic* of the area? - What was the retail business atmosphere like? - Why did you leave?
	Why did you choose to locate in Downtown Kitchener/UpTown Waterloo?	<ul style="list-style-type: none"> - What attracted you to the area? Were there any drawbacks? (e.g., business community, demographics, transit, rent prices, etc.) - Did you use any available incentives to facilitate your move/opening? If so, what one(s)?
Neighbourhood evolution	Over the course of your time in the Downtown Kitchener/UpTown Waterloo, how do you think the area where your business is located has changed?	<ul style="list-style-type: none"> - How have the demographics* changed? - How have your customers changed? - How has the retail business atmosphere changed? - What do you believe are the mechanisms behind these changes? - Did you change your business plan to adapt to these changes? If so, how?

Perspectives of LRT	What was your initial reaction to the announcement of the LRT line?	<ul style="list-style-type: none"> - How did you think it would impact your business? - How did you think it would impact the neighbourhood? - Did you have any worries about its development? - How did you prepare for the construction phase?
	Describe your experience during the construction of the line.	<ul style="list-style-type: none"> - How did the construction process impact your business? (e.g., financially, customer traffic, physical accessibility) - What did the Region do well to support businesses in the affected area? What could they have done better?
	Now that LRT construction is complete, how do you think the line has impacted the neighbourhood? Your business? Other businesses in the area?	<ul style="list-style-type: none"> - Have you experienced changes in your customer traffic? If so, how? - Has your typical customer changed? If so, how? - What types of businesses have entered/left the area? - How has the overall neighbourhood changed?
Future of retail	In conjunction with LRT development, the K-W corridor has seen significant investment in new construction and redevelopment projects. How have these projects impacted the neighbourhood? Your business? Other businesses in the area?	<ul style="list-style-type: none"> - Many of the condo buildings are not finished and new residents have not yet moved in. What type of people do you think purchased these units? How do you think the area will change once they move in? How will this impact your business? - What is the future of retail in Downtown Kitchener/UpTown Waterloo? What is the formula for a successful business in the core? What must these businesses have? Who should they cater to? - What message would you give to prospective merchants?