

**Opportunities and Challenges of Light Rail Station Development for Women and/or  
Minority Owned Businesses in Seattle, Washington**

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**Abstract**

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Women and/or minority owned businesses (WMBE)<sup>1</sup> disproportionately face more challenges due to systemic inequities in society; however, this is not well-studied in transit-oriented development (TOD) environments. This study aims to explore the opportunities and challenges of WMBE businesses located near light rail stations, by asking the qualitative research question: How do WMBE businesses perceive the opportunities and challenges of locating near a light rail station in Seattle, Washington? 10 semi-structured and anonymous phone interviews were conducted with voluntary owners or employees of food and beverage WMBE businesses located near the U District and Capitol Hill LINK light rail stations. The results showed some common opportunities and challenges, such as increased foot traffic and crime. Different opportunities and challenges were also identified. WMBE businesses near the U District station expressed increased demographic diversity of their customers but have strong distrust or disappointment in government agencies. In contrast, WMBE businesses near the Capitol Hill station expressed how employees depended on the light rail to commute to the business, but homeless individuals disrupt their businesses often. During the construction phase of the station, WMBE businesses near the U District station expressed additional challenges such as vandalism, low foot traffic,

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<sup>1</sup>“WMBE” in this study is defined as women and/or minority owned businesses and is simply used as an acronym created by the author. It is not affiliated with the business classifications designated by the City of Seattle or federal and state Office of Minority and Women Business Enterprises.

construction noises, and obstructions from construction equipment. The results suggest that planners, government, and transit agencies should build relationships and trust with WMBE businesses; improve their knowledge of WMBE businesses; increase crime prevention measures in TOD areas; and assist WMBE businesses in TODs *during* and *post* construction of the light rail stations.

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## 1 INTRODUCTION

Small businesses located near new transit infrastructure developments, also categorized as transit-oriented developments (TODs), often face uncertainties during and post construction of light rail stations. This could greatly benefit or detriment their businesses significantly (Tornabene and Nilsson 2021). TODs allow businesses to be part of a vibrant area with access to foot traffic and increases their economic competitiveness; however, there are challenges such as gentrification, increased rent values, and crime. The challenges are alarming because smaller businesses have less capital and access to resources to deal with sudden challenges, which could widen the wealth and success gap for these businesses with other larger establishments (Wang 2013); (Lee 2017). Furthermore, it is hard to pinpoint a universal, single impact on small businesses due to the opening of a new light rail station, which makes challenges sudden and unexpected. With the lack of preparation beforehand to face these obstacles, businesses could face closure easily and rapidly. Hence, this topic should be explored in the context of a specific region and type of business, so that impacts could be narrowed down and businesses could know what to expect beforehand (Sukaryavichute, Delmelle, and Hammelman 2021). This reasoning leads to the context of this study, which examines the opportunities and challenges that women and/or minority owned businesses in Seattle, Washington face due to the development of a light rail station.

Small women and/or minority owned businesses, are an important component of our economy. Studies show that at least 36% of all businesses in the United States are women-owned, employing 15% of the workforce; and minority-owned businesses employed nearly eight million people in 2015 (Berghall 2020). In Seattle, Washington, women and/or minority owned

businesses (WMBE)<sup>2</sup> who typically do business or contracted with government entities, are often separately classified by the City of Seattle and Washington State Office of Minority Women's Business Enterprises. Through this classification, they could access certain resources such as loans, tips, networking events, and be registered in the state certified directory. However, it should be noted that many smaller WMBE businesses are unable to participate in the state program because it often requires them to be certified, which costs \$50 and above (Office of Minority and Women's Business Enterprises 2017). This could hinder their access to take advantage of the resources and opportunities offered by this program. On the other hand, the program with the City of Seattle allows businesses to be featured on the city's online business directory and receive newsletters or invites to networking events. It does not require businesses to be certified and has less stringent requirements. However, those who participate are usually firms and companies – and very rarely are mom and pop businesses (City of Seattle 2021).

Federal, state, and local agencies believe that is important to classify these businesses because they have been historically marginalized due to various exclusionary policies. The historical marginalization of WMBE businesses could be traced back to New Deal programs during the Great Depression era, instituted by the federal government to restore the economy. One of the efforts was to provide subsidies and contract with the largest companies in the United States, which often included businesses owned by wealthy and White men (Garcia, Keller, and Duran 2021). This provided larger businesses with a head start on making profits, leaving smaller businesses behind as the years went on, leading to smaller businesses being on an

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unequal footing. This impacted various women and minority individuals, as one of their major ways to build wealth is through owning small businesses (Garcia, Keller, and Duran 2021).

Women and minority individuals prioritize building wealth through owning businesses because of their lack of access to opportunities in society. The typical ways to building wealth in the United States include education, access to good or high paying jobs, and access to homeownership (Garcia, Keller, and Duran 2021). However, due to past exclusionary policies and discriminatory or suppressive laws, most women and/or minority individuals were unable to access these methods of building wealth at the same time in history as their White or male counterparts. Even though access has been greatly improved, women and/or minority individuals are still lagging behind their White or male counterparts and trying to catch up. Hence, owning small businesses apart from other methods to building wealth has always been seen as a source of empowerment, or an alternative way to gain access to wealth for women and/or minority individuals (Wang 2013). Today, studies show that owning businesses has the potential to improve social mobility for many minorities and women, and helps to bridge the racial and gender wealth gap that is currently present (Altman and Mckinnon, n.d.).

This paper is an exploratory study with a broad research question to discover the opportunities and challenges faced by WMBE businesses due to light rail developments. The methodology used in this study is a semi-structured, qualitative interview with WMBE businesses around light rail stations. The structure and topic of the study, addresses various gaps in the literature. Firstly, even though there are peer-reviewed studies on the impacts of new transportation infrastructure development towards small businesses, we found no current studies towards WMBE specific businesses and light rail development in Seattle, Washington. Furthermore, studies show that WMBE businesses face unique challenges that pertain to their

identity, such as language or cultural barriers, racial discrimination, or lack of access to resources – and this study could help to identify these challenges in the context of TODs (Wang 2013). Subsequently, the new Northgate LINK light rail extension in the region has recently opened in October 2021 with three new stations, but there have yet to be studies that would adequately cover the impacts of this extension (Sound Transit n.d.). Hence, research on post construction impacts of the light rail towards small WMBE businesses along the Northgate extension could add a new realm of findings that would be informative for local governments and transit agencies in the area and help inform future developments in the long-term. Additionally, this would come just in time for WMBE business owners in other parts of Seattle to prepare for upcoming opportunities or challenges, as the next East LINK light rail extension in Seattle is projected to open in 2023 (Sound Transit n.d.). Lastly, this study aims to be qualitative based – whereas many studies on small businesses are usually quantitative based (Sukaryavichute, Delmelle, and Hammelman 2021). A qualitative based approach allows for business owners to share their rich, personal perceptions towards the new light rail stations and gives them an opportunity to voice their concerns – in contrast to quantitative studies which show numeric results and may not capture the personal experience of respondents.

The remaining structure of this thesis is broken into five sections: literature review, methodology, results, discussion, and conclusion. In the literature review section, an overview and definition of the concepts and themes such as equity and transit-oriented developments are explored, along with existing literature on opportunities and challenges that businesses or TODs face. Next, the methodology section examines the research question, hypothesis, research design, study area and limitations of the methodology. Then, the results section finalizes important takeaways from the data collection process and categorizes results into two main themes:

opportunities and challenges. The following section would then be the discussion section, which describes the implications and interpretations of the results and how the results answered the research question, along with the significance of the results when compared to existing literature. The conclusion section of the paper wraps up findings, implications for future research, and mentions significant takeaways for readers and practitioners.

## 2 LITERATURE REVIEW

The following review of literature: (1) explains the concept of equity in planning; (2) explains the concept of Transit-Oriented Development (TOD) and its benefits or challenges; (3) describes the importance of studying small businesses – especially women and minority owned businesses; and (4) explores the various opportunities and challenges towards small businesses when new transportation infrastructure is constructed. These studies provide context on why planners should focus on studying women and/or minority owned businesses and these businesses' benefits to society. Furthermore, the literature explores the general impact that public transit has on businesses and identifies a few common themes that studies focus on across the board. This section assists in the preparation of data collection and in the determination of the best methodology or approach for this study.

### 2.1 Equity in Planning

The concept of equity provides the rationale for focusing this study on women and minority owned businesses. However, equity is a loaded concept with multiple definitions. The most renowned and widely cited scholar on equity is John Rawls, who wrote “A Theory of Justice” in 1971. Rawls defines two principles of justice in his theory:

- (1) equal liberty principle; and
- (2) the fair equality of opportunity principle (also famously known as the difference principle) (Banerjee 2011) ; (Stein 1988).

The *equal liberty principle* states that everyone has a right to basic liberties such as the freedoms of speech, assembly, religion etc. as stated in the United States constitution (Stein 1988); (Banerjee 2011). On the other hand, the *fair equality of opportunity principle* accepts that social and economic inequalities in society are just, but **only** if these inequalities result in benefits to

the disadvantaged members in society to the greatest extent possible (Banerjee 2011) ; (Stein 1988); (Deakin 2012).

Another definition of equity often cited in planning literature is by William Lucy, who examined the concept of equity in infrastructure planning (Stein 1988). Lucy defines equity as the “notion of fairness”, and offers five different interpretations to define equity, namely based on: equality, need, demand, preference, and willingness-to-pay (Stein 1988). Based on Lucy’s infrastructure service analysis framework, the goal of equity in infrastructure would be to “service population and influence social conditions by using resources such as expenditures, facilities and equipment; and engage in activities – to produce results that leads to changes in social conditions” or improved impacts to society (Stein 1988).

Based on these two definitions by Rawls and Lucy, the concept of equity would mean that everyone has an equal opportunity to thrive, and equity should bring improved societal outcomes to everyone – especially members of the disadvantaged in society. One other comprehensive definition of equity that could unify all the different sources, is that “*equity* implies that each person receives a treatment according to their conditions, which is contrary to treating each person in the same way” (Lozano-Torres 2021). It should be noted that because equity is vast and broad, the applications of equity in the planning field can be distinct from each other, and sometimes conflicting with each other. We will explore this in the paragraphs below.

There are multiple ways to put the concept of equity into action within the urban planning field. A few literature sources that focus on equity in planning, specifically towards women and minority groups, have examined this – and found that cooperation and communication are the two key considerations when it comes to applying equity. Deakin has emphasized the democratization of planning processes, in which building trust, consensus and

broader participation from members in society in decision-making processes could result in a better outcome for all (Deakin 2012). Similarly, Lung-Amam et. al and Reece's studies have recommended that planners be equipped to conduct community engagement with communities of color in preparation of integrating equity into their work in the future; and that inclusion and equity means that the citizen has to be heard and be well-informed about the decisions that are being made (Lung-Amam et al. 2015); (Reece 2018). As Lozano-Torres writes in her study, equity in planning seeks to redistribute power, resources, or participation away from local elites and officials towards poor and working-class residents – ensuring participation for all (Lozano-Torres 2021).

Another widespread theory in implementing equity is for planners to prioritize *livable* communities in areas with a high marginalized and vulnerable populations. According to the Partnership for Sustainable Communities (PSC), the definition of “livability” revolves around six principles (Herrman and Lewis 2015):

1. Provide more transportation choices
2. Promote equitable, affordable housing
3. Enhance economic competitiveness: (accessibility to reliable and timely employment centers, educational opportunities, services needed by workers, business access to markets)
4. Support existing communities: (increase community revitalization)
5. Coordinate and leverage federal policies and investment: (leverage funding to increase the accountability and effectiveness of all levels of government to plan for future growth)
6. Value communities and neighborhoods: (investing in healthy, safe, and walkable neighborhoods)

In practice, livability could also mean designing safer walkable, bikeable streets and transit; having clean and appealing areas around open spaces or buildings in communities; and vibrant street life (Appleyard and Riggs 2021); (Seattle Planning Commission 2010). Other livability measures could include having anti-displacement strategies to retain vulnerable populations in their neighborhoods, community-based alternatives to policing, and for the city government or planners to partner with racial and environmental justice organizations (Slabaugh, Németh, and Rigolon 2022).

Overall, for equity to be embedded in planning, one of the major ways is to ensure that everyone has a seat at the table – especially the voices of historically marginalized individuals such as people of color and women. Furthermore, there should be a prioritization by planners to focus on the livability of historically marginalized areas, to maintain the vibrancy in these communities for the years to come.

## **2.2 Women and/or Minority Owned Small Businesses**

### **2.2.1 Importance of Small Businesses**

Small businesses are important because they are beneficial for the overall society and economy. A study by Lee examined the impacts of entrepreneurship on local economy growth using statistical modeling, and found a positive relationship between the number of small businesses and employment or payroll growth across businesses – and that this also has spillover effects to the larger economy (2017). Furthermore, a study by the Small Business Administration (SBA) estimates that small businesses accounted for 63% of net new jobs between 1993 and 2013 (Altman and Mckinnon, n.d.). Additionally, small businesses are also vehicles for innovation, since they offer a wider range of choices for consumers and introduce new processes and organizational models to operate businesses. Lastly, the personal benefits for small business

owners is that their enterprises offer a source of independence and economic mobility for themselves and their families (Altman and Mckinnon, n.d.).

### **2.2.2 Challenges Faced by Women & Minority Owned Small Businesses**

Despite women and minority individuals constituting increasingly large shares of the workforce and business entrepreneurship, women and minority owned small businesses, *especially* minority owned businesses, have “comparatively slow revenue growth, smaller shares of private markets, fewer employees, and lower capitalization rates” (Berghall 2020); (Altman and Mckinnon, n.d.). A study by the U.S. Census Bureau's SBO program found that male owned businesses performed better than female owned businesses; and when race was a factor, White businesses performed better than their counterparts (Wang 2013). Hence, it is important to classify women and/or minority owned businesses to ensure that they have access to the appropriate tools and resources to sustain their businesses and overcome the challenges that they uniquely face.

There are many reasons for these disparities. Firstly, women or minority headed households have lower levels of household wealth and lower than average credit scores, which can make internal investment and external borrowing for their businesses more difficult (Altman and Mckinnon, n.d.). As a result, they start their businesses with about half as much capital as non-women or minority owned firms, and these initial disparities can persist or even grow over time (Altman and Mckinnon, n.d.). Furthermore, the lack of personal capital leads to more frequent loan rejections, or higher interest rates when being offered a loan, leading to a cycle of challenges (Altman and Mckinnon, n.d.) This is even more perpetuated when it comes to business owners who identify as minorities. For example, based on existing data, Black-owned firms are seven times less likely than White-owned firms to obtain business loans in their

founding year; and even when they have obtained loans, the amount offered is much less than their White counterparts (Maxwell et al. 2020). Furthermore, Black women owned businesses have a tougher time gathering external funds. Based on data from the Federal Reserve Bank of Kansas City, in 2016, only 6% of Black women owned firms managed to obtain external financing (Maxwell et al. 2020).

The lack of access to business networks is also a challenge faced by women and minority owned businesses. This is because professional networks usually consist of people with similar backgrounds, and the lack of women or minority business professionals makes it hard for entrepreneurs to seek appropriate advice and connections (Altman and Mckinnon, n.d.). This is especially true for women and minority business owners who start their business in areas with low women or minority populations, as the geographic isolation could disrupt their opportunities for networking (Altman and Mckinnon, n.d.). Other challenges could also include low educational attainment and systemic discrimination which can be significant barriers to success for women and minorities (Altman and Mckinnon, n.d.).

Lastly, there are inequities when it comes to the business types that women or minority individuals pursue. A study by Wang (2013) which focuses on ethnic minority and women-owned businesses in the United States showed how businesses are concentrated in distinct industrial sectors based on their identity. For example, male-owned businesses tend to cluster in manufacturing and high technology industries compared to female-owned businesses. This leads to business performance implications for female-owned firms, since manufacturing and high technology industries tend to have larger sized and more profitable firms (2013).

### 2.3 Transit-Oriented Developments (TOD)

Transit-oriented developments are communities around a transit station, and it is a popular concept across many cities today. The Federal Transit Administration defines transit-oriented development as:

“...a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities.” (Federal Transit Administration 2019).

The City of Seattle characterizes TODs as having accessibility to transit within a 10-minute walk (one quarter to one half mile) or bike ride (approximately two miles), depending on the level of service (Seattle Planning Commission 2010). Furthermore, TOD means that land uses should be organized around transit (Seattle Planning Commission 2010).

Puget Sound Regional Council (PSRC), the planning authority for the Puget Sound region that includes the city of Seattle, is embracing TOD development for the years to come through their long-range plan, Vision 2050 (2016). The plan sets out to focus on population and employment growth within *regional growth centers*<sup>3</sup> and *high-capacity transit station areas*<sup>4</sup>.

Apart from the PSRC, there are many reasons that the City of Seattle is also encouraging TODs within their boundaries. The Seattle Planning Commission has stated that TODs are more equitable than auto-oriented communities because of decreased transportation costs, as people do not have to own or maintain a car when living in a TOD and could allocate their budget towards a reasonably priced house or apartment (2010). In recent years, there have been measures in the

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<sup>3</sup> “mixed-use centers formally designated by PSRC that includes housing, employment, retail and entertainment uses” (Puget Sound Regional Council 2016).

<sup>4</sup> “areas within ½ a mile of existing or planned light rail and streetcar stations, commuter rail stations, ferry terminals, and within ¼ mile of all bus rapid transit stations” (Puget Sound Regional Council 2016).

Seattle area to increase affordable housing around station areas. Whenever Sound Transit (the transit agency responsible for constructing the light rail) builds a new light rail line, there is a policy that requires the agency to partner with developers to build affordable housing and other spaces that contribute to the vibrancy around station areas (Sound Transit 2022b). Furthermore, if there is a surplus of land bought by Sound Transit after constructing the stations, the agency has to prioritize offering the land for the development of affordable housing, as outlined in Washington's State Statute RCW 81.112.350 (Sound Transit 2022b). Additionally, the agency is also "contributing \$4 million per year for five years into a revolving loan fund to create affordable housing near high-capacity transit stations" as part of the Sound Transit 3 plan, a regional transit system plan adopted in 2016 (Sound Transit 2022b).

### **2.3.1 General Impacts of Transit-Oriented Development**

There are impacts from implementing transit-oriented development in a community. Studies on this topic show that people living in TODs tend to drive less or increase transit use overtime, which reduces their vehicle-miles traveled (Griffiths and Curtis 2017; Dong 2021; Mudigonda et al. 2014; Noland et al. 2014; Nasri and Zhang 2014). This is because of lower car ownership rates and lower parking space availability in these areas, which leads to the increase in light rail use (Nasri and Zhang 2014; Dong 2021). This further leads to transportation monetary cost savings for these households, as vehicle ownership can be costly when parking costs, registration renewal costs, and insurance are factored in; and leads to reduction in other costs such as travel time and externalities – like accidents, air pollution and noise (Dong 2021; Mudigonda et al. 2014). However, the study by Nasri and Zhang showed that work trips are commonly made by transit – whereas shopping, recreational and personal business trips are usually still made by driving in TOD areas (2014).

Another common theme was social capital and livability. Social capital is defined as having a sense of trusted community and social connections in an area. Studies show that in general, community members in TODs are able to build lasting networks which therefore lead to a higher social capital and livability – especially when compact and mixed-use developments are in place since it can lead to an increased feeling of connection (Noland et al. 2014; Noland, Puniello, and DiPetrillo 2016).

#### **2.4 Impacts of Light Rail Development on Businesses**

There are a relatively few studies that have surveyed the opportunities and challenges of locating near new transportation infrastructures by small businesses. The findings of these studies are varied, which makes it hard to pinpoint a common opportunity or challenge businesses typically face. These studies have been conducted in many different locations. In the United States, an exploratory study was conducted by Sukaryavichute, Delmelle, and Hammelman to examine the proximity of small businesses to light rail stations and its opportunities and challenges (2021). This study looks at the impact of new and old transit stations on existing businesses using a qualitative approach through semi-structured interviews with business owners or managers in Charlotte, North Carolina; Phoenix, Arizona; and Seattle, Washington (Sukaryavichute, Delmelle, and Hammelman 2021). The study found that businesses are typically faced with challenges such as increased rent, criminal activity, and disruption from the homeless population. However, there are also opportunities such as increased foot traffic for these businesses (Sukaryavichute, Delmelle, and Hammelman 2021). A similar study using a different methodology by Tornabene and Nilsson examined the impact of a new light rail line in Charlotte, North Carolina on small businesses during and beyond the construction phase of the infrastructure (2021). This study was done using interviews and

surveys and found that construction nuisance and rising property values caused economic damage, making it hard for businesses to recover post construction of the infrastructure.

There are other exploratory studies done in other countries that have completely different findings. For example, a study by Yao and Hu looks at the impacts of an urban transit line on startup firms in Hangzhou, China using ArcGIS and by conducting regression analyses (2020). The study found that transit lines decrease urban costs and foster agglomeration of startup firms – particularly in business, retail and technology firms (Yao and Hu 2020). In contrast, a study done in Perth, Australia used methods such as surveys and ArcGIS to measure the changes in non-residential land use and business owners' responses toward the new transit development in emerging transit oriented districts (Curtis and Mellor 2011). The study found that there were increasing trip generating land uses around the stations (e.g. retail, offices), but it did not make an impact on transit patronage. Furthermore, not many existing businesses showed interest in the railway, whereas newer businesses were more interested in it (Curtis and Mellor 2011).

Other studies that have been conducted are less exploratory and targeted towards a single opportunity or challenge that arises due to the construction of a new transportation infrastructure, are showcased in these sections below.

#### **2.4.1 Specific Opportunities and Challenges of New Transportation**

##### **Infrastructures onto Businesses**

##### **Property/Land Values, Property Taxes**

There are a couple of studies that went in-depth examining rising property values in relation to the construction of a new transportation infrastructure. The increase of land/property values or taxes could be valued or burdened by business owners, depending on whether they rent

or own the property. This is because renters may see an increase in rent from their landlord, whereas owners could see their property value appreciate quickly.

A study by Seo et al. looked at the impacts of light rail and highway developments onto commercial property values in Phoenix, Arizona using hedonic modeling, and found that impacts of light rail onto property values were much larger than highways, especially for retail and service industry commercial properties (2019). Other studies take a more spatial approach and find that property values and proximity to rail stations have positive associations; and this impact is enlarged when put into a Transit-Oriented Development (TOD) context and for properties near Central Business Districts (CBD) (Yu, Pang, and Zhang 2018; Golub, Guhathakurta, and Sollapuram 2012). Furthermore, the positive associations were found to be overall consistent throughout the planning, development, and construction phases of the light rail; with only a minor decrease in values for properties located within 200ft of these stations during the construction period of the light rail because of nuisance (Golub, Guhathakurta, and Sollapuram 2012).

Other studies showed that commercial TOD properties near light rail lines could increase the land values of the area, due to the accessibility to public transit and as valuable locations to do business (Topalovic et al. 2012). These high land value parcels could in turn generate more property taxes for the city, which could be used to pay for the capital and operating costs of the transit system (Topalovic et al. 2012).

### **Gentrification**

Some studies focus on the challenges of gentrification, which is said to occur with the new construction of a new light rail infrastructure. Gentrification is usually signified by a change in residents' demographics in an area. The findings of these studies vary.

Deka examines Transit Oriented Developments (TOD) in New Jersey and gentrification; and compares the changes in demographics surrounding the TOD from 1990 (when the TOD was implemented) until 2013 (2017). The study found that there were no significant changes in population demographics, especially for race and ethnicity near the stations (Deka 2017). In contrast, a study conducted by Hess in Seattle, Washington found that neighborhoods near the light rail within Seattle saw an increased percentage of White residents and decreased percentage of Asian/Pacific Islander population between years 2000-2010 and 2010-2014 (2020). The study suggests that more socioeconomically advantaged and White residents were moving to be near the light rail line in Seattle, which would impact people of color and low-income individuals (Hess 2020).

Interestingly, another study by Padeiro, Louro, and da Costa examined this topic by conducting a systematic review of 35 peer-reviewed studies which looked at the connections between small businesses and gentrification, but found various flaws in the methodology of those studies and even bias (Padeiro, Louro, and da Costa 2019). This could signify the need for more accurate studies when it comes to small businesses, gentrification, and transit developments.

### **Economic Opportunities**

Other studies examined economic opportunities, where a new transportation infrastructure is claimed to foster agglomeration economies and increase wages or jobs, and benefit businesses around the area. Studies found strong positive correlations between transit service and employment density (number of jobs and wages); and concluded that transit systems allow businesses to access a larger pool of employees (Chatman and Noland 2014; Topalovic et al. 2012). Other studies in Texas, Oregon and Arizona found that firm births increased near light rail stations (Chatman, Noland, and Klein 2016; Credit 2018). However, the study by Credit

(2018) did mention that firm births appear to suffer from a “novelty factor”, where after the initial increase of establishments, it proceeds to diminish at various rates per year, signifying that firm births might be temporary and only occurring during the initial opening of a new transit system (2018).

In contrast, one study showed that light rail stations only provide widespread economic opportunities to certain segments of the population. A study on the light rail line in Charlotte, North Carolina showed that there was no significant increase in the level of employment for low-wage workers in neighborhoods located near the light rail line; but instead, it benefited high-wage workers who are in sectors such as information, finance, and real estate (Canales, Nilsson, and Delmelle 2019).

The literature in this review provides a basis for the reasons to study this topic; and offers a various opportunities and challenges that are faced by small businesses with the construction of a new light rail infrastructure. However, the literature above does not cover women and minority owned businesses specifically, and their findings sometimes conflict with one another. Hence, this study aims to further research to fill in the gaps.

### **3 METHODOLOGY**

This section describes the research question, hypothesis, study area, research design, data collection, analysis, methods, and limitations for this study. The purpose of this research is to explore the opportunities and challenges of women and/or minority owned businesses for locating near a light rail station in Seattle, Washington, and this was achieved through semi-structured phone interviews with WMBE business owners. The selected WMBE business owners were divided into two camps based on the location of their business: locating near a recently constructed light rail station (U District station); or locating near a light rail station that was

constructed more than 3-5 years ago (Capitol Hill station). Interviews were transcribed and analyzed by categorizing themes from the transcripts into three categories: opportunities, challenges, and miscellaneous, to answer the proposed research questions.

### **3.1 Research Question**

The main research question is: *“How do WMBE businesses perceive the opportunities and challenges of locating near a light rail station?”* Two sub questions guide the study in the direction of answering the main research question:

- What are the differences in perceptions of WMBE businesses located near the recently opened station compared to WMBE businesses near a station that opened 3-5 years ago?
- What are the opportunities or challenges during construction compared to post-construction for WMBE businesses near the recently opened station?

### **3.2 Hypothesis**

The hypothesis for this study is that there are various opportunities and challenges identified by women and/or minority owned businesses near light rail stations. After the development of the light rail, there will be opportunities such as increased foot traffic, patronage, and vibrancy, which could lead to the revenue growth of their businesses. The challenges post-development of the light rail would be increased rent for those who do not own the property, gentrification, a change in the demographics of their customers, less parking spaces, and increased crime. During the construction phase of the light rail, there would be challenges such as low revenue growth due to low foot traffic and an unwelcoming environment caused by loud noises from construction equipment around the area. Lastly, during and post construction of the light rail, there could be unique challenges faced by women and minority owned businesses such

as lack of access to business resources, language barriers to ask for assistance, or the perceived inability to voice their concerns to government and transit agencies.

### **3.3 Study Area**

The selected study area is Seattle, Washington – a city located on the Northwest of the United States with an existing population of approximately 737,000 people (“U.S. Census Bureau QuickFacts: Seattle City, Washington” 2020). The reason for selecting this city is because this is a growing city with current and future efforts to develop and extend various light rail lines within the city. The latest Sound Transit 3 (ST3) plan approved by voters in 2016 aims to add an additional 60 miles and 37 new stations to existing light rail service, making it a total of 116 miles with over 80 stations available to connect beyond the Central Puget Sound region (Sound Transit 2016). Hence, this region is an exciting place to compare responses from WMBE businesses located near former and recent light rail lines.

As of 2022, the existing Sound Transit Link Light Rail line that is completed and in service runs North from Northgate Station all the way South to the Angle Lake Station, with a total of 19 stations (Figure 1). Two stations were selected: U District and Capitol Hill, and the commercial transit-oriented developments around the U District station and Capitol Hill station were of interest (Figure 1). The U District station opened as part of the Northgate Link light rail extension in 2021, and is located in the University District neighborhood (Sound Transit n.d.). On the other hand, the Capitol Hill station opened as part of the University Link light rail extension in 2016, and is located in the Capitol Hill neighborhood (Federal Transit Administration, n.d.). The neighborhood locations are shown in Figure 2 below.

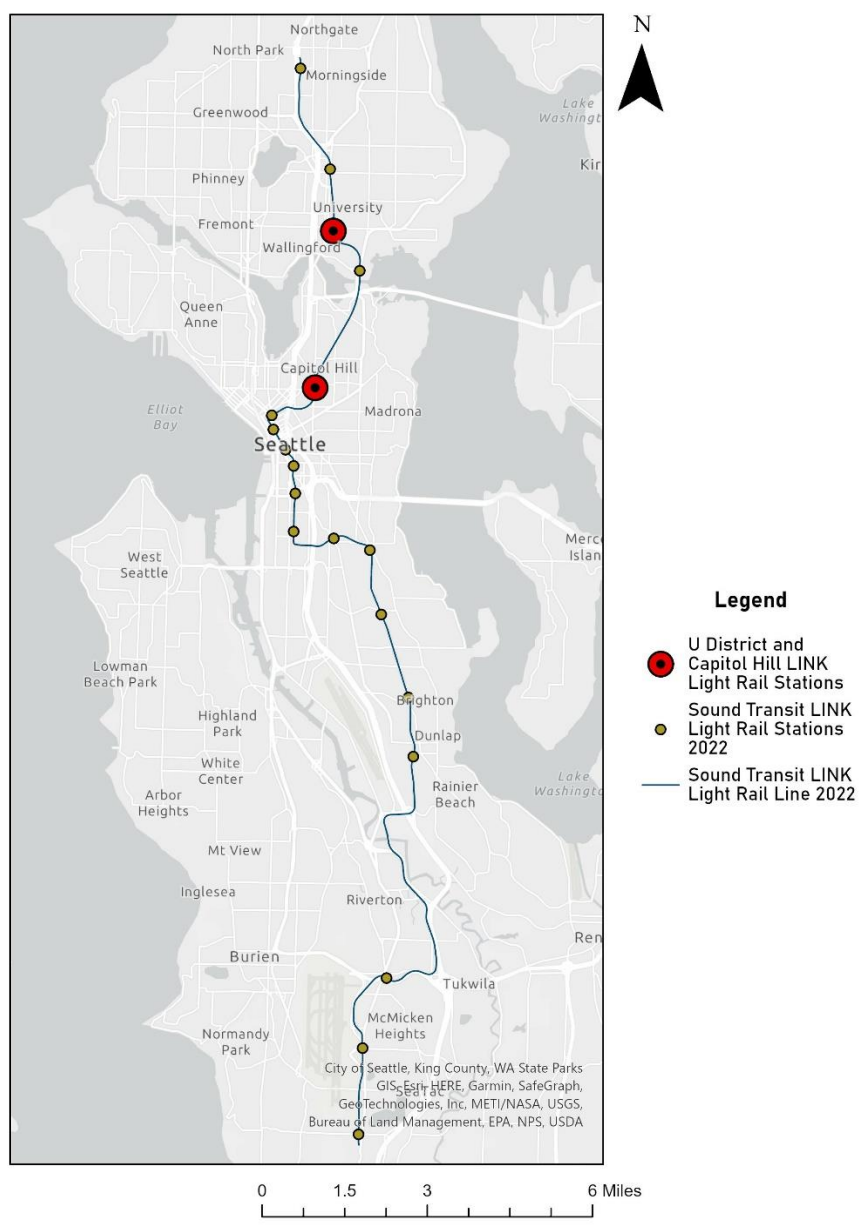


Figure 1: Location map of completed Sound Transit Link Light Rail line and stations in 2022. The two red dots on the map are the U District and Capitol Hill stations (Sound Transit 2022). *Map created by author using ArcGIS Pro*

2.5<sup>5</sup>.

<sup>5</sup> Maps throughout this thesis were created using ArcGIS® software by Esri. ArcGIS® and ArcGIS Pro™ are the intellectual property of Esri and are used herein under license. Copyright © Esri. All rights reserved. For more information about Esri® software, please visit [www.esri.com](http://www.esri.com).

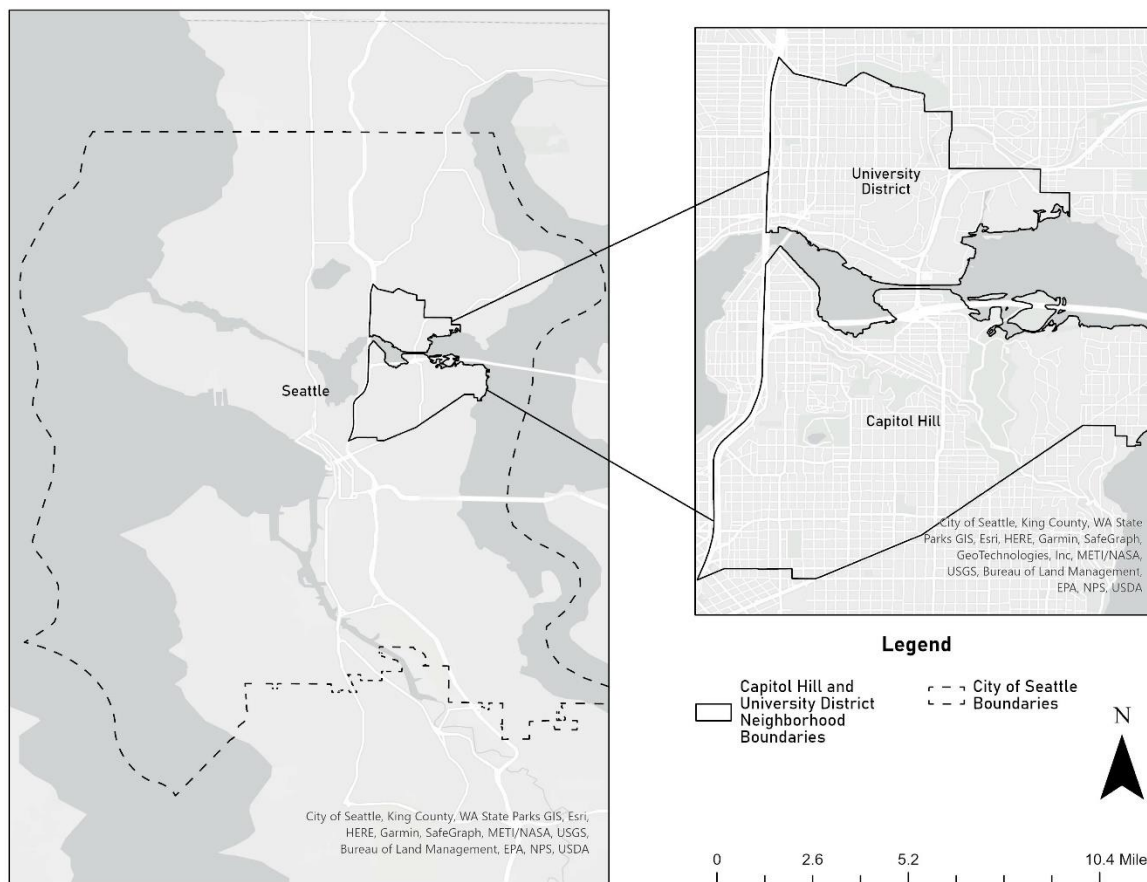


Figure 2: Map showing the boundaries of the City of Seattle and the University District and Capitol Hill neighborhoods within Seattle (City of Seattle 2022; 2020). *Map created by author using ArcGIS Pro 2.5<sup>6</sup>.*

The first reason for choosing businesses around these two stations is because these two stations opened 5 years apart, which allows for a comparison in responses from a newly opened compared to an older station. The second reason is because the selected stations are in neighborhoods that have similar demographics based on ACS 2020 5-year data, as shown in Table 1 below (“Census Profile: Seattle City (Northeast) PUMA, WA” 2020; “Census Profile: Seattle City (Southeast)--Capitol Hill PUMA, WA” 2020). These demographics show that the

<sup>6</sup> Maps throughout this thesis were created using ArcGIS® software by Esri. ArcGIS® and ArcGIS Pro™ are the intellectual property of Esri and are used herein under license. Copyright © Esri. All rights reserved. For more information about Esri® software, please visit [www.esri.com](http://www.esri.com).

selected neighborhoods have approximately 130,000 – 140,000 residents, a young median age with most residents being 20-40 years old, and a median income of around \$90,000 (“Census Profile: Seattle City (Northeast) PUMA, WA” 2020; “Census Profile: Seattle City (Southeast)--Capitol Hill PUMA, WA” 2020). This can control for outliers as these businesses would have similarities in customer demographics and the populations served. Lastly, only two stations were selected because of the study’s data collection time frame of three to four months, which brings time constraints and limits the number of interviews that could be conducted.

Neighborhood Characteristics	Capitol Hill	University District
Population	132,693	140,158
People per square mile	10,029.30	9,188.90
Age (Median)	35.6	31.7
Household Income (Median)	\$99,556	\$89,419

Table 1: ACS Demographics of Capitol Hill (Seattle, Southeast) and University District (Seattle, Northeast) neighborhoods (“Census Profile: Seattle City (Northeast) PUMA, WA” 2020; “Census Profile: Seattle City (Southeast)--Capitol Hill PUMA, WA” 2020).

### 3.4 Research Design

This study is an exploratory, qualitative study that attempts to gauge the types of opportunities and challenges that WMBE business owners face due to locating near a light rail station. The reason for selecting qualitative methods is because many existing studies on small businesses are usually quantitative; and qualitative methods allow for a more personal approach and a richer description, which is helpful for describing urban change (Sukaryavichute, Delmelle, and Hammelman 2021). Business owners are also able to identify unique challenges faced by their own businesses or in the area, which gives them an opportunity to voice their concerns and thoughts instead of being limited to quantitative measures.

This study answers the research question by conducting a semi-structured, anonymous phone interview with WMBE business owners, managers, or staff from the area around two light

rail stations. Subjects are non-random and are selected using a mix of quota sampling and volunteer sampling non-probability methods. This mix means that the type of business and demographics of business owners are identified and selected in advance of the interview, but business owners can opt-in or out after hearing about the purpose of the study. Business owners who do not identify as women and/or minority owned in the beginning of the phone interview are ruled out, and those who identify as such are asked for permission to continue with the interview. Subsequently, only food and beverage businesses, classified as restaurants or cafes, were selected to control for any outstanding variables. The food and beverage industry were also of interest due to their vulnerabilities to societal conditions and the various challenges faced by these owners, along with its high abundance in the study locations. It should be noted that most recently, the 2020 COVID-19 pandemic has taken a toll on the food and beverage industry just like any other industry in Seattle and elsewhere within the United States, especially towards smaller and local mom-and-pop businesses. For this industry, the pandemic led to staffing shortages, food or beverage supply chain issues, low in-person foot traffic and/or overwhelming online orders causing an inability to keep up, and shifting government regulations forcing these businesses to quickly adapt – causing mental, physical and financial distress towards business owners (Stewart 2021; Mullin, Glazer, and Bobrowsky 2021). Since their vulnerable position makes them susceptible to outside challenges such as major events or disasters, they are likely to be impacted by local public transportation developments as well. Lastly, even though there are hundreds of businesses near both light rail stations, only a maximum of 10-15 businesses total from two stations would be interviewed due to the limited time frame of data collection.

Responses from the interviews are anecdotal and a thematic analysis is used for analysis. Responses are organized and categorized into three groups: opportunities, challenges and

miscellaneous. Since the interviews are conversational, themes are parsed out and categorized based on the interactions between the interviewer and interviewee. For example, if the interviewee is expressing emotions or stating words that relate to frustration, anger, or disappointment when sharing about anecdotal evidence, then the response is categorized as a challenge. If the interviewee is using keywords or expressing emotions such as happiness, hopeful or appreciation, then the response is categorized as an opportunity.

### **3.5 Data Collection and Analysis**

10 semi-structured interviews were conducted between January 2022 and March 2022, and businesses that were interviewed were evenly allocated between those located near the new U District light rail station and the Capitol Hill Station, with 5 businesses representing each station. In total, approximately 33 businesses were contacted via phone, with some subjects dropping off because they did not want to participate, and with others whose owners do not identify as a woman and/or minority. Potential subjects and their business phone numbers were identified through Google and Google Maps, and businesses were called in order based on the distance between the business and the light rail station area. Businesses that are closest in proximity to the light rail based on Google Maps were contacted first, and in the case of inadequate responses businesses slightly further from the station was contacted. Participation was completely voluntary, and subjects included WMBE business owners, managers, or employees of WMBE-owned businesses.

Prior to the interview, subjects were briefed on the interviewer's background and positionality, the purpose of the study and was reassured that subjects' names or business names were not recorded. The semi-structured interview consisted of open-ended questions which lasted between 5 to 15 minutes, and interview guides were used based on the impacts identified

in the literature review section. The reason for selecting semi-structured interviews is to provide some structure to the interview so that it does not drift too far from the topic at hand since the topic is so broad; but also, at the same time it is to provide autonomy to the interviewee to express their opinions or any ideas that are not covered by my prompts. The phone calls were recorded and transcribed using a software called Otter.ai.

The transcriptions generated by Otter.ai captured most of the content, but some sentences needed heavy editing due to the software's limitations to capture certain phrases or rule out filler words. Hence, an intelligent transcription method was used, where words were transcribed based on playback of the recordings, but certain sentences were edited for further grammatical clarity. Next, after cleaning up the transcripts, the interview was coded inductively by deriving codes or themes from the data. This allows the narrative of the theory to emerge from the raw data itself with minimal interference. The emerging themes were then classified into the categories of opportunities, challenges or miscellaneous. Themes were analyzed separately for the two different light rail stations (Capitol Hill and U District) and compared between each other to see if there were any unique similarities or differences.

### **3.6 Limitations**

There are a few limitations of the methodology used in this study. The first one would be the generalizability of the study to the broader area. Only 10-15 businesses were the target number of businesses to be interviewed, and this small sample size presents many challenges to apply the findings to WMBE businesses in the entire neighborhood. For instance, businesses located further away from the light rail but still located within the same neighborhood might have different unique opportunities or challenges that they face, which is not captured in this study. However, this is beyond the scope of the study and would not be feasible due to the

limited time frame and resources of this study. The author hence chose to focus in-depth on the responses of these 10 interviewed businesses.

Another limitation would pertain to the interview method of this study, which is by phone and only for 5 to 15 minutes. It may be possible that some subjects are more willing to share in a face-to-face interview or a virtual video interview due to the ability to see each other, gauge body language and further build trust; or even stay longer for the duration of the interview. However, these types of interviews are often time consuming, and it would be unethical to take up the valuable time of these small business owners or employees without compensating them. Hence, the author of this study chose to shorten the length of the interview while asking relevant questions so that minimal time is wasted. The author also ensured that everyone was comfortable with the questions asked and to maintain respect for the interviewees. Additionally, the methodology of calling and finding out if a business is WMBE owned is extremely time consuming and would have been easier if there were a resource out there that had that information. The only online databases that were accessible and consisted of WMBE business information were the City of Seattle's Online Business Directory tool and Washington State's Office of Minority and Women's Business Enterprise (OMWMBE) database and directory (Office of Minority and Women's Business Enterprises 2017; City of Seattle 2021). Unfortunately, both tools did not allow filtering businesses by zip code, and usually they consisted of larger firms and certified firms only, which rules out a lot of smaller and restaurant businesses, which may avoid certification since they must pay to get certified. This author then had to ask, at the beginning of the call, whether businesses were WMBE owned, but with a small sample size it was not an issue.

## 4 RESULTS

This study was conducted using a semi-structured, 10-15 minute anonymous and voluntary phone interview with 10 WMBE food and beverage businesses around the U District and Capitol Hill LINK light rail stations, with 5 businesses representing each station. Themes were derived from the transcripts of the interviews, and grouped into three main categories: opportunities, challenges and miscellaneous. These categories are elaborated in the subsections below and supported with quotes derived from the original transcripts.

### 4.1 Opportunities

There are similar perceived opportunities across both light rail stations, with the new U District light rail station having slightly more opportunities than those near the Capitol Hill station. The themes are summarized in Table 2 and Table 3 respectively for businesses surrounding the two different stations. The most stated opportunity was “Increased diversity in demographics of customers” for the U District station, and “Employees using the light rail to commute to the business” for the Capitol Hill station. In terms of increased diversity in demographics of customers, WMBE businesses near the U District station have seen more families or customers travelling from further destinations overall because of the light rail. This is in contrast with the usual demographics of their patrons, which consists of University of Washington students or neighborhood residents. A business owner summarized his situation well:

“Students are normally my customer already, but I have more regular people, like the family people; or the people who live upside [North] of the light rail [station], so they can travel up here to get to my place... I have more customers that way.”

**Table 2: Opportunities of WMBE businesses located near the U District LINK light rail station**

Type of Opportunities	Count*
Increased foot traffic	3
Increased diversity in demographics of customers	4
Employees use light rail to commute to business	2
Light rail connects locations of different branches of the same business	1
Hopeful about future opportunities that the light rail will bring	2

\*Count = Number of businesses who mentioned this opportunity in the interviews.

**Table 3: Opportunities of WMBE businesses located near the Capitol Hill LINK light rail station**

Type of Opportunities	Count*
Increased foot traffic	2
Increased diversity in demographics of customers	1
Employees use light rail to commute to business	3
Light rail connects locations of different branches of the same business	1

\*Count = Number of businesses who mentioned this opportunity in the interviews.

WMBE business owners around Capitol Hill expressed that the majority of their employees commute using the light rail, signifying job growth as one of the opportunities for locating near the station – which is consistent with findings from the study by Chatman and Noland (2014). For example, an employee in a WMBE-owned business mentioned that the light rail was a main reason for why he got the job in the restaurant, since he can depend on the light rail to commute to the business. Another restaurant manager explained how his employees’ dependency on the light rail impacts the business:

“I can't say the light rail in general has affected our bottom line, other than getting some staff to and from work, which **does** affect the bottom line; because then it affects customer service if we don't have enough people here to be fully staffed.”

It should be noted that even though the theme of employee dependency on light rail is mostly found in businesses around the Capitol Hill station, there were two businesses around the U District station who provided insights on how the light rail is beneficial to their employees and

ultimately their business as well. For example, a University District WMBE business owner expressed that:

“A lot of my employees use the [light rail], and actually the light rail station being open connects one of my other shops, because I have a Capitol Hill location. Some of the staff didn't feel safe taking the bus at night to come back to U District. They only used to want to work in the U District [before the U District station opened], but they're like completely open now to taking the light rail system to go to my other shops. It's freed up my employee work pattern a lot.”

The owner further emphasized that she encourages her employees to take the light rail by paying for their ORCA transit passes, especially for her employees who are non-University of Washington students. This is because students typically have their UPASS, which is a mandatory transit pass built into their tuition fees, whereas her non-student employees had to use their ORCA transit passes which required them to pay out-of-pocket.

The second most received response by WMBE business owners around both stations falls under the theme of “increased foot traffic”, which is consistent with the study by Sukaryavichute, Delmelle, and Hammelman that showed how increased foot traffic was common across businesses around the light rail station in three cities: Charlotte, Phoenix and Seattle (2021). U District business owners typically mentioned that increased foot traffic only happened post light rail construction. In contrast, the Capitol Hill station businesses mentioned constant foot traffic that sometimes would bring new customers to their businesses. An employee from a WMBE business near the Capitol Hill station said:

“A lot of customers [come] from the train station. They didn't know about us. But when...they walk around the street, they see us - and then they...[wonder] like what we have. And then, you know, they usually like...buy some food, but they live kind of far from here. But because of the train station they found us.”

The last opportunity that is worth mentioning which is unique to the U District WMBE businesses would fall under the theme of “Hopeful about the opportunities that the light rail will bring in the future”. Two out of five businesses specifically shared that they were excited about

the future that the light rail would bring to the University District neighborhood, despite not seeing the full opportunities at present since the light rail station is new. For example, one business owner said:

“Overall, the light rail station has been a positive impact. It hasn’t made up for the trouble that in created, and the construction leading up to it. Yeah. But I was sure come this Spring/Summer, I am very excited for the amount of traffic that it's going to bring.”

Another business owner touched on the positives that it would bring to the neighborhood as well but went even further to talk about the opportunities beyond the neighborhood. They said:

“...[Light rail] brings more traffic here. People walking down the street. We don't have a lot of parking space no more, so it helps businesses. Hopefully right now – because we’re still during the middle of the pandemic so it's very hard to tell the effects – but **later on I think it will bring a lot of visitors or everyone here.**

Oh yeah, you will never know that... **maybe later on, we don’t need a car no more. We just hop on the light rail and go to work, even better.**”

## 4.2 Challenges

The most cited challenge for U District WMBE businesses falls under two themes: “Vandalism towards businesses” and “Disappointment or distrust in government and transit agency”. These two themes happened mostly during the construction phase of the light rail, but there were businesses who reported that it happened post construction of the station too. In contrast, WMBE businesses around the Capitol Hill station mostly talked about how unwelcoming individuals disrupt their businesses, such as homeless individuals or drug users. They pleaded for more security measures around the stations, especially seeking help from authorities. Overall, an interesting finding is that both U District and Capitol Hill WMBE business owners focused on crime, theft, and perception of danger in their area. Table 4 and 5 shows the summary of challenges that U District and Capitol Hill WMBE businesses face.

**Table 4: Challenges of WMBE businesses located near the U District LINK light rail station**

Type of Challenges	Count*
Decreased foot traffic during construction of light rail	2
Noise from construction of light rail	1
Construction equipment or debris obstructing path flow/not dealt with properly	2
Unwelcoming individuals around business (homeless people, drug users)	2
Vandalism	3
Increased property tax	2
Increased rent	1
Increased theft	2
Perception of area being dangerous (especially at night)	1
Disappointment or distrust in government and transit agency	3

\*Count = Number of businesses who mentioned this opportunity in the interviews.

**Table 5: Challenges of WMBE businesses located near the Capitol Hill LINK light rail station**

Type of Challenges	Count*
Unwelcoming individuals around or disrupting business (homeless people, drug users)	3
Vandalism	1
Increased theft	1
Perception of area or station being dangerous (especially at night)	2
Disappointment or distrust in government and transit agency	1

\*Count = Number of businesses who mentioned this opportunity in the interviews.

For U District WMBE businesses, vandalism happened mostly during the construction of the light rail, as the streets were desolated, especially during the nighttime. For example, a business owner described the conditions during the construction of the light rail:

“There are like certain pockets of time, that there are less people on the street... it was easier for people who are trying to make a mess... construction debris, sidewalks, that was torn up or didn't get covered up...they were just on the floor...there was no security or lights... [and] one or two people were fooling around, throwing rock pieces/construction debris into the businesses... and used a construction debris to break into [my neighbor's] window...got into their back storage.... [and] had a van that pulled up and took all of their inventory.”

Another business owner highlighted his personal experience with having his business vandalized post construction:

“My place was a victim of vandalism, because in one year I got my window broken and it costed me \$1,000, each time, twice in one year. The last incident was like two months ago. At that time, the light rail already opened. I think we need a little bit more security.”

Similarly, one Capitol Hill WMBE business also faced vandalism as well. The business manager mentioned that someone smashed their windows, but they were not sure who was doing it, and gave up hope to investigate further. The reason was because there are many cars and people walking around on Broadway, a major street near the light rail station, making it hard to pinpoint the person who committed the crime. Lastly, a U District business owner expressed both disappointment in the city and vandalism incidents that were happening in the neighborhood:

“Yeah, and then [the city] said that they will fix the window for us. Because it's broken. A lot of windows around here is broken by the crazy people right? But [the city] say if its broken before 2022, they cannot pay for it. It's like you give someone hope, and then you just throw the person down again. Don't even say it, right?”

Subsequently, U District WMBE business owners expressed strong distrust and disappointment towards the government agencies and transit agency in the area, as they felt like they never got the assistance that they needed from these authorities. This is likely exacerbated by the COVID-19 pandemic, which has brought hardship to many of these businesses. A U District WMBE business owner claimed that his goods got stolen by a homeless individual and expressed that he did not even bother to call the police or notify authorities from the city because he felt that they are always “protecting” these individuals. Another owner expressed that the city did not provide the appropriate and timely help that they needed:

“But leading up to the light rail, the construction had a huge negative impact...It hit on top of COVID, so that was pretty hard. And every time I reached out to City for help... [they said] we can't help businesses, except for monetary contributions... [and then they said] We can help you with marketing. And I'm like, I don't need help with marketing. No one even wants to come here.”

As a side note, this same business owner who was quoted above mentioned the rough process that her and her neighbors had to go through to apply for grants or funding from the City of

Seattle. She mentioned how she would spend 6 hours a day filling out the paperwork just to obtain grants from the city and even had to be in contact with her CPA (certified public accountant) apart from being at her shop. Furthermore, she also shared her concerns about how a lot of other minority-owned businesses did not speak English as a first language, had no adequate bookkeeping records of their revenue and did not have access to a personal accountant. This also meant that they had no way of filling out the paperwork to get the grants posted by the city.

Additionally, even with all the complete paperwork, it was extremely hard to obtain grants. One of the breaking points for her was during the COVID-19 pandemic, where she mentioned that the City of Seattle was promoting a grant and framed it in a way such that it was easy to get help from the city, but it turned out that only very few people received the grant. She shared that out of the 200 minority owned business owners who were in her online group chat, only 2% of them ended up getting the grant. Hence, that further caused distrust between these WMBE business owners and the city government. Next, another business owner who is closing her restaurant in two months expressed frustration towards the city, and how they provided empty promises and hope to her:

“This business is [closing] in two months. We cannot afford anymore, its dangerous; is bad here. I mean, government keeps saying in the TV, they're helping us. That's so not true. I'm so sorry. And they respect [women] who opened the business? That's not true also! It's this [fake] “advertisement... and also [they said they help] minority - I also minority, but they don't do anything.”

The same business owner also expressed disappointment in authorities for not maintaining the new light rail cars and station. She said:

“But lately, I hear a lot complaints [from customers] about light rail. Is dirty; is nasty; is dangerous.... It's just so fast to become dirty. Nobody does anything. But it's Seattle right? The needles everywhere, the poop everywhere. People pee on the bench. On the light rail. I mean, you build something - you need to take care. It's like a baby. You have a baby, you don't expect it to just walk. Right? You need to teach it. Light rail is like that.”

The distrust in authorities is not just unique to the U District station. A WMBE business owner around the Capitol Hill station expressed distrust in the police and transit security, as he felt that they did not care about the safety of the city:

“To be honest, even if you call the cops, it doesn't really help, they don't want to bring them in. It's a COVID thing, they don't want to bring homeless and druggies to their cells ...I mean, there was a security guy at the [light] rail [station] but I don't think they do anything... as long as the homeless or druggies don't do anything bad, they are just watching.”

On the topic of disappointment and distrust in local authorities, a few other Capitol Hill WMBE business managers and owners have expressed similar sentiments by providing suggestions as to what the authorities could improve on moving forward when it comes to safety.

A business manager said:

“... Sometimes it can be a bit daunting if you're going on the light rail as a female – alone... [our business is] directly across from the light rail station. At least [have] one [security guard on] the south entry on East anyway. That would...be beneficial to us. I do see Sound Transit...in and out a lot. But it's not very consistent...And then anytime something intense may or may not happen, there's not necessarily security on the grounds...”

Another business owner suggested to have more security patrolling in the warmer months of the year, as more homeless individuals and drug users would be out roaming around.

“... Its going to be summer soon which means more hobos and druggies are going to come out. So hopefully, cops or the city or something could like [patrol] the city more, rather than just waiting for calls. They don't even know what's going to happen and they could be late.”

Next, WMBE businesses around the Capitol Hill station have shared specific details on how their businesses are being disrupted, which mostly includes homeless people visiting their businesses or loitering around their storefronts, trying to get into the business. One employee from a WMBE business mentioned that occasionally these individuals would get out of control, and they had to contact the police. One business owner mentioned that he mitigated it by taking the opportunity to check their vaccination cards or IDs and prohibiting them from entering their business if they have no form of identification. Business owners have also shared that they

encourage employees to go home early when they can, due to the perception that it can be dangerous to be in the area at night. Interestingly, only one business owner in U District mentioned disruptions from homeless individuals. He said:

“Today I [think] I met someone homeless...I don't know - but he walked into my place, grabbed the stuff, put in his shirt and walked away. I sell food in a packet with sealed plastic. So, he asked me questions about the price, and then...just before he walked away, he chucked [the food packet] in a jacket and then walked away.”

It should also be noted that homeless individuals in the University District neighborhood might not be loitering around businesses anymore, due to the demolition of a homeless shelter for the construction of the U District light rail station, which was also mentioned by two business owners in the interviews. Interestingly, despite other business owners disliking homeless individuals around their business, one U District WMBE business owner highlighted that he has does not mind their presence and has been providing help to them:

“I just try to work with [the homeless people] and live with the homeless people...Sometimes they need food, and we provide them food. And they need drink then we provide a drink...they are struggling...On top of that they're not causing any trouble. I don't mind to see them around here. They need help mentally. There's nothing we can do about it.

### **4.3 Miscellaneous**

There are other miscellaneous comments that were mentioned by the U District WMBE business owners, such as the devastating impacts from COVID-19 and increasing property taxes. Two out of five WMBE business owners near the U District light rail station have been frustrated over the increase in property taxes, with one owner claiming that their property tax increase is more than the rental increase for their business. Another business owner vented her frustration on how even though her property taxes were increased, there has not been more positive outcomes towards the city and the light rail, as she expects there to be improvements using property tax funds. Other common comments were regarding the COVID-19 pandemic, and how business

owners would mention that there was a terrible business outlook and staff turnover. The terrible business outlook was exacerbated given that the construction of the U District light rail station co-occurred with the pandemic.

For the Capitol Hill WMBE businesses, three out of five managers or owners mentioned miscellaneous comments of how many customers or employees like themselves live within walking distance to the businesses – hence they do not take the light rail often. Other miscellaneous comments from WMBE businesses in Capitol Hill include a very personal comment about his business being a victim of racist incidents. He said:

“A lot of African American called us the bad Asian words, racist words. It happened a couple times, one of the customers called one of my bartenders the “N word”, but this [bartender] was an Asian. It was weird. This lady who said it too, she was kind of old. She just got drunk and called him the “N word”...There’s a lot of weird people.”

Lastly, WMBE business owners in both Capitol Hill and U District have also brought up less parking. There were mixed feelings about this, since all business owners who were surveyed typically drove to the business as they needed to buy groceries and the lack of parking can be frustrating, but they did mention their employees’ high reliance on the light rail to get to their business, making light rail a necessity to keep their business running.

#### **4.4 Summary of Findings**

Overall, around both U District and Capitol Hill stations, WMBE businesses tend to have opportunities from the light rail such as increased foot traffic and customers (Table 6). The slight difference here is the way that this theme is phrased in the neighborhoods. Businesses around the U District station noted a sudden increase in foot traffic and change in demographics of customers after the opening of the new station; and expressed that foot traffic was extremely slow during the construction phase. In contrast, WMBE businesses around the Capitol Hill station had mentioned a constant stream of new and old customers being brought by the light rail

today. Subsequently, both stations also expressed challenges related to the theme of crime and safety. WMBE businesses near the U District station had experienced vandalism during the construction period; and post opening of the station they had experienced an increase in theft – leading to a perception of heightened danger in the area. Interestingly, WMBE businesses near the Capitol Hill station are experiencing similar crime related challenges as the businesses near the U District station, meaning that these challenges are carried on even post-construction and opening of light rail stations. These common opportunities and challenges answer the main research question listed in this paper, which is that WMBE businesses in general perceive some similar opportunities and challenges near a light rail station regardless of the location and the year that the station was built.

**Table 6: Summary of Opportunities and Challenges identified by WMBE businesses located near the Capitol Hill and U District LINK light rail station**

Opportunities or Challenges (Themes)	Light Rail Station*	
	Capitol Hill	U District
Increased foot traffic/customers	2	3
Crime or safety concerns	4	3
Increased diversity of customer demographics	1	✓ 4
Distrust in government/transit agencies	1	✓ 3
Employees using light rail to commute to work	✓ 3	2
Disruption from homeless individuals	✓ 3	2

The checkmarks above signify that more businesses around the station mentioned this theme in the interviews.

There are also a few differences between the challenges or opportunities that are faced by WMBE businesses around the U District station and the Capitol Hill station (Table 6). Firstly, in terms of opportunities, WMBE businesses near the U District light rail station had identified an increase in diversity of the demographics of their customers as a huge opportunity post opening of the light rail, where more families and students from other areas would visit their business instead of just University of Washington students; whereas WMBE businesses near the Capitol

Hill station had identified employees using the light rail to commute to work as the biggest opportunity.

In terms of challenges, WMBE businesses around the U District station had mostly identified strong distrust in the government agencies as a major challenge – due to the lack of assistance or support that has been provided to businesses during the construction period such as funding, compensation for damages, or patrolling for safety of the businesses. However, WMBE businesses around the Capitol Hill identified homeless individuals loitering around and disrupting their businesses as a major challenge and prompted that police or transit security in should be more responsible, proactive, and able to swiftly respond to dangerous situations.

Next, some other important notes were that U District WMBE business owners were able to mention the unique impacts of the light rail during/before/after construction, but Capitol Hill WMBE business owners were unable to do so because they were all newer businesses that opened post 2016 – and in general, U District WMBE business owners had been in their neighborhood much longer than Capitol Hill station WMBE business owners. Lastly, WMBE businesses near the U District station had a more positive outlook for the future of the light rail station than those near the Capitol Hill station. This is probably because a new change to the neighborhood seems more exciting and noticeable than a structure that had already been in a place for quite some time, where the excitement is wearing off. Overall, these differences between respondents around the U District and Capitol Hill station have answered the sub research question of the differences in responses between older and newer stations.

The next finding would answer our sub question of this study about the unique opportunities and challenges during construction compared to post construction of the light rail (Table 7). WMBE businesses near the newer U District station only identified challenges during

the construction of the light rail and zero opportunities. Based on the responses from WMBE businesses near the U District station, the main challenges during construction were vandalism, low foot traffic, noises from the construction of the light rail, construction equipment obstructing path flow and distrust or disappointment in the government or transit agency for the lack of action and assistance. Post construction of the light rail, WMBE businesses reported opportunities such as increased foot traffic, increased diversity in demographics of customers, and employees using light rail to commute to the businesses. There are also new challenges post-construction such as theft, safety concerns and increased property taxes on top of those identified during the construction period.

**Table 7: Summary of Opportunities and Challenges during and post-construction identified by WMBE businesses located near the U District LINK light rail station**

Opportunities or Challenges	U District Light Rail Station Development Status	
	Construction Phase	Post-Construction/Opening
Distrust/disappointment in government agencies	✓	✓
Theft	✓	✓
Safety concerns	✓	✓
Vandalism	✓	✗
Low foot traffic/bad business outlook	✓	✗
Noises from construction	✓	✗
Construction equipment obstructing path flow	✓	✗
Increased foot traffic	✗	✓
Increased diversity of customer demographics	✗	✓
Employees using light rail to commute to work	✗	✓
Increased property taxes	✗	✓

Based on the interviews with WMBE businesses around the U District station, the checkmarks (✓) above signify that this theme occurred during the construction phase. The (✗) signifies that this theme occurred post-construction.

## **5 DISCUSSION**

The purpose of this study was to explore the opportunities and challenges of women and/or minority owned businesses for locating near a light rail station in Seattle, Washington. The results indicate that WMBE businesses in general perceive increased foot traffic as an opportunity and increased crime as a challenge for locating near a light rail station. However, WMBE businesses locating near a new station did express different opportunities and challenges than those who were located close to an old station. Additionally, WMBE businesses located near the newer station had different opportunities and challenges during and post construction of the light rail.

### **5.1 Findings**

Increased foot traffic was identified as a common opportunity from WMBE businesses around both U District and Capitol Hill stations, which is consistent with the study on small businesses by Sukaryavichute, Delmelle, and Hammelman (2021). This might be correlated to the effects of transit-oriented developments (TODs), as they are generally more walkable which allows for less cars to be in the area, allowing customers to browse stores by foot and visit these businesses (Nasri and Zhang 2014; Griffiths and Curtis 2017; Dong 2021; Mudigonda et al. 2014; Noland et al. 2014). It should be noted that increase foot traffic is only applicable for WMBE businesses near the U District station after the light rail station has been built. During the construction phase of the light rail, WMBE businesses in U District had noted low volumes of foot traffic due to construction debris and equipment obstructing path flow or being disruptive in general, making walking around the area unpleasant. This is consistent with the study by Tornabene and Nilsson (2021), which cited that construction nuisances causes economic development challenges and ultimately less customers for businesses, especially if the business is

located in a low visibility area by the street – and this could lead to long-term economic damage. Additionally, nuisance from the construction could also lead to a decrease in property values, as cited by Golub, Guhathakurta, and Sollapuram (2012). This could be detrimental to property owners or WMBE business owners who own their store fronts and should be taken into consideration by the transit agency or city government. Additional support should be provided so that these businesses could survive during that period, and remain in the area post construction of the light rail.

A common challenge listed by both WMBE businesses around the U District and Capitol Hill area was crime and safety related issues. WMBE businesses around the U District station had mentioned vandalism during the construction phase of the light rail station, and theft as the main issue post opening of the light rail station along with perceptions of danger. This is consistent with the literature review findings by Sukaryavichute, Delmelle, and Hammelman (2021), which also found an increase in criminal activity and disruptions from the homeless population from businesses located near a light rail station.

In terms of different opportunities, WMBE businesses near the U District light rail station had identified an increase in diversity of the demographics of their customers as a huge opportunity post opening of the light rail. This change in demographics of customers might be a double-edged sword, as it could increase patronage but also signify gentrification. The findings by Hess (2020) in Seattle had shown that neighborhoods along the light rail are attracting more socioeconomically advantaged and White residents to the area, which could potentially price out people of color and low-income individuals. This may be of concern in the University District neighborhood if it happens, as most residents surrounding the area are students who have no choice but to live in the vicinity. In contrast, WMBE businesses near the Capitol Hill station

have identified employees using the light rail to commute to work as their biggest opportunity. This is consistent with findings from Chatman and Noland (2014) and Topalovic et al. (2012), in that the transit system allows employers to have access to a large pool of employees. Many employers expressed their staff's dependency on the light rail to get to work; and one employee from the interview emphasized that the light rail was the reason for him getting his current job at the WMBE business. All these responses could indicate a positive correlation between transit access and employment density.

In terms of the differences in challenges, WMBE businesses around the U District station had mostly identified strong distrust in the government agencies as a major challenge. This is especially pronounced during the COVID-19 pandemic and the construction phase of the light rail station, as they felt that they were not getting any assistance. Despite being less prominent, this theme of distrust also appeared among some WMBE businesses around the Capitol Hill station who felt that authorities could be doing more to keep the area safe. The principle of equity, as cited by Lozano-Torres (2021) implies that "each person receives a treatment according to their conditions, which is contrary to treating each person in the same way". This would mean that more assistance could be geared towards WMBE businesses around the U District station since they had double the negative impacts (COVID-19 pandemic and construction impacts); and authorities could be more attentive towards the safety of the WMBE businesses near the Capitol Hill station; but this unfortunately was not the case. The distrust of the WMBE business community could be attributed to the fact that authorities were not conducting enough outreach to this business community specifically, as cited in the literature review section of this study (Deakin 2012). It could also indicate that they were uninformed or unprepared about the resources or decisions being made by authorities (Lung-Amam et al. 2015;

Reece 2018). Overall, more communication is needed between the two parties. Fortunately, many WMBE businesses, especially around the U District station have said that they managed to seek help from nearby businesses or the business community in certain segments of the interview. This could be a positive impact of TODs, which fosters good social capital and connection between these businesses due to the high-density and mixed-use layouts of the building and street design in the area (Noland et al. 2014; Noland, Puniello, and DiPetrillo 2016).

Capitol Hill WMBE businesses were all new and opened post construction of the Capitol Hill station; in comparison with WMBE businesses near the U District station who have been there for many years, including one business who will be closing in 2 months and had been in the area for 6 years. This could signify some positive or negative scenarios. The positive aspects would be an agglomeration of new restaurant businesses in the Capitol Hill area, which is consistent with the findings by Yao and Hu (2020). Other positive aspects would signify the attractiveness of TODs as a place to do business and increase formation of new businesses due to light rail stations – which are all consistent findings of various sources (Chatman and Noland 2014; Topalovic et al. 2012; Chatman, Noland, and Klein 2016; Credit 2018). This signifies that TODs really attract the startup of new businesses and enhance the “economic competitiveness” of the community, making it a vibrant and livable place (Herrman and Lewis 2015). However, the negative elements of this scenario might be the inability of TODs to retain older businesses in the area. As evident from the interviews, one out of ten WMBE businesses is closing down around the U District station, and the fact that all WMBE businesses around the Capitol Hill station are new, this means that there is a need for more anti-displacement strategies for these businesses so that they could remain in the neighborhood (Slabaugh, Németh, and Rigolon 2022). WMBE businesses are traditionally more vulnerable and have slower revenue growth

compared to their White or male counterparts, which puts them at risk of displacement especially if TODs are increasing land values and property taxes (Berghall 2020; Altman and Mckinnon, n.d.; Wang 2013). There should also be more professional network support especially for small WMBE businesses to seek advice and help from one another when they face hardships (Altman and Mckinnon, n.d.).

There are a few surprising elements that emerged in the results section. The first one would be the distrust and disappointment in authorities by WMBE businesses, which is one huge challenge as mentioned in the results section by WMBE businesses near the U District station. WMBE businesses felt like they were unseen and unheard, which was a unique challenge that was not found in the literature review. This is very much an equity issue and pertains to being marginalized, as these individuals feel like they are being treated unfairly and this could be tied to the fact that the city government is not using their resources to produce results that bring the best outcomes to society (Stein 1988).

Another element was discovered when one of the business owners near the Capitol Hill station mentioned a few hate crime incidents happening towards his staff. He shared how racial slurs were hurled at his staff, and he felt helpless because he did not know what to do. He concluded by saying that there are lots of odd characters out there.

Another surprising element was how a few WMBE businesses around the U District station expressed that there are fewer homeless individuals loitering around their business now compared to the time before the station was built. WMBE business owners or managers attribute it to a homeless shelter in the area being torn down. It should be noted that this does not mean homeless individuals are not disrupting businesses – as some WMBE businesses mentioned theft from homeless individuals after the station opened. It is unclear whether the effect could be due

to the demolition of the building or the light rail, although certain news reports have hinted both were involved, as homeless individuals were worried about being displaced prior to the station being built – the University District has been a popular neighborhood for homeless individuals to seek help due to the abundance of social services and churches (Berger 2014; Aprikyan 2018). However, as of late 2021, a temporary tiny-home shelter called Rosie’s Village was built in conjunction with the City of Seattle and Sound Transit near the U District station (Sound Transit 2021b). This might mean that the reduction in homeless individuals is only temporary and could increase in the next few years.

Multiple WMBE business owners near the Capitol Hill station also expressed that many of their managers and employees also lived nearby and walked to the business as well. This would indicate that the vision of PSRC, with a focus on population and job growth within regional growth centers and high-capacity transit areas has been occurring in the 5 years since opening the Capitol Hill station. there are increasingly dense, walkable and mixed-use developments in Capitol Hill’s TOD area (Puget Sound Regional Council 2016). It would be interesting to continue to observe Capitol Hill’s TOD area and see whether PSRC’s vision would also be fulfilled in other areas across Seattle so that residents could reap the benefits of TOD and be able to live in vibrant and connected communities for the years to come. Interestingly, across both U District and Capitol Hill station WMBE businesses, all owners expressed that they themselves do not live in the TOD area and drive to work rather than take the light rail. The reason for this was because they needed a vehicle to carry their groceries, goods, or supplies, and explained that using the light rail would be inconvenient for them.

## 5.2 Limitations

There are a few limitations in the results of this study. The first one would be sample size, which is limited to a total of ten interviews around only two light rail stations. This could lead to a potential for overgeneralization of the interview findings from the research, as there may be different opportunities or challenges in other TOD neighborhoods in Seattle. There are specific characteristics of these two stations, such as a high homeless population, majority student population, and the young demographics of residents which may influence the outcome of these interviews. Hence, some of the results for this study may not be the same for WMBE businesses near other stations along the light rail line, as they may have vastly different demographics and unique characteristics. Another limitation would be the lack of quantitative data, such as modeling the WMBE businesses' actual drop in revenue or the margin of increase in property taxes across the city. This would have made the results seem more concrete.

Furthermore, challenges such as low foot traffic during the construction phase of the U District light rail station happened during the same time as the COVID-19 pandemic. Some WMBE businesses expressed that they are uncertain if challenges such as a decrease in foot traffic and patronage were correlated with the pandemic or the construction, and it felt like overlapping challenges hit their businesses all at once. Hence, perhaps if this study was conducted for a different light rail station that was not constructed during the COVID-19 pandemic, there may have been different responses from the interviews in terms of challenges during construction. However, WMBE business owners did acknowledge how there were some additional issues directly caused by the pandemic such as employees falling sick and being unable to work regularly, which had nothing to do with the new light rail line. Another limitation is that the construction of the light rail co-occurred with the 2020 protests on police brutality,

after the murder of George Floyd. One of our study areas, the Capitol Hill neighborhood, was the location during the protests for establishing the Capitol Hill Organized Protest (CHOP) (Martin 2021). The CHOP was a famous autonomous zone, becoming the epicenter of protests. Hence, this would have had an impact on business owners and their patronage (King 2020). Given the timeline overlapping both COVID-19 and the protests, our results in this study can be confounded with these two major events (Sound Transit 2022a). Future studies could take the opportunity to deepen the understanding of differences between these events.

Overall, it should be noted that there are two main general opportunities and challenges faced by WMBE businesses. Furthermore, there are unique opportunities and challenges that pertain to newer stations which contrasts with older stations. Additionally, WMBE businesses located near the newer light rail station tends to face some different challenges during construction compared to after the light rail station is built. Research in this area should continue to be explored, especially when it comes to focusing on WMBE businesses as they have different challenges compared to non-WMBE small businesses – which our study has shown when it comes to distrust and disappointment in authorities and hate crimes.

## 6 CONCLUSION

This study is a good starting point to provide insights on the perceived opportunities and challenges that WMBE businesses in TOD environments face, as we were unable to find studies to date that connected these two elements together. The findings from this study, especially the opportunities, are consistent with the literature review. However, there were additional challenges identified by WMBE business owners that pertained to their identity, leading them to have distrust in government authorities as promises that were made were not delivered. Additionally, given that there are more challenges than opportunities identified in this study, especially for WMBE businesses near a newly constructed light rail station, this shows that there is much more work to be done by transit and government agencies to improve the experiences of WMBE business owners so that they may thrive in new TOD environments during and after construction of stations. Challenges such as crime and disruptions from homeless individuals should also be addressed.

There are common opportunities and challenges that WMBE businesses near new and old light rail stations face, such as increased foot traffic and increased crime. However, there are also differences. WMBE businesses near a new station experience opportunities of an increase in the diversity of the demographics of their customers, but face challenges of strong distrust towards authorities. In contrast, WMBE businesses near an older station experience opportunities for their employees to use the light rail to commute to work, whereas they experience challenges of homeless individuals disrupting their business. Additionally, WMBE businesses located near a new light rail station have expressed unique challenges during the construction period such as: vandalism, low foot traffic, noises from the construction of the light rail, construction equipment obstructing path flow and distrust or disappointment in the government or transit agency. Post

construction, they gained opportunities such as increased foot traffic, increased diversity in demographics of customers, and employees being able to use the light rail to commute to the businesses. There are also additional challenges post-construction of the light rail such as theft, safety concerns and increased property taxes.

These findings demonstrate to planners or transit and governmental agencies that there is value in observing opinions from WMBE businesses, as it provides insights into the opportunities and challenges that WMBE businesses truly face within a TOD, and allows authorities to identify what they are doing right and where help is needed. One outstanding comment was that WMBE businesses have strong distrust towards authorities. This indicates that there is much more work to be done for authorities to mend relationships between themselves and communities of color or women. Authorities could begin by conducting intentional community engagement to *listen* to what these business owners have to say. Furthermore, involving them as a key role in the decision-making process whenever building a new light rail facility is very much needed. Post planning of the facility, authorities must continue checking in with WMBE businesses throughout the entire construction and post opening of the new stations to assess what they need, and provide immediate assistance when challenges arise. This is extremely important given that there will be many more light rail stations being built by Sound Transit in the Seattle area for years to come, *and the distrust will only grow if authorities do not act now*. Subsequently, homelessness and crime should be high on the radar for authorities in Seattle. Planners could take a role in designing TODs with a basis for maximum security but also ensuring that it is welcoming for all. Furthermore, local governments could organize more community-based policing, and transit agencies should better train their in-house transit security. As mentioned in the interviews, WMBE businesses have expressed that the police force and

transit security play an extremely weak role in helping to keep their neighborhood safe. Hence, better alternatives should also be implemented to ensure better results.

Overall, future studies could research guidelines on how to improve the information of WMBE businesses stored by governmental authorities, and how to promote the existence of WMBE businesses to the public. It is important to classify these businesses and study them to get the unique help they need, but existing poorly managed databases from the City of Seattle and Office of Minority and Women's Business Enterprises show barriers in even identifying businesses who are classified as WMBE. These databases tend to only input businesses that are certified, and because certification comes with a fee, many smaller businesses do not have the means and will not pay to be certified. Hence, with that initial barrier, it is hard to examine these businesses in TOD environments on a large scale due to the lack of data on these businesses, which calls for a need to improve the existing system. Subsequently, next steps for this research could take a renewed approach by focusing on quantitative measures only, such as looking into the revenue impacts, property taxes, and economic survivability of WMBE businesses around these stations. Results from such studies could complement the existing results with this study for additional quantitative significance. Lastly, transit agencies or government authorities could also use my methodology in the real world by going out and conducting community outreach or engagement with the WMBE business community. Then, based on the identified opportunities or challenges, they could provide targeted assistance to the business owners.

Overall, the challenges of WMBE businesses in TOD environments needs to be addressed if Seattle, Washington wants to grow and thrive within high-capacity transit station areas. The goal should be to thrive together as a community since everyone is interconnected. With one significant community being left behind, this could lead to major negative impacts for

all other members. With the inclusivity of the well-being for all community members, TOD environments in the region could stay welcoming, safe, livable, and vibrant for the years and generations to come.

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