In-Migration and Neighborhood Change on Atlanta’s Westside

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Introduction

Neighborhood change, gentrification, and displacement have long been important concepts for researchers trying to understand the effects of economic shifts at the neighborhood level. A significant portion of this work has been focused on understanding and preventing displacement of existing communities, especially in historically disinvested areas, due to fears that such communities will be excluded from the benefits of new investments (Elliott-Cooper, Hubbard, and Lees 2020). Unfortunately, the phenomenon is still not well understood. Researchers often approach this by observing changes in demographic statistics in an area over time, or by directly observing the demographics of individuals moving out of a neighborhood undergoing gentrification (Janssen et al. 2023). These studies have not succeeded in finding consensus on whether, or to what extent, gentrification can cause displacement (Zuk et al. 2018).

Other researchers have taken a different approach. Recognizing that neighborhood demographic change is a product of both in- and out-migration, some studies have called for a more thorough focus on the role of in-movers in neighborhood change (Ellen and O'Regan 2011; Freeman 2005). That is the goal of this study. I first review the state of the literature on gentrification and neighborhood change, emphasizing differences in scope and approach, and the need for greater focus on in-movers. I then perform a case study focusing on the effects of a major private development in Atlanta, Georga. Using a difference-in-differences approach, I attempt to model the affects of a new Microsoft campus on nearby home prices, as well as the race and income level of prospective homebuyers in the area. My results do not conform with expectations, suggesting that while home prices in the area increased, homebuyer demographics were unchanged. These results indicate a need for further nuance in studies about neighborhood change to better understand what residents are actually experiencing.

Literature Review

Researchers have long been interested in the topic of gentrification, its mechanisms, and its impacts on urban life. However, it is a complex topic, and has proven difficult to address comprehensively. Indeed, even the definition of the term remains a matter of some discussion. In the most general sense, it refers to the process by which a neighborhood's socioeconomic status increases (Zuk et al. 2018). Researchers are divided on its scope and consequences. Brown-Saracino (2017) points to a divide in the existing gentrification research wherein some studies, especially those of a more qualitative nature, view it as a growing and impactful trend in urban life, while quantitative studies often conclude that it is less widespread and only marginally influential. In all cases, observers agree that gentrification is a complex and highly context-dependent process whose causes and effects can be difficult to understand comprehensively.

Research has frequently pointed to large-scale, often but not always publicly funded, investments in infrastructure or redevelopment projects as one important catalyst of gentrification pressure (e.g. Immergluck 2009; Zuk et al. 2018). Public transport, especially new rail transit, is a frequently cited example (Delmelle, Nilsson, and Schuch 2021), as well as other kinds of infrastructure (Immergluck and Balan 2018). These larger projects have the potential to induce significant change in the desirability and livability of previously disinvested areas, and have been found to create positive pressure on home values and rents in the immediate vicinity (Immergluck and Balan 2018). Importantly, the literature shows that these effects can set in before final delivery of the project. Immergluck and Balan (2018, 1741) find that "The timing of these increases matches the timing of the initial public discussion" of the project. In other words, housing markets appear to capitalize the expected benefits of major investments well before these benefits are actually delivered.

More recently, the topic of gentrification has gained traction in the public consciousness outside academia. There, it is often accompanied by concerns that it can cause displacement, especially in historically marginalized communities. Most frequently, this is believed to occur when increased attractiveness and lower vacancy in a gentrifying neighborhood lead to increasing rents and property taxes. When these higher prices force longtime low-income residents to leave the area in search of more affordable housing, it is known as direct displacement. Additional indirect mechanisms have also been described (Zuk et al. 2018).

Preventing displacement has become a major priority for policymakers and community advocates and has often been a major motivation for studies of gentrification. Yet for all their efforts, researchers have largely failed to find a consensus on how, or to what degree, gentrification causes displacement. Even comprehensive literature reviews present apparently contrasting conclusions about the state of current findings on the topic (e.g. Brown-Saracino 2017; Janssen et al. 2023; Zuk et al. 2018). Still, displacement remains an important element of gentrification research, so much so that the terms have sometimes come to be used interchangeably. However, many scholars are critical of this trend, and have called for a better analytical framework for understanding them as separate phenomena (Elliott-Cooper, Hubbard, and Lees 2020; Zuk et al. 2018).

To this end, some studies have attempted to look beyond displacement to a more generalized understanding of gentrification-induced neighborhood demographic change. Some approach this by examining changes in overall neighborhood demographics over time (Janssen et al. 2023). Others chose to separately examine in- and out-movers. While the many studies that focus on displacement can be said to investigate out-movers, relatively few examine contemporary changes in in-mover demographics as a factor of overall neighborhood change

(Janssen et al. 2023). Among those that do, several have argued that in-movers play an important role in neighborhood change, perhaps more important than displacement (Ellen and O'Regan 2011; Freeman 2005).

Studies focused on in-moving populations have examined a variety of demographic characteristics to understand their impact on the community. Race and income level have traditionally been the most commonly cited dimensions of neighborhood change, but studies have also pointed to others, including age, household composition, and educational attainment (Janssen et al. 2023). While data on these factors can be less readily accessible, such findings may provide some clarity in reconciling the apparently contradictory findings about displacement. For instance, Delmelle et al. (2021) suggest that in-moving young, educated professionals may have similar nominal income levels to legacy working class residents, but they would not be viewed as part of the same economic class. Thus, residents may feel a sense of changing demographics, even as median income levels are relatively stable.

Similarly, their analysis examines changes in in-mover demographics based on how home listings are marketed on online real estate platforms (Delmelle, Nilsson, and Schuch 2021). Such changes could indicate (or influence) changes in the prevailing cultural understanding of what the area has to offer and who belongs there. This is an example of nonspatial displacement, in which residents are not forced to relocate, but still experience "the loss of social meaning, cultural practices, and social networks associated with gentrifying neighborhoods" (Zuk et al. 2018, 39). In this way, studies focusing on in-movers are perhaps better able to provide context for the lived reality of residents of gentrifying neighborhoods.

In Atlanta, neighborhood change has featured heavily in conversations about housing, development, and community for many years. The city is growing quickly, and home prices have steadily increased in line with national trends. Perhaps the primary object of concern in these conversations has been the Atlanta Beltline. The Beltline is a 22-mile loop of abandoned rail corridor which is being developed into a multiuse trail and transit corridor. The project began public efforts in 2003, and TAD financing was approved in 2005 (Immergluck 2009). Since then, steady progress has been made building out the trail, and while the loop remains unfinished, the completed segments have become a highly desirable amenity (Immergluck and Balan 2018). From the beginning, the project has raised concerns about housing prices and displacement (Immergluck 2009). Historically black neighborhoods on the eastside, including the Old Fourth Ward, are often considered to be victims of significant displacement and neighborhood change. In the wake of these changes, activists and residents have begun to raise concerns about other large developments, especially in low income historically black areas in south and west of the central business district. In February 2021, these anxieties were renewed by the announcement that Microsoft would build a new campus on a recently purchased 90 acre site in the westside neighborhood of Grove Park (Smith 2021). The announcement was widely viewed as a milestone, and a significant boon to the region's economy. Microsoft also stated that the development would include affordable housing and other amenities to benefit the neighboring community, but resident outlooks were mixed (Capelouto 2022). Many worried that Microsoft would fail to uphold its promises, while others felt that rapid investment would raise prices and push them out well before the project was finished.

To date, little has come from the announcement. Initially, the company engaged positively with local community leaders on the design for the project, but over time communication fell off. Two years later, in February 2023, Microsoft announced the project had been "paused" indefinitely (Hansen 2023). Still, for two years after the announcement, residents faced uncertainty about what would happen to their homes and neighborhoods, and many feel that some amount of harm was already done. The nature and extent of these outcomes deserves further study.

Data

The primary data source for this analysis is Home Mortgage Disclosure Act (HMDA) data. The Consumer Financial Protection Bureau requires most lenders to report data about mortgage applications they receive. The data set includes demographic information about the applicant, details of the requested loan and any property it may be secured by, the final action taken, and reasoning given for it (Avery, Brevoort, and Canner 2007). This data set allows researchers to explore trends in the housing and mortgage markets. It also gives insight into the demographics of prospective in-movers to an area.

For this study, I include applications received between 2018 and 2022. As of this writing, 2023 data is not yet available, and data collected in 2017 and earlier was less comprehensive. I restrict the data to applications for loans for the purpose of purchasing a site-built home with one to four units, secured by a first lien. These are common restrictions used in analysis of this dataset, intended to limit the sample to individuals and households attempting to move into the area (Popick 2022). Unlike many studies that use HMDA data to focus on lending practices, I don't limit this analysis to conventional loans, as insured loans still represent potential in-movers.

The geography of the study includes census tracts located entirely or primarily within Atlanta city limits. Some census tract boundaries in the city changed in 2020. However, the borders of the study area, as well as those of the treatment and control areas, were not affected. Therefore, those areas, though subdivided differently, may still be compared across the entire study period. For each tract, the distance to the central business district (CBD) was calculated by measuring the distance from the intersection of Forsyth Street and Peachtree Street in Downtown to the closest point in the tract.

It is important to note that, by its nature, HMDA data captures nothing about institutional and cash buyers, nor does it address the rental market. While beyond the scope of this study, these play an important part in shaping neighborhood change and deserve further investigation. It should also be noted that, while lenders are required to ask for applicants' race and ethnicity, applicants are not required to disclose this information ("Appendix B to Part 1003 — Form and Instructions for Data Collection on Ethnicity, Race, and Sex," n.d.). For this reason, approximately one third of records do not include the borrower's race. This trend appears relatively consistently across time and geography, so it is still meaningful to examine changes over time. However, while rarely addressed in the literature, this is an important caveat to any conclusions that might be drawn about race based on this dataset.

A few significant outliers were observed in the dataset. Two applications were recorded for mortgages on very high value properties (greater than $20 million), with Loan to value ratios below 3%. These are very likely to be data entry errors and have been excluded. In addition, six applications reported borrower incomes in excess of $200 million, as well as very low loan to value ratios. These records are also possible data entry errors. If not, they likely represent companies rather than households, and are outside the area of interest of the study. Therefore, they have also been excluded. Table 1 shows the variables used for the analysis and summary statistics.

Table 1. Summary Statistics

Variable		Min	Max	Mean	SD	units
Property Value	Property value used by lender to assess loan application. Rounded to the midpoint of nearest $10 thousand interval.	$5,000	$20,005,000	$480,811	$477,862.3	$, Rounded to the midpoint of nearest $10 thousand interval.
Income	Borrower income used by lender to assess loan application	-$3,455	$173,580	$220.2	$2,189.92	$1,000s
Tract to MSA income ratio	Tract median income as percentage of MSA median income	0%	371%	127.5%	89.9	%
Tract Minority Population	Percentage of minorities among total tract population	0%	100%	58.64%	32%	%
Distance to CBD	Distance in miles between nearest point in the census tract to Downtown Atlanta	0.844	6.376	3.237	1.305	miles
Notes: All data from HMDA except Distance to CBD						

Methods

My analysis proceeds similarly to that of Delmelle et al's study of light rail in Charlotte, North Carolina (Delmelle, Nilsson, and Schuch 2021). I first identified two geographic areas for comparison: the treatment area and a control area. Figure 1 shows the location of the two areas.

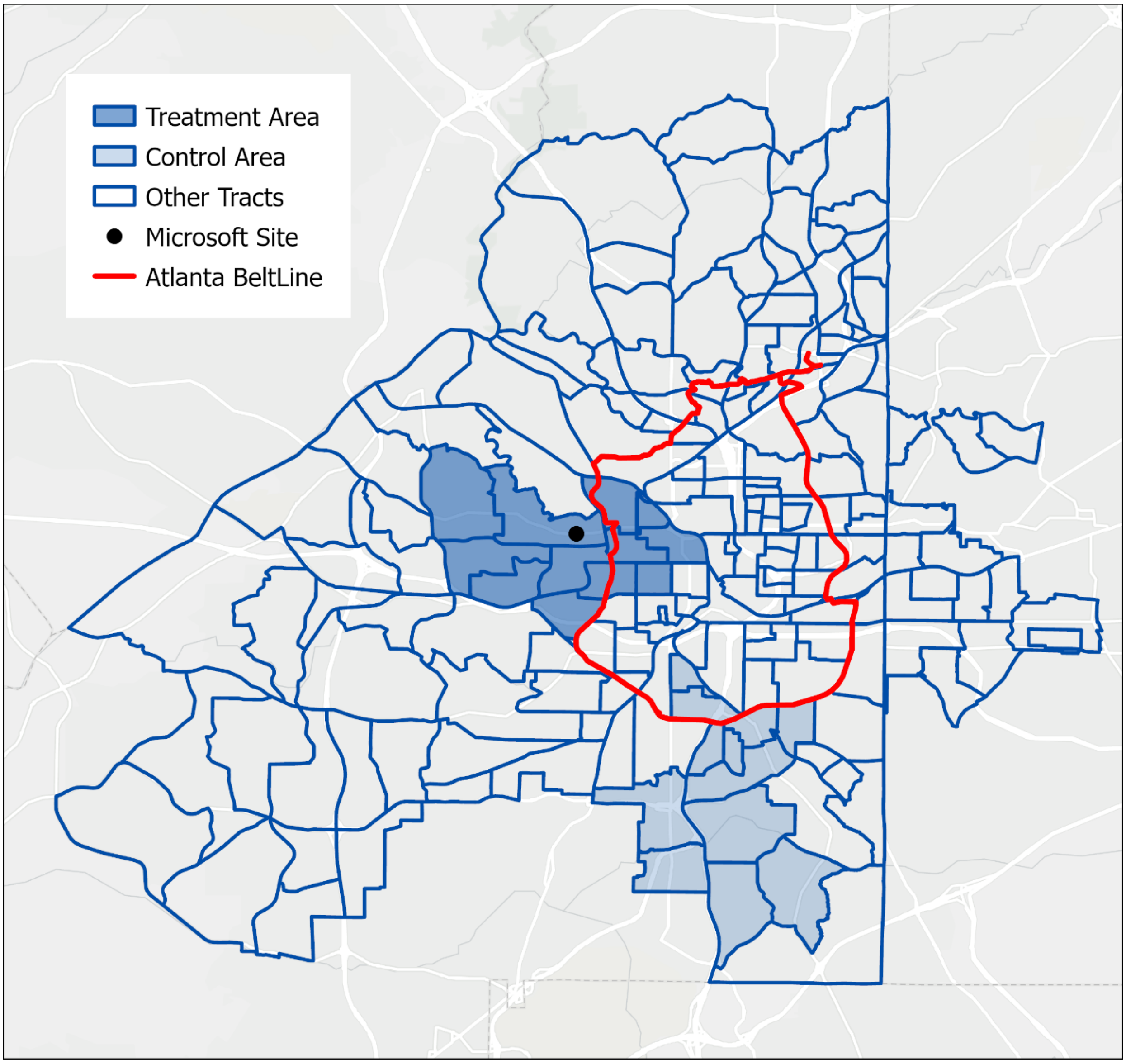

Figure 1: Location of treatment and control areas, as well as other tracts included in the study, in relation to the Microsoft project site and the Atlanta Beltline.

The purpose of the treatment area is to isolate the effect of the announcement of the Microsoft investment (Damiano and Frenier 2020). The hypothesized draw of the development is limited to the site itself, with no proposed changes for the surrounding area (in other words, nothing about the project would make the surrounding area itself more desirable, other than its proximity to the project). Therefore, we expect to see the strongest amenity effect in areas with easy access to the site. The neighborhood is not particularly walkable or well-served by transit, so any tracts falling entirely or mostly within a five-minute drivetime radius were designated as the treatment area. The resulting area radiates westward from just outside the CBD. It is bisected by the Atlanta Beltline corridor and has good interstate access. The area was comprised of 11 census tracts according to the 2010 map, one of which was split in 2020, resulting in 12 tracts. The outside border of the area is the same on both maps.

The control area is intended to represent similar conditions to those found in the treatment area before the announcement of the development, but to be far enough from the project site to receive no amenity affect from it. This was accomplished through a manual process of trial and error. The aim was to select a contiguous area with a similar total population and similar distribution of race and income. Both areas feature a population of approximately 29,300. Figure 2 compares the distribution of the two dependent variables between the treatment and control areas and the rest of the city. The selected area lies to the south-south-east of the CBD and also features Beltline and interstate access. The number of tracts in the control area also changed with the 2020 maps, from 9 to 12.

Loan applications across these two geographies are compared using a difference in difference approach with several regression analyses. The benefit of the difference in differences approach is that it can account for any external factors that may have affected the results evenly across the time and space of the study. In other words, it attempts to predict changes in applicant demographics caused by the independent variables beyond any changes that may have naturally occurred otherwise. This is important because the study coincided with the unprecedented effects of the global Covid 19 pandemic and its associated economic impacts, including high inflation and housing prices. Under the assumption that these factors impacted the entire market evenly, the difference in difference approach can account for it in the regression results.

Figure 2. Census tract median income and %African American residents, by treatment and control areas, compared to the rest of Atlanta.

I first perform an OLS regression, to assess the effects of the Microsoft project announcement on home prices in the area:

$$\hat{y} = \alpha + \beta After_t + \gamma Treat_i + \delta After_t \times Treat_i + \varepsilon X_{it}$$

$After_t$ = 1 if the year of the application is 2021 or later, and $Treat_i$ = 1 if the census tract is in the treatment area. $After_t$ X $Treat_i$ is an interaction term between the two, and its coefficient δ, representing applications in the treatment area after the announcement, is the main coefficient of interest. X_{it} is a vector of socioeconomic data about the census tract each property is in and demographic data about the applicant.

The second phase of the analysis uses a logistic regression to assess the degree to which large development projects affect the decisions of in-movers. This analysis results in the following model:

$$ln\left[\frac{P}{1-P}\right] = \alpha + \beta After_t + \gamma Treat_i + \delta After_t \times Treat_i + \varepsilon X_{it}$$

The dependent variables represent socio-economic factors of applicants – namely income level and race. Independent variables are the same as above, with the exception that X_{it} does not contain any applicant demographics.

Results

Before performing the regression analysis, we can observe and compare trends over the study period for property values, as well as applicants' race and income. Figure 3 shows median property values in the treatment area, control area, and the rest of the city. The graph is consistent with the expected effect of the project announcement. Before 2021, both the treatment and control areas were low value compared to the rest of the city and increasing at similar rates. After the announcement, prices began increasing faster in the treatment area than the control area or the city overall.

This observation is reinforced by the first regression model. Table 2 shows the estimated coefficients for the first regression model predicting property values. The variable of interest, the interaction term between treatment area and postannouncement, indicates that the announcement of the Microsoft project was associated with around a $13,200 increase in home prices in the treatment area compared to the control.

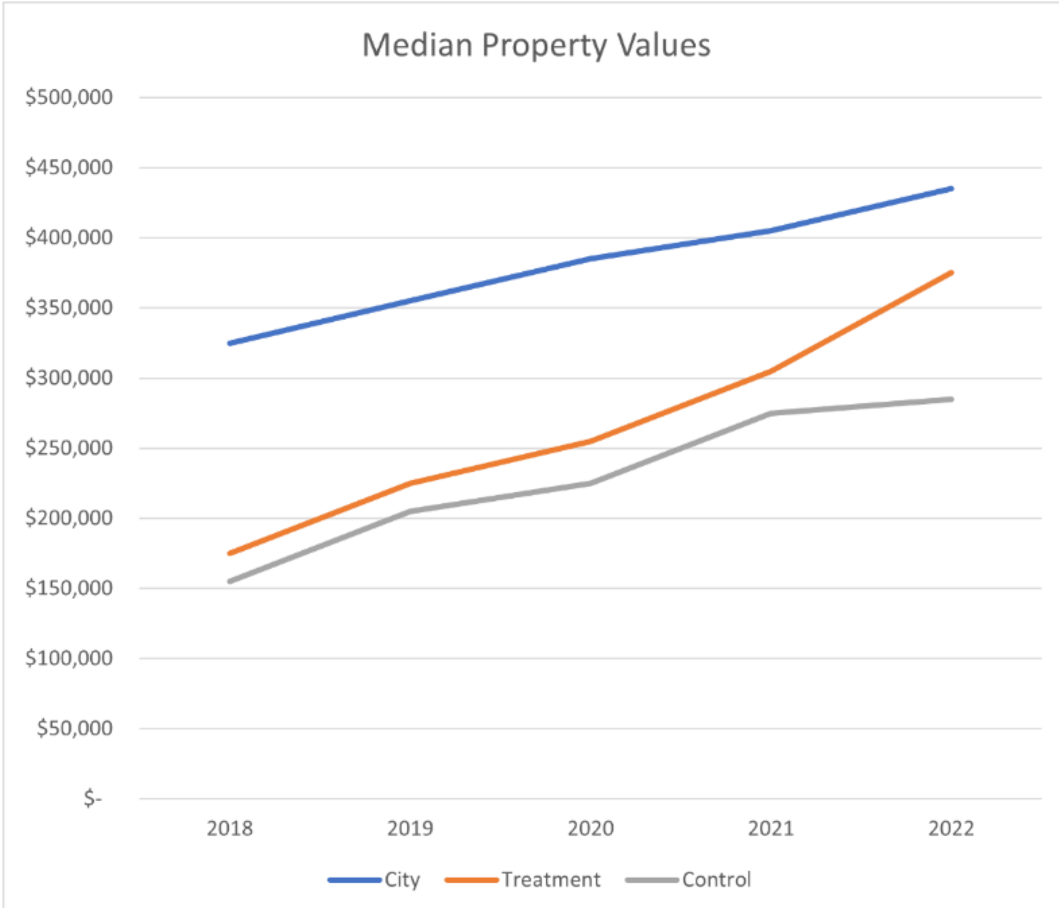

Figure 3. Median Property Values by location and year

Table 2. Coefficients for property value

Variable	Coefficient
Postanouncement	$96,416.48***
Treatment Area	-$1,486.62
Postanouncement X Treatment Area	$13,216.83*
Tract minority population %	-$4,693.63***
Tract to MSA median income ratio	$11,47.53***
Distance to CBD (Miles)	-$8,663.93***
LMI Applicant	-$66,517.17***
Black Applicant	$256.92
n	4,346
Adjusted r^2	0.395
Significance codes: ***0, **0.001, *0.01	

On the other hand, trends in applicant race and income do not appear to match expectations. Figure 4 shows black or African American applicants as a fraction of the total. Both the treatment and control areas have very high concentrations of black residents, which helps to explain the higher rate of black applicants in these areas compared to the rest of the city. However, there is no clear deviation between the treatment and control areas after the announcement of the Microsoft project.

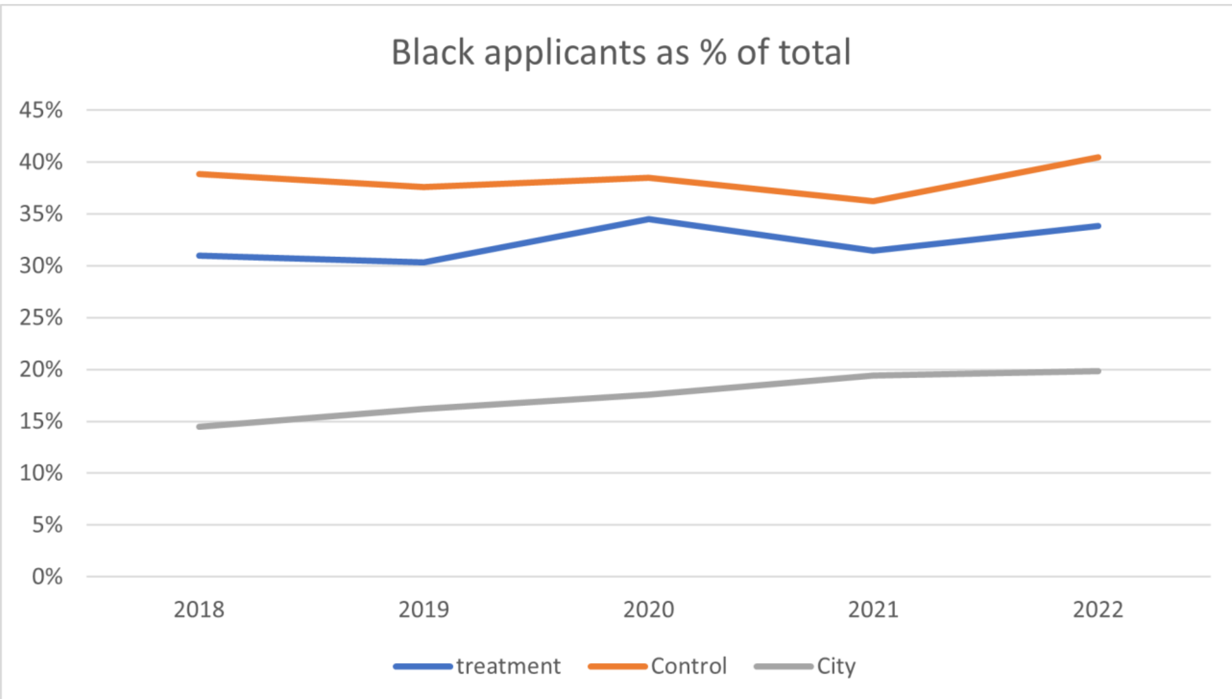

Figure 4. Black or African American applicants, as % of all applicants

Similarly, Figure 5 shows the trend in median applicant income. While it appears that incomes may have increased faster in the treatment area after the project announcement, it is not clear that the incomes in the treatment and control areas behaved similarly before the announcement. For this reason, it is difficult to conclude that the announcement was associated with a shift in the prevailing trend.

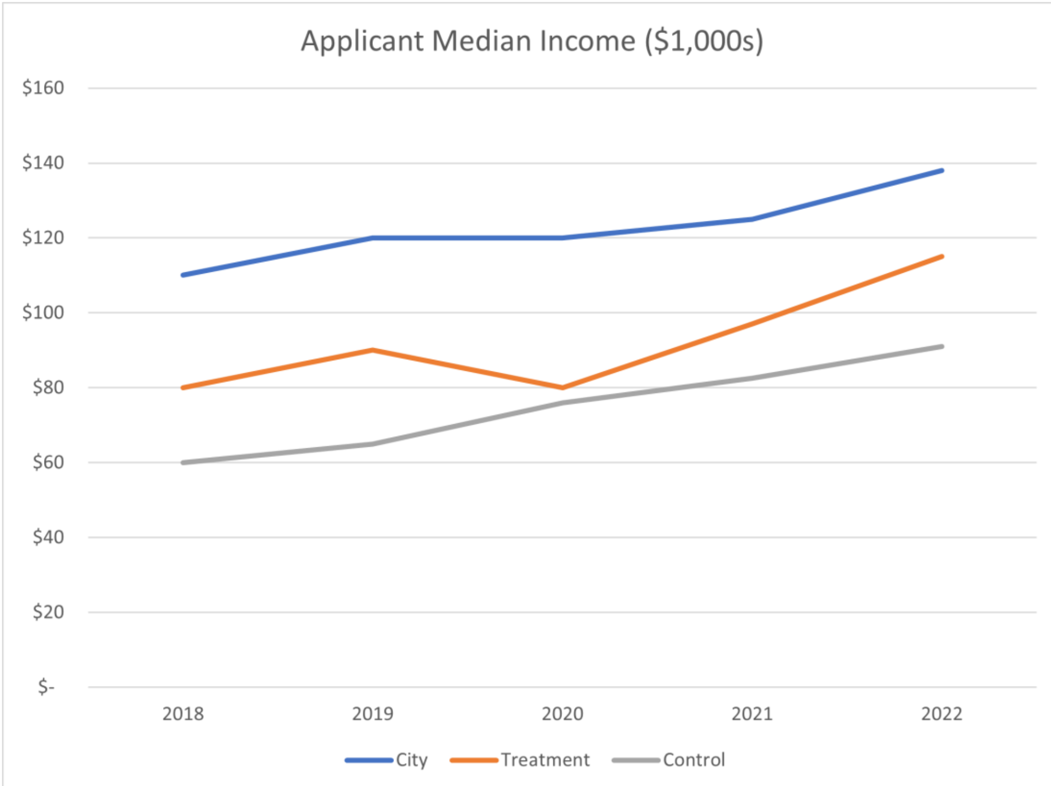

Figure 5. Median income of applicants, by geography and year

These observations are reinforced by the regression results. Table 3 shows the estimated impact of the independent variables on applicant income and race as odds ratios. All three models failed to find a significant relationship between the input variable of interest – the interaction term between treatment area and postannouncement – and the dependent variable.

Table 3. Odds ratios by applicant race and income

	White Applicants	Black/African American Applicants	LMI Applicant
Postanouncement	0.7322**	1.2931***	0.7069***
Treatment Area	0.8212*	0.8801**	0.6438***
Postanouncement X Treatment Area	0.8813	0.9958	1.0218
Tract minority population %	0.994	1.0498***	1.0475***
Tract to MSA median income ratio	1.0129***	0.9954**	0.9946**
Distance to CBD (Miles)	0.8769***	1.1554***	1.1533***
n	5,941	5,941	5,941
Significance codes: ***0, **0.01, *0.05			

The models do find a significant relationship with the timing of the application relative to the Microsoft announcement across all geographies, estimating shifts around 30% in all outcome variables. This makes sense, as the market was experiencing major shifts over this time period. Furthermore, the model estimates that applicants are around 36% less likely to be low or moderate income in the treatment area compared to the control, across all five years. This may suggest that the control area was not sufficiently tailored to match the conditions in the treatment area before the announcement.

Discussion

The results of the analysis of changes in property values align well with expected outcomes based on the literature, as well as the prevailing discourse. The treatment area saw a significant increase in the value of home sales compared to the control area in the immediate wake of the announcement of the Microsoft campus. However, the income and race results do not support the expected narrative based on the literature and anecdotal experience. Much of the anxiety surrounding gentrification and neighborhood change centers on the displacement of historic, low to middle income minority communities by higher income white buyers. Yet my analysis of racial trends seems to indicate the opposite. The Microsoft announcement appears to have had no impact on the racial and economic makeup of mortgage applicants. Several factors should be considered when attempting to interpret this departure.

First, there are limitations to this methodology that may contribute to this confusion. First, the time period examined coincides not only with the Microsoft project announcement, but with the Covid-19 pandemic and the high-demand, low-interest real estate market that followed. The difference-in-differences technique is intended to control for these kinds of external factors that affect the entire population evenly. However, it is possible that the exceptional market conditions may have distorted the effect of the project compared to what would have happened under calmer market conditions.

In addition, the analysis attempts to compare two areas that experienced similar conditions before the treatment. However, the selection of the control area, and to a lesser extent the treatment area, are imprecise and somewhat subjective. The treatment area was selected based on access to the project site, and the control area was selected to match the treatment area as closely as possible in income, racial makeup, size, population, and geography. However, there may be better criteria with which to compare candidate tracts, and it is ultimately impossible to find a perfect match using any set of criteria. This is a process that should be further refined to facilitate similar analyses in the future.

Despite these caveats, it is reasonable to believe that this episode did in fact diverge from the expected pattern. Many similar studies that examine the effects of large investments do so after more time has passed, and often after the project is completed (Delmelle, Nilsson, and Schuch 2021; Immergluck 2009). While those studies have suggested that the process of neighborhood change can begin to set in as soon as a project is announced, successful projects produce regular updates on the planning process, public engagement efforts, and visible progress. These indicators may be required to sustain increased interest in the area. Conversely, in the case of the Microsoft campus very little happened with the project after the initial announcement (Hansen 2023). No specific plans for the site were ever released and no timeline was given. This might suggest that buyers were not sufficiently “convinced” that the proposed benefits would actually be delivered. This would be an important finding for planners and communities hoping to prevent displacement in the wake of large redevelopment projects. While previous studies assert that the announcement of such a project is enough to initiate the neighborhood change process, (Immergluck 2009) My analysis suggests there may be a window after such announcements where cities and advocates can step in to help protect residents.

If it is the case that in-mover demographics, particularly income, remained largely the same, why did prices increase relative to the control area? This appears to indicate an increase in demand driven by buyers not captured by this dataset. While more investigation is required to confirm, these buyers are likely to be institutional investors. Some may have bought property to hold speculatively, while others bought or built houses to rent. These are important facets of housing markets and neighborhood change which require further investigation.

Finally, it should be noted that these findings are in contrast not only with existing literature, but with the lived experience of residents at the time. Many residents have shared anxiety about the project, and feel that displacement and neighborhood change are already occurring. (Hansen 2023) How should these stories be understood in the face of apparently contradictory data? This question deserves careful consideration. What are the causes of the disconnect between research results and residents' experience? If the neighborhoods around Grove Park are not experiencing significant changes to in-mover demographics, why do residents believe that they are? The answer likely requires better understanding of resident experiences. Population changes are not the only way people experience their neighborhoods. Changes to the built environment, increased media coverage, and changes in business offerings are likely to play an important role in residents' sense of place. Further research should seek to put demographic changes in the context of other factors to gain a more comprehensive understanding of neighborhood change.

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