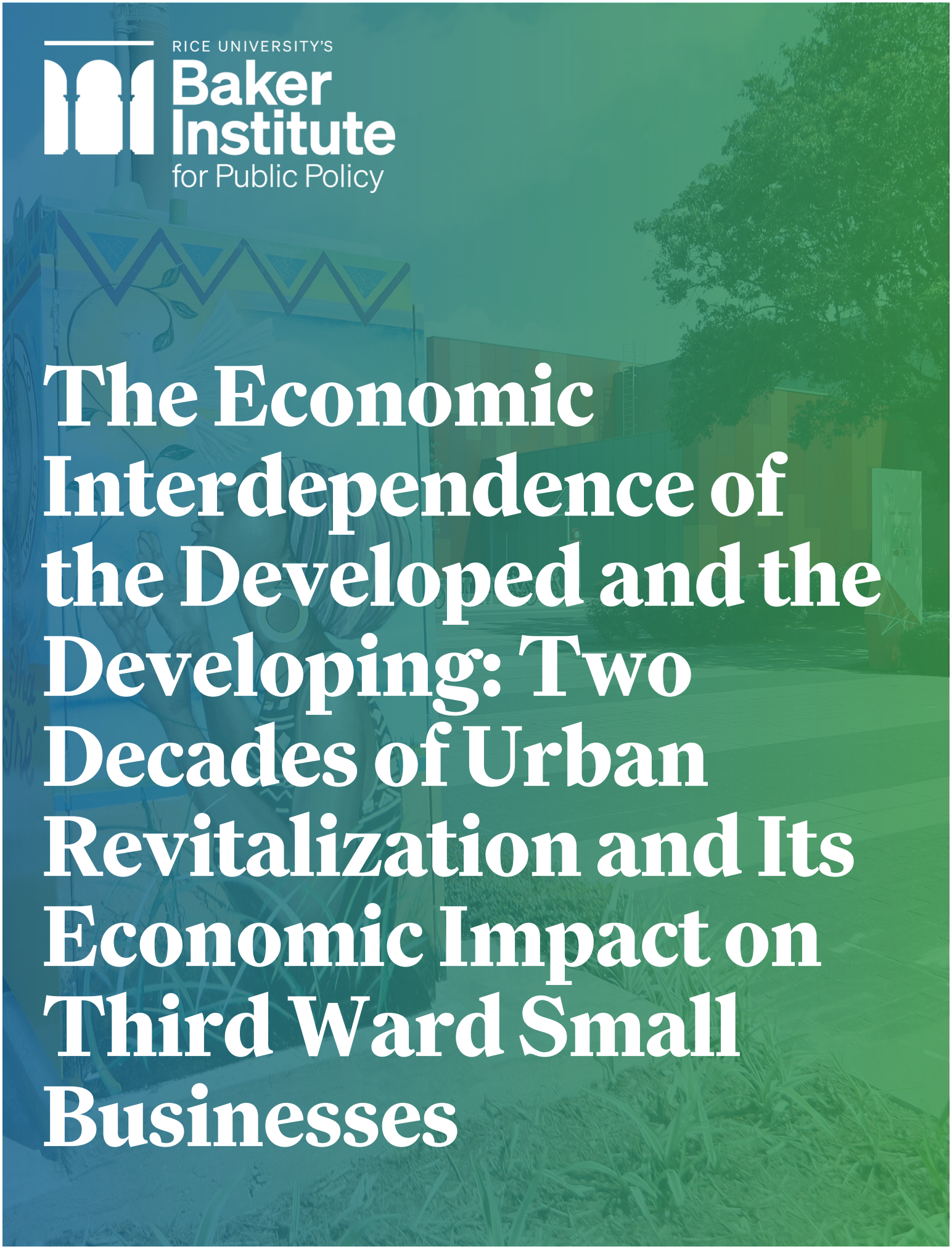

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The Economic Interdependence of the Developed and the Developing: Two Decades of Urban Revitalization and Its Economic Impact on Third Ward Small Businesses

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Working Paper

The Economic Interdependence of the Developed and the Developing: Two Decades of Urban Revitalization and Its Economic Impact on Third Ward Small Businesses

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The Economic Interdependence of the Developed and the Developing: Two Decades of Urban Revitalization and Its Economic Impact on Third Ward Small Businesses

Abstract

Communities are often undecided about urban revitalization or gentrification, as it frequently brings desirable economic improvement to inner-city neighborhoods at the cost of displacing long-time residents and small businesses. Research on major Sun Belt cities such as Houston, recognized as one of the most ethnically diverse and fourth most populous metro areas in the United States[1] is scarce. With Houston as the focus and noted as the highest-ranked city for friendliness to minority-owned businesses[2], The Impact of Urban Revitalization on Small Businesses Research Study conducted a qualitative and quantitative examination of the effect of the revitalization of Houston's Third Ward on small businesses in the Ward. While urban revitalization brings economic benefits to economically challenged areas, the degree to which those benefits accrue to the incumbents of the revitalizing area is an issue of both economic and social concern. This research assesses economic growth and the success of incumbent small businesses in Houston's Third Ward from 1999 to 2021.

Introduction

Most studies on urban revitalization have been qualitative in nature and focused on residents and housing prices, but fewer studies quantitatively examine the displacement of small businesses.[3] Research in Harlem finds most businesses remain through revitalization, and only a small share of businesses leave without replacement (Meltzer, 2016). In contrast, research in Seoul finds that small businesses are ultimately displaced by large franchise stores at the expense of neighborhood culture (Yoon & Park, 2018). Another concern in the U.S. is the availability of capital investment for small business owners in communities of color. J.P. Morgan Chase finds that Black- and Hispanic-owned firms have less cash than White-owned firms and encourages policy that produces level access to capital amongst all business owners.

Although revitalization in global cities such as New York, Chicago, London, and Seoul has been studied from qualitative and quantitative lenses, revitalization in inner-city areas of Houston, the immensely diverse and 4th largest city in the U.S.,[4] has not been similarly studied. Nobel Laureate Sir Arthur Lewis found in his research that less developed economies depend on developed economies.[5] Like Lewis' pioneering economic development finding, the research assesses the growth of small business entrepreneurs residing in an urban community in Houston that has seen immense economic growth over the past 20 years. One of the goals of the research is to

complement current literature on the subject of inner-city development related to small businesses and to provide a perspective from small firms in a major city located in the Sun Belt of the U.S. through a survey. The research also evaluates if there is a holistic economic revitalization of this urban community alongside the small business growth of the rest of Houston using qualitative and quantitative methods. Finally, understanding the qualitative and quantitative effect of economic growth on small businesses within the Ward in Houston will offer a complementary viewpoint for public policy proposals that support the success of incumbent small businesses in the revitalized Ward.

A Historical View of Economic Development

The topic of economic development finds its roots in the ground-breaking work of Nobel Laureate Sir Arthur Lewis from the Caribbean island of Saint Lucia. Sir Lewis is considered the pioneer of development economics.[6] Not only was his work foundational to the field of economics, but Lewis was also the first Black professor at the London School of Economics[7] and the only Black Nobel Laureate in Economic Sciences, among other firsts.[8] His work at the London School of Economics focused on colonial economic development with a world economic historical perspective.[9] Kofi (1980) states that the study of colonial economic development is important:

> because there is a direct linkage between the rate of growth of output of the developed world and that of the developing countries. An understanding of the history of the growth process in the former is a prerequisite for understanding that of the latter. For the past hundred years, the rate of growth of output in the developing countries has depended on the rate of growth of output in the developed world.[10]

Related to Lewis' inter-war years[11] analysis of colonial West Africa and similar developing countries and their growth rate of output being a function of developed countries, the research reviews the economic growth from business revenue in the Ward to the rate of growth for the developed city of the rest of Houston. Furthermore, Sir Lewis found in his international research that African businesses were completely dependent on small savings for investment; however, their European and other immigrant counterparts acquired "easy access to external and internal capital markets."[12]

Following Lewis' work, the term economic development in the 20th and 21st centuries has evolved to be an area of interest not only for world governments seeking to improve the prosperity of their nation but for domestic local governments such as city and county planners of rural and urban communities with the same desire for economic growth. Since Lewis' work, economic development has manifested in different forms, commonly coined as redevelopment, revitalization, and gentrification. In The Impact of Urban Revitalization on Small Businesses research, these terms will be used interchangeably; however, each may have distinct meanings in other studies.

Similarly to Lewis' inter-war work, after World War II, the Third Ward of Houston became a predominantly African-American community[13] and experienced economic decline for the remainder of the twentieth century. However, the Ward experienced economic revitalization and demographic transformation over the last two decades.

Literature Review

Historical Background of Gentrification/Urban Revitalization

Experts provide different perspectives on the overall impact of commercial gentrification on communities and neighborhoods, especially concerning local economies and business landscapes. Curran (2006) finds that property owners of commercial properties seeking to profit from the opportunity of increased demand and market rents tend to inflate prices by a significant amount over a short period. This leaves many existing tenants, particularly small businesses, due to their lack of capital or human resources, few options except to relocate, either by moving out of the neighborhood, downsizing to a smaller location, or both, or more drastically, closing the business (Curran, 2006). Some property owners even go so far as to hold on to vacant properties in order to "hold out" to be eligible for city rezoning criteria from commercial to residential real estate due to the multiplicative increase in property value that occurs with this shift in property designation (Curran, 2006). This holdout is also seen in communities such as Third Ward, where business owners reported longtime landlords of vacant and deteriorating buildings refusing to sell and waiting to receive a lucrative purchase offer from a developer. Lester & Hartley (2014) also deduce that short-run impacts of gentrification contribute to changes in both neighborhood clientele and consumption habits, which leads pre-existing businesses to involuntarily relocate or close (Lester & Hartley, 2014). Curran (2006) also finds that with the loss of businesses, there followed a loss of jobs, leading to prolonged unemployment and a decline in the wages and benefits of remaining jobs. However, research by Lester & Hartley (2014) shows that gentrification can induce positive changes, particularly for a community overall. They find that the long-run impact of gentrification is associated with increased employment opportunities in studied neighborhoods compared to the short-run effects of the same neighborhoods (Lester & Hartley 2014).

It is difficult to pinpoint the relationship between gentrification and the effect of policy decision-making on communities. The difficulty is ascribing a positive or negative overall effect on a community. There are winners and losers. The "winners" are typically from outside the developing community and benefit monetarily at the expense of the "losers." The losers are typically from inside the developing community, who, if they had the tools, could play the leading role in the development process. The question is, do the policies give an advantage to those outside of the community at the expense of those within the community? If so, is this a form of development that builds wealth and sustained economic growth for all, including those members who existed in the community before the development initiatives? Research by Yoon & Currid-Halkett

(2014) finds that local governments permit real estate developers to buy up land priced lower than its intrinsic value, which will soon skyrocket in price. This type of buy-up raises existing business property rental rates in revitalizing areas. Similarly, Kofi (1980) shares this same mode of operation from Sir Lewis' work that foreign enterprises in Africa "acquired lands on favourable terms, either from ignorant chiefs or from conniving metropolitan governments, and the royalties and rents which they pay for these valuable properties are a fraction only of the true economic rent" (p. 106).

On the other hand, Curran (2006) identifies city planners allocating funds to aid businesses in jeopardy of being displaced. However, the same research describes re-zoning policies by municipalities in which a commercial district is converted to a residential district. However, as noted previously, landlords are incentivized to hold on to vacant commercial properties to hold out for the upcoming increases in property values. This type of contradictory policy by urban planning departments allowing real estate speculation by developers leads to what Curran (2006) refers to as the "uphill battle," creating an unstable business ecosystem for small business owners in revitalizing areas (Curran, 2006).

Quantitative Methods

Assessing the Economics of Revitalization in the Third Ward

In its broad ethnic and racial diversity, Houston mirrors what social scientists forecast to be the future demographic composition of the U.S.[14] The Third Ward is a defined geographic district easily accessible to downtown Houston, the Texas Medical Center, and academic institutions.[15] Historically, Third Ward has been a predominantly African-American community.[16] Over the past two decades, the Third Ward has experienced economic revitalization and demographic transformation,[17] commonly referred to as gentrification.

By examining the experience of small businesses in the Third Ward from 1999 to 2021 through a community-engaged methodology and an economic dataset, the study sought to understand whether revitalization is perceived to be economically inclusive by existing small businesses and the extent to which a revitalizing community experiences economic growth as compared to the greater metropolitan area in which it is situated. Specifically, during the 1999 to 2021 time period, the study sought to do the following:

1. Measure and compare the economic success of small businesses in the Third Ward;
2. Measure the change in the number of businesses in the Third Ward community and;
3. Measure the economic growth of Third Ward as compared to the rest of Houston.

Key Quantitative Findings and Discussion

Median regression analysis was used to examine the median sales revenue in the community. To assess the economic growth of Third Ward and the rest of Houston, the research purchased a Data Axle dataset representing Houston from 1999 to 2021. As provided in the Data Axle dataset, the research used the modeled business sales volume as a proxy to represent business revenue and only reviewed businesses with 99 or fewer employees for the analysis of Third Ward and the rest of Houston, respectively. The research analyzed the community output in sales volume for businesses within zip code 77004 compared to the rest of the city of Houston (all other zip codes) using data from Data Axle 1999 to 2021. The zip code 77004 covers 96% of the Third Ward neighborhood[18] and, for this reason, was chosen as the representative zip code for the Third Ward in the study. Due to the skewed nature of the sales volume data, the research used median regression as an instrument variable approach. The dependent variable, *Y,* represented the sales volume. A best-fit model was chosen using a quantile regression relative importance analysis. Based on the available Data Axle data, the research identified the lowest mean absolute error with the identified variables as the predictors. The best-fit model analysis of the median regression revealed the best model for predicting the future Sales Volume variable of the Third Ward. One of the explanatory variables identified to represent the sales volume was all industries (see list below), where the Other Services industry category served as the baseline for comparison of the industry variables. The final explanatory variable identified was the firm's size, which was based on the number of employees reported in the Data Axle dataset.

The best-fit model observed:

$$S = \sum_{i=1}^{16} a_i X_i + bZ + \varepsilon$$

where, *S = Sales Volume*, Industries: $x_{1=}$ *Agriculture,* $x_{2=}$ *Mining_Oil_Gas_Extraction,* $x_{3=}$ *Construction,* $x_{4=}$ *Manufacturing,* $x_{5=}$ *Retail_Trade,* $x_{6=}$ *Transportation_Warehousing,* $x_{7=}$ *Information,* $x_{8=}$ *Finance_Insurance,* $x_{9=}$ *Real_Estate,* $x_{10=}$ *Professional_Scientific_Technical,* $x_{11=}$ *Management_Companies_Enterprises,* $x_{12=}$ *Administrative_Support_Waste_Management,* $x_{13=}$ *Educational_Services,* $x_{14=}$ *Healthcare_Social_Assistance,* $x_{15=}$ *Arts_Entertainment_Recreation,* $x_{16=}$ *Accommodation_Food_Services, and Z= Employee_Size_Location*.

Table 2 below shows that many industries are statistically significant at p-value <.001, meaning a strong relationship exists between most industries and the sales volume. Thirteen of the 16 total industries have a positive impact on the overall median sales volume in Third Ward. Notably, the Arts/Entertainment and Accommodation/Food Services industries show a statistically significant negative effect on the overall median

sales volume at $p<.01$ and $p<.001$, respectively. The exceptions are the industries of Agriculture and Educational Services. Since Third Ward is an urban setting, it is sensible for agriculture not to impact sales volume. Educational services did not show an impact; however, it should be noted that the research excluded publicly funded institutions such as schools and universities and only reviewed private businesses with less than 100 employees. Table 2 also shows that the Number of Employees variable had a positive effect on the Sales Volume variable. Overall, the table reveals how each industry impacts the median sales volume and assists in predicting the median sales volume for the Third Ward businesses with less than 100 employees.

In the quantitative review of the Data Axle Database, the research asked:

- What is the median business income growth of Third Ward and Houston income growth over the time period 1999 to 2021?
- How does the business income growth of Third Ward compare to that of the rest of Houston?
- Is there a significant relationship between economic growth in Third Ward and that of the rest of Houston and sales volume?

The research used the median test to determine if the Third Ward's sales volume significantly differed from that of the rest of Houston. The hypothesis is that the medians are the same for both groups. The alternate hypothesis for the test is that the medians are different for both groups.

Table 1 – Median Regression Results, Including All Industries and Firm Size

Pseudo R Squared	.313
Mean Absolute Error (MAE)	552.3404

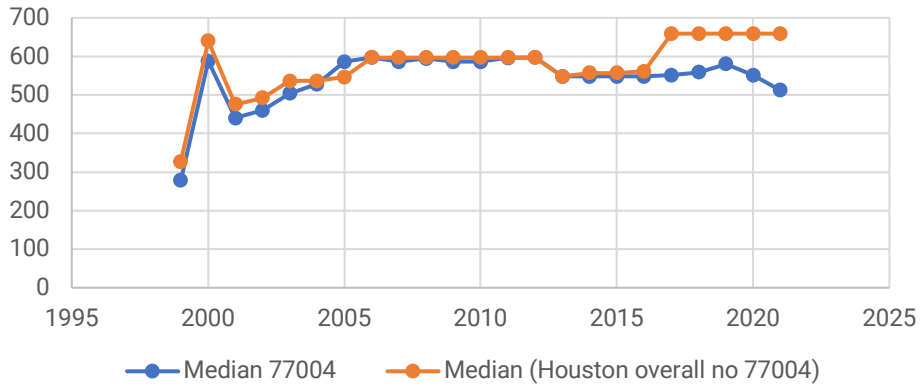
Source: Research tabulations of Data Axle dataset.

Table 2 – Estimates of the Effect of Industries and Number of Employees on Third Ward Business Sales Volume between 2000 and 2021

Dependent Variable: Sales Volume of Business 2000-2021							
Parameter	Coefficient	Std. Error	T	df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
(Intercept)	-168	4.27	-39.38	29239	.000	-176.36	-159.64
Agriculture	5	65.48	.08	29239	.94	-123.35	133.35
Mining_Oil_Gas_Extraction	1010	65.49	15.42	29239	.000	881.63	1138.37
Construction	556	8.86	62.74	29239	.000	538.63	573.37
Manufacturing	372	13.24	28.09	29239	.000	346.04	397.96
Retail_Trade	329	5.80	56.77	29239	.000	317.64	340.36
Transportation_Warehousing	227	16.71	13.59	29239	.000	194.25	259.75
Information	665	11.16	59.56	29239	.000	643.12	686.88
Finance_Insurance	1088	7.36	147.89	29239	.000	1073.58	1102.42
Real_Estate	308	7.13	43.17	29239	.000	294.02	321.98
Professional_Scientific_Technical	224	5.72	39.19	29239	.000	212.80	235.20
Management_Companies_Enterprises	2627.000	48.1373	54.573	29239	.000	2532.65	2721.35
Administrative_Support_Waste_Management	56.000	9.49	5.90	29239	<.001	37.402	74.60
Educational_Services	-24	14.05	-1.71	29239	.088	-51.55	3.55
Arts_Entertainment_Recreation	-37	11.85	-3.12	29239	.002	-60.22	-13.78
Accommodation_Food_Services	-327	6.92	-47.27	29239	.000	-340.56	-313.44
Healthcare_Social_Assistance	348	4.97	70.05	29239	.000	338.26	357.74
Employee_Size_Location	139	0.18	770.03	29239	.000	138.65	139.35

Source: Research tabulations of Data Axle dataset.
Note: Data Exclusions: Govt/Public Administration, Elementary and Secondary Schools, Colleges and Universities, Religious Organizations for the Rest of Houston, and 77004 data. Other Services industry is the control variable.

Figure 1 – Median Business Sales Volume of Third Ward Compared to the Rest of Houston between 1999 and 2021



Source: Research tabulations of Data Axle dataset.
Note: Median value is in thousands of dollars.

The 2006 median test results (Table 9) show a p-value <.001, which is less than alpha .05 therefore, one must reject the null hypothesis that the median for Houston sales volume of businesses with less than 99 employees, excluding Third Ward, is equal to the median sales volume of Third Ward businesses with less than 99 employees. In this test, businesses were split into two groups to determine if a significant relationship existed between the sales volume (economic growth) of Third Ward and the rest of Houston. The median test results show the number of businesses with median sales either greater than or less than or equal to the respective median of both groups (Table 3).

In 2006, the observed frequencies (Table 7) were statistically significant based on a Pearson Chi-Square test value = 39.277 and a significance level of p<.001, which is less than alpha .05 and is a statistically significant effect. So, the median sales volume of the rest of Houston and Third Ward were significantly different from each other, even though the median values of $597,000 were the same for 2006 (Table 4). The Phi coefficient was used to evaluate effect size. For 2006, the effect size Phi = -.018 (Table 8) result shows a slight inverse relationship between the rest of Houston's sales volume overall compared to Third Ward.

In 2006, more Third Ward businesses' sales were less than or equal to the median value of $597,000 (Table 3). More businesses' sales were less than or equal to the median value of $597,000 for the rest of Houston, although only by about 650 businesses.

As shown in Figure 1, prior to 2017, Third Ward and the rest of Houston's median sales values ran relatively closely together. Then, in 2017, the medians moved apart. In 2017, the observed frequencies were statistically significant based on a Pearson Chi-Square test where Chi Square = 75.096 value with a significance level of p<.001 (Table 15).

Therefore, one rejects the null hypothesis that the business sales volume of Third Ward is independent of business sales volume for all other Houston zip codes.

Table 3 – 2006 Median Test Frequencies of Sales Volume Above or Below Median Sales Volume for the Rest of Houston and Third Ward

Frequencies			
		Location	
		Rest of Houston	Third Ward
Sales Volume Location	> Median	60226	526
	<= Median	60881	835

Source: Research tabulations of Data Axle dataset.

Table 4 – 2006 Median Test Statistics for the Rest of Houston and Third Ward

Test Statistics		
		Sales Volume Location
N		122468
Median		597.00
Chi-Square		66.114
df		1
Asymp. Sig.		<.001
Yates' Continuity Correction	Chi-Square	65.671
	df	1
	Asymp. Sig.	<.001

Source: Research tabulations of Data Axle dataset.
Note: Median value is in thousands of dollars.

Table 5 –2006 Median Test Cross Tabulation Summary for the Rest of Houston and Third Ward

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Difference Below and Above Area	127151	100.0%	0	0.0%	127151	100.0%

Source: Research tabulations of Data Axle dataset.

Table – 6 – 2006 Median Test Difference Below Above Median for the Rest of Houston and Third Ward

Rest of Houston and Third Ward Cross Tabulation				
Count				
		Area		Total
		Rest of Houston	Third Ward	
Difference Below and Above	<=Median	60881	835	61716
	>Median	64796	639	65435
Total		125677	1474	127151

Source: Research tabulations of Data Axle dataset.

Table 7 – 2006 Rest of Houston and Third Ward Chi-Square Tests

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	39.277	1	<.001		
Continuity Correction	38.950	1	<.001		
Likelihood Ratio	39.325	1	<.001		
Fisher's Exact Test				<.001	<.001
Linear-by-Linear Association	39.277	1	<.001		
N of Valid Cases	127151				

Source: Research tabulations of Data Axle dataset.

Table 8 – 2006 Rest of Houston and Third Ward Measures of Association

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	-.018	<.001
	Cramer's V	.018	<.001
N of Valid Cases		127151	

Source: Research tabulations of Data Axle dataset.

Table 9 – 2006 Median and Mann Whitney U Tests Hypothesis Test Summary Third Ward Sales Volume compared to the Rest of Houston Sales Volume

Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The medians of Sales Volume Location are the same across categories of Third Ward and Houston	Independent-Samples Median Test	<.001[c]	Reject the null hypothesis.
a. The significance level is .050.				
b. Asymptotic significance is displayed.				
c. Yates's Continuity Corrected Asymptotic Sig.				
Hypothesis Test Summary				
	Null Hypothesis	Test	Sig.[a,b]	Decision
1	The distribution of Sales Volume Location is the same across categories of Third Ward and Houston	Independent-Samples Mann-Whitney U Test	<.001	Reject the null hypothesis.
a. The significance level is .050.				
b. Asymptotic significance is displayed.				

Source: Research tabulations of Data Axle dataset.

For the 2017 median test, the significance level p<.001 is less than a nominal alpha level of p = .05 (Table 13). Therefore, one must reject the null hypothesis that the medians are equal across Third Ward (zip code 77004) and the rest of Houston for the year 2017.

The median test indicates that there is a statistically significant difference at a p <.001 level and concludes that not all the population medians are equal. Since the Third Ward economy is smaller than the economy of the rest of Houston, it is sensible that there

would be a vast variation in median sales across industries when comparing Third Ward to the rest of the city's aggregate business sales of similar-sized firms.

In summary, when examining the effect size of the differences found in the 2006 data, the research found the Phi value = -.018 with a p-value <.001 is statistically significant, which indicates an association between the sales volume of 77004 and sales volume of the rest of Houston for the year 2006. The result indicates that there is a slightly negative relationship between the sales volume of businesses in 77004 and the sales volume of businesses in the rest of Houston.

Table 10 – 2017 Third Ward Sales Volume Statistics

Third Ward Statistics		
Sales Volume Location		
N	Valid	1408
	Missing	7
Median		551.00

Source: Research tabulations of Data Axle dataset.
Note: Median value is in thousands of dollars.

Table 11 – 2017 Rest of Houston Sales Volume Statistics

Rest of Houston Statistics		
Sales Volume Location		
N	Valid	128403
	Missing	916
Median		659.00
a. Recode of Zip Code = .00		

Source: Research tabulations of Data Axle dataset.
Note: Median value is in thousands of dollars.

Table 12 – 2017 Median Test Frequencies of Sales Volume Above or Below Median Sales Volume for the Rest of Houston and Third Ward

Frequencies			
		Recode of Zip Code	
		Rest of Houston	Third Ward
Sales Volume Location	> Median	55719	449
	<= Median	72684	959

Source: Research tabulations of Data Axle dataset.

Table 13 – 2017 Median Test Statistics Rest of Houston and Third Ward

Test Statistics		
		Sales Volume Location
N		129811
Median		659.00
Chi-Square		75.096
Df		1
Asymp. Sig.		<.001
Yates' Continuity Correction	Chi-Square	74.628
	df	1
	Asymp. Sig.	<.001

Source: Research tabulations of Data Axle dataset.
Note: Median value is in thousands of dollars.

Table 14 – 2017 Median Test Cross Tabulation Summary for the Rest of Houston and Third Ward

Case Processing Summary						
	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Difference Below and Above * Rest of Houston and Third Ward	129811	99.3%	924	0.7%	130735	100.0%

Rest of Houston and Third Ward Cross Tabulation				
Count				
		2017		Total
		Rest of Houston	Third Ward	
Difference Below and Above	<=Median	72684	959	73643
	>Median	55719	449	56168
Total		128403	1408	129811

Source: Research tabulations of Data Axle dataset.

Table 15 – 2017 Rest of Houston and Third Ward Chi-Square Tests

Chi-Square Tests					
	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	75.096[a]	1	<.001		
Continuity Correction	74.628	1	<.001		
Likelihood Ratio	77.412	1	<.001		
Fisher's Exact Test				<.001	<.001
Linear-by-Linear Association	75.095	1	<.001		
N of Valid Cases	129811				
a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 609.23.					
b. Computed only for a 2x2 table					

Source: Research tabulations of Data Axle dataset.

Table 16 – 2017 Rest of Houston and Third Ward Measure of Association

Symmetric Measures			
		Value	Approximate Significance
Nominal by Nominal	Phi	-.024	<.001
	Cramer's V	.024	<.001
N of Valid Cases		129811	

Source: Research tabulations of Data Axle dataset.

In 2017, the median sales volume for businesses in Third Ward was $551,000 (Table 10). The median sales volume for businesses in the rest of Houston was $659,000 (Table 11). A difference of $108,000 in sales. When using the chi-square analysis, the result is significant, which suggests that the median sales volume of Third Ward and the rest of Houston are associated with each other, and for 2017, the Phi value of -.024 (Table 16) indicates that the sales volume of Third Ward and that of the rest of Houston has a slightly inverse relationship. This means that in 2017, as sales volume increased in the rest of Houston, the sales volume of the Third Ward decreased. Similarly, analysis for 2006 revealed that when Third Ward and Houston were experiencing the same median sales volume, the result was significant, showing again that the null hypothesis is rejected, namely that the two regions are independent of each other. Additionally, the analysis revealed a slightly negative relationship between the two areas even when the areas experienced the same median sales volume.

Rejecting the null hypothesis that the business sales volume of Third Ward is independent of the business sales volume of the rest of Houston is supported by Sir Arthur Lewis' research, which states that the output of the developing region is not independent of the more developed region.

The data revealed that in 2006 and 2017, Third Ward and Houston shared the same median sales value. However, in 2017, economic growth was disparate between the two areas, and there was a negative relationship where growth occurred in Houston while Third Ward saw a decline in economic growth.

Additionally, the visualization in Figure 1 of the median sales revenue from 1999 to 2021 and the statistical testing connects with the assertion of Sir Arthur Lewis that the output of the developing region is relational to that of the more developed region as it shows the two tend to move together. During these years, redevelopment initiatives included:

- Re-Ward Third Ward (1995)
- Northern Third Ward Neighborhood Planning Project (2017).
- Third Ward Complete Communities Action Plan (2018).
- Recommendations for Democratic Engagement Shared Ownership and Wealth Generation in Houston's Third Ward (2016-2017).

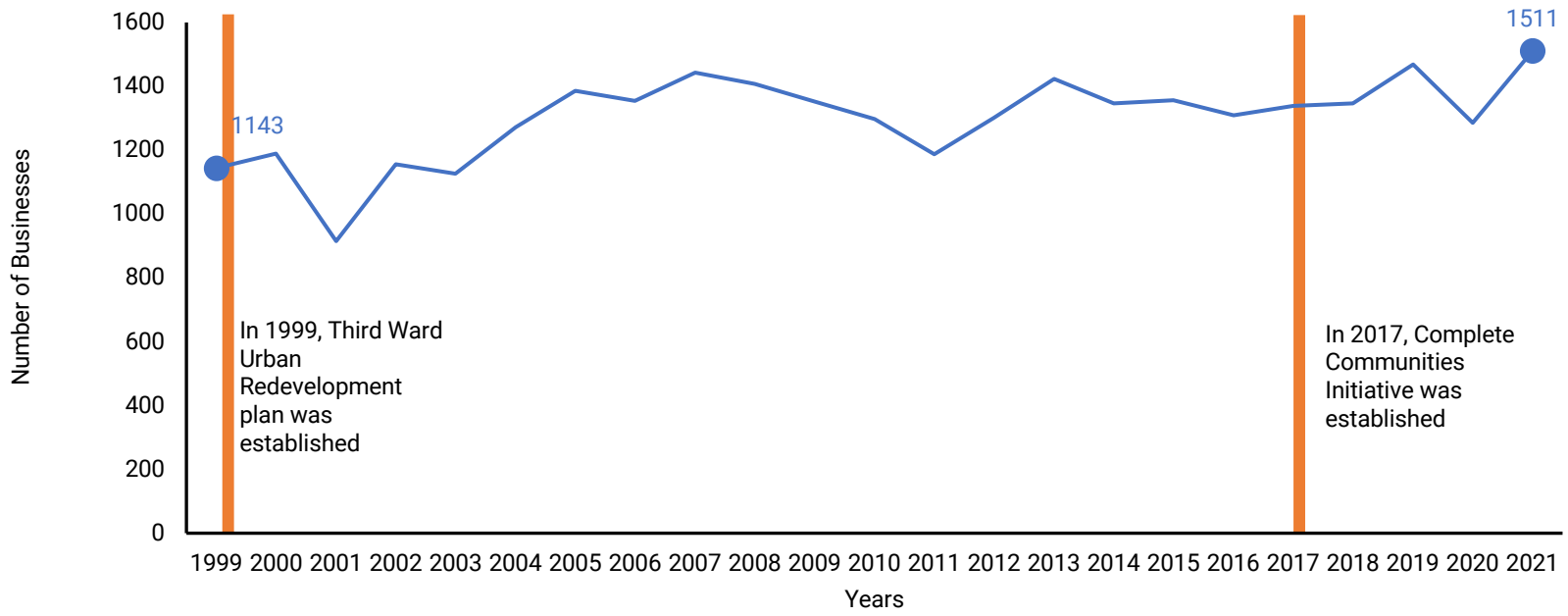
Furthermore, the chi-square test and effect size analysis using the Phi coefficient shows that a business location in zip code 77004 made a difference compared to being located in the rest of Houston.

Overall, Third Ward experienced economic prosperity along with Houston's growth, but this changed in 2017. Using the Mann-Whitney U Test, the data revealed that for each year from 2017 to 2021, there is a statistically significant difference in the sample year median of Third Ward (zip code 77004) and the rest of Houston. The data illustrates that during the time period, Third Ward did not continue to grow economically but instead showed a decline in economic growth. As shown in Figure 1, the largest difference in economic growth between Third Ward and the rest of Houston occurred in 2021, in which the median sales of businesses was $512,500 for Third Ward versus $659,000 for the rest of Houston. The next highest difference in economic growth between the Third Ward and Houston occurred in 2017 and 2020, respectively. Interestingly, the data showed that the economic growth for the rest of Houston stayed constant from 2017 to 2021.

On the other hand, despite the difference in growth in the two areas, Third Ward saw small incremental growth from 2017 to 2019. However, this was followed by a sharp decline, notably before the Covid pandemic 2020. As Houston was constant in its economic growth, it is clear that Third Ward did not maintain its growth. Sir Lewis' research asserted that a developing region depends on a developed region. Third Ward is interdependent on the greater city of Houston for its economic growth. This interdependence shows that the city cannot leave the community behind, and intentional policies should be developed to ensure sustained community growth.

The initiatives that occurred in 1999 and 2017 serve as examples of efforts made by the city of Houston and community stakeholders to revitalize the community. To complement Figure 1, Figure 2 shows a timeline for the establishment of the redevelopment initiatives and visualizes the change in the total number of businesses within the Ward. This perspective provides an overview of total business change in the community and illustrates an incremental growth in total number of businesses from 1999 to 2021.

Figure 2 – The Establishment Year of Redevelopment Initiatives and the Change in Number of Businesses in the Third Ward from 1999 to 2021



Source: Research tabulations of Data Axle dataset.

Key Qualitative Research Results

The Impact of Urban Revitalization on Small Businesses Survey 2022 Full Qualitative Results can be found in the publication: The Impact of Urban Revitalization on Third Ward Small Businesses Survey 2022.

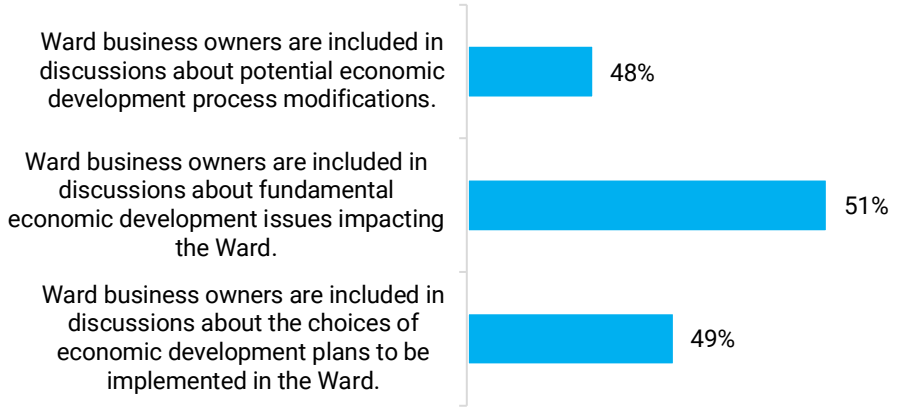
The goal of the study was to survey business owners and report findings on their perception of how they have been able to communicate feedback to urban planning officials during the economic development period from 1999 to 2021. Additionally, the research examined whether the owners felt included in the redevelopment planning that occurred over the years from 1999 to 2021. Figure 2 shows that nearly 50% of respondents disagreed at every level surveyed that they were included in discussions about economic development plans concerning:

- Changes to the renewal plans,
- basic redevelopment issues impacting Third Ward, and
- the type of plans to be pursued by the community planners.

Additionally, Figure 4 shows that no more than 21% of respondents actually agreed with being included in the development plans.

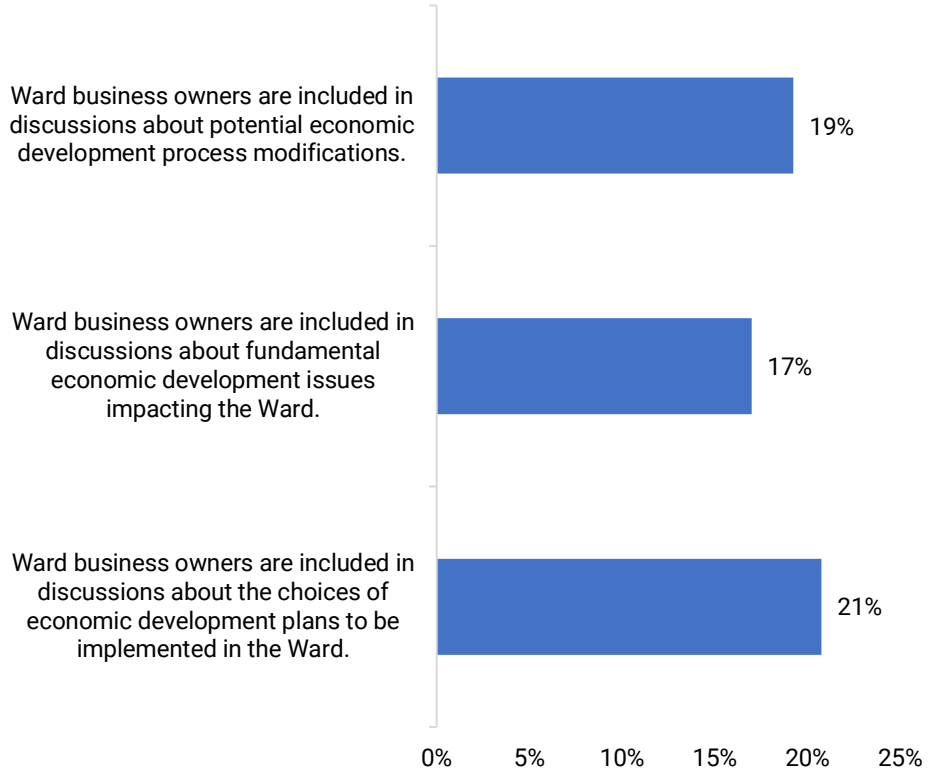
As detailed in Figure 5, nearly one-third of Third Ward business owners were unsure if the business owners' opinions were actually implemented in the redevelopment, while around a quarter of respondents thought that their opinions were rarely reflected in the community renewal. Only 16% of the owners agreed that their perspectives were a part of the revitalization. With 66% of the respondents either not knowing or not agreeing that business input is heard by community planners, there seems to have been a gap between the plans made by the planners in Third Ward and the existing businesses regarding development plans for the neighborhood. These survey findings illustrate research by Curran (2006), which speaks of the "uphill battle" and lack of power felt by small businesses in revitalizing areas resulting in displacement.

Figure 3 – Percentage of Business Owners Who Disagreed with Inclusion in Economic Development Discussions



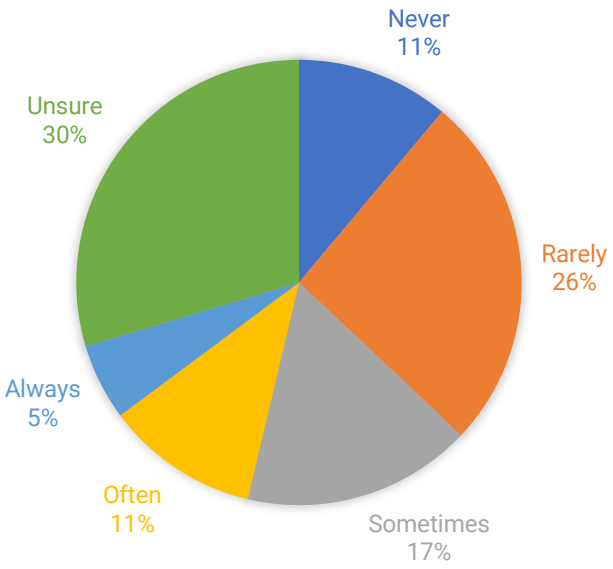
Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

Figure 4 – Percentage of Business Owners Who Agreed with Being Included in Economic Development Discussions



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

Figure 5 – Percentage of Third Ward Business Owners Who Feel Their Opinion Was Reflected in the Ward Development



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

The study evaluated the access to capital experiences of business owners in the Ward, such as their preferred source of financing, recognizing research from JP Morgan Chase Institute (2020) indicates that there is a lack of opportunity for external financing in the form of personal savings, financial institutions, or personal business connections for minority-owned businesses (Chase and Institute, n.d.). More than two-thirds (67%) of the survey respondents identified as Black or African American, and based on their responses to financial experience questions, the research results support Curran's (2006) finding that minority-owned small businesses lack financial resources.

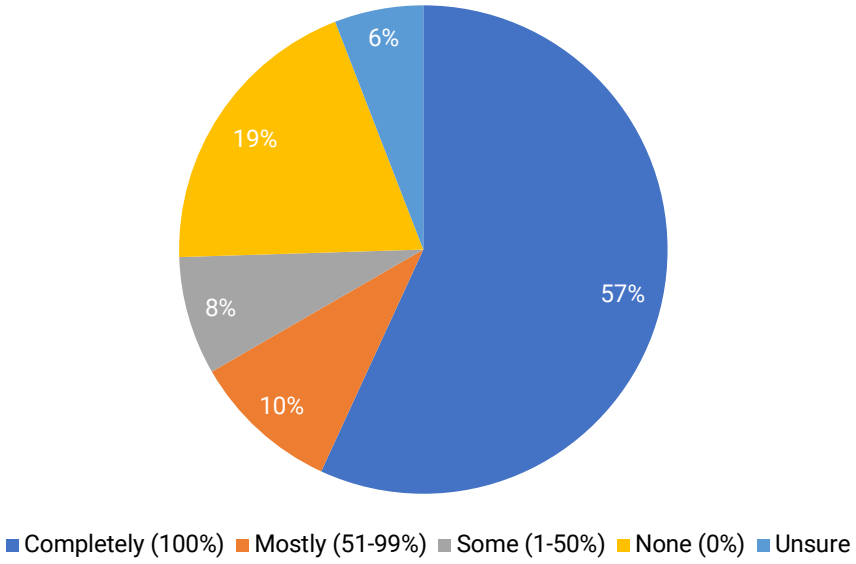
The quantitative research did not identify the residential demographics of the business owners in the community overall due to a lack of demographic information in the Data Axle data set. However to understand business owners' connection to the neighborhood, a proxy was used since the survey asked the business owners to provide their zip code of residence. Ninety-three percent of respondents lived outside of Third Ward, although their firm was located in Third Ward. This does not necessarily mean that the owners are not connected to the community, but it does indicate that these business owners must intentionally reinvest their earnings directly into the community since they live outside the neighborhood.

Sir Lewis noted that investment must be made in people of a developing area to create employment stability[19]. During the years of colonialism, African enterprises did not have the same opportunities as immigrant entrepreneurs[20]. This included the sources of capital from external and internal markets, such as banks, and the requirements to acquire investment. For example, European financial institutions extended loans to

Europeans, Syrians, and Indians but not to African entrepreneurs because they were more confident in the immigrant entrepreneurs' business acumen.[21] Furthermore, on a national level, colonial policy did not permit African governments to participate fully in the building industry, which led to a heavy dependence on foreign investment by African countries.[22]

In relation to Third Ward, regarding startup expenses, Figure 6 shows the majority of the business owners (57%) indicated they relied 100% on their personal and/ or family savings to pay for the initial costs to start and continue to run their businesses. A total of 67% mainly relied on their personal funds.

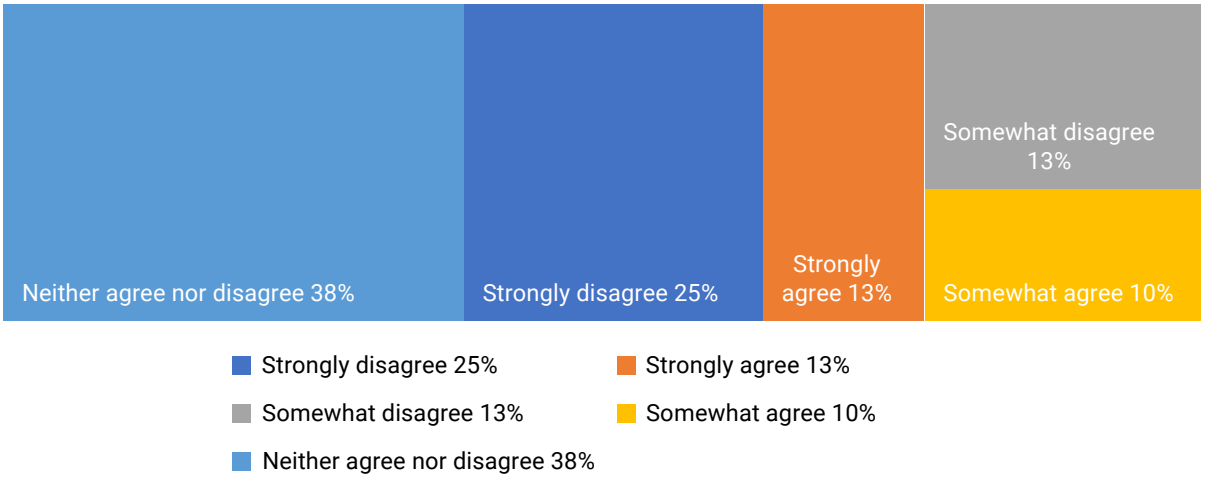
Figure 6 –Most Business Owners Relied on Personal or Family Savings for Start-Up Capital



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

Figure 7 asserts that almost 40% (38%) of the business owners did not agree that over the previous 24 months, borrowing funds to operate their business was an easy process. Only about half as many (22%) of the owners agreed that acquiring loans came with ease over the same previous 24-month period.

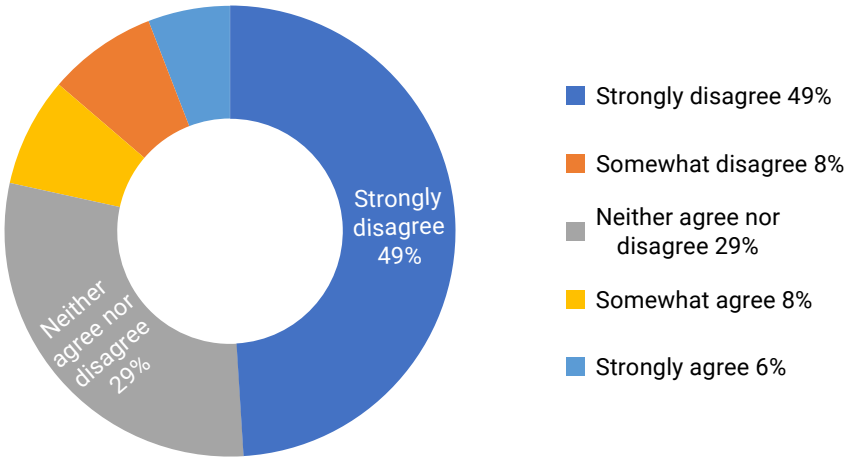
Figure 7 – Most Business Owners Had No Strong Opinion on Being Satisfied with the Borrowing Opportunities Available for Funds for Their Business During the Prior 24 months



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

As shown in Figure 8, most respondents did not even acquire a loan or line of credit easily to start their business. In conversations, some business owners also shared that they perceived it difficult to receive a loan due to the mere location of their business in Third Ward. Whether starting or running their business, more than half of all respondents (57% and 66%, respectively) disagreed that capital investment opportunities were readily available to them, as shown in Figure 8 and Figure 13.

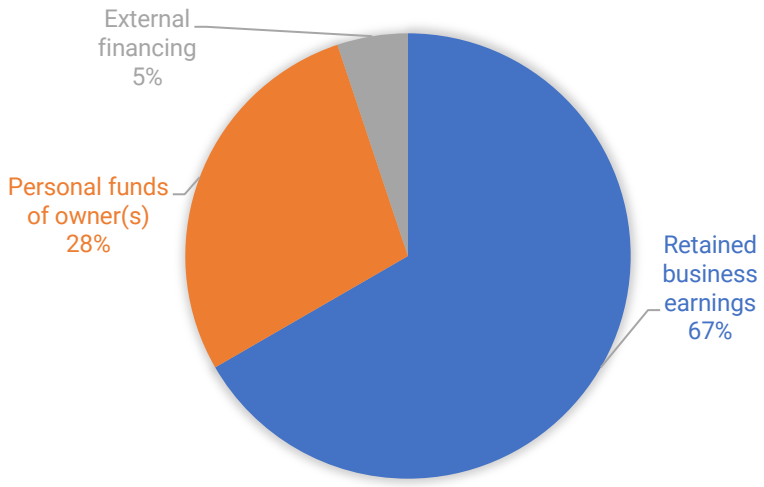
Figure 8 – Most Business Owners Disagreed that They Easily Acquired a Loan or Line of Credit to Start Their Business



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

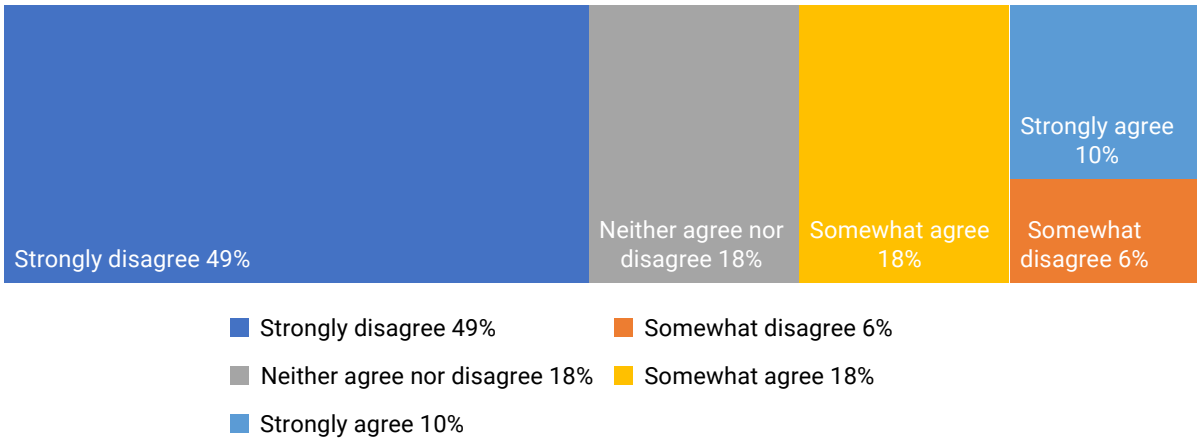
In relation to the ongoing operations of their business, Figure 9 shows that nearly 30% of business owners reported relying on their personal funds to fund the business, and only 5% reported relying on external financing.

Figure 9– Retained Business Earnings Is the Primary Source of Business Financing



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

Figure 10 – Most Business Owners Strongly Disagreed that During the Time They've Operated Their Business in the Ward, They've Had Capital Investment Opportunities Available from Outside Sources



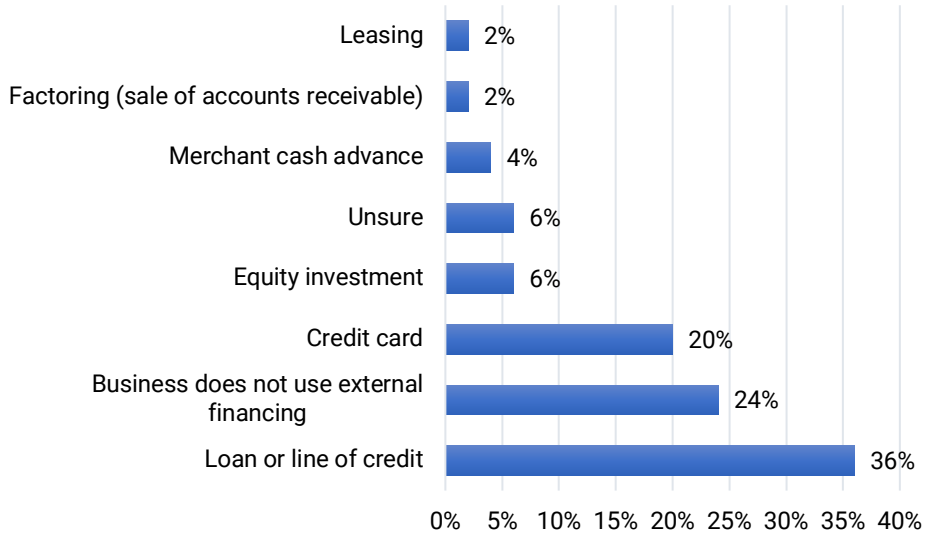
Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

To assess the prevalence of applications for external financing among Third Ward enterprises, owners were asked if they had applied for financing in the previous 24 months. More than two-thirds (68%) of the respondents did not apply for external

financing, and only a quarter (24%) applied for external financing. When looking deeper, Figure 11 shows that for those who did seek external financing, a loan/ line of credit (36%) or credit card (20%) were the top two types of financing used. Less than 20% of businesses used other types of financing such as equity investment, merchant cash advance, factoring or leasing. When inquiring more about business debt, there was nearly an even split between respondents who held outstanding debt, with 51% reporting they had outstanding debt and 46% who did not.

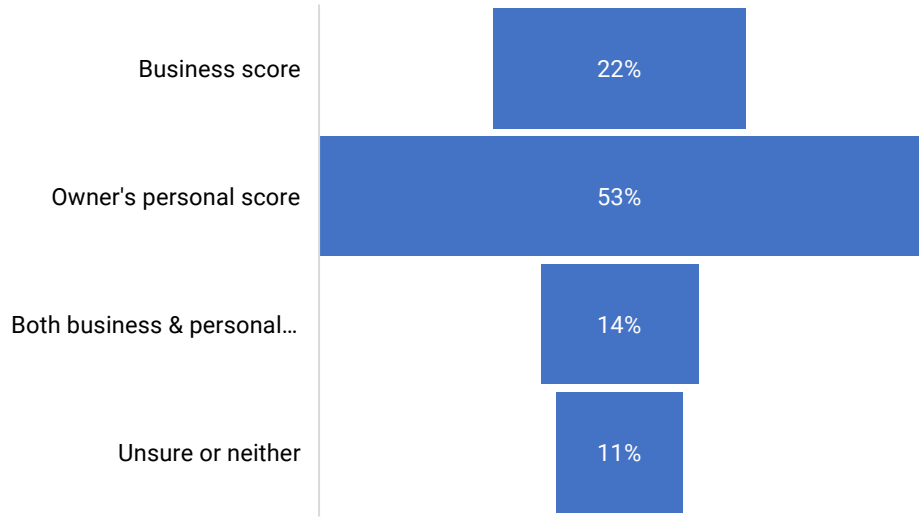
Realizing that credit score is essential in approving a business' external financing, the questionnaire asked about the type of business score that business owners used. When applying for financing, as illustrated in Figure 12, more than half of respondents (53%) depended on their personal credit score, 22% relied on the business's credit score, while 14% relied on both personal and business credit scores.

Figure 11 – Most Business Owners Used a Loan or Line of Credit as Their Primary External Financing



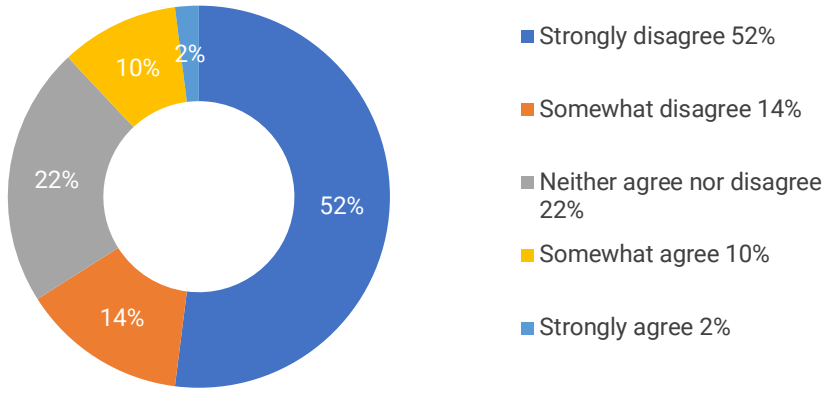
Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

Figure 12 - Most Business Owners Relied on their Personal Credit Score



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

Figure 13 – Most Business Owners Strongly Disagree They've Acquired Loans Easily During the Time They've Operated Their Business in the Ward

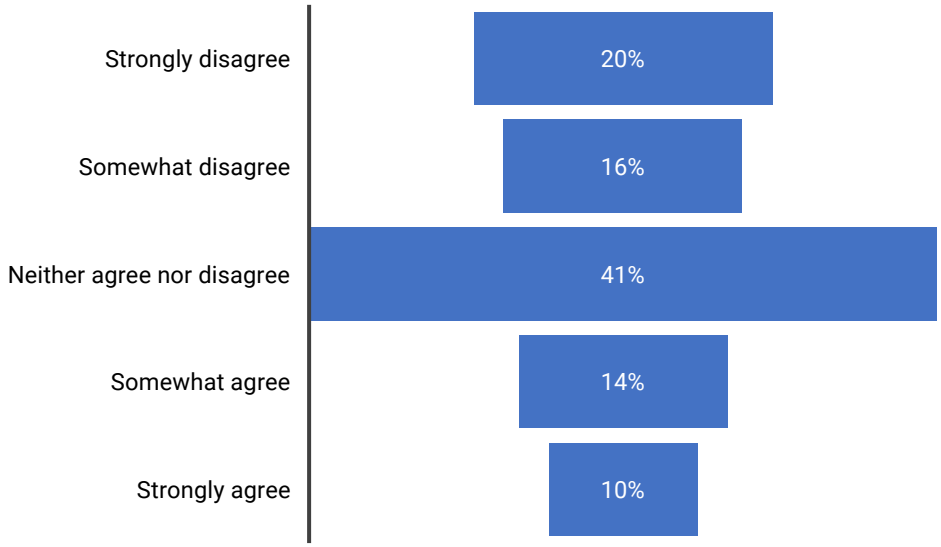


Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

However, when asked about experiencing discrimination during the loan application process, 41% of owners disagreed with experiencing discrimination (Figure 14). Among the 24% who perceived experiencing discrimination, 50% thought it was due to their race, 28% due to their gender, and 17% due to their ethnicity.

Overall, the findings do not contradict Sir Lewis and J.P. Morgan Chase's analysis that in communities of color, there tends to be a lack of opportunities for capital investment. In line with Lewis' argument, Third Ward business owners did not rely on external capital to invest in their businesses. Instead, they relied heavily on their personal finances, which means that their accumulation of wealth was based primarily on using their own dollars rather than that of outside sources, which is a more economically savvy and less labor-intensive method of wealth accumulation than relying on personal funds.

Figure 14 – Most Business Owners Had No Strong Opinion that They've Experienced Discrimination in Applying for a Loan or Line of Credit During the Time They've Owned Their Business



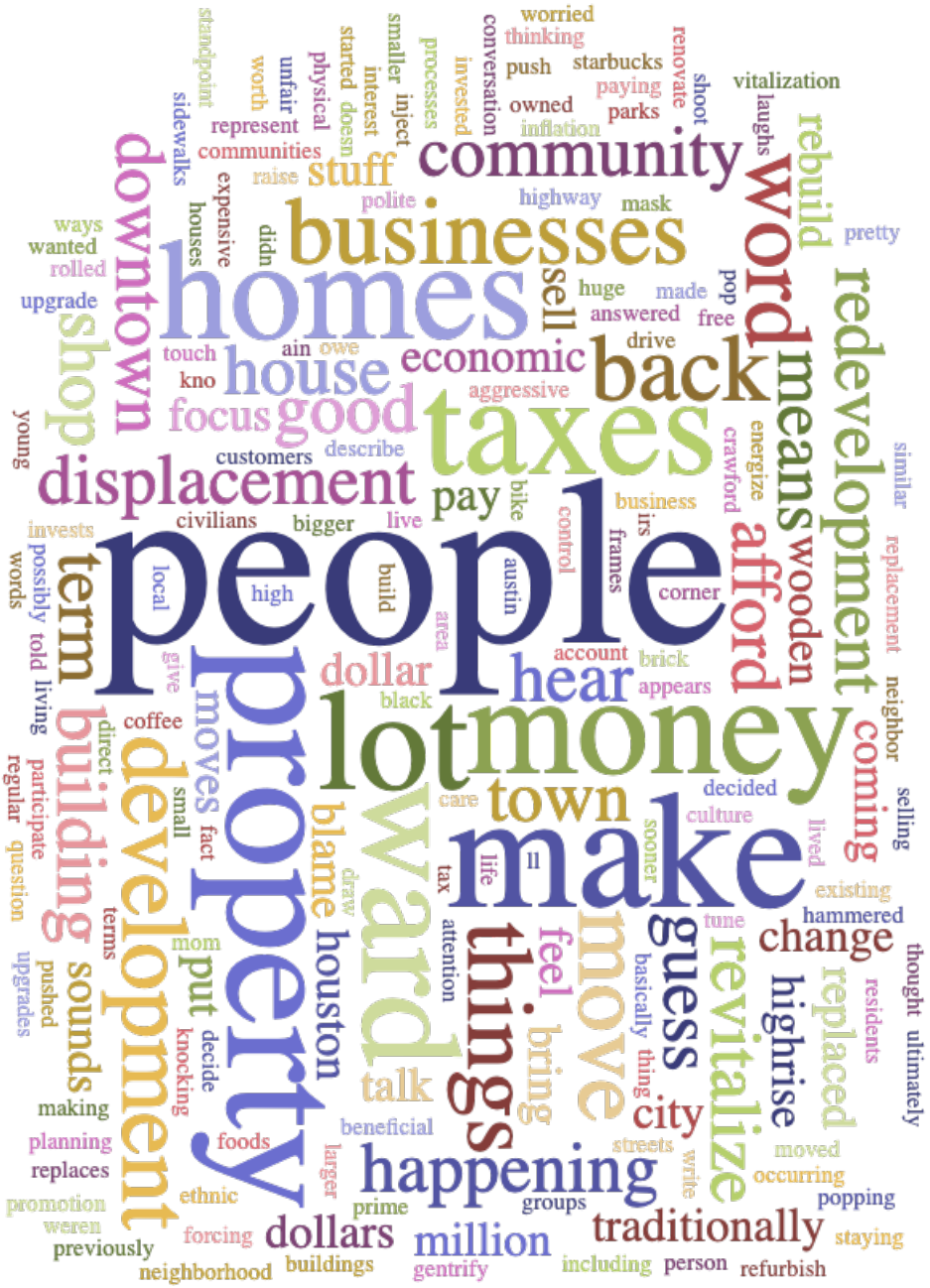
Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

The research also compiled comments shared by owners to further understand their perspectives through focus groups or the survey. Key findings that the entrepreneurs desired included the following:

- A Third Ward Chamber of Commerce that advocates for local businesses and promotes a unified business community.
- Partnerships with financial institutions that have the business community's best interests in mind and promote genuine and sustainable financing resources for local business owners.
- Stronger partnerships between businesses and investors who can bring money into the community.
- Preservation of the community's historical culture.
- Business class offerings.

- Grants or scholarships from neighboring academic institutions to business owners in Third Ward to alleviate student loan debt to attain a business degree such as an MBA.

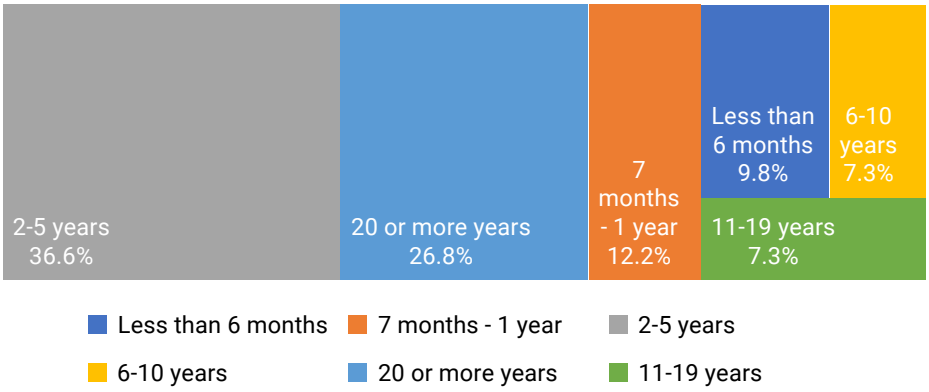
Figure 15 – Focus Group Word Cloud



Source: Third Ward Business Owners Focus Groups.
Note: The most prominent words were the most common words mentioned by focus group members.

To determine the amount of participation in the urban redevelopment process occurring in the Third Ward, business owners were asked if they were aware of urban revitalization programs such as public hearings or discussions, business council, education, or seminars being offered between 1999 and 2019 prior to the Covid-19 pandemic.

Figure 16 – Most Businesses Surveyed Operated in the Ward between 2 and 5 Years



Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

The top two categories of years of a business operation in the Ward reported were two to five years and 20 or more years, with the average business lifespan around 5 ½ years. However, when asked if they were aware of a public hearing/discussion, business council, education, or seminar on redevelopment from 1999 to 2021, 90% of owners responded they were unaware of such programs.

Public meetings were offered during the specified time period, as referenced in several city redevelopment publications. Below is a list of publications outlining city efforts to inform community members:

- Third Ward Pedestrian and Bicycle Study (2004).
- Third Ward Urban Redevelopment Plan (2005).
- Northern Third Ward Neighborhood Planning Project (2017).
- Recommendations for Democratic Engagement Shared Ownership and Wealth Generation in Houston's Third Ward (2016-2017).
- Third Ward Complete Communities (2018).

Of the 10% who indicated they were aware of public meetings regarding the redevelopment occurring within the area (5 respondents):

- 20% participated once in a program offered.
- 40% participated more than once.
- 40% did not participate.

The lack of awareness reported by surveyed owners is consistent with a low participation rate of the owners in the city's outreach regarding economic development. This disconnect is understandable since a program cannot have participation if potential participants are not aware of or engaged in such public discussions. It also follows that business owners would not feel included if they were not participating in the offered discussions. This follows with the earlier findings in Figure 4 that nearly 40% of owners either did not agree or were unsure (30%) if Third Ward entrepreneurs' opinions were reflected in the renewal. As noted by Smith (2009), it is not the development that is opposed by a community but the shortage of participation of the existing business population.

A Quantitative and Qualitative Review of Industry and Change in Number of Businesses Findings

Using the neoclassical perspective, Sir Lewis presented capital investment, entrepreneurship, and technology as keys to a prosperous economy. Kofi (1980) notes that Sir Lewis was a proponent of building an entrepreneurial class [23] to increase the number of African entrepreneurs. He identified that the lack of these key factors stunted Africa's economic prosperity, further cementing its dependence on colonizers.[24] Likewise, these same factors impact the once-forgotten U.S. inner-city communities. The Impact of Urban Revitalization on Small Businesses Survey 2022 found that 30% of the respondents were in Retail Trade and 13% were in Professional, Scientific, and Technical Services, which includes industries such as engineering and science-related fields.

Table 17 – Percentage Distribution of Third Ward Businesses by Industry Category

Retail Trade	30%
Professional, Scientific, and Technical Services	13%
Healthcare and Social Assistance	11%
Accommodation and Food Services`	11%
Manufacturing	9%
Arts, Entertainment, and Recreation	8%
Other Services, please specify:	8%
Educational Services	4%
Real Estate and Rental and Leasing	4%
Finance and Insurance	2%

Source: Impact of Urban Revitalization on Small Businesses Survey 2022.

When analyzing the Data Axle dataset covering 77004, it showed that in 2000, 10% of the business representation was in the Professional, Scientific, and Technical Services field, and in 2021 the industry's representation increased to 14%. Healthcare and Social Assistance represented 20% of the business industry in 2000 and 35% of the industry in 2021.

In contrast, only 4% of the survey respondents were from the Educational Services industry and recall that in the regression analysis, Educational Services was found to have no effect on the Sales Volume. It must be noted that Information Services, which includes computer analyst fields, stayed steady at around 2% of the industry in the Ward in 2000; however, in 2021, Information Services saw a small decline to 1.75%.

Additionally, in 2000, the rest of Houston had a 16.5% representation of Professional, Scientific, and Technical Services and a 1.6% representation of Information Services. In 2021, Professional, Scientific, and Technical Services was 11%, and Information Services grew to 2% in the rest of Houston (Table 18).

Table 18 – Percentage Comparison of STEM Industries within Third Ward and the Rest of Houston in 2000 and 2021

Year and Industry	Third Ward	Rest of Houston
2000 Information Services	2.09%	1.58%
2021 Information Services	1.75%	1.95%
2000 Prof, Sci, Tech	9.71%	16.5%
2021 Prof, Sci, Tech	14.19%	11.47%

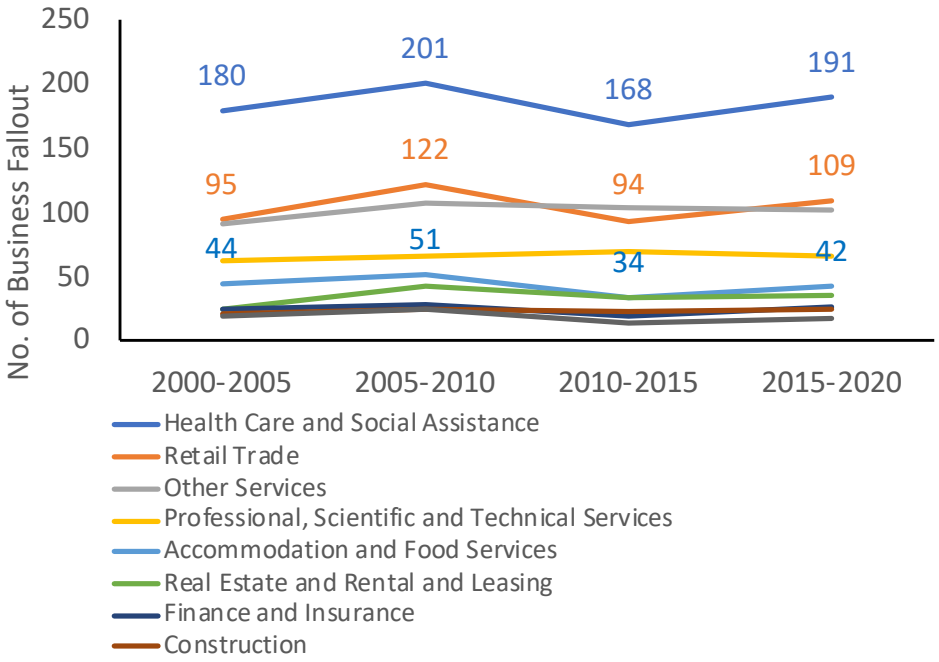
Source: Research tabulations of Data Axle data.

Though there was a small decline for the 77004 community in the Information Services field, the 4% uptick in businesses for that same community in the Professional, Scientific, and Technical Services field is promising. The Third Ward community saw an increase in this STEM-related industry despite the rest of Houston seeing a similar downturn, with a magnitude of 5%, during the same period. According to the Bureau of Labor Statistics,[25] jobs in the Professional, Scientific, and Technical Services industry require a high degree of expertise and training, which serves as an asset for a community in a technologically based economy such as that of the U.S.

When comparing 2000 to 2021, community planners and policymakers should not disregard the decline in the STEM-related Information Services industry from 2.09% to 1.75%, a 16 percentage decrease, in the Third Ward compared to the 23 percentage increase (1.58% to 1.95%) in the industry for the rest of Houston. The increase in this industry in the rest of Houston as the Ward saw a decline, although relatively small, is an example of Sir Lewis' work regarding the developed versus the developing and the inverse relationship that can occur with economic development if planners do not stay vigilant. Community decision-makers must proactively ensure that a disparity does not continue to grow, especially in a modern-day economy where technology drives current and future work. The presence of community businesses that provide access to STEM-related resources and invest within a community can provide a form of access to STEM and economic opportunity to a neighborhood overall. Increasing the number of STEM-related firms that locate and invest in the community via employment, education, and awareness through community engagement would be a win for both the neighborhood and the city overall. Technology and education are key factors for sustainable prosperity for any level of an economy, from the neighborhood to the city. Economic policies that build up people for the future promote economic progress for all.

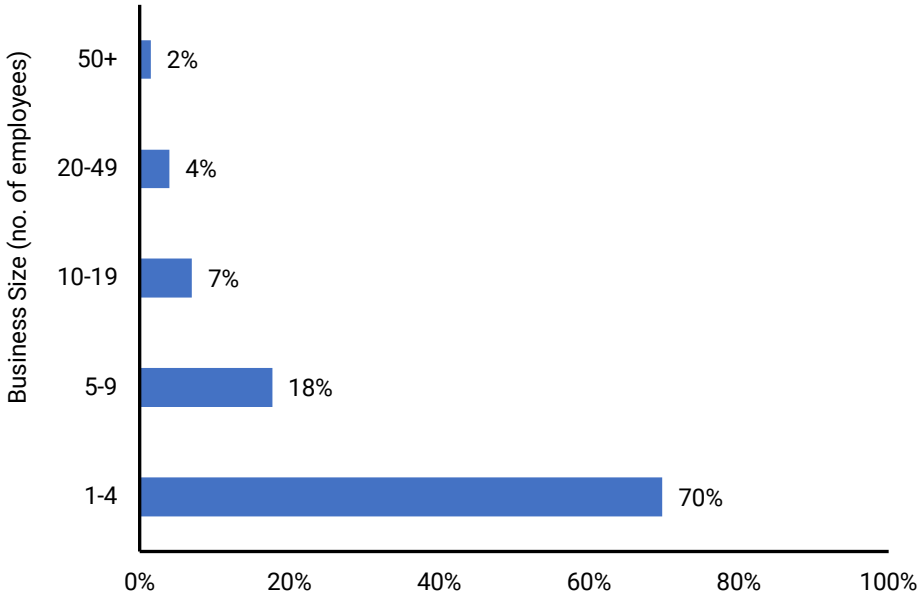
The research identified the number of businesses that were lost during 5-year periods between 2000 and 2020, as shown in Figure 17, using the term “fallout” to describe this movement of businesses in zip code 77004. The Healthcare and Social Assistance industry saw the most significant number of businesses fall out of the community from 2005 to 2010. During the 2015 to 2020 period, the highest business fallout occurred in the Healthcare Social Assistance industry. Retail Trade had a similar movement of business loss, however, in smaller numbers than that of Healthcare and Social Assistance. Notably, the Professional, Scientific, and Technical Services maintained the most steady levels of staying within the community of the most prevalent 9 industries identified in the Ward.

Figure 17 – Healthcare, Retail Trade, and Accommodation & Food Services are the Industries in which the Business Fallout Number Varied Most over the 5 - Year Periods between 2000 and 2020



Source: Research tabulations of Data Axle data.

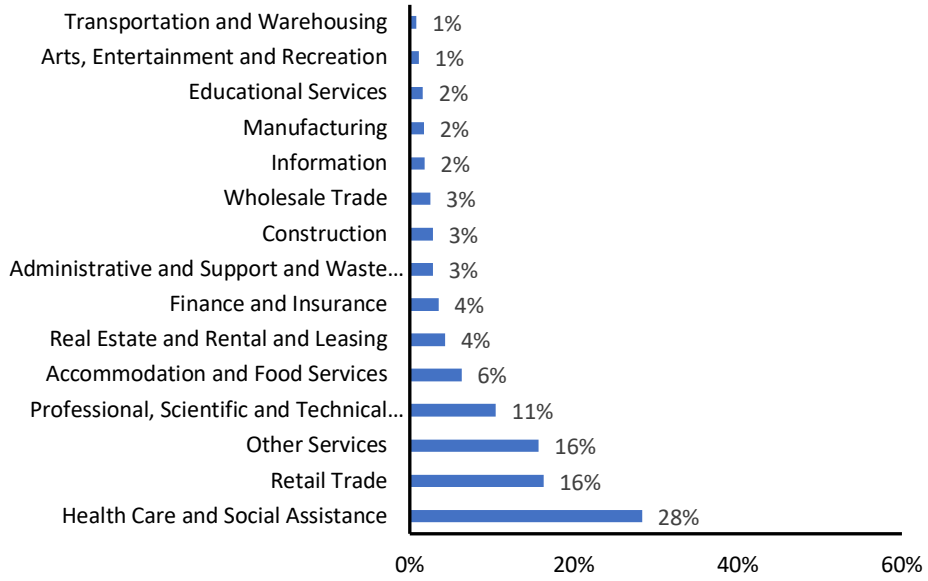
Figure 18 – Third Ward Businesses with Less Than 5 Employees Experienced the Highest Percentage of Business Fallout between the Years 2000 and 2020



Source: Research tabulations of Data Axle data.

In addition, businesses with less than five employees fell out of the community more than any other firm size. The data shows a notable decrease in business fallout from 70% to 18% when the business size increased to the range of five to nine employees from 2000 to 2020.

Figure 19 – Healthcare and Social Assistance Is the Industry with the Highest Percentage of Business Fallout between 2000 and 2021



Source: Research tabulations of Data Axle data.

Similar to what was shown in Figure 17 in regards to the number of businesses that fell out, Figure 19 also shows that Healthcare and Social Assistance had the highest percentage of fallout during the period 2000 to 2020, followed by Retail Trade and Other Services, which includes services such as auto repair, beauty salons/barber shops, funeral services, and other personal services.[26]

Methods

Engagement of the Third Ward Community

This project was funded by a grant from the Ewing Marion Kauffman Foundation as part of its Community-Engaged Entrepreneurship Research portfolio[27]and its support of entrepreneurial economic development.[28]

Since businesses are often reluctant to share information about their internal operations and finances, establishing trust and rapport between the researcher and the study participants was key to the survey's success. Reluctance is more severe in communities of color where research practices have not always been ethical or beneficial to the community of focus. To facilitate community trust and validity of the project, research in the Third Ward was conducted in cooperation with the SHAPE Community Center (SHAPE), a trusted place for community entrepreneurs and leaders to gather and share their experiences. A 55-year institution that has facilitated entrepreneurship with a belief in cooperative economics and action by creating an

entrepreneurial ecosystem serving as a business startup incubator for new business owners in the Third Ward. The principal researcher was also familiar with the SHAPE community, having volunteered in her youth at the center and was a beneficiary of the institution's belief in building up the young and old of the community. SHAPE supported the research by serving as the project's community partner. The research performed the following engagement activities:

A. Use of Third Ward event facilities
    1. Two community kickoff events were held in February 2022 at SHAPE Community Center;
    2. Two focus groups were held in May 2022 at SHAPE Community Center;
    3. Third Ward Business Appreciation Day was held in November 2022 at the Emancipation Cultural Center and;
    4. Third Ward "Data Walk" event, where research findings were presented to the community at the Emancipation Cultural Center in March 2023.

B. Recruitment of research personnel from the Third Ward
    1. Community research assistants collected and contributed to the research products.
    2. Research assistant TaCorra Brooks was the lead assistant performing survey data collection, focus groups, data visualization, and community event hosting throughout the research.
    3. Four other research assistants contributed to data collection, business history, and community events.
    4. The research engaged over 600 businesses through personal visits collectively.
    5. Online business directory
        i. The gifting of an online business directory developed by Hebrew Codes, LLC for small businesses and the community to facilitate continued business networking and local patronage among residents and businesses;
        ii. The presentation of a historical context of Third Ward businesses and owners' experience with community-led storytelling of neighborhood businesses via a Historical Consultant.

C. The Rice GIS Spatial Labs converted the project's collected data into compelling visualizations and a historical business article gallery. The interactive map provided the community with an accessible visualization of how the small business and economic landscape has changed in the community over the 20-year period in which economic development occurred. The visualizations will remain publicly available here, serving as a historical record of Third Ward's business community and as a resource for the public, policymakers, and future researchers.

D. Data Walk — The data walk is a methodological approach to empower members of a community to guide research so that it is primarily beneficial to their

community (Murray et al. 2015). This approach was developed to provide a forum for stakeholders such as residents, local policymakers, and researchers to engage with research results in an accessible walk-thru or exhibit of the data. The stakeholders then discuss the research and participate in the development of the policy that directly impacts them. Due to the nature of this study, small business owners served as key stakeholders, and their perspectives were actively pursued to direct the research and policy recommendations. The data walk consisted of the following:

1. Emancipation Community Center Data Walk Event held on March 25, 2023
2. Staffed by community coordinator and community research assistants
3. Presented research findings
4. Recorded responses from community members in attendance at the Data Walk Event
5. Presented online community directory
6. Presented Third Ward Map Visualization
7. Presented Historical Business Gallery

Survey of Small Businesses

A. Method
    1. Qualitative Survey Design
        - A qualitative survey was designed and distributed as an online survey, which was sent to approximately 1600 respondent businesses to collect demographic and the income data of business owners.

B. Procedure
    1. An introductory letter was sent to businesses.
        - Letter stated their participation would allow the business to be in an online directory and receive a gift card
        - Included an online survey link

    2. Sent mailings and emails to businesses advertising upcoming community informational meetings
        - Included invitation with an RSVP in the letter and an online RSVP option
            - Offered an option to complete the survey online and the opportunity to be included in an online directory and receive a gift card
            - Included an online directory sample in the mailing
        - Sent an email to publicly available business emails with an informational meeting advertisement
            - Included an online directory sample in emails

    3. Informational Presentations to Business Owners

- Two dates for events at the community centers
- Staffed by principal researcher and community research assistants.
- Verbally offered online directory inclusion and gift cards to business attendees who completed the survey
- Provided a sample online business directory to showcase at the meeting

4. Personal Visits and Drop-ins
    - Community research coordinator pooled community research assistants for site visits
    - During personal visits and drop-ins, showed sample online directory on a tablet to businesses
    - Administered survey on the spot during drop-in upon agreement by business owners

5. Focus Groups
    - Two focus group meetings at the community center with 30 participant community business owners to collect data on personal perspectives on owning a small business during a period of revitalization
    - Collected community-led mapping data
    - Staffed by principal researcher and community research assistants.

6. Conducted review of expected sample size compared to actual sample size:

7. Survey Response Analysis
    - Compiled collected survey data
    - Analyzed responses and made observations
    - Performed statistical analysis of responses
    - Created and Planned Data Walk event

Third Ward's Contribution to Houston's Economic Growth

A. Method
    1. Quantitative Review of data purchased from the Data Axle Database
        - Analyze industry changes over time period 1999 to 2021

B. Procedure
    1. Quantitative review of Data Axle Database -Median analyses:
        - Question: What is the median business income growth of Third Ward and Houston income growth over the time period 1999 to 2021?

- Question: How does the business income growth of the Ward compare to that of the rest of Houston?

Limitations and Recommendations

The following findings and recommendations offer a guide for policymakers in implementing economic revitalization strategies that will support the Third Ward neighborhood small businesses and economic growth. This research aimed to determine whether revitalization included businesses existing before and during the renewal period of 1999 to 2021. The research captured business owners' experiences through a survey and analyzed Third Ward's economic growth by reviewing its business sales volume and comparing it to the rest of Houston's economic business growth. In the quantitative analysis, the research did not review the demographics such as race, ethnicity, and age of business owners due to the limitations of the acquired Data Axle dataset. Future quantitative research on business owner demographics would further develop the quantitative analysis of gentrification and its relationship to economic growth within a neighborhood and the surrounding metropolitan area. Regarding the qualitative analysis performed, the research recognizes that low overall survey response and low item response rates on individual business revenue limited the release of data on self-reported business earnings from respondents. Including self-reported business earnings would allow for a more "real" earnings representation of entrepreneurship within the community. The lack of earnings data did not allow for the measurement of the economic success of individual businesses as expected in the research objectives. The research also recognizes that beginning the research during the Covid pandemic may have played a part in response rate challenges where social distancing and mask-wearing were still in place during the early stages of the collection period.

The research also recommends sustained community engagement efforts by future researchers to develop more trust among business owners with the research team. Overall, the one-year development of community relationships was successful. However, a longer period of relationship building is necessary to improve outcomes for all stakeholders for continued policymaking that benefits business owners, community members, and policymakers. The research also found low response by community members to join and stay consistent as research assistants. The research aimed to educate any community member on survey methods, data collection, data analysis, economics, and entrepreneurship, regardless of background. Sustained efforts by future researchers to build mentoring and teaching relationships with community members are crucial to community engagement research to retain and attract community research assistants to build up future researchers, economists, or business owners. Additionally, compensation for community research assistants should be easily accessible for community research assistants. Intentional efforts should be made by researchers to remove unnecessary hindrances and compensate the community research assistants.

The survey results show that, on the whole, business owners did not feel included in the overall economic development processes. The research recognizes these observations could be attributed to a lack of knowledge or interest in the development initiatives offered during the period considered by the research. As this project was a community-engaged research, continued intentional efforts to engage the community business owners are key. Policymakers should note the low participation rates in Houston development programs. As a participatory research, the recommendations to support Third Ward businesses are based on what they shared with the research. Therefore, the research recommends developing a Third Ward Chamber of Commerce to advocate for local businesses and promote a unified business community. To address capital access issues, the business owners recommended that partnerships be developed with financial institutions that have the business community's best interests in mind and promote genuine and sustainable financing resources for local business owners. Moreover, business owners want stronger partnerships between businesses and investors who can bring money into the community. Regarding education, the research recommends cultivating continued business class offerings and the development of small business scholarships by neighboring academic institutions to Third Ward aspiring entrepreneurs. Nearby academic institutions include Texas Southern University, University of Houston, Houston Community College, and Rice University. Business owners still reported needing educational, entrepreneurial programs even with these surrounding educational institutions. Although technology was not mentioned by respondents specifically, education and technology skills move hand in hand in the 21st century as education is highly technologically based, which differs from the education of the middle of the 20th century. All of the recommendations regarding education and investment mirror the suggestions by Sir Arthur Lewis from the 1950s and 1960s concerning building up an entrepreneurial class within a developing economy. However, the tools for education and entrepreneurship have become technology-centered in recent years.

The research also recommends ensuring that the community's historical culture is preserved. Business owners clearly indicated that the African American history of Third Ward be maintained throughout the process of revitalization. Maintaining established community culture and history is critical to the redevelopment efforts so that even though new economic infrastructure comes into the community, the historical infrastructure and longstanding residents of the same community are also uplifted alongside the development.

Nobel Laureate Sir Arthur Lewis shared wisdom through his work from the 1950s that the lack of financial investment, education and corresponding technology benefiting the areas undergoing economic development was a significant action hindering African countries' development, even though these same countries were the source of income and wealth for foreign developed countries and held advanced technologies of the time. Similarly, as Third Ward is a developing community within the Greater Houston economy, surveyed business owners clearly stated they desired educational resources such as business classes, scholarships, and grants that would assist in building their businesses. In addition, the 2021 analysis of the community showed that only 15% of

businesses in the neighborhood were in technologically or STEM-related industries in an age when technology is a necessary infrastructure of not only the U.S. economy but globally. If there is not a substantial representation of such infrastructure in a community, the youth of a community have less exposure to the industries and, therefore, the jobs of the future. STEM-related firms and nearby academic institutions should invest in community engagement by offering low to no-cost educational programs within revitalizing areas to increase the presence of mathematics, science, and technology for community members, including entrepreneurs and residents. Community-engaged research such as The Impact of Urban Revitalization on Small Businesses Study intentionally brought on community research assistants to expose community members to the research to build economic, statistical, and entrepreneurial skill sets. The STEM Research Inquiry Summer Enrichment Program is an example of a community-directed program that educates young people in the Ward.

As Lewis presented, investment should be made in the people of a developing community because this leads to sustainable economic growth. Third Ward business owners indicated that they desired business classes and training in entrepreneurship, so this type of educational resource is welcomed in the Third Ward. There must be attention given to this shortfall through educational resources, as identified by Sir Lewis[29] and Third Ward entrepreneurs themselves, for existing and future entrepreneurs of the community. The local Stimulating Urban Renewal Through Entrepreneurship (SURE) program is a model currently accessible in the community where prospective or current entrepreneurs are educated in an efficient boot camp mentoring program on how to build a successful business. In addition, the SCORE Houston program and the Small Business Administration Office of Houston offer community programs and even partnered with The Impact of Urban Revitalization on Small Businesses Study to provide resources to Third Ward business owners. However, business owners must be aware of such programs and choose to participate in these programs. To increase uptake by entrepreneurs and similar to the methods of this community-engaged research, continued community outreach through existing entrepreneurial training programs and the formation of more programs are recommended. These initiatives are examples of Lewis' push to increase the number of entrepreneurs by the people who live within the developing area.

Nobel Laureate Sir Arthur Lewis maintained that an absence of capital led to the discrepancy between the developed and developing economies. He argued that when an area is being developed, the development should be a process that ensures the inclusion of all stakeholders, particularly those who do not have the upper hand in accessing capital investment. As observed by the research in Third Ward, a majority of the owners reported not easily acquiring a loan to start their business or while operating their business. Private initiatives such as J.P. Morgan Chase's $30 billion Racial Equity Commitment, government programs offered by the Small Business Administration, and local programs such as those offered by the Emancipation Economic Development Council (EEDC) of Third Ward and Harris County are critical to building up community entrepreneurs. Policymakers must continue to engage business owners to meet their needs further and ensure that they are included in the growth of Houston. However,

Third Ward and Houston were experiencing economic growth together for much of the development period. There was a point in 2017 when the research identified where the growth became disparate between Third Ward and the rest of Houston. Intentional community engagement served as the defining tool for the research and is the tool the research recommends to be used by policymakers. Local, state, and national policy decisions should be based on small business owners' perspectives and, thereafter, developed and put into action.

Conclusion

When evaluating the economic growth of Third Ward as compared to the rest of Houston, the results showed that Third Ward is not independent of the rest of Houston. The sales volume of the Ward and the rest of Houston moved together until 2017. Due to the difference in the sales volume shown by the data, the years 2017 to 2021 were the years in which analysis was performed to determine if a significant relationship existed between business sales volume in Third Ward and business sales volume in the rest of Houston. The results of the comparison of the rest of Houston to Third Ward showed that there is a significant difference between the median sales of Third Ward as compared to the rest of Houston. Before 2017, the growth in Third Ward and the rest of Houston appeared to move in sync; however, between 2017 and 2021, a chasm formed between the two areas. The results showed that when measuring the economic success of small businesses in the Third Ward, the community saw an increase in economic growth, which grew nearly consistently with the growth of the rest of Houston. However, in 2017, growth became disparate between the two areas and remained that way through 2021. When examining the industry of the Ward and the change in the number of businesses in the Third Ward community, the Healthcare and Social Assistance industry saw the most number of businesses fallout from the community during the periods of 2005 to 2010 and 2015 to 2020, respectively. The Retail Trade industry experienced a similar movement of business loss but in smaller numbers than Healthcare and Social Assistance. In addition, the Professional, Scientific, and Technical Services maintained the steadiest levels of remaining in the community of all industries identified in the Ward.

The research examined the business sales volume from 1999 to 2021 in relation to industry and firm size for the developing area. Assessing these economic factors is foundational to economic development and its impact on a revitalizing community. An inclusive revitalization approach goes back to the recommendations of Sir Arthur Lewis, who argued that for a developing area to experience prosperity, there must be a priority that investment is intentional by the developed community to ensure that prosperity is inclusive, leading to prosperity for the developing community. This intentionality can be supported by using community-engaged methods in developing policy decisions that include business owners and community members impacted by neighborhood revitalization. This form of policy development moves towards all stakeholders benefiting from the renewal process. Economic development goes beyond real estate or profits gained from the new investment. If performed inclusively, economic

development can be an investment into the land masses of a neighborhood and the next generation of a community to build an economically sustainable future for businesses and residents.

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Notes

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