

Memorandum



CITY OF DALLAS

DATE October 20, 2017

TO Honorable Mayor and Members of the City Council

SUBJECT **October 16, 2017 Human and Social Needs Committee Follow-Up**

On October 16, 2017, the Human and Social Needs Committee received a briefing titled "100 Resilient Cities Update" by Chief of Resilience Theresa O'Donnell. During this meeting, Chair Casey Thomas requested the AECOM report titled "Socioeconomic Analysis of the Dallas Workforce: Identifying Economically Isolated Populations and Neighborhoods" be shared with City Council.

The report has been attached for your convenience. Should you have any questions, please feel free to contact my office at 214-670-3309.

A handwritten signature in blue ink that reads "Theresa O'Donnell".

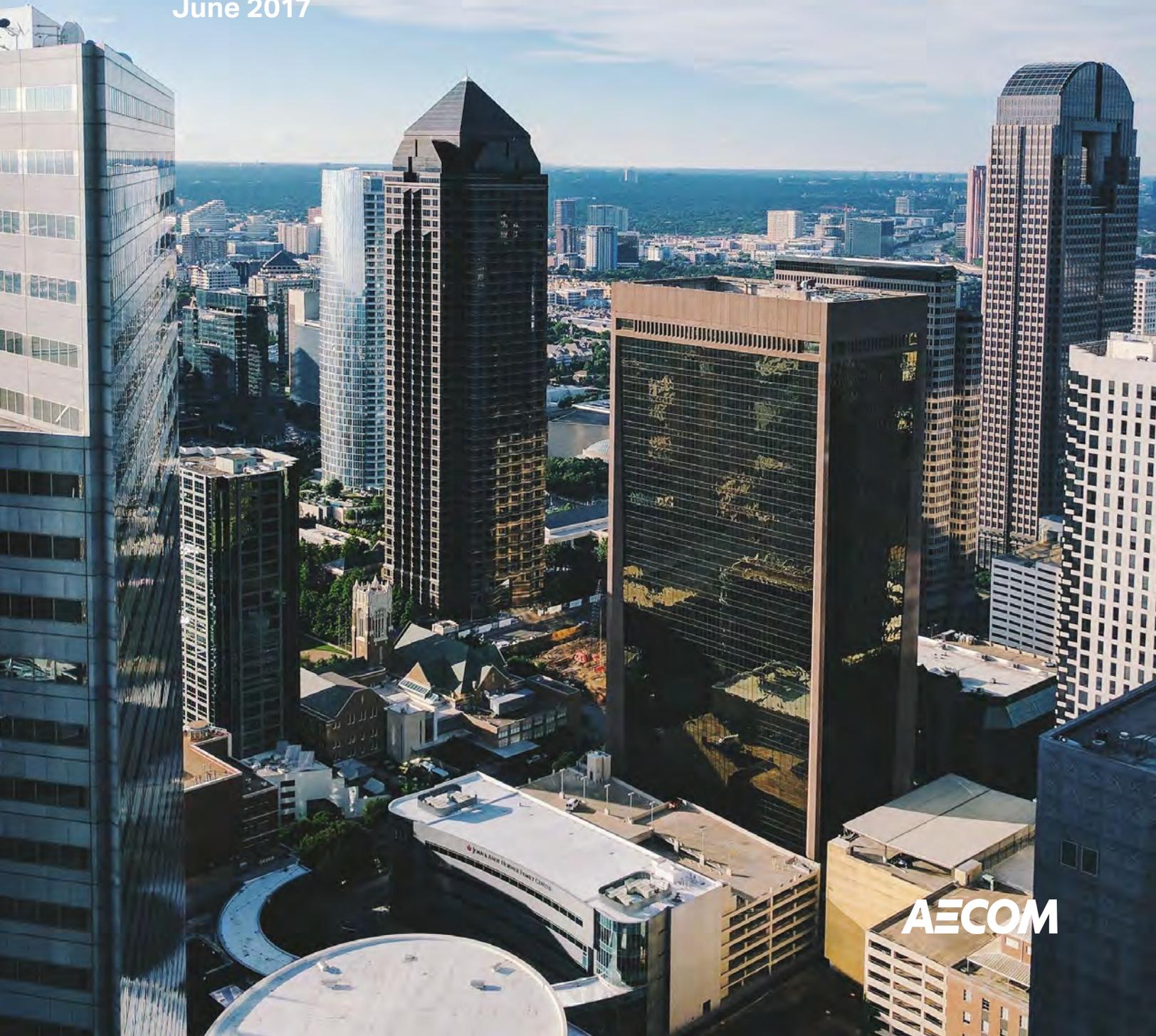
Theresa O'Donnell
Chief of Resilience

c: T.C. Broadnax, City Manager
Larry Casto, City Attorney
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Raquel Favela, Chief of Economic Development & Neighborhood Services
Directors and Assistant Directors

Socioeconomic Analysis of the Dallas Workforce: Identifying Economically Isolated Populations and Neighborhoods

Resilient Dallas Diagnostic Report (DRAFT)
June 2017



AECOM

Socioeconomic Analysis of the Dallas Workforce: Identifying Economically Isolated Populations and Neighborhoods

Acknowledgements

City of Dallas

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Section 1. Executive Summary

The objective of this diagnostic report is to identify the populations in Dallas that currently experience the greatest difficulty entering the labor force and where they are located.

1.1 Study Purpose

The objective of this diagnostic report is to identify the populations in Dallas that currently experience the greatest difficulty entering the labor force. Specifically, this study addresses the following key questions:

- Who are the Dallas residents most disconnected from employment?
- Which demographic groups and neighborhood areas suffer disproportionately from unemployment and lack of labor force participation?

The results of this focused research effort are intended to inform future strategy development around targeting employment “onboarding” strategies to the most economically isolated demographic groups and neighborhoods, consistent with the long-term goal of creating an inclusive economy for all Dallas residents.

The methodology used is a statistical correlation analysis that establishes the linear relationship between different key demographic variables and employment at the level of the Census Block Group.

Which demographic groups and neighborhood areas suffer disproportionately from underemployment and lack of labor force participation?

1.2 Findings

The variables that show the strongest correlation with employment are education, followed by ethnicity, household composition and commute time.

The spatial distribution of residents by education, ethnicity, household type and commute time corresponds directly with lower levels of observed employment at the Block Group level in West and South Dallas.

In particular, people with a high-school degree or less, African-Americans, and people living in single-person headed households show the highest negative correlations with employment. These demographic groups –heavily concentrated in South and West Dallas - face the largest challenges with “onboarding” into the mainstream workforce in Dallas.

1.3 Recommendations and Next Steps

As part of the overall agenda for building an economy in Dallas, the research and analysis presented in this study should serve as the foundation for more intensive qualitative research among the identified groups with a focus on areas in South and West Dallas. This “on-the-ground” focused research is needed to inform new approaches and strategies for bringing more of Dallas’ diverse population into the formal labor force. Whatever the final strategies developed as part of a complete workforce development plan, it is clear that Dallas will be more economically prosperous and resilient when more of its residents are fully employed and included in City’s growing economy.

Section 2. Introduction

2.1 Background and Report Purpose

As recognized by the Preliminary Resilience Assessment (PRA) for Resilient Dallas under the 100 Resilient Cities Program, economic inequality constitutes one of the primary obstacles to building a resilient Dallas. Although Dallas currently enjoys one of the strongest metropolitan economies in the United States and consistently ranks near the top of US cities for business investment and employee attraction, there are significant longstanding disparities in terms of access to employment and participation in the labor force, both by demographic group and by area of the city.

A significant body of research and policy analysis already exists for Dallas on the general topics of economic inequality, workforce preparedness and potential strategies for moving people already in employment into higher wage occupations and stable career pathways. As noted by 100 Resilient Cities Platform Partner Manchester Bidwell, one of the defining characteristics of the Dallas economy is the large percentage of “Dallas residents living at or below the poverty level who are of working age (and) currently work either full or part-time jobs (Manchester Bidwell, April, 2017).”

While this already employed but struggling segment of the workforce continues to be a major priority for economic development practitioners and policymakers, there is another segment of Dallas’ population that is less well understood: those individuals who are not employed and who face obstacles to “onboarding” into the workforce. The objective of this diagnostic report is to identify the populations in Dallas that currently experience the greatest difficulty entering the labor force. Specifically, this study addresses the following key questions:

- Who are the Dallas residents most disconnected from employment?
- Which demographic groups and neighborhood areas suffer disproportionately from unemployment and lack of labor force participation?

The results of this focused research effort are intended to inform future strategy development around targeting employment “onboarding” strategies to the most economically isolated demographic groups and neighborhoods, consistent with the long-term goal of creating an inclusive economy for all Dallas residents.

“There is another segment of Dallas’ population that is less well understood: those individuals who are not employed and who face obstacles to “onboarding” into the workforce. ”

2.2 Approach

Employment growth and access to jobs depend on both dynamic and structural economic and social factors. As a temporal, dynamic phenomenon, employment depends on variables such as the economic cycle, commodity prices, migration fluxes, etc. At the same time, there are structural characteristics that affect access to labor markets such as regional industry composition, productivity, workplace skills, sociodemographic characteristics like age and household composition, and even geographic characteristics like distance to the work place expressed as commute time. Taking into account these multi-dimensional characteristics of employment, this reports focused on how various key sociodemographic variables relate to employment.

There is an extensive literature that has studied the major factors that affect labor force participation. Among the most important, the literature underlines the following: household composition, educational attainment, marital status, number and age of children, ethnicity and area of residence. This report takes the previous research in this field as a point of departure and analyzes the relationship of different sociodemographic variables with employment in Dallas.

2.3 Methodology

In order to determine the relationship between the most important demographic variables typically associated with employment and unemployment, AECOM prepared a statistical analysis measuring the linear relationship/correlation between the different key variables and employment. Since many of the variables used in this analysis are closely correlated, this methodology was preferred to a causal-oriented approach such as a multi-variate regression analysis. The latter analysis would likely produce non-robust results with many confounders affecting the variable of interest (employment) at the same time as they affect each other.

Correlation Coefficients.

In correlation analysis the value that is produced is referred to as a coefficient. Correlation coefficients measure the degree to which two variables are related to each on a scale from -1 to 1. For example, a value of 0.3 indicates that there is a positive relationship between the two variables. A measurement of -0.3 would indicate a negative relationship.

Data Source.

The dataset used to conduct this analysis is the US Census American Community Survey five-year estimates for 2015, as updated for some variables by private data provider ESRI for 2016.

Areas Analyzed.

Our geographic level of analysis unless otherwise noted is the Census Block Group, with the city of Dallas comprising approximately 1,000 Census Block Groups across five counties (Collin, Dallas, Denton, Kaufman, and Rockwall). Census Block Groups are smaller than Census Tracts and allow for a finer-grain level of demographic and statistical analysis.

1. See for example, Wamuthenya, W. (2010). Determinants of Employment in the Formal and Informal Sectors of the Urban Areas of Kenya. African Economic Research Consortium, Research paper 94.

2. In this analysis, we excluded outlier observations for employment that took values of 0 or 100, so the final number of Census Block Groups analyzed here is approximately 980.

Section 3. Analysis of Employment by Demographic Variable and Block Group

3.1 Employment

According to the US Bureau of Labor Statistics, the overall unemployment rate in Dallas was 3.8% as of April, 2017. For economists, a rate of five percent or below traditionally suggests that the labor market is at or above full employment, meaning that the labor force is being utilized as efficiently as possible. Despite this seemingly positive indicator of economic health, there remain large numbers of working age Dallas residents who are not currently seeking employment and/or who have never been in the formal labor force. This subset of Dallas residents who are not participating in the growing regional economy are the focus of the maps and tables which follow below.

Map 1 displays employment by Block Group for Dallas residents aged 16 and over. As shown, most Block Groups in Dallas have relatively high overall rates of employment, averaging around 95 percent. There are, however, stark differences across the city, with areas of West and South Dallas having particularly large numbers of Block Groups with lower than average numbers of residents holding a job. In some neighborhood areas of South Dallas there are Block Groups with less than 75% of working age residents currently in employment, meaning that 25% of adults 16 and over are either unemployed or not in the labor force (e.g., not seeking employment, retired, disabled, etc.).

Following the findings of relevant literature regarding the determinants of labor supply and access to job markets, the sections below examine the relationship between employment and its determinants through a correlation analysis. In what follows, we analyze in more detail each of these relationships, both with a statistical and spatial analysis.

3.2 Employment by Educational Attainment

Education is typically considered to be the most important determinant of access to labor markets. In theory, as individuals acquire more skills, they become more productive and are thus more attractive to employers. Figure 1 below displays the correlation between employment status and educational attainment. As expected, Census Block Groups with a higher concentration of people with low educational attainment (those who completed at most high-school) show lower employment, whereas Census Block Groups with a more educated population have higher employment. This relationship starts to be positive for associate degrees and reaches a peak with a bachelor's degree, which implies that having a college degree has the largest positive association with employment overall.

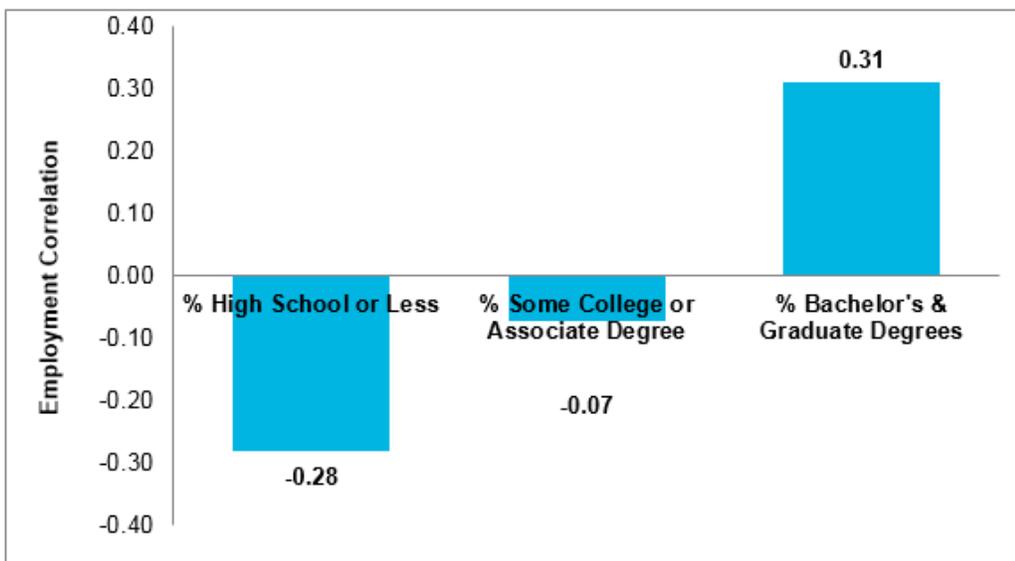
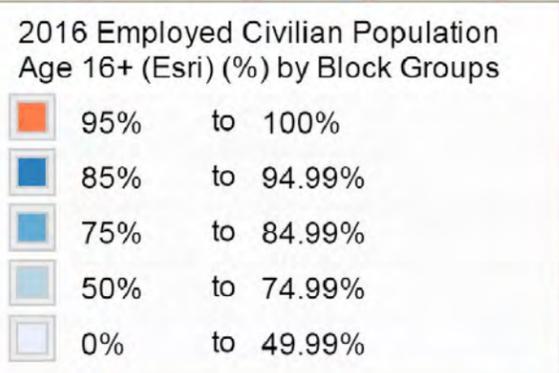
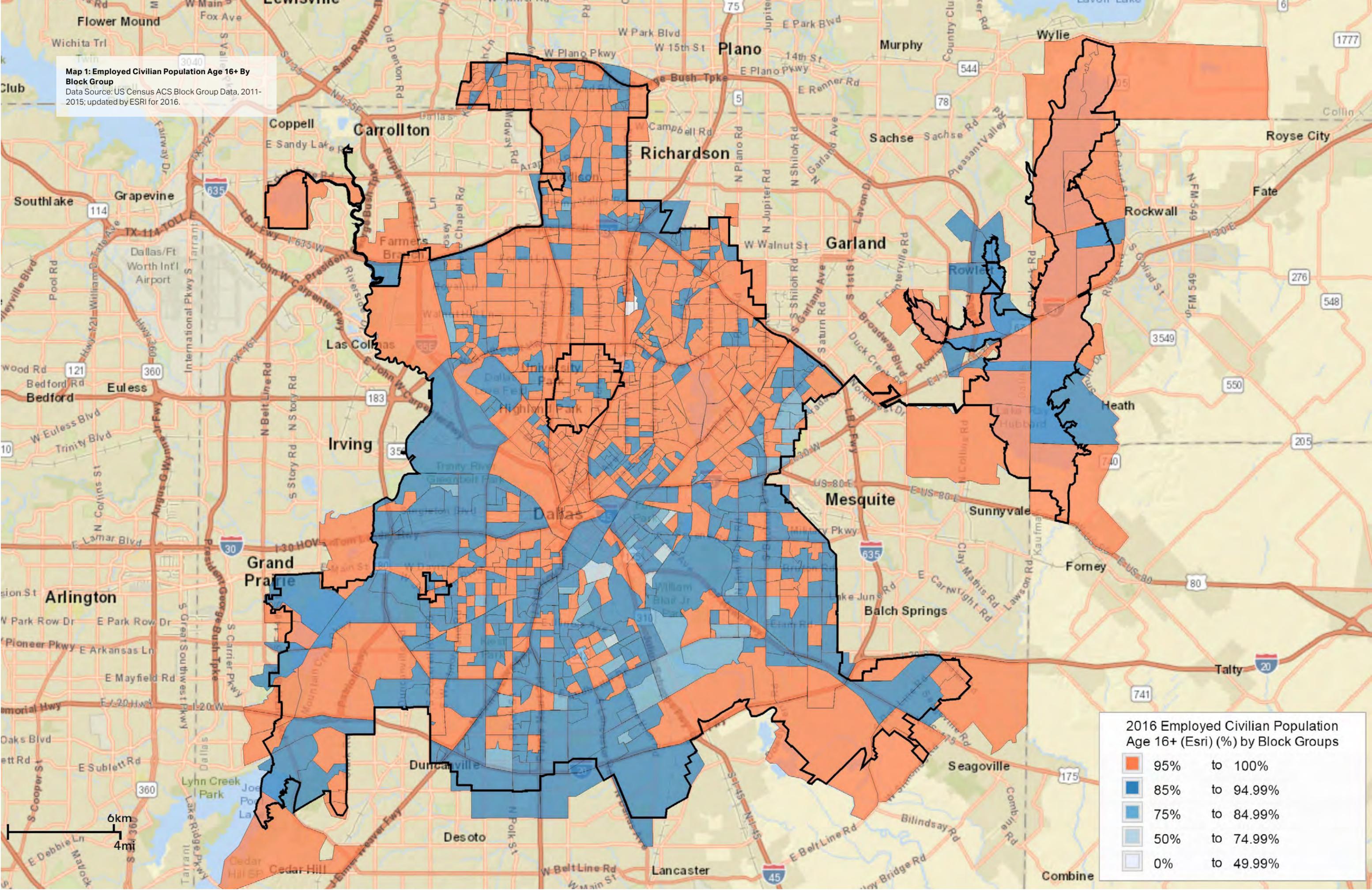


Figure 1: Employment Correlation with Educational Attainment, 2016

Data Source: US Census ACS 2015, ESRI 2016

Map 1: Employed Civilian Population Age 16+ By Block Group
Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.



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As shown in Figure 2 below, this relationship between education and employment does not appear to vary markedly by gender, with the exception that women with lower levels of educational attainment (grade 10 and less) tend to be marginally less employed than men with comparable levels of education.

AECOM also analyzed the association between different types of college degrees and employment, shown in Figure 3. The career choices that are associated with higher levels of employment in Dallas are business degrees, communications, social science and science and engineering, whereas Census Block Groups with higher

concentrations of workers in multidisciplinary studies, physical and related sciences, and education degrees are associated with lower rates of employment.

Maps 2 through 4 show the spatial distribution of educational attainment. Highlighted in red, there are two clear zones that have a high percentage of residents with low educational attainment: one in the southeast section of the city and another in the western section of the city. This distribution corresponds directly with the lower levels of observed employment depicted in Map 1.

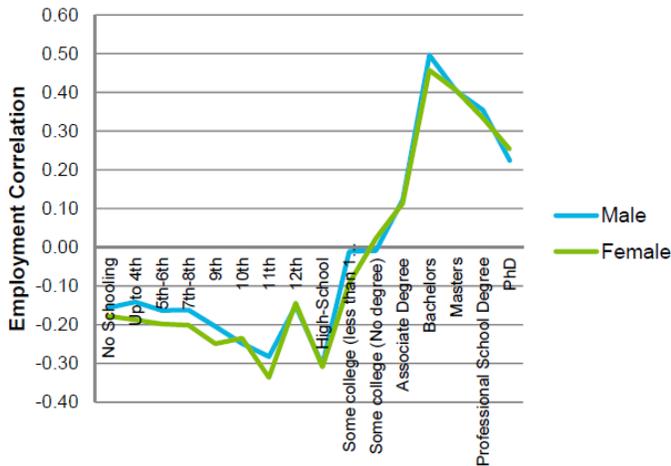


Figure 2: Employment Correlation by Education and Gender
Data Source: US Census ACS 2015

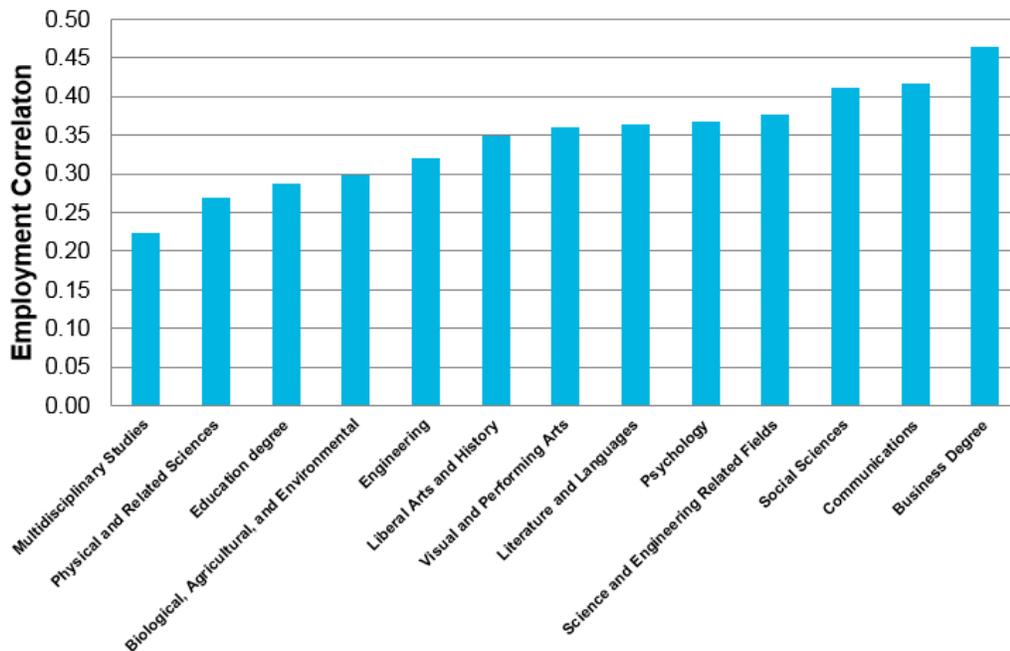
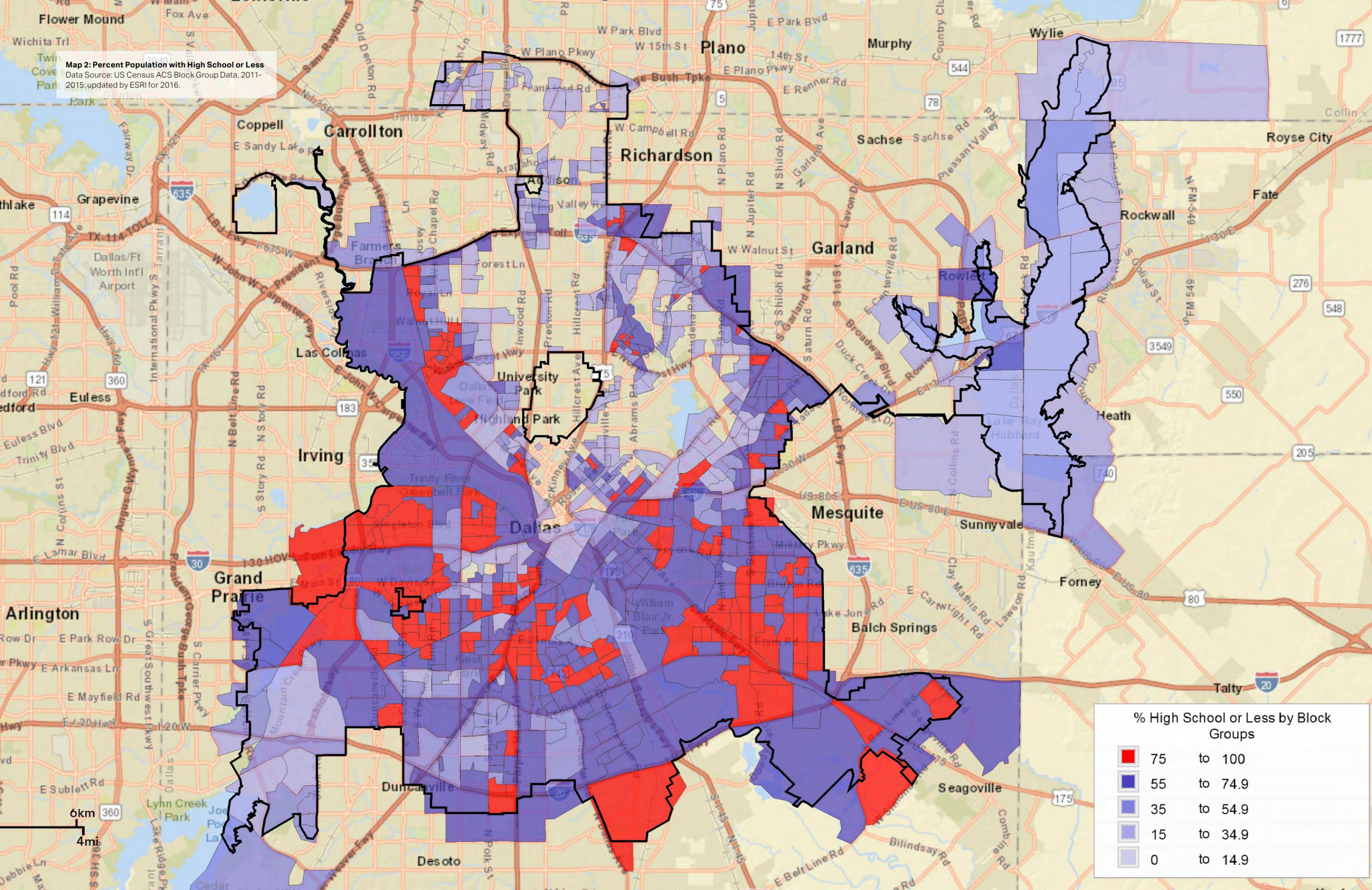


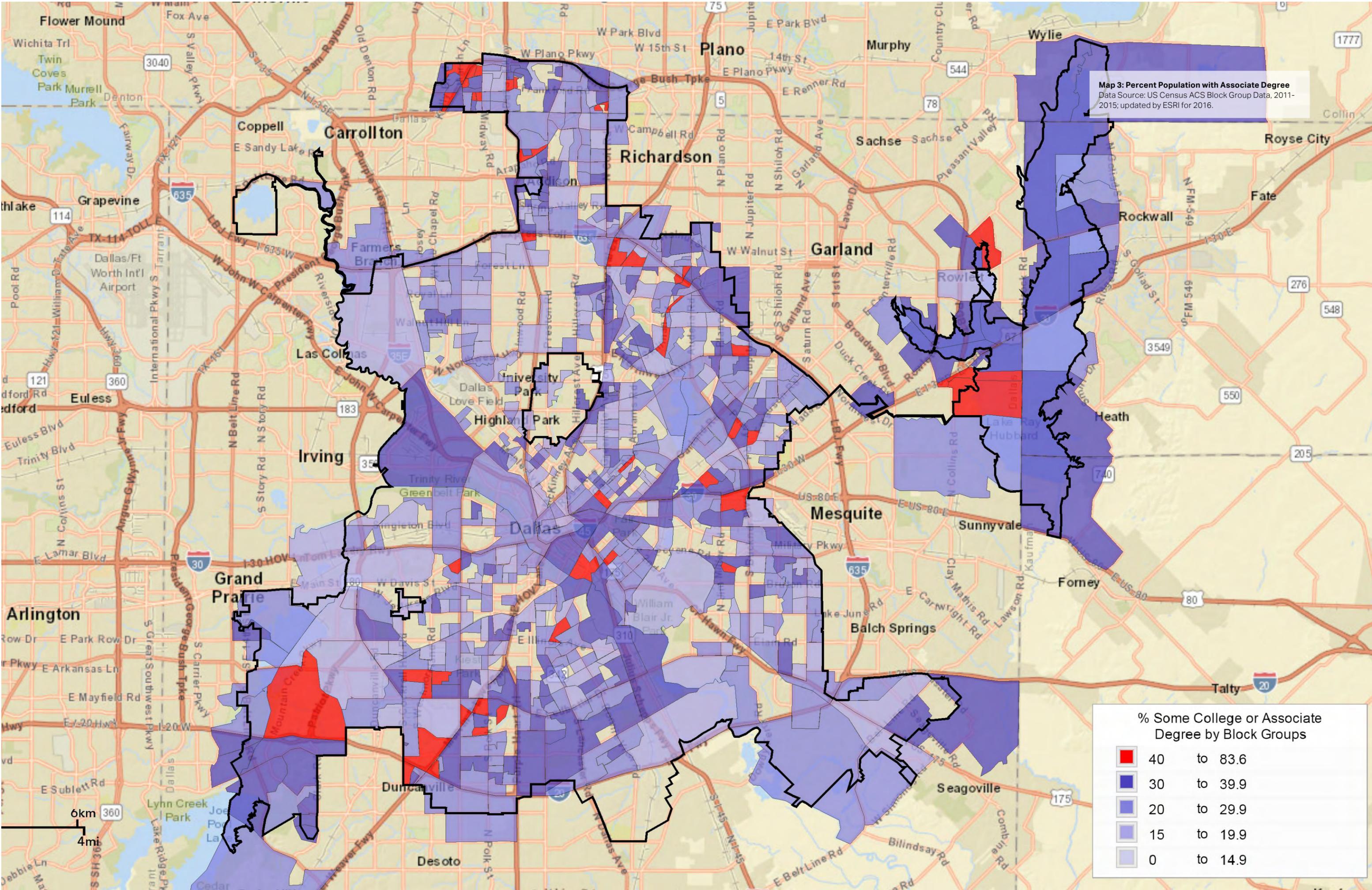
Figure 3: Employment Correlation by Educational Degree Type, 2015
Data Source: US Census ACS 2015

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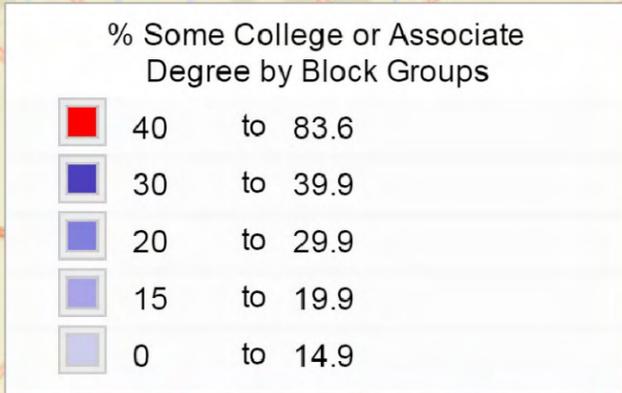
Map 2: Percent Population with High School or Less
Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.



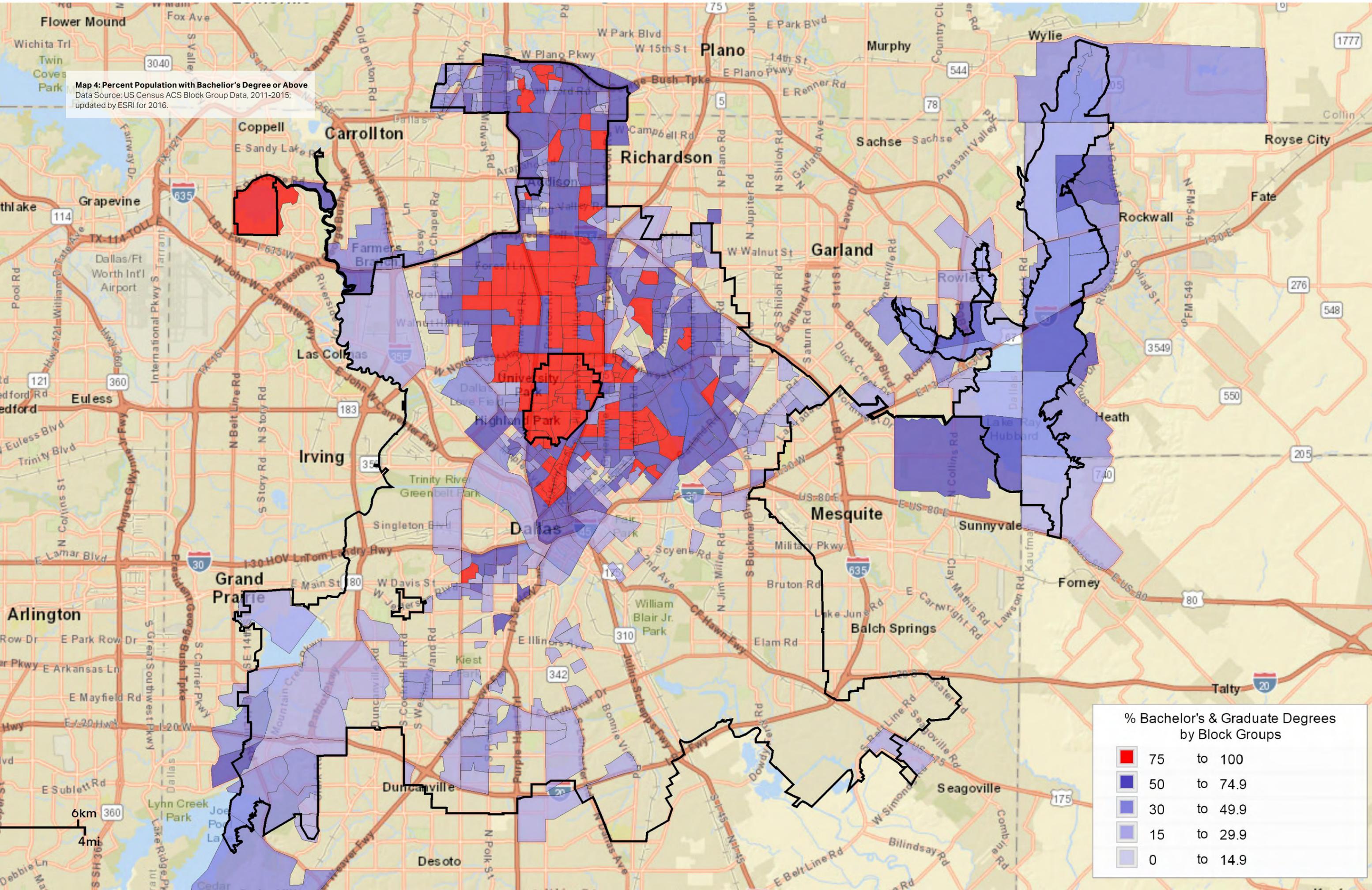
6km
4mi



Map 3: Percent Population with Associate Degree
Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.



Map 4: Percent Population with Bachelor's Degree or Above
Data Source: US Census ACS Block Group Data, 2011-2015;
updated by ESRI for 2016.



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3.3 Employment by Race and Ethnicity

As other studies have documented, race and ethnicity also often play an important role in determining access to job opportunities, both because of educational disparities between different ethnic groups, and as a result of institutional racism in the employment markets. Figure 4 below presents the statistical correlation between employment and the percentage of households whose head identifies with a single ethnic or race group. Consistent with previous studies, Block Groups with higher White and Asian populations show higher levels of employment, whereas the opposite occurs in areas with a larger share of African Americans and, to a lesser extent, Hispanics.

Maps 5 through 8 on the following pages present the spatial distribution of race and ethnicity in Dallas. In general, African American households cluster in the southern part of the city, Hispanic households concentrate in East and Southwest Dallas and the White population is concentrated in Central and North Dallas. The Asian population shows neither a significant density nor population clusters overall in the city, but is mostly located in North- Central Dallas. As with the maps depicting educational attainment, there is a direct correlation between patterns of observed employment as shown in Map 1 and the distribution of Dallas' population by race and ethnicity.

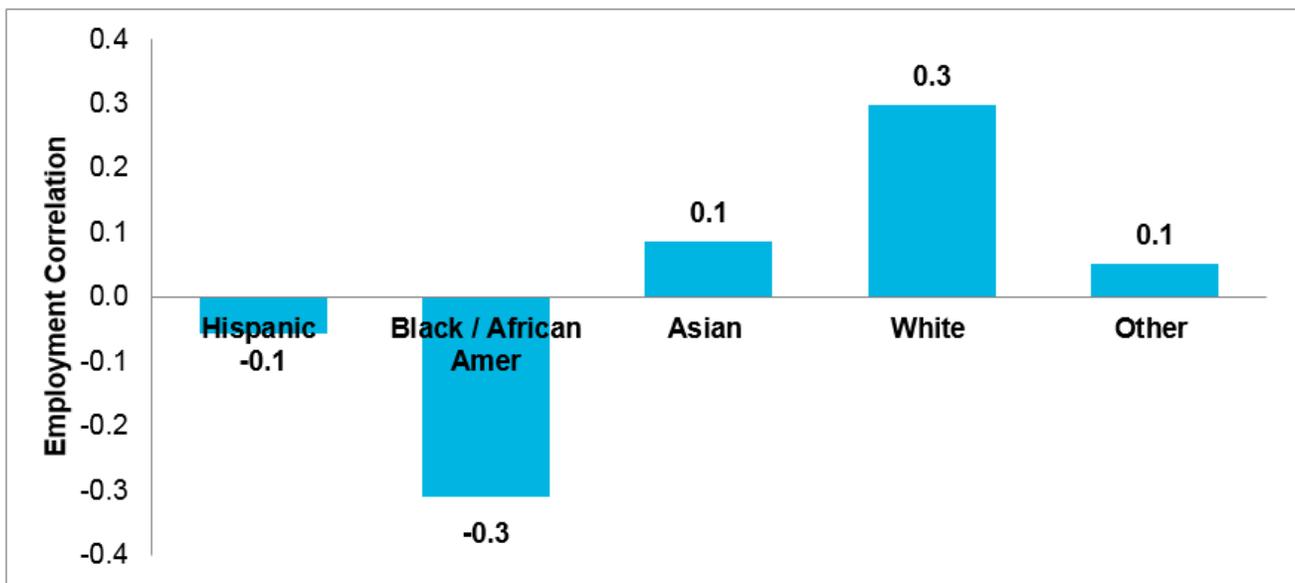
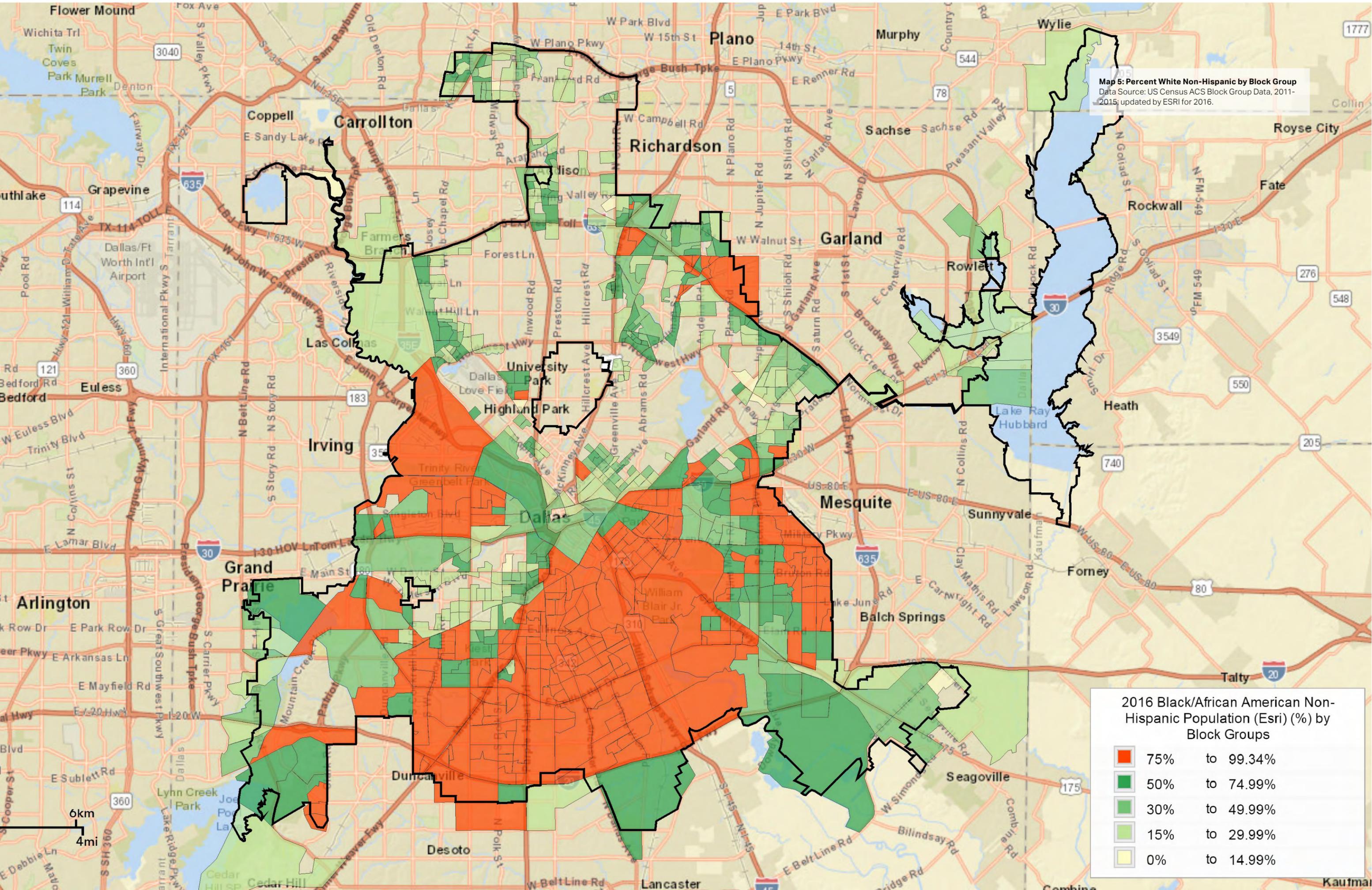


Figure 4: Employment Correlation with Race/ Ethnicity 2016
Data Source: US Census ACS, 2015, ESRI, 2016



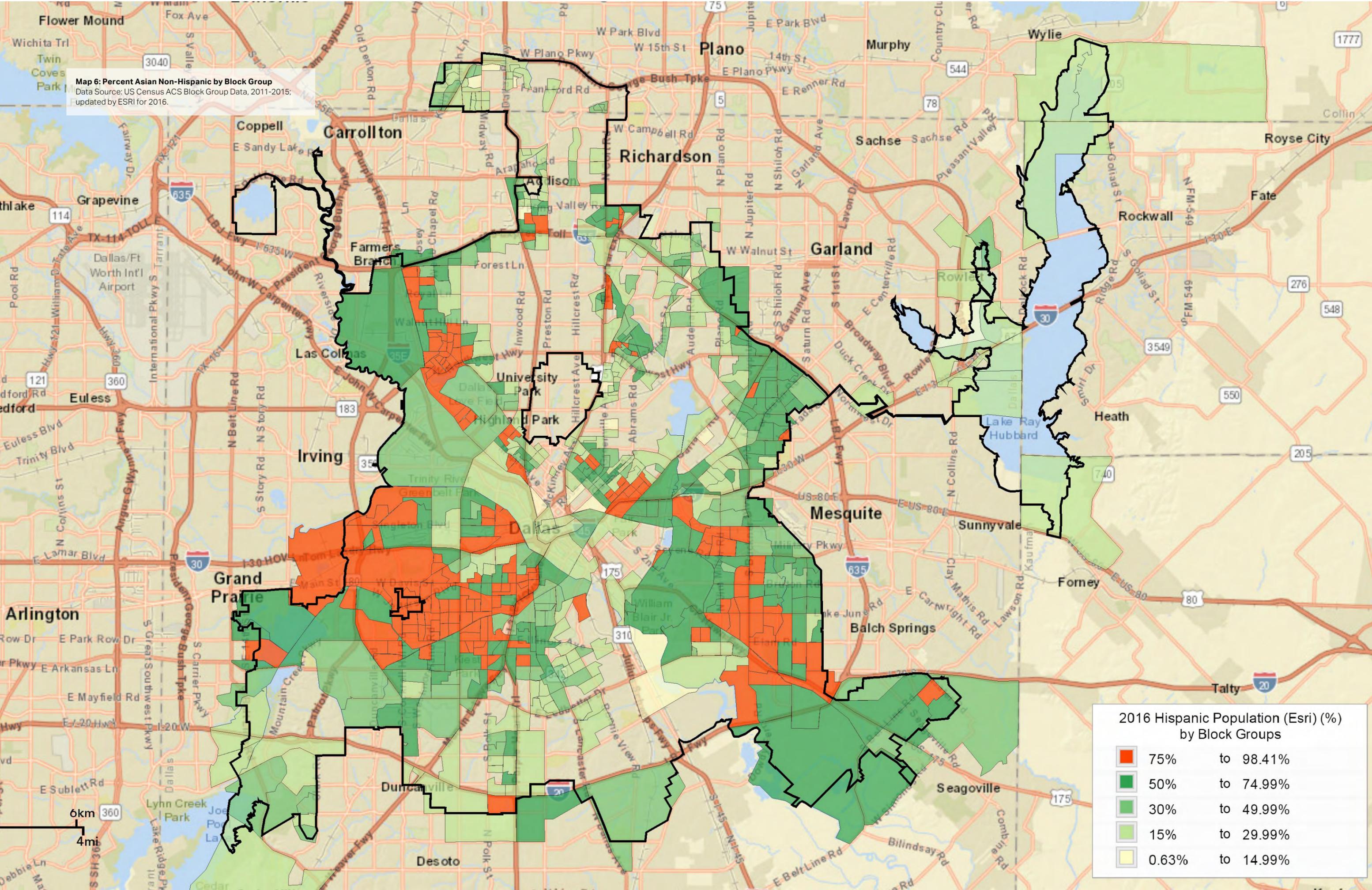
Map 5: Percent White Non-Hispanic by Block Group
Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.

2016 Black/African American Non-Hispanic Population (Esri) (%) by Block Groups

Dark Orange	75%	to 99.34%
Orange	50%	to 74.99%
Light Orange	30%	to 49.99%
Yellow-Orange	15%	to 29.99%
Light Yellow	0%	to 14.99%

6km
4mi

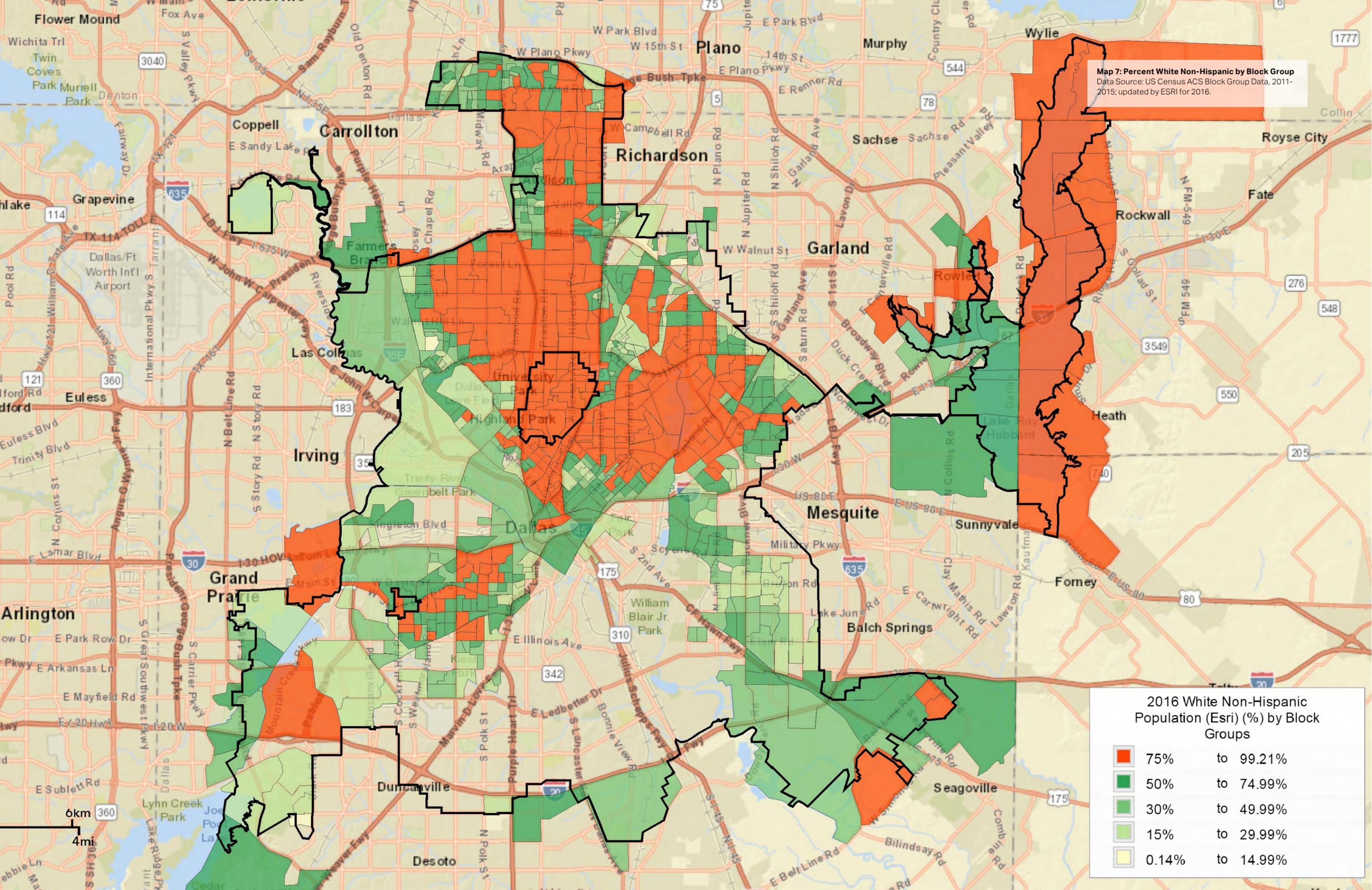
Map 6: Percent Asian Non-Hispanic by Block Group
 Data Source: US Census ACS Block Group Data, 2011-2015;
 updated by ESRI for 2016.



2016 Hispanic Population (Esri) (%) by Block Groups

■	75%	to	98.41%
■	50%	to	74.99%
■	30%	to	49.99%
■	15%	to	29.99%
■	0.63%	to	14.99%

6km
4mi

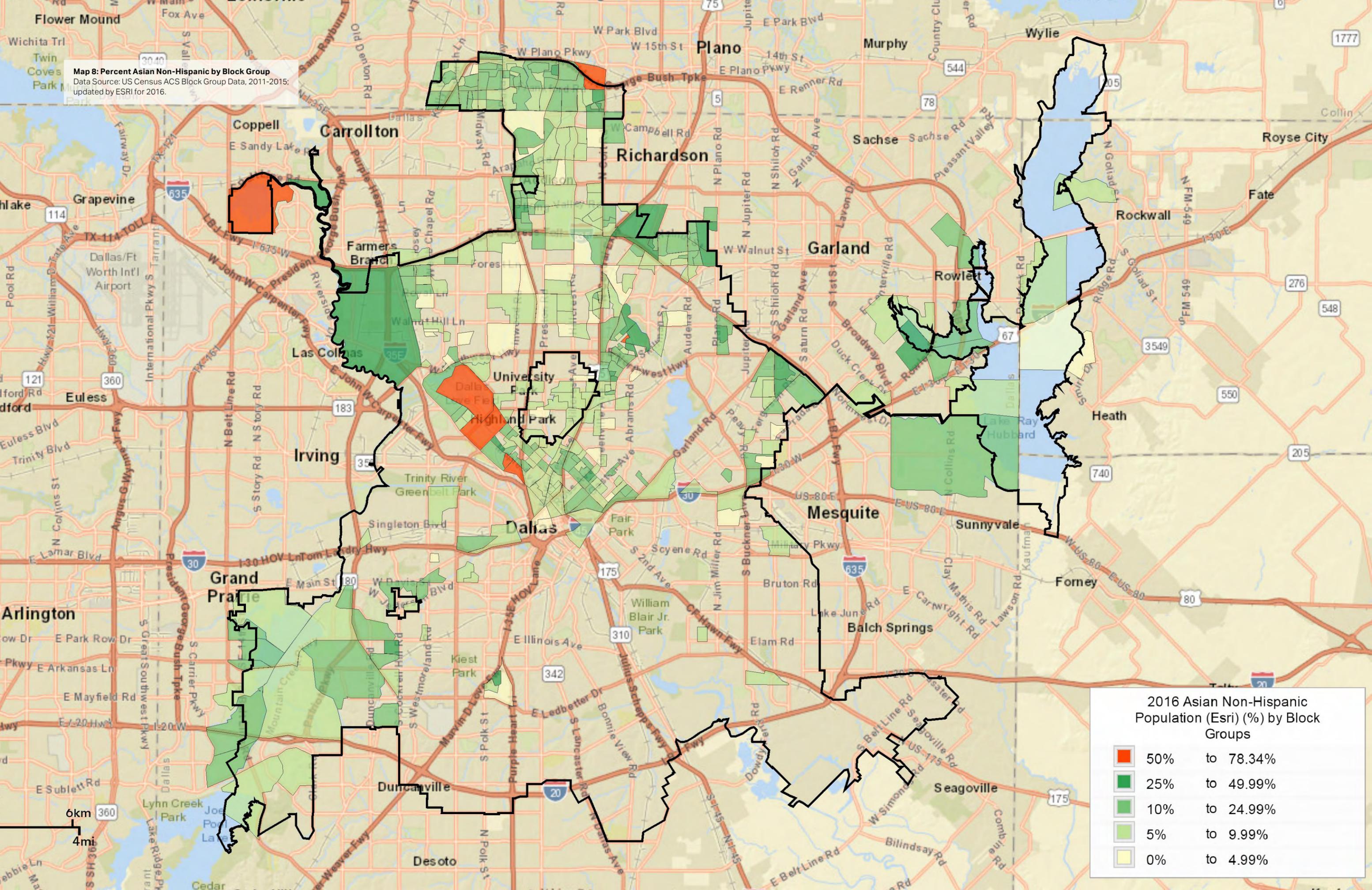


Map 7: Percent White Non-Hispanic by Block Group
Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.

2016 White Non-Hispanic Population (Esri) (%) by Block Groups

	75%	to	99.21%
	50%	to	74.99%
	30%	to	49.99%
	15%	to	29.99%
	0.14%	to	14.99%

Map 8: Percent Asian Non-Hispanic by Block Group
 Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.



2016 Asian Non-Hispanic Population (Esri) (%) by Block Groups

	50% to 78.34%
	25% to 49.99%
	10% to 24.99%
	5% to 9.99%
	0% to 4.99%

6km
4mi

3.4 Household Composition

Household composition is also a key factor that the economic literature usually includes in labor market analysis. For example, in a study of the Dominican diaspora in New York, Gurak and Kritz (1996) find that Dominican women residing in New York with children and no spouse present are less likely to be employed than are either women who have spouses or who have neither spouses nor children. This analysis looks at the association between household type (married couple family, single male and female householder, non-family household), and household family size (number of people per household) and employment.

Census Block Groups with higher percentages of single-person headed households show a negative correlation with employment, whereas Block Groups with more married couple family households and non-family households have higher rates of employment. This information is shown in Figure 5.

Maps 7-10 below show the household type distribution across Dallas. Single female headed households tend to cluster in the south and southeastern parts of the city, but there is no distinguishable pattern for single male households. Married couples also cluster in the center and northcentral part of the city, and to a lesser extent in the eastern and western parts of the city, whereas non-family clusters concentrate around the center. Census blocks with more households of less than two members (couples with no kids, or non-family households) display higher rates of employment, and as the number of larger household increases, the rate of employment drops.

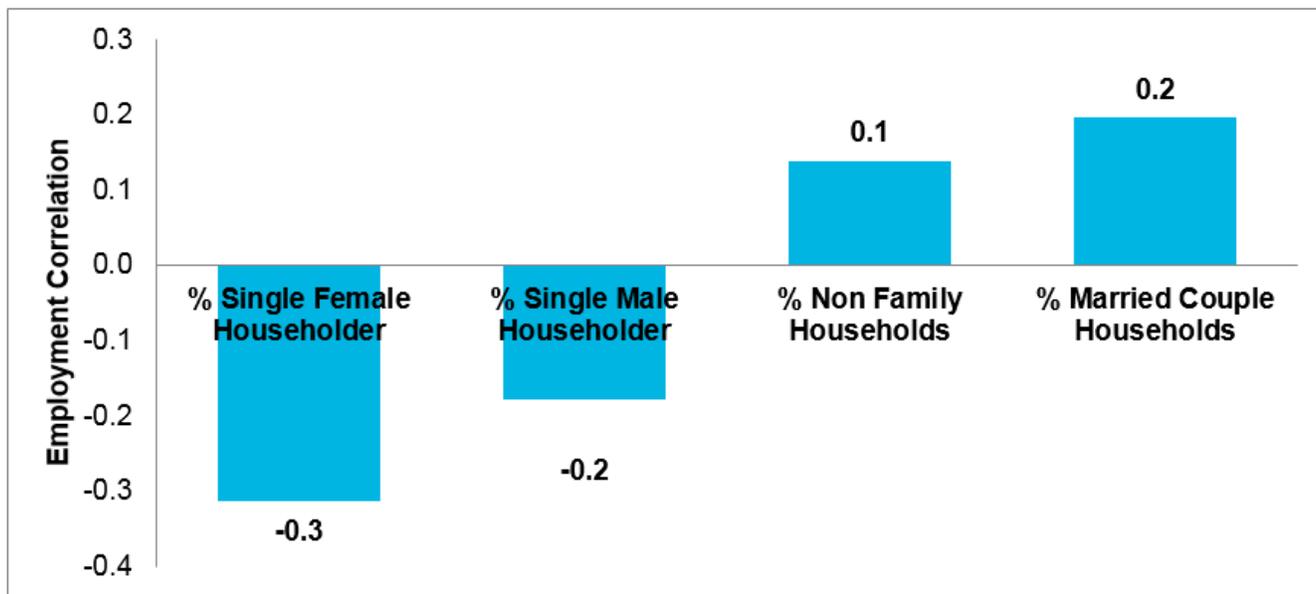
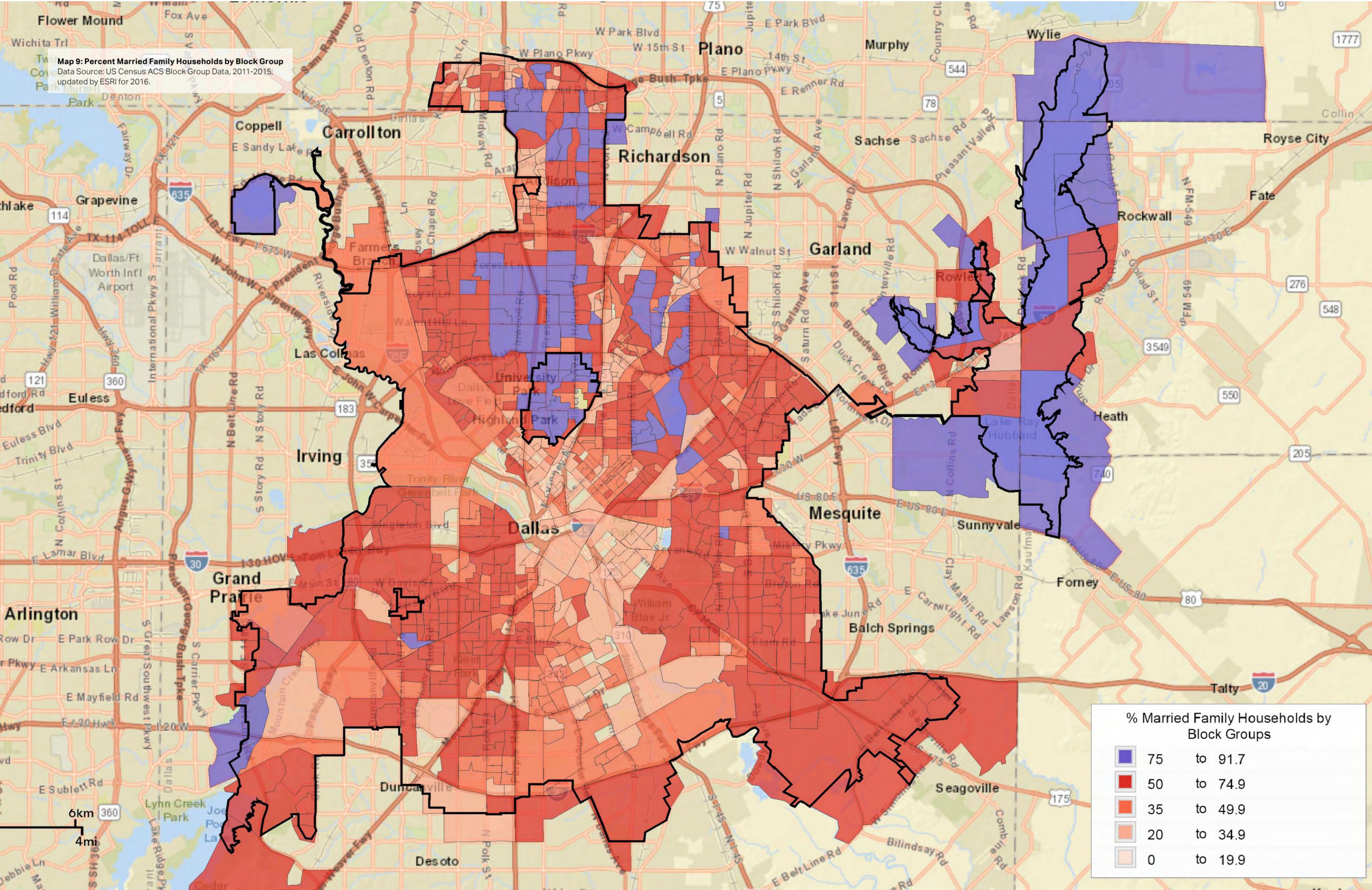
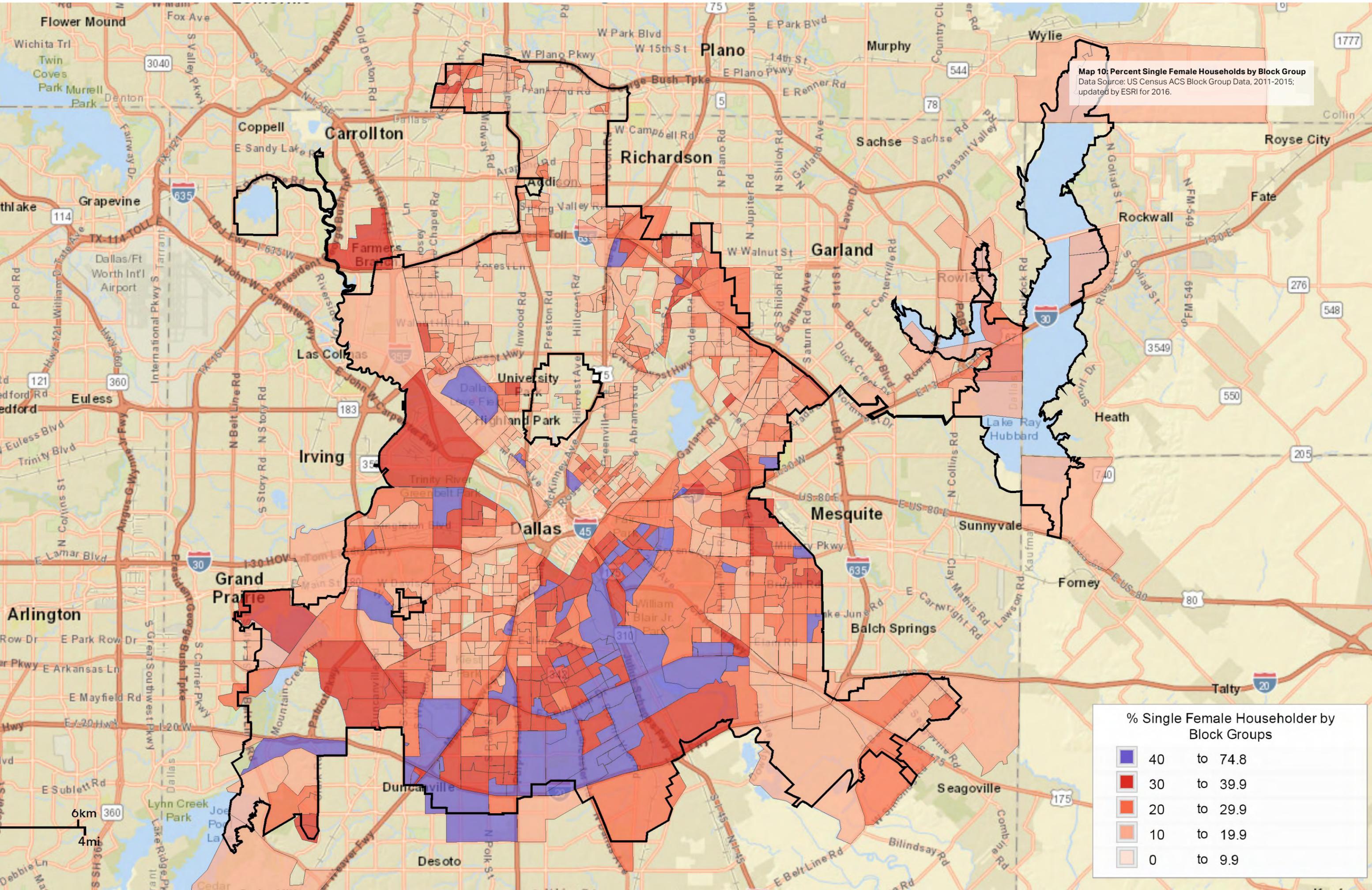


Figure 5: Employment Correlation with Household Composition
Data Source: US Census ACS, 2015, ESRI, 2016

Map 9: Percent Married Family Households by Block Group
Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.



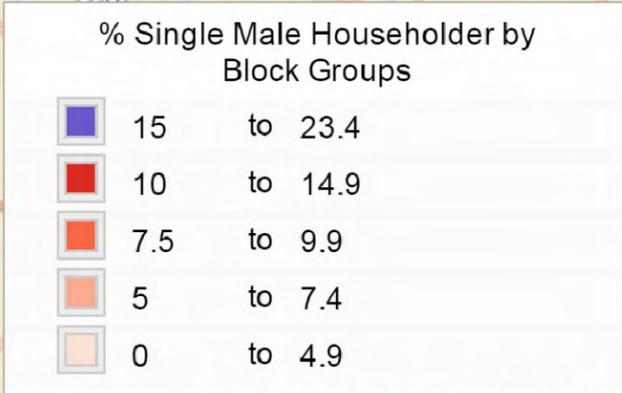
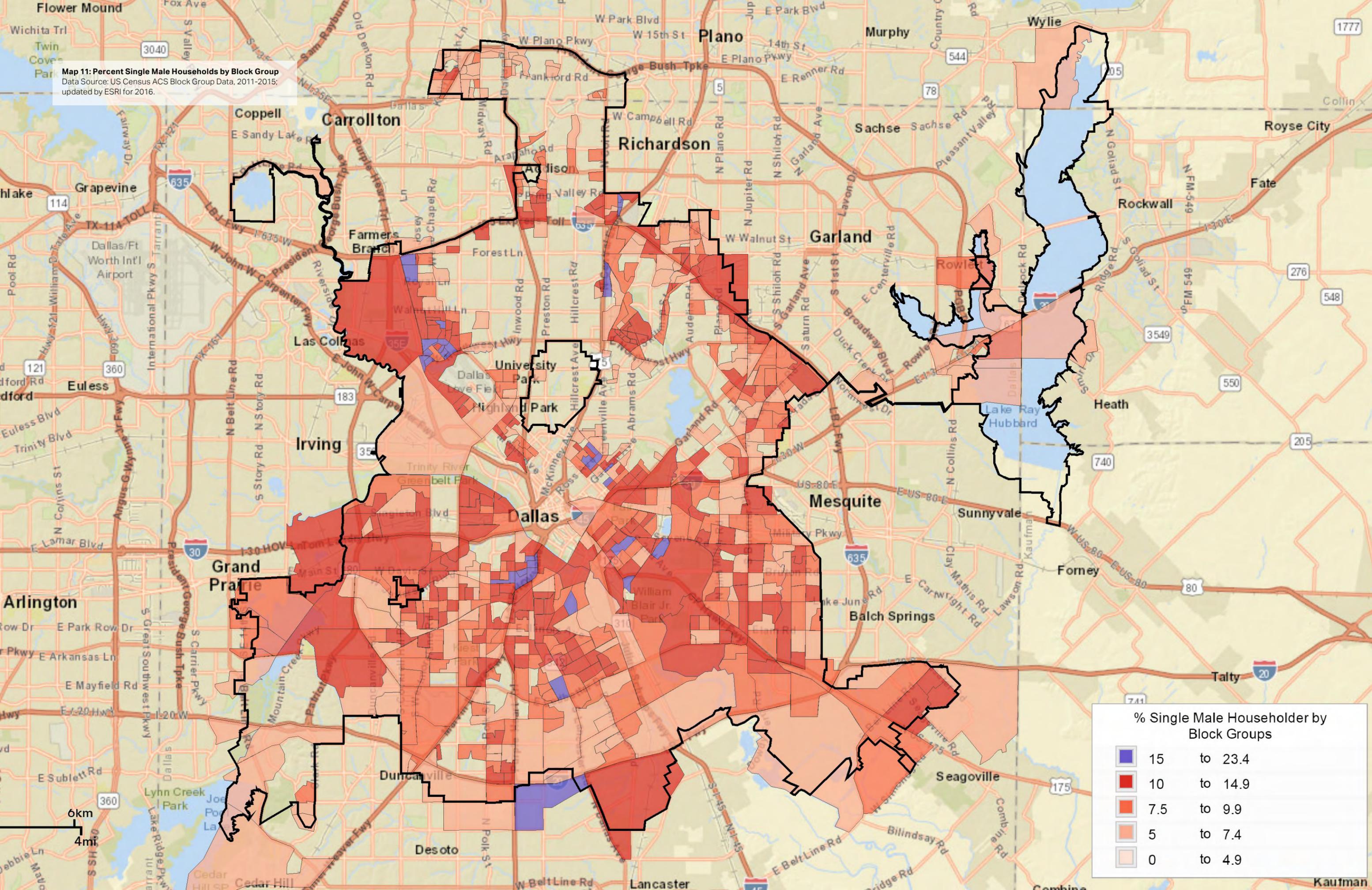
Map 10: Percent Single Female Households by Block Group
Data Source: US Census ACS Block Group Data, 2011-2015;
updated by ESRI for 2016.

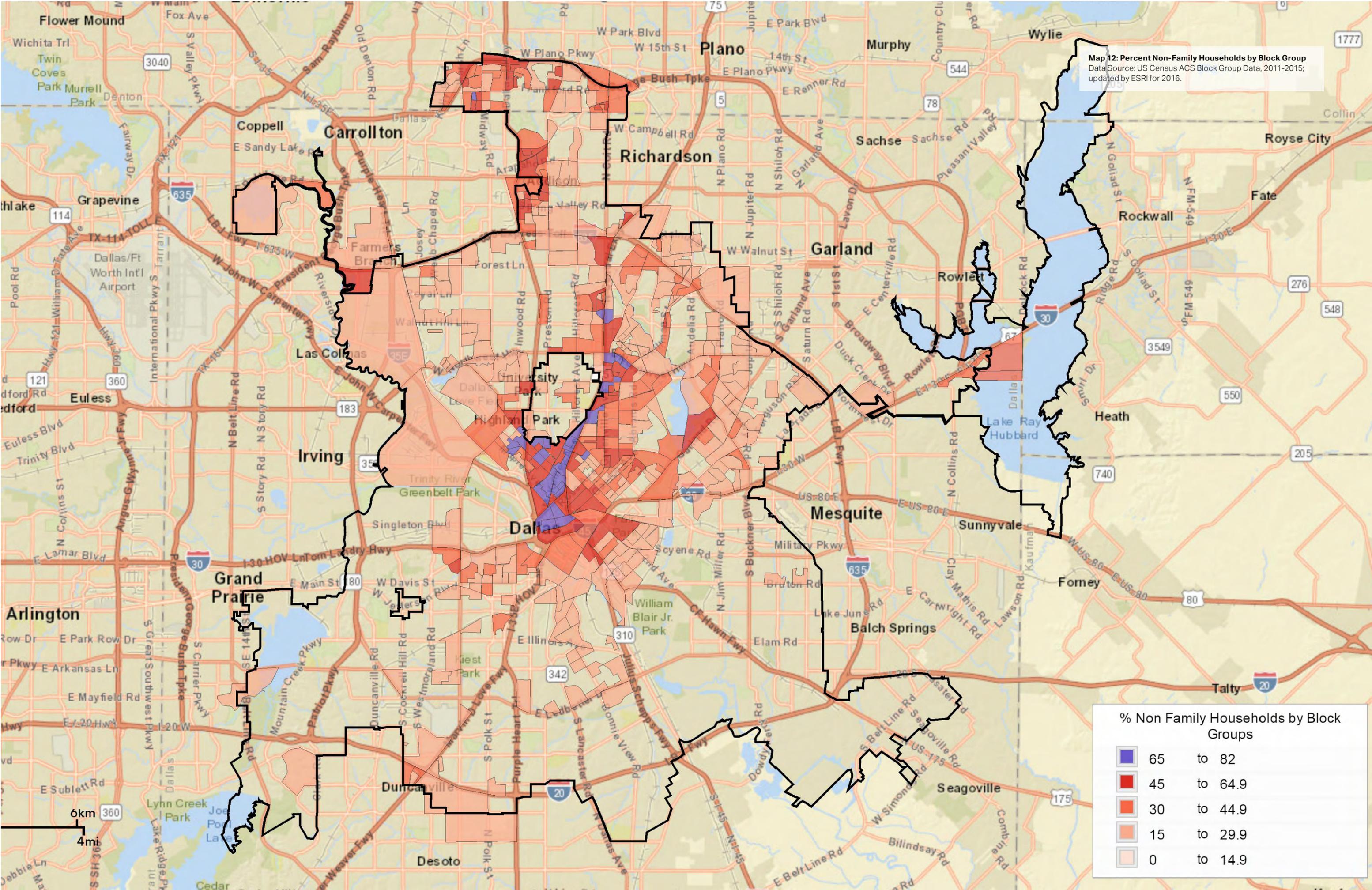


% Single Female Householder by Block Groups

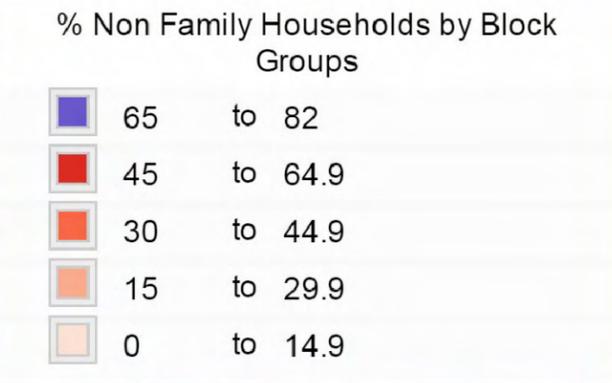
Dark Blue	40	to	74.8
Red	30	to	39.9
Orange	20	to	29.9
Light Orange	10	to	19.9
Light Pink	0	to	9.9

Map 11: Percent Single Male Households by Block Group
Data Source: US Census ACS Block Group Data, 2011-2015;
updated by ESRI for 2016.





Map 12: Percent Non-Family Households by Block Group
Data Source: US Census ACS Block Group Data, 2011-2015; updated by ESRI for 2016.



6km
4mi

3.5 Employment by Age and Gender

Another potentially important demographic characteristic closely linked to labor market access is age. Figure 6 below shows the strength of the relationship between employment, age and gender. Interestingly, this chart suggests that only considering age, young women between the ages of 20 to 34 tend to have higher rates of employment as compared to men in the same age group; after the age of 34 this correlation is reversed. For the population segment above 55 years old, Block Groups with a large senior population show lower levels of employment.

making it even more difficult or expensive to access sources of employment. Figure 7 shows the correlations between commute time in 5-minutes intervals, and employment across the City of Dallas. As expected, the longer the commute time, the weaker the correlation with employment: people prefer to work and find jobs that do not represent high costs in terms of mobility. In terms of the spatial distribution, Census Block Groups that register the largest share of residents facing longer commute are located in the south and southeast areas of the city.

3.5 Employment by Commute Time

Another key determinant of employment appears to be distance traveled to work as measured by commute time. It is often the case that segregated and vulnerable communities live far away from employment centers,

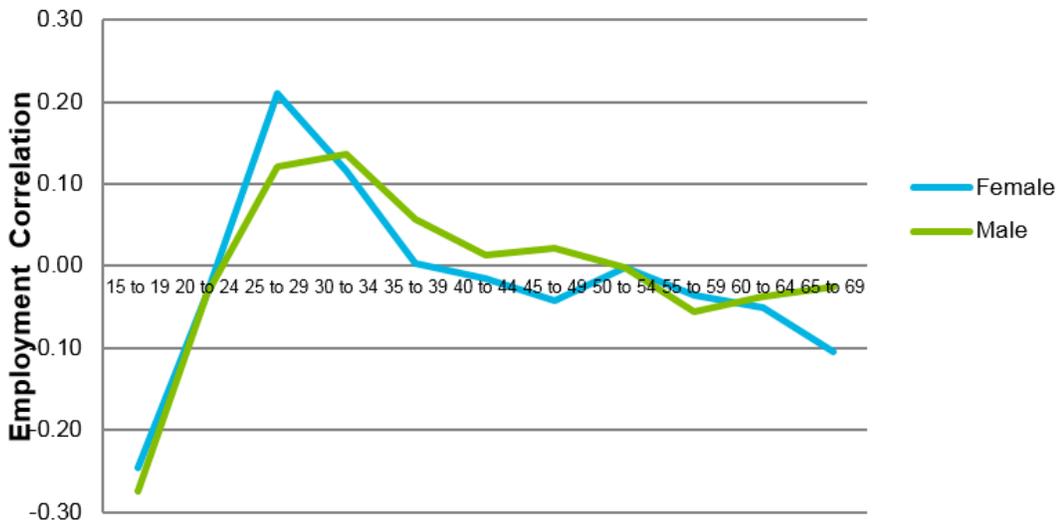


Figure 6: Employment Correlation by Age and Gender

Data Source: US Census ACS, 2015

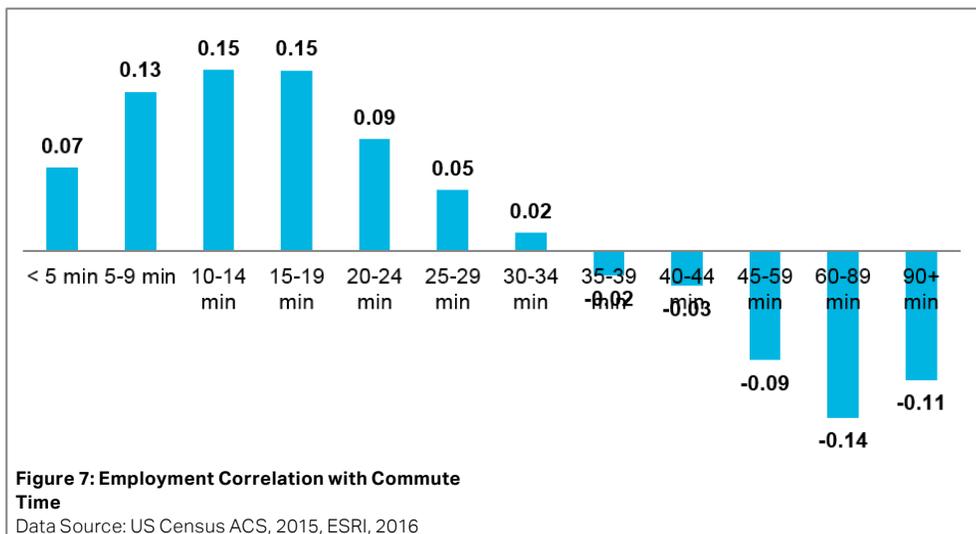


Figure 7: Employment Correlation with Commute Time

Data Source: US Census ACS, 2015, ESRI, 2016

Section 4. Findings and Next Steps

4.1 Summary Findings

The statistical analysis presented in this report points to several populations that experience particularly strong barriers to employment onboarding. Although many other groups may also face economic challenges and experience periods of unemployment or underemployment, the following are the major socioeconomic variables most negatively correlated with employment in Dallas.

- High School Education or Less
- African American
- Single Female or Male Household
- Living in Area with Commute Time of 35 Minutes or More

The maps presented throughout this report also display clearly the spatial relationship between these characteristics and the overall rate of employment at the Block Group level. In general, Block Groups in South and West Dallas tend to have both higher rates of unemployment and larger number of residents who fall into one or more of the categories that are negatively correlated with employment.

4.2 Next Steps

This report identifies both which demographic groups are most in need of assistance with onboarding and where these groups tend to concentrate in Dallas at the Block Group level. It does not, however, explore the specific obstacles to employment faced by these groups, nor explain the negative correlations in any details.

As part of the overall agenda for building an equitable and inclusive economy in Dallas, the research and analysis presented here should be seen as the foundation for conducting more intensive quantitative and qualitative research among the identified groups with a focus on the areas of South and West Dallas with the highest number of employment age residents not currently participating in the workforce.

The ultimate strategies for bringing more of Dallas' diverse population into the formal labor force will vary from community to community, and may involve both targeted educational policies and programs (such as workforce training and high school completion programs), social services (such as childcare assistance for single parents) and neighborhood infrastructure investments (such as improved public transportation to improve mobility for workers in South and West Dallas). Whatever the final strategies developed as part of a complete workforce development strategy, it is clear that Dallas will be more economically prosperous and resilient when more of its residents are fully employed and included in City's growing economy.

Section 5. Appendix - Data and Correlation Tables

Demographic Variable	# City of Dallas
2016 Group Quarters Population (Esri)	20,111
2016 Total Population (Esri)	1,283,763
2016 Household Population (Esri)	1,263,652
2016 Family Population (Esri)	967,595
2016 Population Density (Pop per Square Mile) (Esri)	3,760.7
2010-2016 Population: Annual Growth Rate (Esri)	1.11%
2010 Population Living in Family Households (U.S. Census)	940,202
2010 Population Living in Husband-wife Family Households (U.S. Census)	598,791
2010 Population Living in Other Family Households with a Male Householder and No Spouse (U.S. Census)	92,112
2010 Population Living in Other Family Households with a Female Householder and No Spouse (U.S. Census)	249,299
2010 Male Householder Living in Family Households (U.S. Census)	160,137
2010 Female Householder Living in Family Households (U.S. Census)	105,400
2010 Spouse Living in Family Households (U.S. Census)	165,499
2010 Biological Child Living in Family Households (U.S. Census)	335,154
2010 Adopted Child Living in Family Households (U.S. Census)	6,153
2010 Stepchild Living in Family Households (U.S. Census)	13,193

2010 Grandchild Living in Family Households (U.S. Census)	41,072
2010 Brother or Sister Living in Family Households (U.S. Census)	24,094
2010 Parent Living in Family Households (U.S. Census)	12,963
2010 Parent-in-law Living in Family Households (U.S. Census)	3,182
2010 Son-in-law or Daughter-in-law Living in Family Households (U.S. Census)	7,146
2010 Other Relative Living in Family Households (U.S. Census)	33,314
2010 Nonrelative Living in Family Households (U.S. Census)	32,895
2010 Total Population Living in Nonfamily Households (U.S. Census)	238,885
2010 Population Living Alone in Nonfamily Households (U.S. Census)	155,157
2010 Population Not Living Alone in Nonfamily Households with a Male Householder (U.S. Census)	52,341
2010 Population Not Living Alone in Nonfamily Households with a Female Householder (U.S. Census)	31,387
2010 Male Householder Living Alone in Nonfamily Households (U.S. Census)	75,087
2010 Male Householder Not Living Alone in Nonfamily Households (U.S. Census)	22,764
2010 Female Householder Living Alone in Nonfamily Households (U.S. Census)	80,070
2010 Female Householder Not Living Alone in Nonfamily Households (U.S. Census)	14,596
2010 Nonrelative Living in Nonfamily Households (U.S. Census)	46,368
2016 Total Households (Esri)	487,023
2016 Average Household Size (Esri)	2.59
2016 Total Family Households (Esri)	279,440
2016 Average Family Size (Esri)	3.46
2010-2016 Families: Annual Growth Rate (Esri)	0.82%
2010-2016 Households: Annual Growth Rate (Esri)	0.99%
2016 Hispanic Population (Esri)	562,413
2016 Hispanic White Population (Esri)	290,059
2016 Hispanic Black/African American Population (Esri)	5,565

2016 Hispanic American Indian/Alaska Native Population (Esri)	5,123
2016 Hispanic Asian Population (Esri)	730
2016 Hispanic Pacific Islander Population (Esri)	176
2016 Hispanic Other Race Population (Esri)	239,139
2016 Hispanic Population of Two or More Races (Esri)	21,621
2016 White Population (Esri)	631,127
2016 Black/African American Population (Esri)	320,644
2016 American Indian/Alaska Native Population (Esri)	8,132
2016 Asian Population (Esri)	45,045
2016 Pacific Islander Population (Esri)	582
2016 Other Race Population (Esri)	240,986
2016 Population of Two or More Races (Esri)	37,247
2016 Non-Hispanic Population (Esri)	721,350
2016 White Non-Hispanic Population (Esri)	341,068
2016 Black/African American Non-Hispanic Population (Esri)	315,079
2016 American Indian/Alaska Native Non-Hispanic Population (Esri)	3,009
2016 Asian Non-Hispanic Population (Esri)	44,315
2016 Pacific Islander Non-Hispanic Population (Esri)	406
2016 Other Race Non-Hispanic Population (Esri)	1,847
2016 Multiple Races Non-Hispanic Population (Esri)	15,626
2016 Minority Population (Esri)	942,695
2016 Diversity Index (Esri)	84.5
2016 Education: Less than 9th Grade (Esri)	107,330
2016 Education: 9-12th Grade/No Diploma (Esri)	93,414
2016 Education: High School Diploma (Esri)	155,305
2016 Education: GED/Alternative Credential (Esri)	26,192

2016 Education: Some College/No Degree (Esri)	145,551
2016 Education: Associate's Degree (Esri)	37,202
2016 Education: Bachelor's Degree (Esri)	156,791
2016 Education: Graduate/Professional Degree (Esri)	97,460
2016 Occupation: Management (Esri)	53,063
2016 Occupation: Business/Financial (Esri)	37,745
2016 Occupation: Computer/Mathematical (Esri)	14,406
2016 Occupation: Architecture/Engineering (Esri)	8,320
2016 Occupation: Life/Physical/Social Science (Esri)	3,682
2016 Occupation: Community/Social Service (Esri)	7,611
2016 Occupation: Legal (Esri)	11,279
2016 Occupation: Education/Training/Library (Esri)	27,695
2016 Occupation: Arts/Design/Entertainment/Sports/Media (Esri)	13,210
2016 Occupation: Healthcare Practitioner/Technician (Esri)	26,561
2016 Occupation: Healthcare Support (Esri)	14,153
2016 Occupation: Protective Service (Esri)	8,201
2016 Occupation: Food Preparation/Serving Related (Esri)	42,592
2016 Occupation: Building/Grounds Cleaning/Maintenance (Esri)	36,259
2016 Occupation: Personal Care/Service (Esri)	21,824
2016 Occupation: Sales and Sales Related (Esri)	68,686
2016 Occupation: Office/Administrative Support (Esri)	70,943
2016 Occupation: Farming/Fishing/Forestry (Esri)	667
2016 Occupation: Construction/Extraction (Esri)	52,230
2016 Occupation: Installation/Maintenance/Repair (Esri)	16,903
2016 Occupation: Production (Esri)	33,689
2016 Occupation: Transportation/Material Moving (Esri)	41,818

	2016 Employed Civilian Pop 16+ (%)	% High School or Less	% Some College or Associate Degree	% Bachelor's & Graduate Degrees
2016 Employed Civilian Pop 16+ (%)	1.00			
% High School or Less	-0.28	1.00		
% Some College or Associate Degree	-0.07	-0.19	1.00	
% Bachelor's & Graduate Degrees	0.31	-0.94	-0.17	1

		Em ployed	Hispanic	Non-Hispanic Black	Non-Hispanic Asian	Non-Hispanic White	Other
2016 Employed Civilian Pop 16+ (%)		1					
2016 Hispanic Population (%)	Hispanic	-0.1	1.000				
2016 Non-Hispanic Black Pop (%)	Black / African Amer	-0.3	0.185	1.000			
2016 Non-Hispanic Asian Pop (%)	Asian	0.1	-0.055	-0.282	1.000		
2016 Non-Hispanic White Pop (%)	White	0.3	-0.227	-0.962	0.024	1.000	
% Other (AI, PI, Other, 2+)	Other	0.1	0.532	-0.134	0.116	0.021	1.000

	Em ployed	% Single Female Householder	% Single Male Householder	% Non Family Households	2010 Pop in Husband- wife Fams (%)
2016 E mployed Civilian Pop 16+ (%)	1				
% Single Female Householder	-0.3	1			
% Single Male Householder	-0.2	0.450420587	1		
% Non Family Households	0.1	-0.282600298	-0.275323814	1	
% Married Couple Households	0.2	-0.454103187	-0.205488082	-0.635408227	1

	Em ployed	< 5 min	5-9 min	10-14 min	15-19 min	20-24 min	25-29 min	30-34 min	35-39 min	40-44 min	45-59 min	60-89 min	90+ min	
2016 Employed Civilian Pop 16+ (%)	1.000													
ACS Workers 16+ Commute < 5 min	< 5 min	0.069	1.000											
ACS Workers 16+ Commute 5-9 min	5-9 min	0.131	0.134	1.000										
ACS Workers 16+ Commute 10-14 min	10-14 min	0.150	0.056	0.146	1.000									
ACS Workers 16+ Commute 15-19 min	15-19 min	0.149	0.061	-0.022	0.039	1.000								
ACS Workers 16+ Commute 20-24 min	20-24 min	0.092	-0.073	-0.111	-0.057	-0.085	1.000							
ACS Workers 16+ Commute 25-29 min	25-29 min	0.051	-0.007	-0.025	-0.070	-0.068	-0.041	1.000						
ACS Workers 16+ Commute 30-34 min	30-34 min	0.015	-0.145	-0.230	-0.343	-0.261	-0.246	-0.118	1.000					
ACS Workers 16+ Commute 35-39 min	35-39 min	-0.020	-0.085	-0.024	-0.122	-0.139	-0.061	-0.088	0.058	1.000				
ACS Workers 16+ Commute 40-44 min	40-44 min	-0.029	-0.084	-0.117	-0.156	-0.150	-0.070	-0.027	-0.014	-0.044	1.000			
ACS Workers 16+ Commute 45-59 min	45-59 min	-0.090	-0.117	-0.260	-0.240	-0.227	-0.176	-0.110	0.054	0.028	0.104	1.000		
ACS Workers 16+ Commute 60-89 min	60-89 min	-0.137	-0.067	-0.203	-0.241	-0.222	-0.122	-0.111	0.040	-0.043	0.079	0.134	1.000	
ACS Workers 16+ Commute 90+ min	90+ min	-0.106	-0.036	-0.117	-0.145	-0.080	-0.068	-0.016	-0.012	-0.023	-0.050	0.033	0.070	1.000

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