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Hypergrowth of the Hispanic Population in Indianapolis, 2000–2010

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ABSTRACT

Indianapolis experienced a 300 percent increase in Hispanic population between 1990 and 2010. This article examines the change in the composition of census tracts in Indianapolis between 2000 and 2010. Hispanic-white tracts and Hispanic-black-white tracts increased between the two censuses while majority-white tracts declined. Regression analysis revealed that number of Hispanics by tract in 2010 was negatively associated with percentage of black population and positively associated with number of Hispanics as of 2000. Hispanics were attracted to tracts with a higher percentage of median housing value ($50,000–$100,000), tracts with a high level of turnover between 1995 and 2000, and tracts that had a greater percentage of new dwellings built between 1990 and 2000. These results indicate that Hispanics avoid low-income tracts and have intensified their location in the core Hispanic tracts as well as advanced into the outer tracts of the city.

KEY WORDS Hispanics; Indianapolis; Ethnic Enclave

The ethnic/racial diversity of the United States has changed dramatically since the 1970s, a result of high levels of immigration from Latin America and the younger age structure and higher fertility rates of the Hispanic population. Between 1980 and 2010, the Hispanic population in the United States increased by 227.4 percent (U.S. Bureau of the Census 1980, 2010). In 2010, Hispanics comprised 16 percent of the U.S. population and were the largest minority population in the country. (U.S. Bureau of the Census 2010).

Since the 1990s, Hispanic immigrants and U.S.-born Hispanics have moved into states in which they have previously been underrepresented (Saenz 2010). Costs of living and job competition in urban areas of California, as well as a downturn in California's economy in the 1990s, led to a secondary migration pattern to the interior of the United States (Light 2006). Much of this Hispanic population growth has occurred in rural and small towns in the Southeast and the Midwest, a result of employment opportunities in enterprises such as meat processing, farming, and retailing, as well as low costs of living in these areas (Barcus and Simmons 2013; Haverluk and Trautman 2008).

Medium and large metropolitan areas such as Atlanta, Georgia; Washington, DC; Portland, Oregon; and Indianapolis, Indiana, however, have experienced what Singer (2004) refers to as hypergrowth, which is defined as a growth rate exceeding 300 percent between 1980 and 2000. In each of the hypergrowth metropolitan areas, the population of non-Hispanic whites, non-Hispanic blacks, and Asians also increased through internal migration, immigration, and natural increase. Most of the hypergrowth metropolitan areas represent the new economy of finance and services and are less dependent on manufacturing. These cities have a dual-economy that requires a highly skilled population of mostly Asians and non-Hispanic whites as well as a low-skilled population overrepresented by blacks and Hispanics to provide services for the affluent populations. This dual economic structure may not be the sole reason for spatial segregation in metropolitan areas, but it likely affects the early settlement patterns of new arrivals to the city.

Numerous studies have examined changes in the racial and ethnic composition of America's largest metropolitan areas. Recent examples include Clark et al. (2015) for Los Angeles, Flores and Lobo (2013) for New York, and Onesimo Sandoval (2011) for Chicago. Others focus on a cross-section of metropolitan areas over several decades (Iceland and Sharp 2013; Reibel and Regelson 2011; Wright et al. 2014). Our understanding of racial/ethnic change in the nation's largest metropolitan areas is thus quite extensive, but processes in smaller metropolitan areas that have experienced a tremendous amount of racial/ethnic change are underrepresented. Recent studies that have examined ethnic/racial change in smaller metropolitan areas include Brown and Chung (2006) for Columbus, and Sharma (2012) for Knoxville.

This article examines changes in racial/ethnic composition for Indianapolis, a midsized metropolitan area in the Midwest that has undergone rapid growth in its Hispanic population since 1990. Specifically, three questions are addressed: (1) How has Hispanic population growth in Indianapolis between 2000 and 2010 affected the racial/ethnic composition of census tracts in Indianapolis? (2) What factors determined the growth of the Hispanic population by tract in Indianapolis between 2000 and 2010? (3) How does the economic status of the Hispanic population in Indianapolis compare with the non-Hispanic black and non-Hispanic white populations?

The article begins with an overview of segregation and ethnic/racial change in cities and provides a short overview of the demographics and economics of Indianapolis. A modified version of the typology of Poulsen, Johnston, and Forrest (2001) is used to examine racial/ethnic tract changes between 2000 and 2010, with a focus on Hispanic population change, non-Hispanic white population change, non-Hispanic black population change, and total change in population. The second part of the analysis examines determinants of the change in Hispanic population by tract from 2000 to 2010. Discussions and conclusions are provided in the final section.

URBAN SUCCESSION AND SEGREGATION

Neighborhood change in cities has long been studied by social scientists. As early as the 1920s, Park, Burgess, and McKenzie (1925) proposed the invasion-and-succession theory of neighborhood change, which predicted that newly arrived residents would replace the

previous residents as cities expanded outward and housing matured. In most cities of the early 20th century, the most dilapidated housing was found in the central city. As one moved away from the central city, a zone of working-class and middle-class neighborhoods with new housing was found. This arrangement allowed higher-class (later white) residents to be spatially separated from lower-class (later nonwhite) residents. In other words, a natural outcome of urban succession was the segregation of certain populations.

By the 1960s, white flight to the suburbs spawned an outpouring of literature on the tipping point and racial segregation of blacks. These studies assumed that whites sought to avoid blacks and would move away once a certain percentage of a neighborhood became nonwhite. By the 1960s, segregation levels in the large cities of the manufacturing belt hovered around 80.0 according to the dissimilarity index (Denton and Massey 1991).[1] "Chocolate City, Vanilla Suburbs" (Farley et al. 1978) is illustrative of this process in Detroit and speaks to the high levels of segregation that were found in cities in the manufacturing belt that received large numbers of blacks after the 1940s. Studies of segregation have found that the percentage of the minority group in a metropolitan area has a strong influence on segregation levels (Iceland and Sharp 2013; Reibel and Regelson 2011). Lower percentages of a minority group tend to be more tolerated by the non-Hispanic white population, as the majority population is expected to feel less threatened from the presence of nonwhites. In this sense, non-Hispanic whites who feel threatened can opt for relocation to another census tract.

Studies on segregation became more detailed in the 1980s as researchers began to include Hispanics and Asians instead of just the black population in their analyses. These studies revealed that blacks in U.S. cities had higher levels of segregation than their Hispanic and Asian counterparts (Frey and Farley 1996; Massey and Denton 1987; Timberlake and Iceland 2007). This suggests that non-Hispanic whites were less concerned about sharing neighborhoods with Hispanic and Asian individuals and that these groups provided a buffer that was more acceptable to non-Hispanic whites (Parisi, Lichter, and Taquino 2015). Hispanic and Asian segregation levels have remained stable or, in some cases, increased over the past three decades while white-black segregation levels have declined, however. These increased levels of Hispanic and Asian segregation can be attributed to high immigration during the past two decades, particularly in smaller metropolitan areas that have only recently experienced increased Hispanic and Asian settlement (Allen and Turner 2012; Hall 2013). Lichter, Parisi, and Taquino (2015) examined the segregation of Hispanics with non-Hispanic whites and non-Hispanic blacks for blocks in metropolitan and nonmetropolitan areas between 1990 and 2010. The authors concluded that Hispanics were integrating more readily with blacks than with whites as evidenced by greater declines in the dissimilarity index for black-Hispanic segregation than for white-Hispanic segregation.

Although the urban-succession model was popular in the mid-20th century, other models of settlement were advanced in the latter part of the 20th century. Immigrants and minorities since the 1970s have not necessarily been settling in the central cities of large metropolitan areas. Much of the recent settlement has gone directly to the suburbs (Smith and Foruseth 2004; Timberlake, Howell, and Staight 2011). Metropolitan areas have

undergone tremendous expansion over the past several decades, and housing availability and employment opportunities are more likely to be found in the suburbs than in the inner cities. Transportation innovations since the mid-20th century have also changed the accessibility of residence on the outskirts of the urban core. Farrell (2008) thus proposes that segregation studies take a hierarchical approach, which examines the central city and the suburban areas. He examined 97 metropolitan areas between 1990 and 2000 and found declines in segregation in the inner cities, but increased bifurcation between white and nonwhite populations in the suburbs. In contrast, Lichter, Parisi, and Taquino (2015) found that segregation levels for Hispanics were lower in the suburbs than in the central cities.

THEORIES ON SEGREGATION

Three theories on racial/ethnic segregation are generally adopted by researchers. The first theory is spatial assimilation theory, which posits that over time, newcomers will assimilate to their environment and settle among the majority population. At the beginning of the 20th century, Eastern and Southern European immigrants settled in the poorest regions of cities and over time moved farther from the city centers and became mixed with the majority native-born white population, hence ending segregation (Lieberson 1963). With changes in immigration laws in the 1920s, immigration from Europe was curtailed and ethnic neighborhoods in U.S. cities were cut off from new arrivals, but changes in agricultural technology in the American South forced blacks to explore employment opportunities in the northern cities, thus replacing the pool of low-skilled laborers from Europe (Kirby 1983). These newcomers from the southern states also settled in the poorest regions of the cities and became segregated from the white majority population. Unlike their European counterparts, who could blend in with the dominant population after a period of social and economic adjustment, blacks were visually different and faced barriers to movement within the city.

The second theory—the place stratification model—proposes that the white majority population will distance itself from populations that it considers to be a threat (Logan, Alba, and Leung 1996). Schelling (1972) introduced the theory of the tipping point, which proposes that whites will tolerate only a token percentage of racial/ethnic "otherness" before they begin to leave and cease to settle certain areas. Thus, over time, neighborhoods will become completely nonwhite. This avoidance by whites became institutionalized through such processes as redlining, steering, and restrictive policies which traditionally excluded nonwhites from white tracts. These policies are illegal today, but it is likely that they still occur discreetly.

The third theory proposes that racial preferences are an important determinant of the location of certain ethnic/racial groups (Clark 2002). Some groups prefer to reside among individuals who share the same culture and the same racial/ethnic characteristics as themselves, even if they can afford to move to white-majority areas. An example are Cubans who are of higher socioeconomic status than their Mexican and Puerto Rican counterparts but choose to reside in ethnic enclaves (South, Crowder, and Chavez 2005). Another example are the Chinese ethnoburbs in suburban metropolitan areas (Li 1998).

TRACT CONVERSION STUDIES

Many contemporary studies have focused on the transition of tracts from one ethnic/racial group to another as minority populations have increased in metropolitan areas. These studies compare the percentage of a tract's population that is a certain race/ethnicity in time one and then again in time two.

Wright et al. (2014) examined racial/ethnic change in metropolitan areas between 1990 and 2010. At the national scale, white-dominant tracts declined from 84 percent to 74 percent. Farrell and Lee (2011) examined changes in tract type and segregation for the 100 largest metropolitan areas between 1990 and 2000. Latino (Hispanic)-dominant tracts increased by 50 percent while Latino (Hispanic)-shared tracts doubled. Not surprisingly, the white-dominant tracts had the greatest level of decline in white percentage population. Holloway, Wright, and Ellis (2012) examined high-, medium-, and low-diversity census tracts for 16 large metropolitan areas for 1990 to 2000. Low-diversity white tracts made up 48 percent of tracts in 1990, but by 2000, they were 32 percent of the total. Although there was some stability in low-diversity white and low-diversity black tracts, low-diversity Hispanic tracts declined significantly. Most of this transition occurred as Hispanics moved into white-dominant tracts instead of remaining in established Hispanic enclaves.

Reibel and Regelson (2011) examined tract conversion in the 50 largest metropolitan areas from 1990 to 2000 and found that tract diversity and resegregation were occurring concomitantly. The authors identified slow-integrating and moderately integrating tracts as tracts that lost a minimal percentage of non-Hispanic white population (5.8 and 18.8 percent, respectively) while gaining in Asian, black, and Hispanic populations. White-to-black succession tracts were ones in which white flight and limited growth in Asians and Hispanics resegregated blacks. The authors further concluded that this is evidence that Asians and Hispanics provide a buffer zone for non-Hispanic whites.

THE STUDY AREA: INDIANAPOLIS

In 1970, Marion County and the city of Indianapolis were consolidated, thus expanding the spatial extent and population of the city (Wachter 2014). This consolidation was an attempt to incorporate the inner suburbs of the Indianapolis metropolitan area and to provide needed revenue to the city; thus, the entire county of Marion serves as the city limits of Indianapolis and is the area of interest.

During the 1940s and 1950s, a few Mexican agricultural workers settled in Indianapolis on the east side (Valdes 2000), which can be considered the establishment of a Hispanic enclave. These individuals were employed in the railroads and construction. By the 1990s, Mexicans were still settled in the Near Eastside and worked in construction, hotels, and manufacturing, but the Near Eastside is no longer the epicenter of the Hispanic enclave. Since the 1990s, many small businesses owned by Hispanics have been opened in western Indianapolis, which this is a new area of Hispanic growth (Baer 2012).

Marion County, Indiana, experienced a growth of 294.0 percent in its Hispanic population between 1990 and 2000 and of 153.7 percent between 2000 and 2010 (U.S. Bureau of the Census 2010). Hispanics made up 1.1 percent (8,450) of the county's population in 1990, 3.9 percent (33,290) in 2000, and 9.3 percent (84,466) by 2010.

Between 1990 and 2010, the non-Hispanic white population in Marion County declined by approximately 77,100 (12.5 percent) and the Hispanic population grew by 76,016 (899.6 percent) while the black population grew by 68,800 (40.6 percent). Note that the growth of the Hispanic and the black population in Indianapolis was twice the decline in the non-Hispanic white population (+144,816 versus –77,100). It is possible that the non-Hispanic black population and the Hispanic population are vying for housing opportunities in Marion County, given that the overall population in Marion County increased between 1990 and 2010 even though the non-Hispanic white population declined.

Table 1 shows the change in population for 1990–2000 and 2000–2010 for the different racial/ethnic groups. The two decades show a steady decline in the non-Hispanic white population, a slight increase in the non-Hispanic black population, and a large increase in the Hispanic population.

Table 1. Population Change in Indianapolis by Ethnic/Racial Group, 1990–2010

| | 1990 | | 2000 | | 2010 | | Percent |
	N	%	N	%	N	%	Change
Total Population	797,159		860,454		903,393		13.3
Non-Hispanic white	615,039	77.2	592,540	68.9	537,905	59.5	–12.5
Non-Hispanic black	169,654	21.3	215,273	25.0	238,454	26.4	40.6
Hispanic	8,450	1.1	33,290	3.9	84,466	9.3	899.6

Source: U.S. Bureau of the Census (1990, 2000, 2010).

DELIMITATIONS

Given the relatively small number of Hispanics found in Marion County, this article does not disaggregate data by immigrant versus native-born Hispanic population. Nor will it disaggregate by Hispanic subgroups such as Mexican, Cuban, Puerto Rican, and other Hispanic.

DATA

The U.S. Census population counts for 2000 and 2010 were used for this analysis. I used ProximityOne (proximityone.com/tracts.htm) to match tracts in 2010 with those of 2000, given that many tracts were subdivided over the decade (Table 2).

Table 2. Tract Type by Number in 2000 and 2010 for Marion County, Indiana

Tract Type	2000	2010
White	98	57
Black	31	31
White-Hispanic	4	35
White-black	66	52
Black-Hispanic	0	9
White-black-Hispanic	11	27
Total	211	211

Source: U.S. Bureau of the Census (2000, 2010).

CHANGES IN HISPANIC CONCENTRATION, 2000–2010

The Poulsen et al. (2001) typology classified isolated host-community neighborhoods as ones in which at least 80 percent of the population was non-Hispanic white. Non-isolated host communities contained between 50 and 80 percent non-Hispanic whites, while mixed communities had less than 30 percent white and no minority group exceeding 60 percent. Polarized communities contained one minority group with more than 60 percent of the population. Given that Hispanic settlement is recent in Indianapolis, the presence of polarized Hispanic tracts is expected to be minimal. The following terminology, modified from Poulsen et al. (2001), is used in this classification scheme:

> White-dominant: ≥ 80.0 percent white, < 10 percent Hispanic
> Black-dominant: ≥ 60.0 percent black, < 10 percent Hispanic,
>   < 20 percent non-Hispanic
> White-Hispanic: 50–80 percent white, ≥ 10 percent Hispanic
> White-black: 50–80 percent white, ≥ 20 percent black
> Black-Hispanic: ≥ 20 percent black, ≥ 10 percent Hispanic,
>   < 20 percent non-Hispanic white
> White-black-Hispanic: ≥ 20 percent white and black, ≥ 10 percent
>   Hispanic

A tremendous amount of tract conversion occurred between 2000 and 2010. Only 57 out of 98 of the white-dominant tracts of 2000 remained so by 2010. Black tracts remained unchanged (31 tracts in both 2000 and 2010). Thirty-five tracts were White-Hispanic in 2010, versus only four in 2000. White-black tracts declined from 66 to 52

over the decade while White-Black-Hispanic tracts increased from 11 to 27. A new tract type evolved by 2010: the black-Hispanic tract, containing nine tracts. For the most part, black-Hispanic tracts converted from black-white tracts and were not from the movement of Hispanics into already predominantly black tracts in the central city. Most of the movement of Hispanics appears to be directed at white-dominant tracts outside of the central city. What is unclear is whether Hispanic presence is causing non-Hispanic whites to move out of these tracts.

Figures 1 and 2 display tract type for 2000 and 2010. Note that black tracts are concentrated in the central city. White tracts are found in the northern part of the county as well as the southern part of the county. In 2000, white-black tracts were found to the northwest of the central city. It is this area where the growth of white-Hispanic-black tracts occurred between 2000 and 2010. White-Hispanic tracts were concentrated in the south-central part of the county in 2000 but had expanded southward by 2010. These white-Hispanic tracts provide a buffer between a dominant-black central city and the predominantly white tracts in the south.

Another area of white-Hispanic transition is found in the northeastern section of Marion County. This concentration is interesting, given that a swath of white-dominant tracts is located between the white-Hispanic tracts and an area of black-dominant tracts. A reasonable explanation for this lack of Hispanic presence in the white-dominant tracts is that this area is too expensive.

Figure 1. Tract Type for Marion County, Indiana, 2000
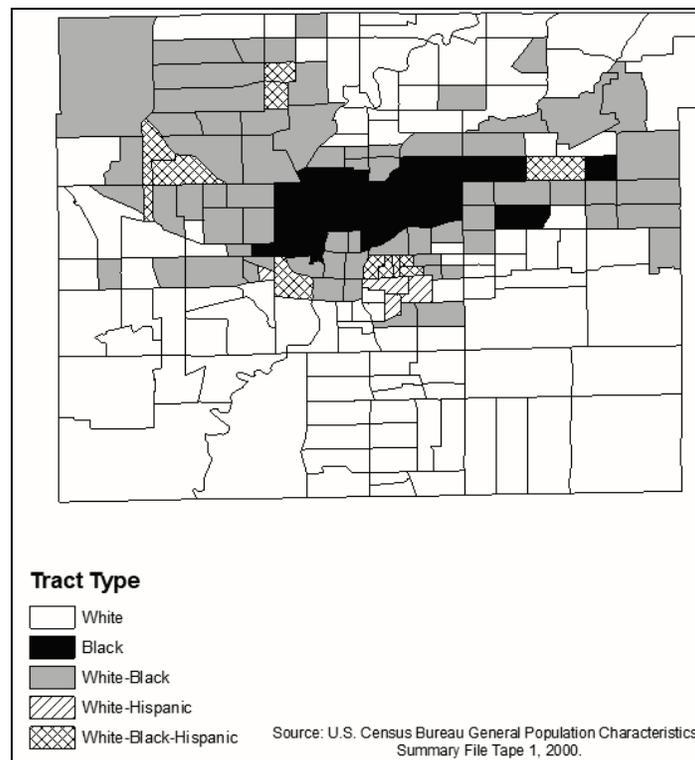
Figure 2. Tract Type for Marion County, Indiana, 2010

Source: U.S. Census Bureau General Population Characteristics, Summary File Tape 1, 2010.
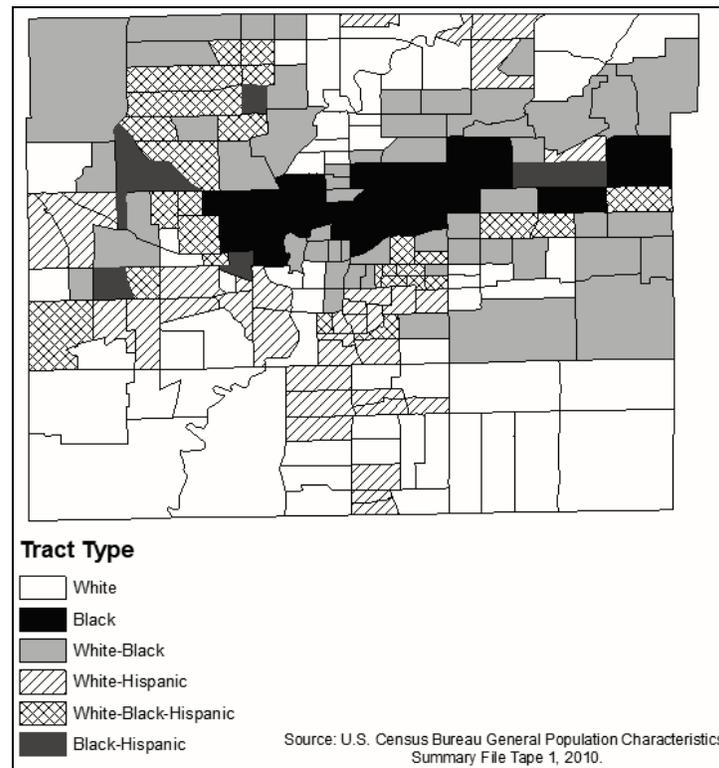
ANALYTICAL PROCEDURE AND METHODOLOGY

Regression analysis is applied in this study to determine the variables that have had an impact on the change in Hispanic population by tract level in Indianapolis between 2000 and 2010. Unfortunately, the statistical packages of SPSS and SAS cannot be used for this analysis, as these programs assume that each unit in the analysis is not affected by neighboring units—a condition that is rarely experienced in geography. GIS (Geographic Information Systems) is a computer program that allows a researcher to analyze spatial distributions. Geographers are interested in space and thus, it is unlikely that two variables with proximity to each other would not exert some type of influence on one another. Tobler's (1969) First Law of Geography states that all things are related to one another but things closer to one another are more closely related. Thus, a procedure that accounts for this spatial bias needs to be incorporated into our models through a process known as geographically weighted regression (GWR). There is very good reason to believe that the dependent variable (number of Hispanics) is not random across the study area; thus, GWR is the appropriate choice for this analysis.

Several demographic and economic characteristics thought to be good predictors of Hispanic population change were selected from the U.S. Census. These variables were examined to determine if they had a normal distribution. If not, the

variable was subjected to a square-root or log transformation. Exploratory regression within ArcGIS was then utilized to narrow the variables to five significant variables and variables that passed the Jarque–Bera test. This test is important for GWR because the residuals from the equation must be randomly distributed or the regression equation is considered mis-specified.

Dependent Variable

> *(Hx):* The number of Hispanics residing in a census tract in 2010 (log transformation). Dalecki and Willits (1991) suggested that the best way to measure change between two periods of time is to use the time-two variable as the dependent variable and to include time-one variable as a control variable.

Independent Variables

Five independent variables are used in this analysis:

> *(T)* Percentage of tract population that moved into current housing between 1995 and 2000 (larger number of Hispanics predicted to be positively related to higher percentage of turnover in housing)
>
> *(NH)* Percentage of housing units built between 1990 and 2000 (unsure of relationship)
>
> *(MH)* Percentage of tract population in median housing price in the second-lowest category ($50,000–$100,000) (log) (larger number of Hispanics predicted to be positively related to availability of housing in lower- to middle-income areas)
>
> *(B)* Percentage of population that is black (square root) (no prediction)
>
> *(H)* Number of Hispanics in 2000 (log) (positive association predicted)

The following equation measures the change in the number of Hispanics by census tract between 2000 and 2010 by determining how much explanatory power can be extracted from the five independent variables described above:

$$Hx = T + NH + MH + B + H + e$$

where *e* is the percentage in Hispanic population change that is not accounted for by the five independent variables.

RESULTS

For ordinary least squares, the independent variables explained 75 percent (adjusted $R^2 =$ .755) of the variance in change in the number of Hispanics by tract between 2000 and 2010 (Tables 3 and 4). The percentage of new housing units was highly significant at the 0.001 level and showed that Hispanic population change was greater for tracts with newer housing. This does not mean that Hispanics are moving directly into new housing units. These units are mostly in the tracts bordering suburban counties where land area is more able to accommodate growth. There may be a process of vacancy chains in which better-off residents move out of older housing, allowing an influx of the Hispanic population, who then filter into the older housing units of the tract. Surprisingly, Hispanics were not attracted to tracts with a high percentage of residential turnover between 1995 and 2000 (not significant). These tracts likely have a high percentage of rental units, which should encourage settlement of the Hispanic population, but there could be other undiagnosed processes occurring in these tracts (to be addressed below). Hispanics were attracted to tracts with 2000 housing values between $50,000 and $100,000 (the second-lowest median housing category). Many of the properties in these tracts may be in a process of rehabilitation and have benefitted from an influx of Hispanics. This is strong evidence that Hispanics avoid the poorer tracts as well as the very wealthy tracts.

Table 3. Ordinary Least Squares Regression for Change in Hispanic Population in Marion County, Indiana

	Coefficient	Standard Error	Significance Level
Intercept	1.240	.249	0.000***
Number of Hispanics, 2000	.895	.042	0.000***
Percent black	−.041	.015	.004**
Median housing value	.048	.018	.007**
Percentage of new housing, 1990–2000	.013	.002	0.000***
Percent movers, 1995–2000	−.002	.002	.609

Note: ***p > 0.0001   ** *p* > 0.001

Hispanics avoided tracts with a high percentage of black population. This avoidance may be a result of competition for housing opportunities, antagonism between the groups, or the inability of the Hispanic population to successfully integrate with the non-Hispanic black population. It is likely that percentage of black population and residential mobility are correlated, which thus may explain why Hispanics avoid tracts with high percentages of mobile population. Not surprisingly, tracts with a greater number of Hispanics in 2000 experienced larger increases in Hispanic population by 2010, undoubtedly an effect of chain migration and social networks.

Table 4. Comparison of Ordinary Least Squares and Geographically Weighted Regression Statistics for Change in Hispanic Population in Marion County, Indiana, 2000–2010

	OLS	GWR
Adjusted R^2	0.755	0.803
Akaike's (AIC)	383.2	361.2
Moran's I	0.129	-0.020

Note: AIC= Akaike information criterion; GWR=geographically weighted regression; OLS=ordinary least squares.

It is likely that the non-Hispanic white population would be more open to Hispanic infiltration than to black infiltration, which may explain the movement of Hispanics into tracts that were predominantly white in 2000. The southwestern part of Marion County contains the airport, and this area may be easier to penetrate, given the disamenities associated with airports, namely noise and congestion. The growth of the enclave to the south of the central part of the city is concentrated around University Heights, and it may be that residents in this area are more accommodating to Hispanics. It may also be that the recent housing crisis affected settlement patterns in these tracts by opening up more housing. This would seem unlikely given the small window of opportunity between the onset of the housing crisis in 2007 and the census count in 2010, but is certainly worth a further look.

DISCUSSION AND CONCLUSION

The results of this analysis reveal that Hispanics in Indianapolis are not necessarily an economically disadvantaged minority group. Hispanics are able to move into lower- to middle-income housing tracts and to mix with both non-Hispanic white and middle-income non-Hispanic black populations.

The map of tract types in 2010 also provides strong evidence that Hispanics are providing a buffer zone between a black inner city and a white outer city in Indianapolis. These conclusions agree with numerous studies that found Hispanics to provide buffer zones (Parisi et al. 2015; Reibel and Regelson 2011). This movement into the suburban tracts is found in several other studies discussing rapid Hispanic population growth since the 1980s. Flippen and Parrado (2012) examined the development of Hispanic enclaves in Durham, North Carolina, and found that Hispanics originally settled in dilapidated African American neighborhoods in the early 1990s but expanded into white-dominant areas by the early 2000s. Smith and Furuseth (2004) found in their study of Hispanics in Charlotte that Hispanics bypassed the city and settled in the inner ring of suburbs of the central city with the availability of rental housing.

This settlement in the suburbs can be understood better with examination of the housing and economic characteristics for the three racial/ethnic groups in Marion County (Table 5). It is likely that by pooling economic resources, Hispanics can enter tracts with

higher incomes, higher housing values, and higher median rents. Note that Hispanic household income, median value of housing, and median rent in 2000 were between those of non-Hispanic whites and non-Hispanic blacks. Also note that average household size was higher for Hispanics than for the other two groups. The average number of members in Hispanic households is about one more than whites and blacks. While these numbers probably include children, it is also likely that relatives and friends have cohabited to take advantage of economic resources.

Table 5. Household Economic Characteristics of Marion County by Race/Ethnicity as of 2000

	Median HH Income (1999)	Total HHs	Average HH Size	Sex Ratio of over-18 Pop.	Owner-Occupied Housing (%)	Housing Median Value (by HoH Race/ Ethnicity)	Median Rent
Non-Hispanic white	$43,798	255,956	2.29	90.6	69.9	$103,300	$585
Non-Hispanic black	$30,446	78.990	2.57	80.8	47.0	$75,900	$532
Hispanic	$35,354	8,999	3.47	1.63	28.5	$87,500	$568

Note: HH=household; HoH=head of household; Pop.=population.

Source: U.S. Bureau of the Census (2015).

The sex ratio of the population over the age of 18 for the three groups shows a great difference. While non-Hispanic whites and non-Hispanic blacks had sex ratios that favored females (90.6 and 80.8, respectively), Hispanic households had a sex ratio of 1.63, indicating a much higher number of males than females. Given that males are more likely to immigrate to the United States than are their female counterparts, these results should not be surprising. Connecting with family and friends is a technique used by new arrivals to a city to combine and conserve scarce monetary resources.

Another major difference between Hispanics and their non-Hispanic white and non-Hispanic black counterparts is the percentage of the population in owner-occupied housing. Only 28.5 percent of Hispanics reside in such housing compared to 69.9 percent for non-Hispanic whites and 47.0 percent for non-Hispanic blacks. This is most likely explained by the recent arrival of Hispanics in Indianapolis.

Is Indianapolis becoming more racially/ethnically integrated or more segregated? Unfortunately, this study does not answer that question. Marion County, the central city county of Indianapolis, has become more integrated as measured by tract conversion, from predominantly non-Hispanic white in 2000 to a variety of racial/ethnic categories in 2010. However, Orfield and Luce (2013) found in their study of the 50 largest

metropolitan regions in the United States that inner suburbs of most large cities that were integrated in 2000 became more segregated by 2010 as the non-Hispanic white population retreated to the outer suburbs. Given the decline in Marion County's non-Hispanic white population from 2000 to 2010, it is likely that these individuals have retreated to the suburbs in the surrounding counties.

Future research could extend the study area to the entire Indianapolis metropolitan area. Questions to be addressed could include (1) Where are Hispanics settling in the Metropolitan Area? (2) Are there multiple Hispanic enclaves in the metropolitan area, or are Hispanics diffusing throughout the adjacent counties? (3) Is the non-Hispanic white population in a process of succession to adjacent counties as a result of Hispanic settlement in Marion County? (4) How are these settlement patterns in the Indianapolis metropolitan area affecting segregation levels of Hispanics and other racial/ethnic groups?

ENDNOTE

1. This index is based on a scale of 0 to 100, with metropolitan areas closer to 100 being more segregated. In the above example, 80 percent of blacks would have to have moved to other locales in their respective metropolitan areas to be integrated with the non-Hispanic white population.

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