THE RURALIZATION OF DETROIT? IMPLICATIONS FOR ECONOMIC REDEVELOPMENT POLICY

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Abstract

This paper raises two questions: 1) do post-industrial cities such as Detroit have substantial numbers of areas with what are commonly defined as "rural" characteristics, and 2) if the answer to the first question is shown to be in the affirmative, then are economic development policies designed for urban areas likely to be successful? Using the United States Census Bureau's 2010 decennial data and American Community Survey data from 2014 and 2016, Detroit is compared to other municipalities nationally to assess the extent to which it has rural characteristics and whether it has indeed "ruralized" over time. Based on findings that show increasing numbers of census tracts with rural characteristics, we argue that rural economic development policies may be a potentially more appropriate and effective alternative to traditional urban development strategies for post-industrial cities.

Keywords: local econoic development, post-industrial cities, shrinking cities

1. INTRODUCTION

As many cities transition into a post-industrial state, their demographic, socioeconomic, and spatial characteristics undergo a variety of changes. While their population sizes and even densities are still considered "urban" they may no longer resemble their thriving pasts or even general understandings of a "central city." Previous research on Detroit, an exemplar of the declining post-industrial city, has indicated that the stories of its recovery have been overstated and fail to account for the large portions of the community that have continued to decline (Reese, et al., 2014; Reese, et al., 2017).

This paper raises two questions: 1) do cities such as Detroit have substantial numbers of areas with what are commonly defined as "rural" characteristics, and 2) if the answer to the first question is shown to be in the affirmative, then are economic development policies designed for urban areas likely to be successful?

Two general tracks of economic development policies have evolved—one for urban places and another for rural communities. Urban and rural areas differ not only in terms of population size and density, but also on other social and economic characteristics that may impact the choice of appropriate economic development policies. This paper compares Detroit to other US municipalities to assess the extent to which it has rural characteristics and whether it has indeed "ruralized" over time. And, based on findings that show increasing areas of the city with rural characteristics, it argues that rural economic development policies may be a potentially more appropriate and effective alternative to traditional urban development strategies. It should be made clear at the outset that the argument is not that Detroit is a rural place. Rather, the paper offers a thought experiment in a sense (based on data), identifying ways in which areas of the city do indeed share characteristics with rural areas opening the door for consideration of whether economic development recommendations for rural areas might effectively be applied.

2. LITERATURE REVIEW

In modern times, deindustrializing rust belt cities such as Detroit are sometimes considered to be primarily a North American phenomenon. However, shrinking cities can be found worldwide. For example, Bartholomae, Nam, and Schoenberg (2016) discuss urban shrinking cities and policies for revitalization in the context of former East Germany. More generally, Oswalt and Rieniets (2007) note that 370 cities across the globe with populations over 100,000, including cities in Europe, Asia, and Africa have population losses that exceed 10%. While numerous studies explore policy options for revitalizing shrinking cities, to our knowledge no study has considered whether policies designed to foster rural development might be effective in helping to revitalize declining urban areas. The discussion below offers a review of the most relevant literature related to measuring urban-rural differences as well as associated urban versus rural economic development policies. We seek to apply these principals to evaluate the case of Detroit, often considered the poster child of deindustrializing American cities, as an exemplar of shrinking cities globally.

2.1 Defining Rural within the United States

Researchers often refer to the US Census Bureau Rural and Urban Taxonomy's definition to categorize places as rural or urban. Urban clusters are defined as areas containing at least 2,500 and less than

50,000 people. "Rural" continues to be defined as any population, housing, or territory outside urban areas, often lacking substantial commuting activity to the urban center (Hart, et al, 2005). Many argue that this definition is not satisfactory, however. Hart and colleagues described rural as a "multifaceted concept about which there is no universal agreement" (2005: 1149). A number of studies provide a common set of factors that characterize rural areas beyond the limited definition offered by the Census Bureau, however. Duncan and Tickamyer (1988), for example, show similarities between the average rural population and poor urban populations; the presence of a low-skilled labor force, isolation from established social and economic institutions, limited access to formal education, and a higher level of persistent poverty. It has been acknowledged that even when using census definitions of "rural" individual census tracts in urbanized areas can have a mix of urban and rural traits (Ratcliffe, et al, 2016).

Several caveats are important prior to the discussion of traits generally identified as "rural" in the literature. First, there is great variability across rural areas in patterns of land use, production, and consumption, and those that serve as tourist, recreation, or cultural hubs have seen their economies grow in recent years (Markusen, 2007; Irwin, et al., 2010; Dandekar and Hibbard, 2016). Yet, even given that some rural areas have been prospering (typically those more proximate to urban centers), there are many that have not. Between 2000 and 2005 there were relatively equal numbers of growing, stable, and declining rural counties in the US (Isserman, 2007). Thus, the definitions of rurality discussed below are common across the literature, but it is acknowledged that they do not apply equally to all rural places.

Although many agree that having a low population density and population loss are important indicators of rurality (Castle and Weber, 2011; Freshwater, et al., 2011; Simms, et al., 2014), there are a number of other characteristics that have been used to define what it means to be "rural": declining employment in primary economic sectors such as agriculture, high unemployment particularly among younger residents, aging populations, low per capita incomes, inadequate education and high rates of poverty (Rickman, 2007).

Rural areas have limited access to formal education and, on average, have lower quality educational resources resulting in a population with lower levels of education than in urban areas (Hart et al., 2005; Cromartie and Bucholtz, 2008; Beck, et al., 2018). Teachers in rural areas are often less educated, receive lower salaries, and are responsible for teaching more classes and subjects (Burchinal and Siff, 1964). Urban areas also tend to see higher returns to schooling compared to rural areas (Mills and Hazarika, 2003).

Rural households struggle financially without access to skilled jobs and on average have lower levels of wages and income than urban households (Mills and Hazarika, 2003; Cromartie and Bucholtz, 2008; Simms, et al., 2014). With a lack of diverse economic activities, they can be more vulnerable to economic

downturns due to concentrated economic specializations (Duncan and Tickamyer, 1988; Hart, et al, 2005) and have a higher probability of a residential base in persistent poverty (Hart, et al., 2005; Castle et al., 2011).

Demographics are another trait that many studies have used to define "rural." On average, rural areas have higher white populations and less diversity than urban areas (Duncan and Tickamyer, 1998; Hofferth and Iceland, 1998; Lee and Sharp, 2017) although diversity in rural areas appears to be increasing over time (Crockett, et al.2016). Rural communities have more elderly and children and fewer middle-age adults (Duncan and Tickamyer, 1988; Hofferth and Iceland, 1998; Hart, et al, 2005). The proportion of people aged 50-90 years is greater in rural areas while the proportion of people aged 15-40 is greater in urban areas (Joliffe, 2003).

Many of these same indicators of rurality have been used in international contexts as well, particularly in studies across Europe. While population density is a common indicator, European studies have also explored educational attainment, manufacturing employment and industry diversification, abandonment, and a number of measures of wealth such as purchasing power, social welfare use, and low income to distinguish between rural and urban places and to develop typologies of rurality (Bluden, et al., 1998; Ballas, et al., 2003; Labrianidis, 2006; Vergurg, et al., 2010; Madsen, et al., 2010).

2.2. Urban Versus Rural Economic Development Policies

2.2.1   Urban Economic Development Policy

There is a large literature on economic development policies for urban areas, spread over decades. Cities often rely on a small number of economic incentives although the array of potential tools is broad. National surveys of local economic development practice over time, conducted by the International City/County Management Association (ICMA), indicate the most commonly used to be: collaboration between local governments and chambers of commerce to facilitate development; business surveys and calls on individual businesses; streamlined zoning and permitting processes; promotional and marketing efforts; infrastructure investment; tax increment finance districts; and tax abatements (see Zheng and Warner, 2010; Reese and Sands, 2013; Reese and Ye, 2015).

Generally, evaluations have been mixed for most of these incentives or tools. For example, using meta-analysis of tax policy studies, Peters and Fisher note, "the best case is that incentives work about 10 percent of the time, and are simply a waste of money the other 90 percent" (2004, p. 32). Other studies have suggested that financial incentives tend to exacerbate inter-city inequities, foster sprawl, do not reap tax and investment benefits commensurate with the taxes forgone, and that any benefits are very short-lived (Sands and Reese, 2006; Kang, et al., 2016). Traditional economic policies often have little

relationship to local economic prosperity and serve to redistribute city wealth from residents to the owners of businesses (Reese and Ye, 2011; Joy and Vogel, 2017; Filion, et al., 2019).

2.2.2   Rural Economic Development Policy

Rural economic development policies tend to focus on improving human and community capital, governance, and resilience (Dandekar and Hibbard, 2016), entailing investments in household utilities and the skill-levels of the workforce, with a focus on low-income areas (Dewitt, 1993; Drabenstott, 1995; Martin, 1996). Scholars highlight the need for bottom-up policies that prioritize the rural poor by reducing unemployment rates via investment in people through better academic and vocational training (McCarthy, 1998; Simms, et al., 2014).

 Rural businesses are often at a disadvantage when it comes to access to information and rural areas often need improvements in telecommunications for their people and businesses to succeed and grow. Much of the literature suggests that local governments need to strengthen their relationships with institutions that can provide better access to information, particularly in rural areas (Drabenstott, 1995). Many sources, including Dewitt (1993), Drabensttot (1995), and the APA Policy Guide on Public Redevelopment (2004), stress that due to varying needs, rural redevelopment policies should not be aimed at broad regional areas but rather be focused on individualized planning done for each unique area.

Next, we discuss the approach we use to evaluate the degree to which depopulating Detroit may exhibit the characteristics of a rural economy. The analysis is in turn used as a guide in a subsequent discussion about whether rural development policies could be effective in a shrinking city context.

3. METHODOLOGY

Detroit serves as the focus of interest for several reasons related to the decline and increasing rural nature of post-industrial cities. The economic decline of Detroit has now been well documented (see for example, Galster, 2012; Reese et al., 2014; Reese, et al., 2017). The result has been extreme economic stress for Detroit residents. The number of jobs in the city fell by over half (52.8 percent) between 1970 and 2010, and those held by city residents dropped by 43.5 percent over the same period (US Census of Population, 1970; American Community Survey, 2011). Unemployment has been in double digits during most of that time (Michigan Labor Market Information System, 2013). Large areas of Detroit's east and northwest sides have become derelict and abandoned (Galster and Raleigh, 2015). Roughly 80,000 (23 percent) of the city's 349,170 housing units, 36% of commercial parcels, 22% of industrial properties and about 20

square miles of the land area are vacant (Reese et al., 2014). Research on Detroit, assessing its economic recovery post-bankruptcy concluded:

> *Overall, the citywide data suggest that Detroit continues to experience decline, leaving it worse off than in 2000, or even 2010. Population, employment and incomes continue to decrease, while vacancies and poverty have increased. The real progress that has occurred in recent years in the Downtown/Midtown core has been insufficient to offset the continued citywide negative trends. In part, this paradox has been caused by the scale and uneven geographic distribution of the positive indicators (Reese, et al., 2017: 375).*

Although places are most commonly defined as urban or rural based on population size and density, the literature just discussed identifies many other variables that show clear distinctions between rural and urban places. This analysis employs several of the most commonly cited variables in the literature: population size and density, residential vacancy rates, income levels, unemployment rates, poverty, educational attainment, and industry composition.

Using the United States Census Bureau's 2010 decennial data and American Community Survey data from 2014 and 2016, incorporated places, minus towns, were selected for the analysis. Census Designated Places (CDPs), or unincorporated places, and towns were not used to limit the number of locations with large amounts of uninhabited lands that would not accurately represent true population densities. Removing CDPs, towns, and any observation that did not have complete data across all variables left a sample of 14,468 places across the contiguous US.

Rural populations were divided into three categories based on population size (Table 1). To identify the difference in average values for each variable among different population ranges, mean values were taken within all three "rural" categories. To test whether there was a statistically significant difference between means across the population ranges, a one-way analysis-of-variance (ANOVA) model with a Bonferroni multiple-comparison test was used for each variable employed in the analysis. Some variables did not make statistically significant distinctions between all three categories, thus a binary variable, "rural-urban," was created to compare mean values between rural and urban areas (Table 2).   Decennial census data and the American Community Survey were also used to obtain mean values of the same variables in Detroit at the Census tract level. Removing census tracts that did not have complete information across all variables left a data set of 291 tracts. The mean values were then compared to those among incorporated places nationally.

TABLE 1 - SUMMARY OF RURAL INDICATOR VARIABLE

Rural Indicator	Population Range	Number of Places
Moderately Rural	1,500 - 2,499	1,408
Rural	500 - 1,499	3,253
Extremely Rural	499 or less	3,683

TABLE 2 - SUMMARY OF RURAL-URBAN INDICATOR VARIABLE

Rural/Urban Indicator	Population Range	Number of Places
Urban	2,500 or more	6,124
Rural	1,499 or less	8,344

The analysis proceeds in several ways to answer the first question posed at the beginning of the paper: is Detroit ruralizing, meaning are census tracts with rural characteristics increasing in number? First, maps and descriptive analyses are used to compare Detroit to other places nationally to assess both the extent of its rural characteristics and the spatial patterning of those characteristics. In other words, it is likely that census tracts in the city vary in the extent of their urban and rural traits. Then cluster analysis is employed to predict membership among calculated clusters with varying levels of rurality to determine the incorporated places that Detroit is most similar to. This applies a broader set of criterion variables beyond simple population density to place Detroit within the context of other, more clearly rural, places. Finally, rural and urban economic development policies are considered for their applicability to Detroit and other post-industrial cities.

4. DATA AND ANALYSIS

4.1. Descriptive and Spatial Analysis

With a total population of 683,443 in 2016, Detroit would not classify as rural based solely on population size. Population density is another common indicator used to define a place as rural. According to the USDA, a place is considered rural if there is a population density lower than 1,000 people per square mile. With an *average* population density of 4,929 per square mile Detroit would not be considered rural on this criterion, either. However, this begs the question of how urban Detroit really is when other common indicators of rurality are considered and how urban and rural characteristics are distributed spatially. In our evaluation, we focus on five indicators of urbanicity-rurality: 1) population density, 2) housing vacancy; 3) household income; 4) educational attainment; and 5) industry composition. These variables are used separately as opposed to an aggregate index based on studies finding variability across rural areas; a community might be high on some but not all indicators (Hurt, et al., 2005; Isserman, 2007). These indicators were selected because the literature previously cited identifies notable differences along these dimensions across rural and urban places in the United States and across Europe. In other words,

previous research has identified these variables as important in distinguishing urban and rural places. Differences across these dimensions in urban and rural places are highlighted below and are compared with Detroit to ascertain the degree to which Detroit more closely resembles rural or urban places.

Population Density. In Figure 1, average population densities were taken in incorporated places across the US in six different population ranges (see legend) and then compared to the population densities within Detroit Census Tracts. The darkest shade of red indicates Census tracts that have population densities that are closest to those in places with populations similar to Detroit's (over 500,000 people). All other tracts have population densities comparable to places with smaller populations, shades of green denoting rural populations. Note that the population densities within Detroit become increasingly similar to smaller populations over time. Table 3 indicates that in 2016, about 42% of Detroit Census tracts have population densities close to or below those in less-populated incorporated places. Figure 1 and Table 3 also show that in 2016, about 20% of Detroit's Census tracts had population densities that were similar to places with populations of less than 50,000 people. Detroit has a number of census tracts that would be considered rural based on the density criterion.
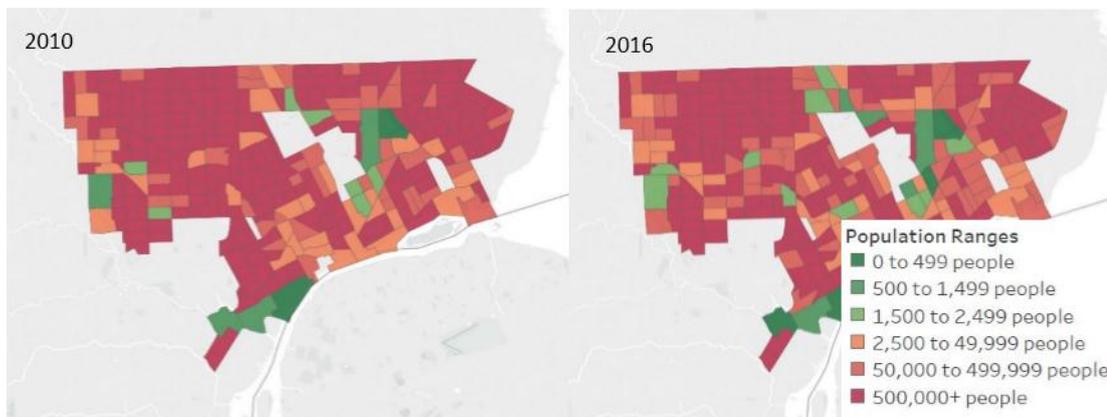

FIGURE 1 - COMPARING DETROIT CENSUS TRACTS TO POPULATION RANGES THROUGHOUT INCORPORATED PLACES IN THE US BASED ON POPULATION DENSITY

TABLE 3 - NUMBER OF DETROIT CENSUS TRACTS THAT CORRELATE WITH POPULATION RANGES

Year	Less than 500,000 people	Less than 50,000 people
2010	85	44
2016	123	56

Vacancy. Rural areas tend to have higher percentages of vacant housing than urban areas. In 2016, about 92% of Detroit Census tracts would have been classified as rural with household vacancy rates of at least 12.98%, compared to the national urban average vacancy rate of about 10.54%. Detroit's average vacancy rate almost tripled that with a value of about 31% (Figure 2 and Table 4). Similarly, about 85% of Detroit census tracts had a rental vacancy rate of at least 10.6% in 2010, which would have been classified as rural. The average among urban places was only about 9% (Figure 3 and Table 5).
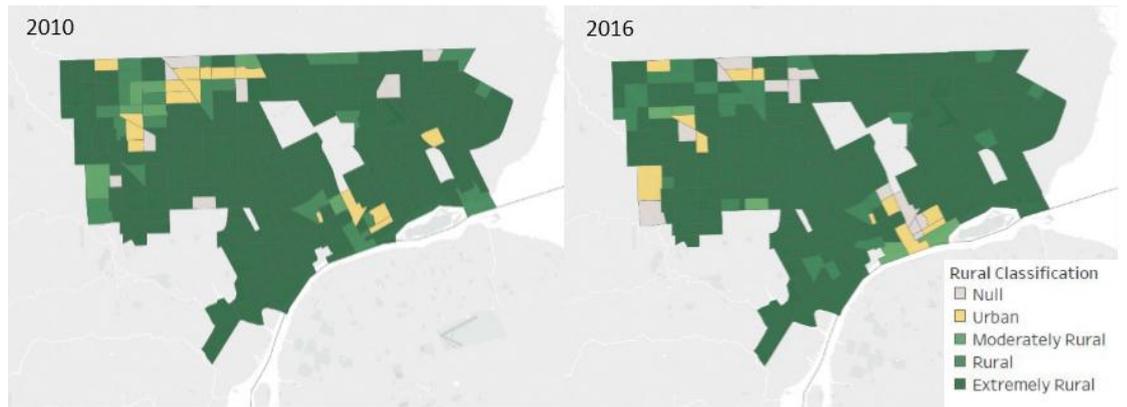
FIGURE 2 - RURAL CLASSIFICATION BASED ON PERCENT OF VACANT HOUSEHOLDS IN DETROIT

TABLE 4 - AVERAGE VACANT HOUSEHOLD RATES

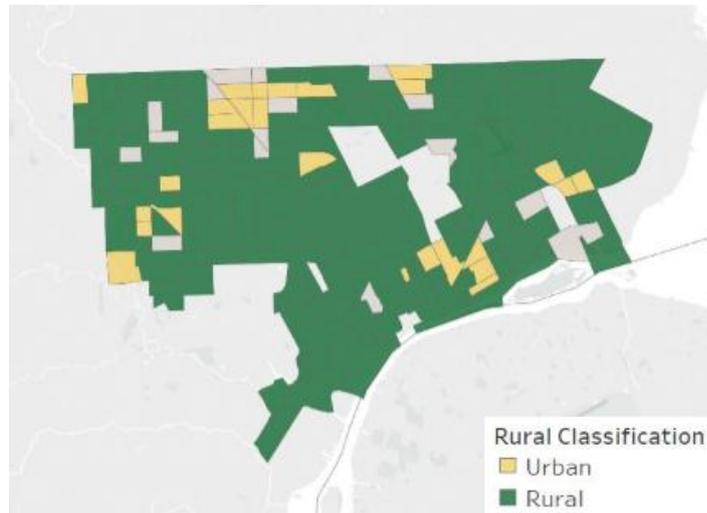| Year	Average Vacant Household Rates in Urban Places	Average Vacant Household Rates in Moderately Rural Places	Detroit Average	Number of Detroit Census Tracts Classified as Rural
2010	9.67	11.4	23.37	267
2016	10.54	12.98	31	268

FIGURE 3 - RURAL CLASSIFICATION BASED ON RENTAL VACANCY RATE IN DETROIT

TABLE 5 - AVERAGE RENTAL VACANCY RATES

Year	Average Rental Vacancy Rate in Urban Places	Average Rental Vacancy Rate in Rural Places	Detroit Average	Number of Detroit Census Tracts Classified as Rural
2010	9.11	10.61	17.64	248

Household Income. Rural places tend to be worse off financially than urban places. In 2016, the average household income in rural places nationally was about $58,674 compared to $71,962 in urban places. Detroit's mean household income was about $37,300, which is substantially lower than the urban *and* rural national averages. About 94% of Detroit Census tracts would have been classified as rural (Figure 4 and Table 6) based on household incomes at or below the rural mean of $58,674. Similar results are

shown for another measure of residential wealth, per capita income. In 2016, the average per capita income in rural places was about $24,342 compared to the average of about $28,016 in urban places. Detroit's average per capita income was substantially lower at about $15,473. About 90% of Detroit Census tracts would have been classified as rural (Figure 5 and Table 7) based on per capita incomes below $24,342.
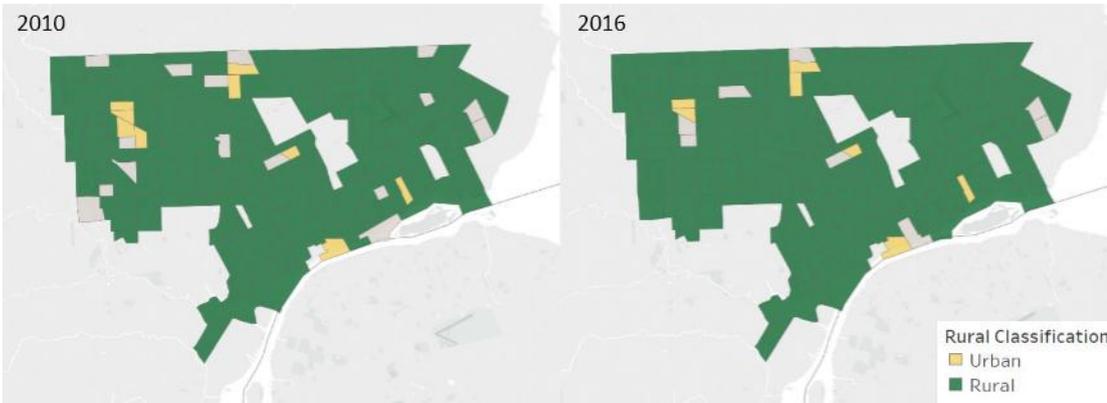

FIGURE 4 - RURAL CLASSIFICATION BASED ON MEAN HOUSEHOLD INCOME IN DETROIT

TABLE 6 - MEAN HOUSEHOLD INCOMES

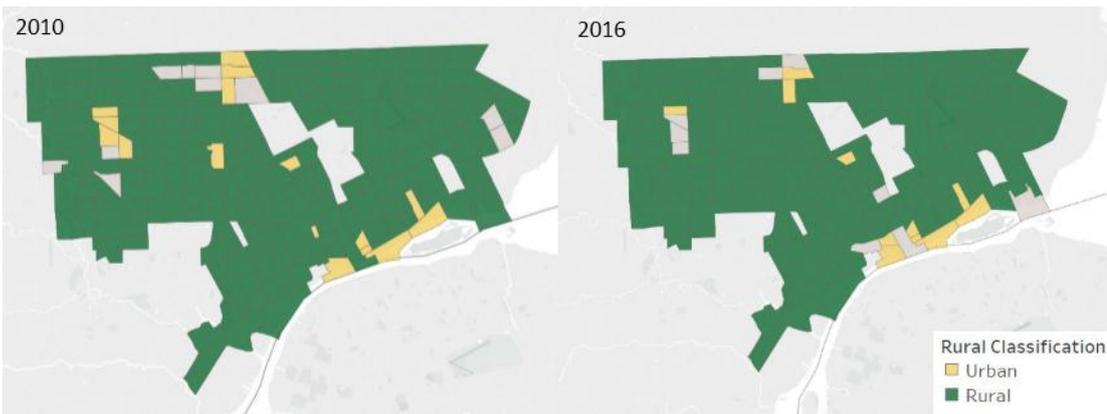| Year	Average Mean Household Incomes in Urban Places	Average Mean Household Incomes in Rural Places	Detroit Average	Number of Detroit Census Tracts Classified as Rural
2010	$66,259	$52,790	$37,755	266
2016	$71,965	$58,674	$37,298	276

FIGURE 5 - RURAL CLASSIFICATION BASED ON PER CAPITA INCOME IN DETROIT

TABLE 7 - PER CAPITA INCOMES

Year	Average Per Capita Incomes in Urban Places	Average Per Capita Incomes in Rural Places	Detroit Average	Number of Detroit Census Tracts Classified as Rural
2010	$25,920	$21,841	$15,064	265
2016	$28,016	$24,341	$15,472	271

Education. In 2016, about 85% of Detroit Census tracts would have been classified as rural, with just under 20% of the population having at least a bachelor's degree. Overall, only about 13% of Detroit's

population had at least a bachelor's degree. In urban places, about 27% of the population obtained at least a bachelor's degree on average (Figure 6 and Table 8).
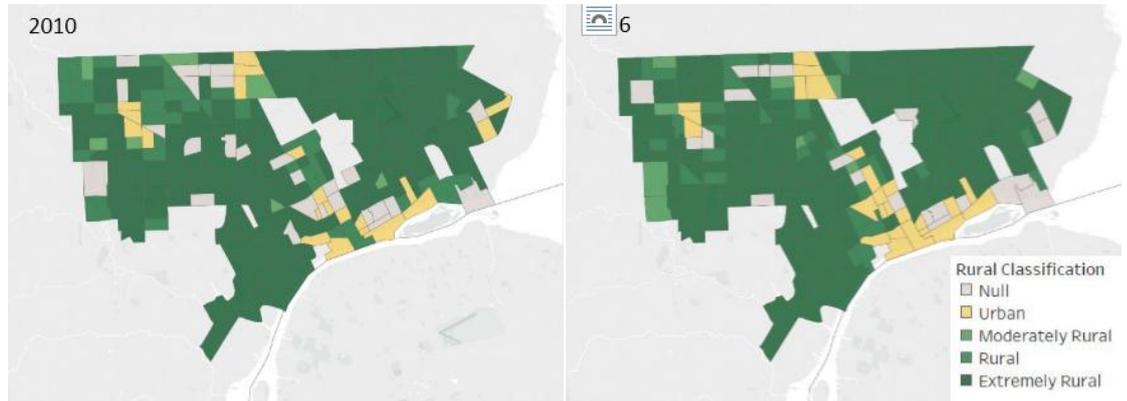

FIGURE 6 - RURAL CLASSIFICATION BASED ON PERCENT OF POPULATION WITH A BACHELOR'S DEGREE OR HIGHER IN DETROIT

TABLE 8 - EDUCATIONAL ATTAINMENT

Year	Average Percent of Population with a Bachelor's Degree or Higher in Urban Places	Average Percent of Population with a Bachelor's Degree or Higher in Moderately Rural Places	Detroit Average	Number of Detroit Census Tracts Classified as Rural
2010	25.42	18.23	11.7	243
2016	27.15	19.96	12.94	246

Industrial Composition and Manufacturing Employment. Industrial composition is examined using the Herfindahl-Hirschman Index (HHI) as an indicator of industry diversity;

$$(1) \quad Ind_i = S_{1i}^2 + S_{2i}^2 + S_{3i}^2 + \cdots + S_{ni}^2$$

where Ind_i is the industry composition ranking in place i and ranges from near zero to 10,000. S_{ni} represents the employment share for industry n in place i, accounting for all 13 industries categorized in the Census data. This model assigns a ranking value that represents the level of diversity among industries, where the higher the value, the less diverse the economic activities.

Rural places tend to have less diversity in economic activities, and thus would be expected to have higher industry composition rankings. This was true for both years 2010 and 2016. Rural places had an average industry composition ranking of about 1,600 while urban places had an average industry composition ranking of about 1,400. Based on these averages, 61% of the Detroit's census tracts would have been classified as rural (Figure 7 and Table 9).
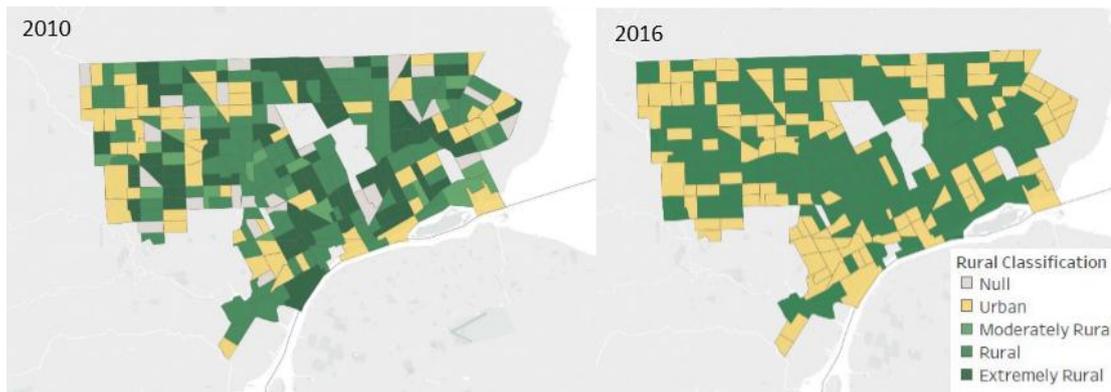
FIGURE 7 - RURAL CLASSIFICATION BASED ON INDUSTRY COMPOSITION IN DETROIT

TABLE 9 - INDUSTRY COMPOSITION

Year	Average Industry Composition Rating in Urban Places	Average Industry Composition Rating in Moderately Rural Places	Detroit Average	Number of Detroit Census Tracts Classified as Rural
2010	1370.99	1464.2	1739.9	205
2016	1407.8	1598.7	1642.2	129

4.2. Cluster Analysis

The variables indicating rurality were also used to predict membership among calculated clusters with varying levels of the indicators. To further examine just how similar Detroit as a whole, is to rural places a k-means partition cluster method was estimated to determine which incorporated places nationally Detroit is most similar to. This technique groups observations based on common traits. Incorporated places were grouped into ten clusters[1] using the following indicators: population density, percent of vacant housing, per capita income, percent population with an educational attainment of at least a bachelor's degree, industry composition calculation, percent of population employed in the manufacturing industry, and average household size. These clusters are evaluated using data from 2016.

Detroit was placed in Cluster 2, among places with an average population of 4,340 and a population density of 1,130 per square mile, the lowest mean population density among all clusters (Table 10). These figures are very close to the criteria used to indicate a rural place and only one cluster has a smaller average population size. Table 11 shows that Detroit's cluster is also very rural based on the other rural indicators; it has the second highest average vacancy rate, and the lowest average per capita income and educational attainment levels.

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[1] As a robustness check, the cluster analysis was performed repeatedly with numbers of clusters ranging from five to 15 and Detroit was grouped among the same places for all cluster amounts.

TABLE 10 - SUMMARY OF 2016 CLUSTERS

Cluster	Sample Size	Mean Population (people)	Average Population Density (people per square mile)
1	38	2,447.8	1,438.7
2	1,985	4,340.3	1,130.0
3	123	6,552.5	2,117.9
4	4,008	7,351.8	1,204.8
5	240	9,792.8	2,680.0
6	3,968	11,142.2	1,318.0
7	2,396	19,670.8	1,678.8
8	1,032	24,333.7	2,265.0
9	514	24,471.3	3,043.6
10	164	113,288.9	11,567.5

TABLE 11 - MEANS OF SELECT FEATURES IN 2016 CLUSTERS

Cluster	Per Capita Income	Percent Vacant	Percent of Population with a minimum of a Bachelor's Degree
1	$132,862.70	18.3	74.2
2	$14,774.38	18.0	10.4
3	$91,815.67	13.1	72.6
4	$19,844.70	14.8	14.0
5	$67,040.19	13.8	66.5
6	$24,306.03	12.4	18.1
7	$29,392.99	11.3	24.9
8	$37,034.97	10.5	38.0
9	$48,724.76	11.6	52.6
10	$20,429.46	9.6	18.5

Table 12 indicates that only 18 of the cities in Cluster 2 have populations larger than 50,000 and about 68% of the cluster, 1,358 places, are considered rural based on the Census Bureau's definition for rurality. Detroit is in the 95th percentile for population density in the cluster. Although it is not the largest outlier, there are only thirty-five places in Cluster 2 with greater population densities. Almost 1,200 places have population densities less than 1,000 people per square mile, meeting the Census Bureau's definition for rurality. It is clear that Detroit is not representative of the average place in Cluster 2 based on population size and density but does share other features of rural areas. The sociodemographic traits within Detroit's cluster are very rural.

This analysis has shown that the socio-demographic characteristics in much of Detroit are actually more similar to rural than urban areas and, in many cases, are becoming more so. Even the population density in many census tracts is similar to that in much smaller communities. Most census tracts within the city

would classify as rural in both household and rental vacancy, mean household and per capita income, and educational attainment.

TABLE 12 - SIZE DISTRIBUTION OF PLACES IN CLUSTER 2 FOR 2016

Population Size (in people)	Number of Places	Population Density (people per square mile)	Number of Places
Less than 1,000	968	Less than 1,000	1,194
1,000 – 2,499	390	1,000 – 2,999	670
2,500 – 49,999	609	3,000 – 4,999	86
50,000+	18	5,000+	35

The cluster analysis grouping Detroit among rural communities defined by the Census Bureau further points to the rural nature of many areas of the city. The twenty *largest* cities also included in the cluster with Detroit range in overall population from 45,404 to 251,671 (Table 13). Among the largest cities in the cluster of just under 2,000 communities, two types are visible: cities that had significant, typically auto-related manufacturing that are now in distress (all of the cities in Michigan included in the cluster for example), and those that are primarily agricultural. This implies that Detroit is not alone in the increase of rural indicators in many areas and that it might be a more widespread feature of post-industrial cities. The level of rurality in Detroit should be a cause for concern when considering appropriate economic development policies and incentives.

TABEL 13 - PLACES IN CLUSTER 2 WITH THE TWENTY LARGEST POPULATIONS FOR 2016

Place	Total Population	Population Density
Detroit city, Michigan	683,443	4,926
Laredo city, Texas	251,671	2,831
San Bernardino city, California	214,581	3,625
Brownsville city, Texas	182,110	1,376
Victorville city, California	121,320	1,658
Rialto city, California	102,418	4,582
Flint city, Michigan	98,918	2,960
Hesperia city, California	92,664	1,268
Nampa city, Idaho	87,896	2,818
Gary city, Indiana	77,858	1,561
Pharr city, Texas	75,172	3,210
Perris city, California	73,718	2,348
Madera city, California	63,398	4,015
Pontiac city, Michigan	59,920	3,000
Porterville city, California	58,472	3,321
Delano city, California	52,538	3,673
Elkhart city, Indiana	52,378	2,233
Caldwell city, Idaho	50,288	2,279
Saginaw city, Michigan	49,892	2,878
Pine Bluff city, Arkansas	45,404	1,019

4. DISCUSSIONS AND CONCLUSIONS

Rural economic development policies are often people and community-based, focusing on issues such as improving utilities, telecommunications, governance, sustainability and resilience, and human and community capital through investments in education and job skills training. Development policies in both urban and rural areas focus on business development. However, rural polices emphasize support to small and medium-sized local businesses to generate employment, whereas urban policies tend to focus on attracting large, individual firms through financial incentives like tax abatements and specialized zones (Reese and Sands, 2013). Traditional urban policies also emphasize managing expansion and congestion, fostering competitiveness and innovation, and investments in infrastructure.

The rural development recommendations differ from economic development policies employed in cities across the US in several important ways. Table 14 summarizes rural economic development policies commonly recommended across decades in the literature. Most of the policies summarized in the Table emphasize a bottom-up approach to economic development that is specifically targeted to small places. The policies summarized in the Table have been recommended in the rural development literature to address the challenges found to be present in Detroit based on the forgoing analysis: spatially uneven development; low income and educational attainment; and, reliance on manufacturing that leaves the small business sector underdeveloped.

TABLE 14 - RURAL DEVELOPMENT POLICY RECOMMENDATIONS

Human and community capital; investments in education and skills training with a focus in low-income areas (Drabenstott 1995, Martin 1996; Blank, 2005; Rickman, 2007)
Business development particularly small business through vehicles such as loan guarantees and business development assistance (Drabenstott 1995; Johnson, 2010)
Telecommunications, better access to information and energy infrastructure (Drabenstott 1995; Partridge, 2007)
Intensive focus on small geographies tied to regional systems (Rickman, 2007; Dandekar and Hibbard 2016; Simms, et al., 2014)
Resilience (Dandekar and Hibbard 2016; Frank and Hibbard, 2016)
Arts, culture and recreation, i.e. amenities (Deller, et al., 2001; Markusen, 2007; Beyers, 2007; Frank and Hibbard, 2016)
Technical assistance for government and businesses (Sims et al., 2014; Dandekar and Hibbard 2016)
Community-based bottom-up strategies (Shaffer, et al, 2004; Simms et al., 2014)
Public enterprises such as ownership of local utilities (van Wart, et al, 2000)

A focus on the city of Detroit as a whole almost inevitably leads to an emphasis on downtown and midtown, creating attractions and entertainment venues that bring in tourists and visitors from the suburbs, and developing new hip businesses. The immediate benefits are that tax base and hence revenue increases in these areas (to the extent that development is not subsidized) and the hope is that these benefits will trickle down (or out) to other areas of the city. But the reality is that they have not (Reese, et al., 2017). Thus, if the focus is changed to smaller units such as neighborhoods potential benefits will be much more directly experienced by the residents that still live there. A number of scholars recommend a community

planning process where the emphasis is on residents and local leaders and community assets and goals are the driving force. However, this is a preamble for identifying connections at larger geographic scales where cooperation might be beneficial. This combines an intensive focus on the needs of small areas of the city and then moves on to examine how those units might be tied to larger systems.

Arguments about the importance of human capital development have been present in the academic literature but have not been as well represented in application on the ground. Investment in education has been shown to contribute to economic growth and research has indicated causal connections between human capital accumulation and economic expansion (Krueger and Lindahl, 2001; Toya et al., 2010 for example). Investment in local public schools has also been suggested as an economic driver (Wrigley and Lewis, 2002). In longitudinal studies comparing the effectiveness of traditional development policies to investment in local public services such as schools, public safety, parks and recreation, and quality of life including arts and culture, it seems clear that the latter do more to promote economic prosperity than the former (Reese and Ye, 2011; Reese, 2012).

While tax abatements are directed at the relocation of large facilities, small business development requires other types of support. While these policies have been recommended for urban areas their application too has been spotty, particularly in distressed cities like Detroit. Economic development policies that might redirect development toward neighborhoods are vital to providing both jobs within walking distance for those without cars, local commercial services, and to address the health implications of food desserts and swamps (Eckert, 2018).

While commercial tax abatements might encourage some small business development, taxes tend not to be the most important cost to smaller fledgling firms. For example, small business incubators have been a well-documented means of local investment in business development. Incubators appear to be successful in stabilizing small businesses, producing limited job generation, and increasing sales among incubated firms in return for relatively small investments of public dollars (Stokan, et al., 2015; Harper-Anderson and Lewis, 2017). Specialized small business incubators in particular can be targeted to meet the needs of small places such as distressed neighborhoods: those focused on food enterprises could address unemployment and food swamps; "maker" spaces could enhance quality of life by providing art and cultural options, training to local youth, and tourism as well as supporting artists; nonprofit incubators could provide office space and shared services for new community organizations enhancing citizen empowerment. Revolving loan funds have also been suggested as a means for bottom-up development of small firms, particularly for small business development, commercial enterprises, rent or purchase of space, renovation of buildings, and other start-up costs.

In short, large and increasing areas of Detroit exhibit characteristics more commonly associated with rural areas of the United States. Yet the City of Detroit continues to employ economic development tools that are designed for urbanized areas. It is perhaps no surprise that such strategies appear to be ineffectual in halting, let alone reversing Detroit's downward trend. While there is no guarantee of success, a more effective development strategy might involve increasing the use of economic development tools that are designed to address the problems faced by rural communities. At worst, they seem unlikely to have adverse effects.

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