

# Neighbourhood Change in Halifax Regional Municipality, 1970 to 2010: Applying the “Three Cities” Model

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Victoria Prouse, Jill L Grant, Martha Radice, Howard Ramos, Paul Shakotko

With assistance from

Malcolm Shookner, Kasia Tota, Siobhan Witherbee

[Three Cities data provided by J David Hulchanski and Richard Maraenen]

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Visit the national project's web site: <http://neighbourhoodchange.ca/>

Visit the Halifax project web site: <http://theoryandpractice.planning.dal.ca/neighbourhood/index.html>

In 2010, the Cities Centre at the University of Toronto released the *Three Cities of Toronto*, a landmark report documenting sociospatial patterns of income polarization in neighbourhoods in Toronto. The report examined individual income by census tract to reveal a dichotomized landscape in the city, with a significant decline in the number of middle-income neighbourhoods over the previous 40 years. The “loss of the middle” intensified a growing gap between the city's rich and poor areas.

The report, like most Canadian studies of neighbourhood change, focused on the county's largest cities. Less is known about changes in mid-sized cities and the factors that shape them. Some studies have analyzed national levels of inequality at the CMA (census metropolitan area) scale, but comparative analyses of neighbourhood-level data of a range of cities are rare. As a result, the Neighbourhood Change Research Partnership is examining several cities, including Halifax Regional Municipality (HRM or Halifax), to better understand income dynamics in Canada more broadly.

## Key findings with respect to Halifax

- Halifax is less economically polarized than larger Canadian cities.
- The average individual incomes of census tracts on the Halifax Peninsula increased over time, relative to the city average.
- The average income of postwar suburbs decreased relative to the city average over time.
- The census tract may not be the most useful scale for evaluating neighbourhood change in Halifax and other smaller cities where neighbourhoods tend to be small.

## Method

The research team examined neighbourhood change in Halifax by analyzing average individual incomes using census tracts from 1970 to 2010 (based on census data from 1971 to 2006, and using tax filer data for 2010). Following the method used for the Toronto study (<http://neighbourhoodchange.ca/>), we tried to determine whether income levels changed in a patterned way over time, in relation to the average income for the CMA as a whole. [The full report of the findings is available at <http://theoryandpractice.planning.dal.ca/neighbourhood/working-papers.html> ]

Using the same approach as the *Three Cities of Toronto* report, we first examine sociospatial differences of five types of neighbourhoods based on levels of income (using census tract as a proxy for neighbourhood) in relation to the average income of individuals in the CMA (table 1). After indicating changes in overall census tract proportions, we discuss spatial patterns in the changes.

Table 1: Income Categories of Neighbourhoods Analysed	
<b>Very High</b>	Census tracts with an average (mean) individual income more than 40% above the CMA average individual income
<b>High</b>	Census tracts with an average individual income 20 to 40% above the CMA average individual income
<b>Middle</b>	Census tracts with an average individual income less than 20% above or below the CMA average individual income
<b>Low</b>	Census tracts with an average individual income 20-40% below the CMA average individual income
<b>Very Low</b>	Census tracts with an average individual income more than 40% below the CMA average individual income

We then used the Three Cities framework as we tried to interpret socioeconomic change *within* and *across* neighbourhoods over time. For this we inspected changes between 1980 and 2010. It is difficult to look at earlier periods because earlier census tracts are not comparable with those of today. As much of Halifax shifted from rural to urban, census tracts became smaller, reflecting a higher density of population, so they should not be compared to census tracts from before 1980. Table 2 shows the definitions of the Three Cities used in the study.

Table 2: Three Cities Model	
<b>City #1</b>	Areas with increasing incomes ranging between 10% and 60% increase
<b>City #2</b>	Neighbourhoods with income increase or decrease that is less than 10%
<b>City #3 L</b>	Low income neighbourhoods with more than 10% decline in income
<b>City # 3 MH</b>	Middle or high incomes areas with more than 10% decline in income

## Distribution of neighbourhood incomes in HRM

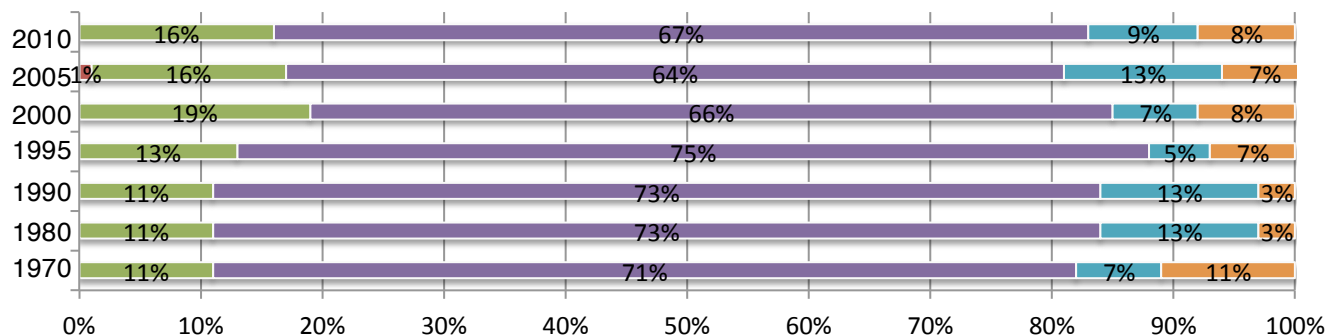
When we examine the changing proportions of census tracts falling under each income category in Halifax we find that the number of middle income census tracts declined slightly between the 1971 and 2011 Censuses. Chart 1 provides a proportional breakdown of each income category from 1971 to 2011. The ratio of “low” and “very low” census tracts to “high” and “very high” census tracts remained relatively constant. Halifax had more “high” and “very high” income census tracts in the 1971 Census than it did in 2011. Given that the middle held its ground and very high tracts did not increase, the data do not provide strong indications of increasing income polarization in HRM as has been seen in Toronto and Vancouver.

Although overall Halifax may not be experiencing large increases in income polarization, when we divide the city into the Halifax Peninsula versus Off-Peninsula things seem less clear-cut. Data suggest that high and very-high income census tracts came to characterize greater areas of the Peninsula, while low-income census tracts increased Off-Peninsula.

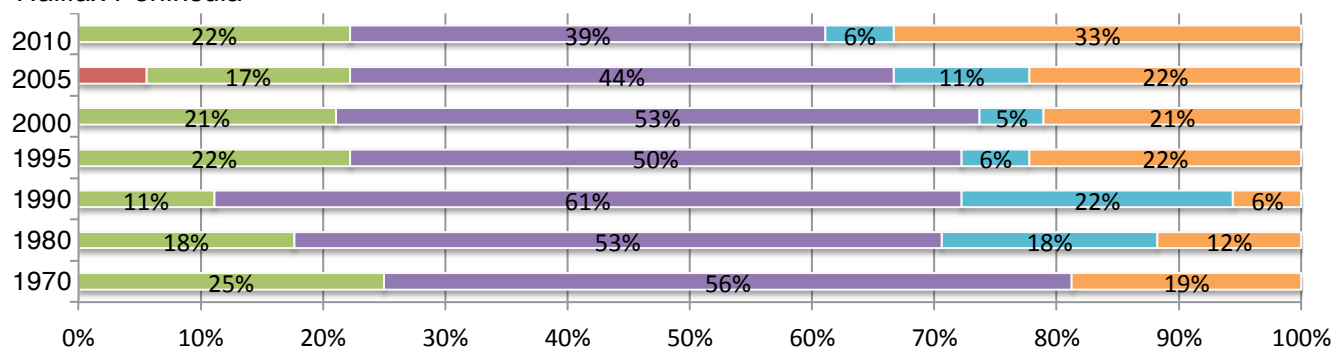
Proportion of census tracts having:

- **VERY LOW** income (Less than 60% of CMA average)
- **LOW** income (Between 60-80% less than CMA average)
- **MIDDLE** income (Between 80-120% of CMA average)
- **HIGH** income (Between 120-140% of CMA average)
- **VERY HIGH** income (Over 140% of CMA average)

### Halifax Regional Municipality



### Halifax Peninsula



### Halifax Off-Peninsula (Mainland)

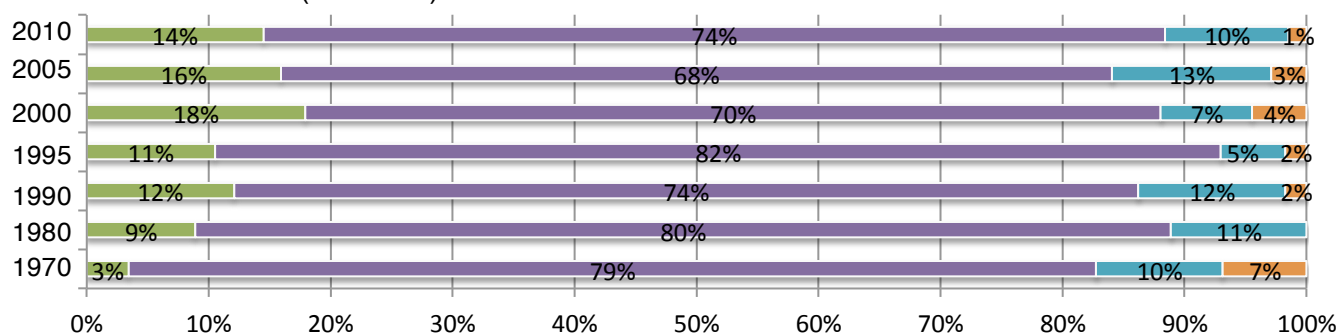


Chart 1: Distribution of census tracts by income category of individuals ages 15 and over, 1970-2010 (1971 to 2006 Statistics Canada Census Profile Series and 2010 Canada Revenue Agency Tax Filer Data)

## Halifax's Geography of Income

Maps showing individual income patterns at intervals throughout the study period add another dimension to our interpretation of neighbourhood change in Halifax. We first examine the distribution of incomes across neighbourhoods in 1970 (Map 1) and then again in 2010 (Map 2).



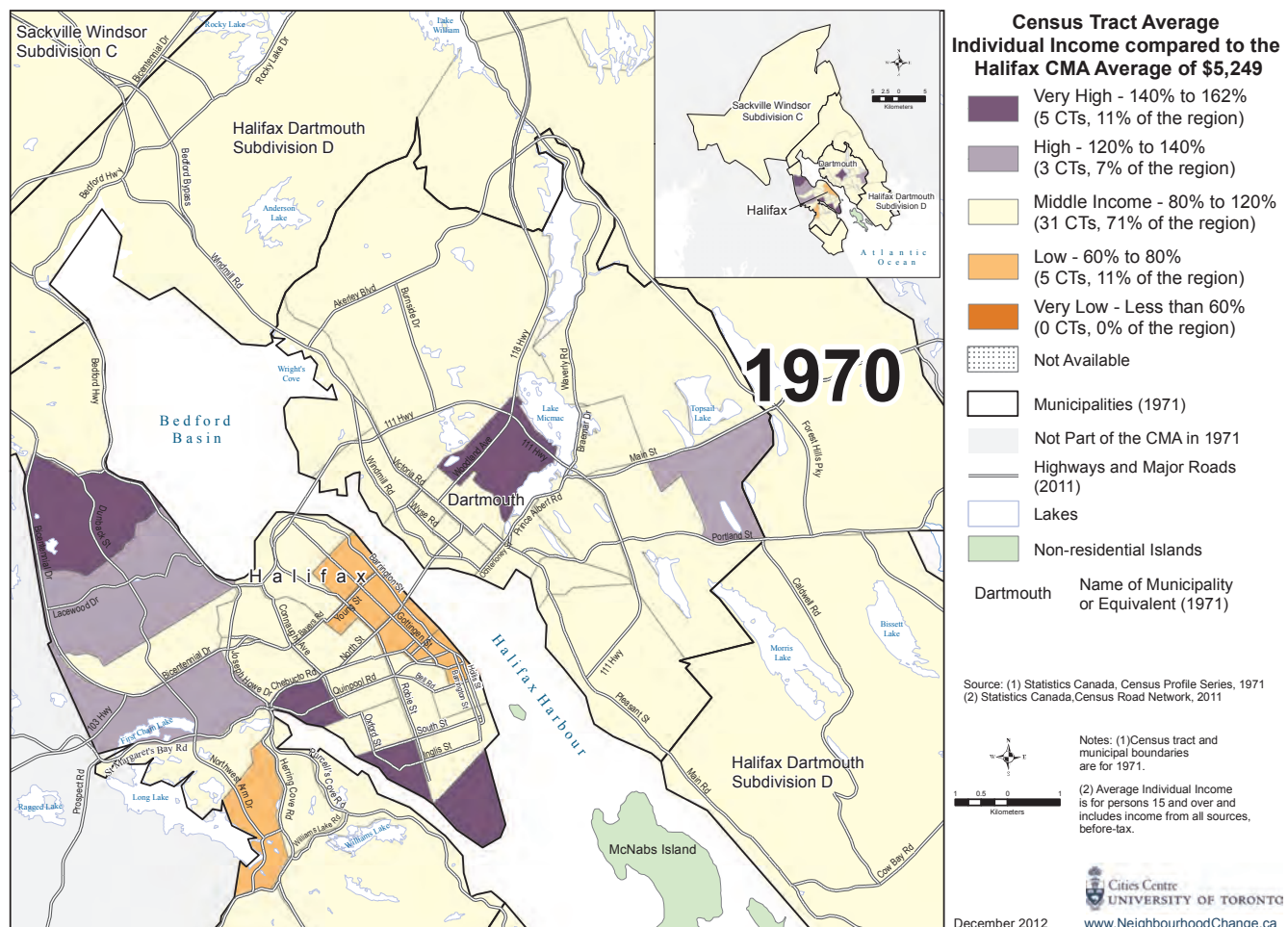
In 1970, incomes were distributed along a steady gradation throughout the Halifax CMA. On the Peninsula, the geography of income distribution echoed historic neighbourhood development. The affluent South End and the area near the Northwest Arm contained some of Halifax's "very high income" tracts. North End Peninsula census tracts along the harbour were homogeneously low-income. Between we find middle-income areas.

The census tracts encompassing then new suburbs of Crichton Park in Dartmouth and Rockingham on the Halifax Mainland were also very high-income areas in 1970. Other suburbs such as Woodlawn, Armdale, and the south part of Clayton Park were high-income areas. Generally, however, the suburban and exurban fringe of the region was in the middle-income range.

Off-Peninsula, Spryfield (an area of farm and industrial land until residential growth in the postwar period) had average individual incomes in the "low-income" range. It contained a corridor of relatively low-rent apartments and many small homes. By 1970, authorities had erected several large public housing projects through the city (Millward, 1983, 182): Mulgrave Park and Uniacke Square in the North End, Bayers Road in the western part of the city, Greystone in Spryfield, and along Victoria Road in Dartmouth near the MacDonald Bridge. Those areas contained pockets of disadvantage, often near middle-class neighbourhoods.

In contrast, by 2010 Halifax's overall geography of income proved more fragmented than it had been in

## Average Individual Income, Halifax Census Metropolitan Area, 1970



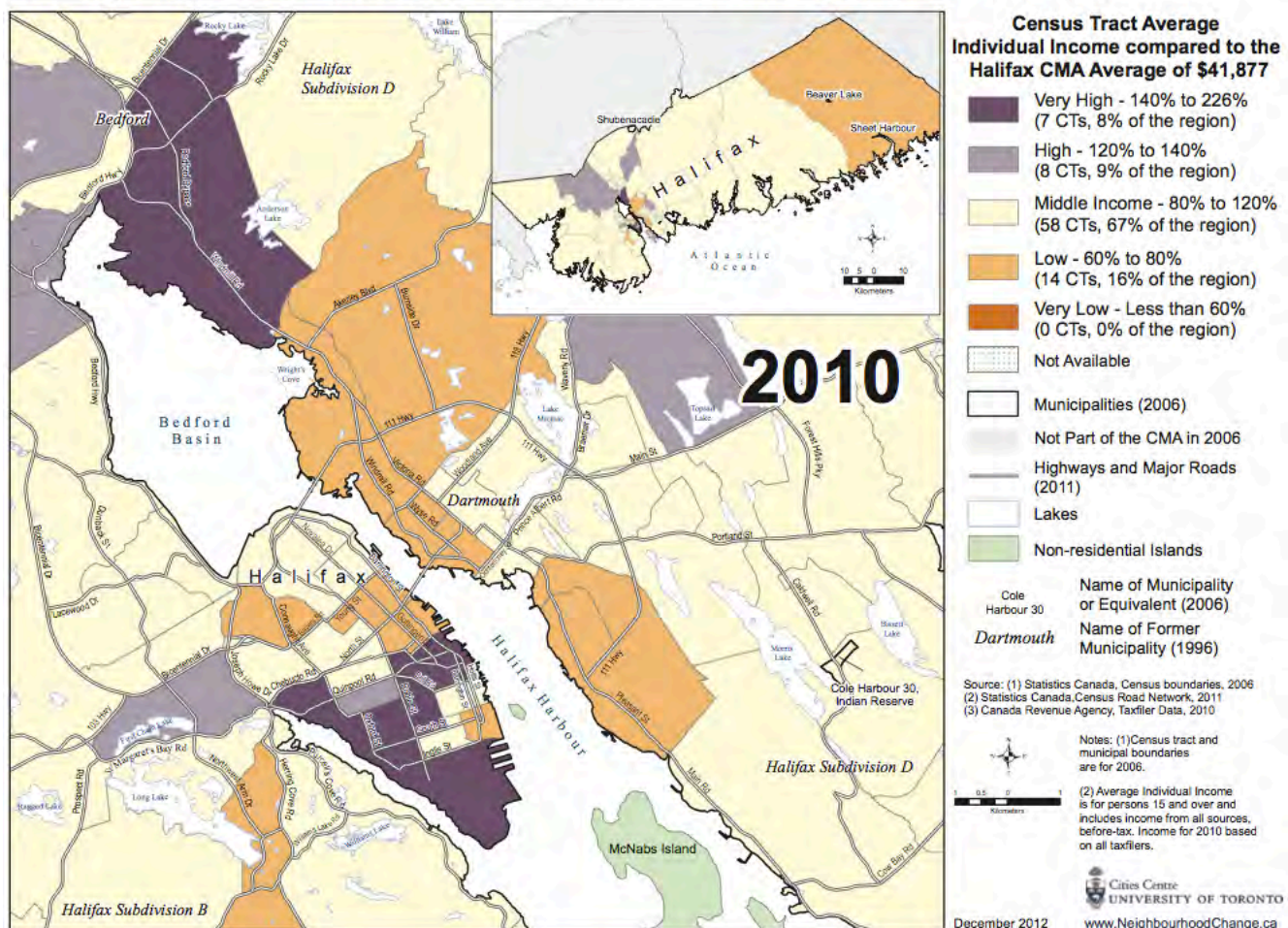
Map 1: Average Individual Income, HRM, 1970 (Cities Centre, 2012)

1970. Formerly middle-income census tracts in the central and western portions of the Peninsula transitioned to “very high income” status as urban living became more popular for affluent households. Neighbourhoods on the Peninsula were less likely to have middle-level incomes by this time. Some census tracts in central Halifax went from lower income in 1970 to very high average income by 2010, as condominium development and gentrification changed neighbourhoods. New affluent suburban areas appeared in Bedford, Dartmouth, and along the highway corridors leading out from Halifax towards Hants County. Formerly very high-income suburbs such as Crichton Park and Clayton Park by 2010 had transitioned to near the CMA average.

Areas with lower than average incomes shrank somewhat in the North End of Halifax, emerged in the Bayers Road area, and grew along the Spryfield corridor. New areas of low average incomes emerged in Dartmouth in districts with high proportions of rental housing. The eastern rural portion of the municipality had low average incomes in 2010. The total area identified as lower than the CMA average grew (although in some cases the census tracts contain large areas of non-residential uses). Within the CMA as a whole, however, the proportion of census tracts located in the lower-income cluster decreased, because suburbanization increased the total number of census tracts in the region.

A mosaic of census tracts with diverse income trajectories replaced the relatively simple income geography seen Off-Peninsula in 1970. New areas in Bedford, Keystone Village, and Fairmount had generally higher average individual incomes than districts built between 1970 and 1980. Thus we see that older suburban areas declined in average individual income, moving toward the city mean over

## Average Individual Income, Halifax Census Metropolitan Area, 2010



Map 2 Average Individual Income, HRM, 2010 (Cities Centre, 2012)

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time. Suburban growth and demographic transformations occurred in Bedford, Cole Harbour, and the Eastern Shore, dramatically altering these communities' traditional forms and character from what existed in 1970.

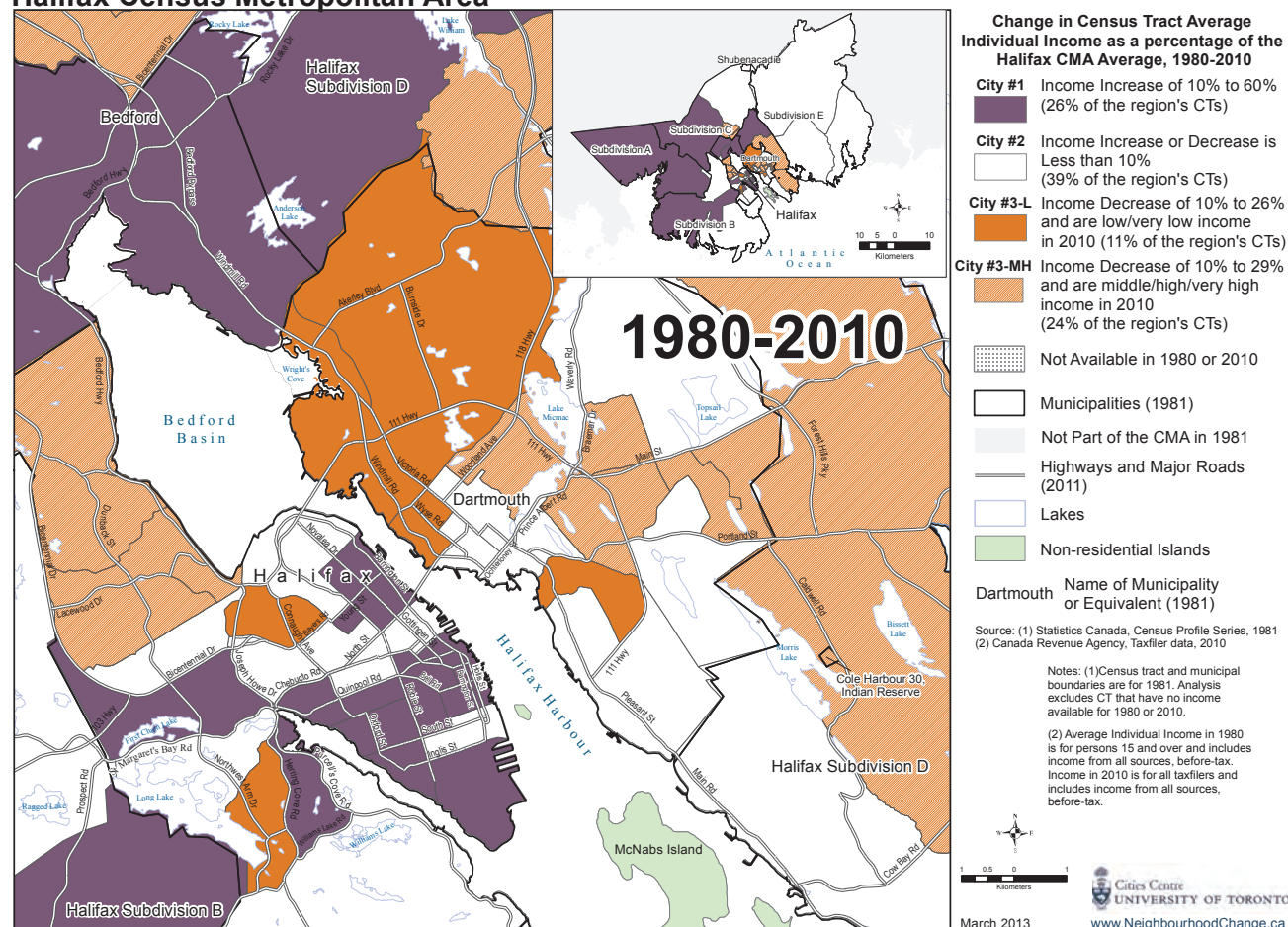
Analysis at the census tract level reveals the discontinuous nature of residential development off the Peninsula. Until recently, much of Mainland Halifax was rural in character. Areas defined as the “rural-urban fringe” have grown more quickly than the rest of the HRM. As a result, we must make conclusions about changing income levels in suburban Halifax with caution.

## Applying the Three Cities Model to Halifax

To examine the geography of income further we mapped the change in neighbourhood's average incomes over time using the Three Cities model. When this is done we generally find less polarization of individual incomes in neighbourhoods.

Just over one-quarter of census tracts in Halifax can be described as fitting City#1, which with 10% or greater increases in average income against the CMA average over 30 years. The census tracts in this category are largely found in a horseshoe shape extending from the South End of the Peninsula into Bedford and the commuting fringe districts of the city (Map 3). About 40 percent of census tracts, in contrast, were part of City#2: these areas remained relatively stable in average income levels over time. Most of those were found off-Peninsula. Areas with declining incomes against the average over time,

### Change in Census Tract Average Individual Income, 1980-2010 Halifax Census Metropolitan Area



Map 3 Relative Change in Census Tract Average Individual Income 1980-2010 (Cities Centre, 2013)

City#3, were categorized in two ways. Some lower income neighbourhoods declined in relative affluence over time: about 11 percent of census tracts were part of City#3L, including parts of the Bayers Road area, Dartmouth, and Spryfield. Many of these districts contain large parcels of public housing or affordable rental units. About a quarter of Halifax's census tracts fell into City#3MH, areas of high and middle income in 2010 but with declining incomes against the city average. These included large areas of Dartmouth, Cole Harbour, and Clayton Park: often in post-war suburbs. Clayton Park contained the census tract with the greatest magnitude of income decrease over the 1980 to 2010 period: extensive recent development of multi-family housing in an area of formerly detached housing likely accounted for much of the change.

In general it appears that neighbourhoods on the Peninsula have been gaining in average individual income against the Halifax mean: low-income census tracts are decreasing. Urban fringe areas are gaining against the mean as they transition from rural to suburban status. Postwar suburban areas off the Halifax Peninsula appear more likely to be declining against the city average, with the exception of Bedford, which transitioned to a high-income area.

## What the “Three Cities” model says about Halifax

We did not find stark patterns of increasing income inequality in Halifax as appeared in applying the Three Cities model to Toronto. Instead, the model reveals an interesting, if inconclusive, picture of neighbourhood change in Halifax. At least four factors, related to local context and scale of analysis, help to explain.

### Governance structures and policy led to scattered economic development

Historically local government struggled to enforce development boundaries. Prior to municipal amalgamation in 1996, Bedford, Dartmouth, the County, and Halifax competed for commercial and industrial investment. Scattered growth patterns distributed poverty and affluence widely throughout HRM, creating challenges for municipal government and service providers.

### Halifax's unique geography means census tracts don't always match neighbourhoods

Halifax's unique topography begets diverse patterns of development that create large and unusually shaped census tracts that do not reflect local neighbourhoods. The region's natural terrain contains marketable features that entice suburban developments. Lakes, forested areas, rugged terrain, steep slopes, and other natural features act as boundaries between neighbourhoods within census tracts. Poverty and affluence are widely distributed in pockets throughout the region.

### Census tract boundaries are inconsistent over time

Statistics Canada's census tract boundary delineations are inconsistent over time. Because of the significant growth of suburban areas, Statistics Canada continually changed census tract boundaries. Adjustments in census tract boundaries are of particular concern in areas identified by HRM as “Rural Commuter Centres.” Changing boundaries make longitudinal comparison of data challenging, as geographic units keep shifting.

### A small-scale city needs a smaller-scale geographic unit of analysis

For purposes of the neighbourhood change study, we used the census tract as a proxy for neighbourhood. However, neighbourhood is a hotly contested concept and difficult to define at the best of times. Our analysis found that census tracts do not reflect neighbourhoods very well. The municipality's political, geographical, and jurisdictional setting makes census tracts too large to represent communities and to reveal the extent of sociospatial polarization.

## Policy questions

Our study explores new ground as we look at longitudinal trends in sociospatial polarization in Halifax. Although Halifax has pockets of poverty and disadvantage, and while individual incomes have been increasing on the Peninsula, our application of the Three Cities model to census data for Halifax suggests that at the census tract level Halifax does not appear as starkly polarized as Toronto or Vancouver. Halifax is not a “divided city” at the same scale as larger cities. Unlike larger cities that have experienced significant growth in areas of extreme poverty and extreme affluence, Halifax has seen more subtle but meaningful neighbourhood change.

Efforts to apply the Three Cities model to Halifax have led us to question whether analysis at the census tract level paints an accurate picture of sociospatial polarization and income inequality in the city. We know from experience that Halifax has areas of concentrated and racialized poverty, but social mix or gentrification may mask them at the scale of the census tract. Consequently we are left with several questions, both practical and theoretical.

### What is the appropriate scale for examining neighbourhood change in smaller cities?

Census tract level analysis did not reveal strong evidence of increasing income inequality or polarization in Halifax Regional Municipality from 1970 to 2010. Aggregation of individual incomes at the census tract level likely hides difference, because the scale of income clusters is small in Halifax and populations may be mixed within census tracts. We hypothesize that a finer scale of analysis – such as the Dissemination Area – would likely show more dramatic trends that reflect lived experience within neighbourhoods of smaller cities

### What are the other dimensions of change and what does income miss?

In Halifax, lower income areas that are declining compared to the CMA overall average income (City#3L) show different patterns of change than middle and high income areas that are decreasing at the same rate against the average (City#3MH). Census tracts that appear to have remained “stable” over 30 years (City#2), moreover, may have remained stable with lower, average, or higher income levels, so we must be cautious not to interpret stability as equality. Furthermore, census tracts near the city’s average individual income may have undergone significant changes that income data on its own masks. Average income can hide processes such as gentrification, incumbent upgrading, and household aging. It does not account for a host of other demographic, social and political factors that intersect with inequality and changing neighbourhoods. Further analysis through neighbourhood studies will help reveal the complex nature of sociospatial inequalities and change.

### What would a stable non-polarized neighbourhood look like?

Evaluating neighbourhood change within a model of sociospatial polarization may imply a desired state of diversity and social integration that is difficult to define. What level of social mix do we want in our cities? At what point does social mix tip over into gentrification or other processes that promote inequality? Neighbourhoods are always in flux. Analysing adjacencies –of household types, housing types, income levels, and uses—may offer insights into neighbourhood context.

### What data can be used to study neighbourhood change in the years to come?

The analysis of neighbourhood change depends on quality information used to assess local experiences. The NCRP team has begun to examine data quality of the National Household Survey (which replaced the long-form census in 2011) and found it insufficient for documenting change, especially for smaller cities. In order to gauge how neighbourhoods are changing in future, governments will need to invest in adequate data collection and analysis.