Routledge
Taylor & Francis Group

⊕ OPEN ACCESS | Check for updates

Are Millennials leaving town? Reconciling peak Millennials and youthification hypotheses

Hyojung Lee 🔟

Department of Apparel, Housing, and Resource Management, Virginia Polytechnic Institute and State University, Blacksburg, USA

ABSTRACT

Are Millennials leaving town? Yes, they are. Are young adults leaving town? No, they are not. The seemingly contradicting answers are due to the fact that age and birth cohort are distinct concepts. Showing how these two phenomena can coexist, this paper aims to provide detailed and timely information on how Millennials are faring compared to previous generations in the United States. Using the 1962–2019 Current Population Survey (CPS), the paper first analyzes the current status of Millennials, in terms of various demographic and socio-economic dimensions, and compares them with those of older generations at the same ages. The results indicate that Millennials did experience delays in transition into adulthood, but they have started to catch up in recent years. Then this paper examines the residential location of young adults and Millennials across metropolitan status, and across urban and suburban areas of the largest 50 Metropolitan Statistical Areas (MSAs) in the United States. The analysis based on the confidential version of the 2006–2019 American Community Survey (ACS) microdata confirms that the early Millennials have started to migrate from urban to suburban areas, consistent with the peak Millennial hypothesis, and that the urban presence of young adults has increased over time, consistent with the youthification hypothesis. Reconciling the two hypotheses, this paper discusses the implications of ongoing demographic shifts for the future urban landscape.

Highlights

- Early Millennials have started to migrate to suburbs as they age into their 30s.
- Yet, the presence of young adults age 25–34 in urban areas has also grown.
- This study reconciles the two seemingly conflicting trends with empirical evidence.
- Policymakers need to address the shift in Millennial demand towards suburban homes.
- Policymakers should also expect sustained demand for urban living among young adults.

CONTACT Hyojung Lee ✉ hyojunglee@vt.edu 📧 Virginia Polytechnic Institute and State University, 252 Wallace Hall, 295 West Campus Dr., 24061, Blacksburg, VA, USA

1. Introduction

COVID-19 has accelerated many of the trends that were already underway before the pandemic. One such trend is the Millennial migration out of cities and into suburban areas. While the recovery of Millennial homeownership was reported long before the pandemic (Myers, Lee, & Simmons, 2020), Millennials have been more actively looking for single-family homes in suburbs since the coronavirus outbreak, encouraged by historically low interest rates as they are moving into their prime homebuying years (Harvard Joint Center for Housing Studies, 2020). Observing the shifts in the Millennial housing demand from central cities to suburban communities and the rise of remote working after the COVID-19 crisis, some assert that the urban exodus has started, or at least the demand for urban living will decline (Henninger, 2020; Hunt, 2020).

The migration of the Millennial generation from urban to suburban areas was fore-seen by Myers (2016). The paper contended that the presence of Millennials in cities would decline as the 'peak Millennials,' 4.2 million people born in 1990, passed the age of 25 in 2015 and were followed by smaller birth cohorts. Some linked this with slower population growth in many U.S. cities in recent years (Frey, 2020) and presumed that people had been leaving the nation's dense urban cores (Dougherty, 2017; Graves, 2018). While it is true that the urban concentration of Millennials was one of the major drivers of the urban resurgence of U.S. cities since 2000 (Hwang & Lin, 2016; Lee, 2020), their recent reverse net migration into suburbs does not necessarily signal the loss of momentum in urban growth. This is because age and birth cohort are distinct concepts: people are moving into and out of a certain age group, but their membership in a birth cohort group persists over time. Thus, the increased presence of young adults in downtown areas, what Markus Moos (2016) described as 'youthification,' can continue to add vitality and vibrancy to urban centres even when Millennials are leaving. Then the key issue would be whether the influx of post-Millennials is large enough to offset the out-migration of Millennials. To date, unfortunately, there have been scarce studies on this issue, despite the widespread confusion and its significant implications.

To fill this gap, this paper aims to provide the most current information on the status of young adults and Millennials and explore the changes in their residential location patterns in the United States. It first explores the demographic and socio-economic attributes of Millennials and compares them with those of older generations at the same ages, using the 1962–2019 Current Population Survey (CPS). Then this paper analyzes the changing geographic distribution of young adults and Millennials across metropolitan status, and across urban and suburban areas of the largest 50 Metropolitan Statistical Areas (MSAs). In doing so, this paper builds on the various approaches suggested by previous studies to define central urban areas and draws on the confidential version of the 2006–2019 American Community Survey (ACS) microdata, which contains detailed information of millions of people and households across the country.

The findings of this paper suggest that Millennials did experience delays in transition into adulthood compared to older generations, consistent with previous literature. However, they have started to catch up in recent years, achieving notable gains in home-ownership and moving from multifamily apartments to single-family homes. The analysis on the geographic distribution of young adults confirms not only that the early

Millennials born in 1981–1990 have started to migrate from urban to suburban areas but also that the urban presence of young adults 25–34 has increased over time, reconciling the peak Millennials and youthification hypotheses. Thus, Millennials are moving away from cities, but an increasing number and share of young adults could be found in those urban centres at the same time.

2. Literature review

Generations are shaped by and are reshaping profound social changes. A generation, or birth cohort, is formally defined as the 'aggregate of individuals who experienced the same event within the same time interval' (Ryder, 1965, p. 845), especially during their formative years (Mannheim, 1952). Thus, substantial social, economic, political changes often form and shape the beliefs and attitudes that are shared among the members of a generation and have lasting impacts on their lives (Kahn, 2010; Malmendier & Nagel, 2011; Shuman & Scott, 1989). In return, the emergence of a new generation can have a large impact on society as they move through life stages (Carlson, 2008; Easterlin, 1980; Myers & Pitkin, 2009). This is the reason that we are interested in the characteristics of today's young generation, especially when they are massive and have distinctive experiences.

Millennials have received much attention from this perspective, particularly in the United States. While different researchers define them differently, most agree that Millennials are the largest generation in U.S. history, boasting nearly 90 million members, and have unique traits and characteristics that distinguish them from older generations (Frey, 2018; Howe & Strauss, 2000). In the United States, one of the changes that the Millennial generation has brought about, or at least has accelerated, is urban revival. While there have been many debates over whether cities grew faster than suburbs, empirical evidence indicates that city growth became more intense in recent years, especially after 2010 (Couture & Handbury, 2020; Frey, 2012; Lee, 2020; Lee, Lee, & Shubho, 2019). Among many factors, the concentration of young adults in urban centres has been recognized as a major demographic driver explaining the resurgence of city centres (Hwang & Lin, 2016; Moos, 2016; Myers, 2016).

As the presence of young adults in central cities grows, Markus Moos (2016) argued that the 'youthification' of downtown areas became prevalent in North American cities. The youthification, defined as an increase in the young adult share of the people in a specific urban space, involves not only demographic shifts towards a younger population but also the transformation of urban spaces as developers incorporate the preferences of young adults into their development projects (Pfeiffer, Pearthree, & Ehlenz, 2019). The changes in physical urban infrastructure indicate that the youthification phenomenon would be enduring, or at least would not suddenly disappear from those urban centres, because of the durability of housing and urban infrastructure (Glaeser & Gyourko, 2005).

While the growth and characteristics of urban Millennials have been relatively well known and discussed elsewhere (Moos, Pfeiffer, & Vinodrai, 2018, among others), Myers (2016) was the first paper that considered demographic swings in the young adult population and impacts of the downturn in growth cycles on the urban landscape. In the paper, he argued that three cycles – annual births (25 years earlier), job growth,

and housing construction – were the keys to understanding urban concentration of Millennials since 2000. Further, the paper suggested that the underlying cycles would turn around and harmonize to reduce the presence of Millennials in inner-city districts after 2015 when the largest Millennial birth cohort born in 1990 (peak Millennials) turned age 25, and after the Great Recession when job growth rebounded and housing construction started to rise. According to his analysis, the size of cohorts reaching age 25 had increased 30% over the 15 years preceding 2015 but thereafter would cease their upward growth. Thus, the peak Millennial hypothesis indicates that the aging of existing young city dwellers will cause them to start to follow their parents in migration out of cities and into suburbs over time.

In the late 2010s, city growth has become relatively muted, which led William Frey at Brookings Institution to conclude that 'the back-to-the-city trend has reversed' (Bauerlein, 2019). According to his analysis, many cities witnessed notably weaker growths in 2015–2019 compared to the early 2010s in which the growth rates of cities surpassed the pace of their suburbs by a large margin (Frey, 2020). In the report, Frey argued that suburbanization of Millennials was one of the factors that explain the slowdown in city growth, as well as the recent expansion of economy and dispersal of job opportunities to suburbs and smaller metros.

Consistent with those findings, recent newspaper articles reported anecdotal evidence that big cities like New York and Chicago had experienced population decline (Reyes & Lourgos, 2019; Roberts, 2019) and that Millennials began to move to suburbs (Bauerlein, 2019; Graves, 2018). In the articles, the slowed growth of city centres (or suburban revival) was seen as a result of the deconcentration of Millennials, as the *New York Times* proclaimed in a headline 'Peak Millennial? Cities Can't Assume a Continued Boost From the Young' (Dougherty, 2017). The underlying idea is straightforward: Given the fact that the urban concentration of Millennials, or youthification, had boosted city growth, their reverse migration indicates a loss of that momentum, which might lead to urban decline.

However, even if it is true that Millennials have started to move from urban centres to suburbs, that does not necessarily mean that urban presence among young adults will decline. That is, the peak Millennial hypothesis implies neither the end of youthification nor that of urban growth. This is because age and birth cohort are different concepts: Millennials are not 'forever young.' They are simply not Peter Pans, and the oldest millennials are nearing 40 years old today. As Joe Cortright (2020) pointed out, the popularity of downtown living would not disappear if the empty homes created by the outflow of middle-aged Millennials could be filled by younger post-Millennials. In his article, Cortright clearly showed that this would happen, as the number of young adults 25–34 years old would increase from 44 million in 2015 to 48 million in 2024.[1] Also, on top of the sustained growth of overall young adult population, Lee (2020) suggested that the expected compositional shift toward those who would be more likely to choose urban living (e.g. racial/ethnic minorities, never married, and college graduates) would slow the pace of the outflows to suburbs among Millennials and post-Millennials.

In sum, although there have been many arguments about whether Millennials (or young adults) will stay in city centres and what that would mean for the future of cities, empirical evidence for or against these views has remained relatively scarce,

especially the one based on quality data and reliable analytical methods. Addressing this research gap, this paper aims to critically analyze the demographic, socio-economic, and geographic characteristics of young adults and Millennials in the United States and test both youthification and peak Millennials hypotheses with empirical evidence. Since 'Millennial city' has been a global phenomenon (Haase et al., 2010, among others), the findings of this paper will not be limited to the U.S. cities but help deepen our understanding of the role of the demographic change in urban development around the world.

3. Cross-generational comparison of select characteristics

With all the buzz around Millennials, it is tough to separate myth from reality. Often, those myths are created by people without a full understanding of the difference between age and generation: they often compare Millennials with Boomers cross-sectionally in a certain year, when those two groups are obviously in different stages of life (age-cohort fallacy). On the other hand, others simply assume that the Millennials' struggles during and after the financial crisis of 2007–2008, often cited in the press, would persist over time without any updated assessment (generational stereotypes and biases). Some may emphasize the generational effects too much, failing to acknowledge that there might be other confounding factors.

To avoid these fallacies, this paper's first analysis examines how Millennials are faring compared to previous generations at the same ages. The primary source of information is the 1962–2019 IPUMS Current Population Survey (IPUMS-CPS) microdata (Flood, King, Rodgers, Ruggles, & Warren, 2020).[2] The CPS is the longest-running annual survey conducted by the U.S. Census Bureau and thus enables us to examine the state of young adults of today and that of the past. The key characteristics considered here include marital status, household formation, homeownership, educational attainment, personal income, and multifamily residence share. All estimates are computed using three-year moving averages to smooth yearly fluctuations due to measurement errors, and all dollars are adjusted to the 2019 value.

This paper focuses on three generations of interest: Baby Boomers (defined as those born in 1946–1965), Generation Xers (1966–1980), and Millennials (1981–2000). Although there is no clear agreement among researchers about the beginning and ending birth years for those generations, the suggested definition of generations enables us to match those generations to the number of people in 5-year age groups in decennial years such as 2000 and 2010 (Table 1). Given that the definitions for Baby Boomers (1946–1965) and Millennials (1981–2000) are spanning 20 years, they are further divided into the early and late groups.

Table 1. Definition of generations and their ages in selected years.

Generation	Birth Years	2000	2006	2010	2015	2018
Baby Boomers	1946–1965	35 to 54	41 to 60	45 to 64	50 to 69	53 to 72
Early Boomers	1946–1955	45 to 54	51 to 60	55 to 64	60 to 69	63 to 72
Late Boomers	1956–1965	35 to 44	41 to 50	45 to 54	50 to 59	53 to 62
Generation Xers	1966–1980	20 to 34	26 to 40	30 to 44	35 to 49	38 to 52
Millennials	1981–2000	0 to 19	6 to 25	10 to 29	15 to 34	18 to 37
Early Millennials	1981–1990	10 to 19	16 to 25	20 to 29	25 to 34	28 to 37
Late Millennials	1991–2000	0 to 9	6 to 15	10 to 19	15 to 24	18 to 27

The status of those five birth cohorts is illustrated in Figure 1, by six demographic and socio-economic characteristics. For convenience, people born in the middle-year of each generation are selected to represent their respective generations: 1950 (early Baby Boomers), 1960 (late Baby Boomers), 1973 (Generation Xers), 1985 (early Millennials), and 1995 (late Millennials). Here, the x-axis is the age of each cohort, and the y-axis measures the outcome of interest at that age. Each line represents the trajectory of the selected variable among people in a birth cohort group over their life course.
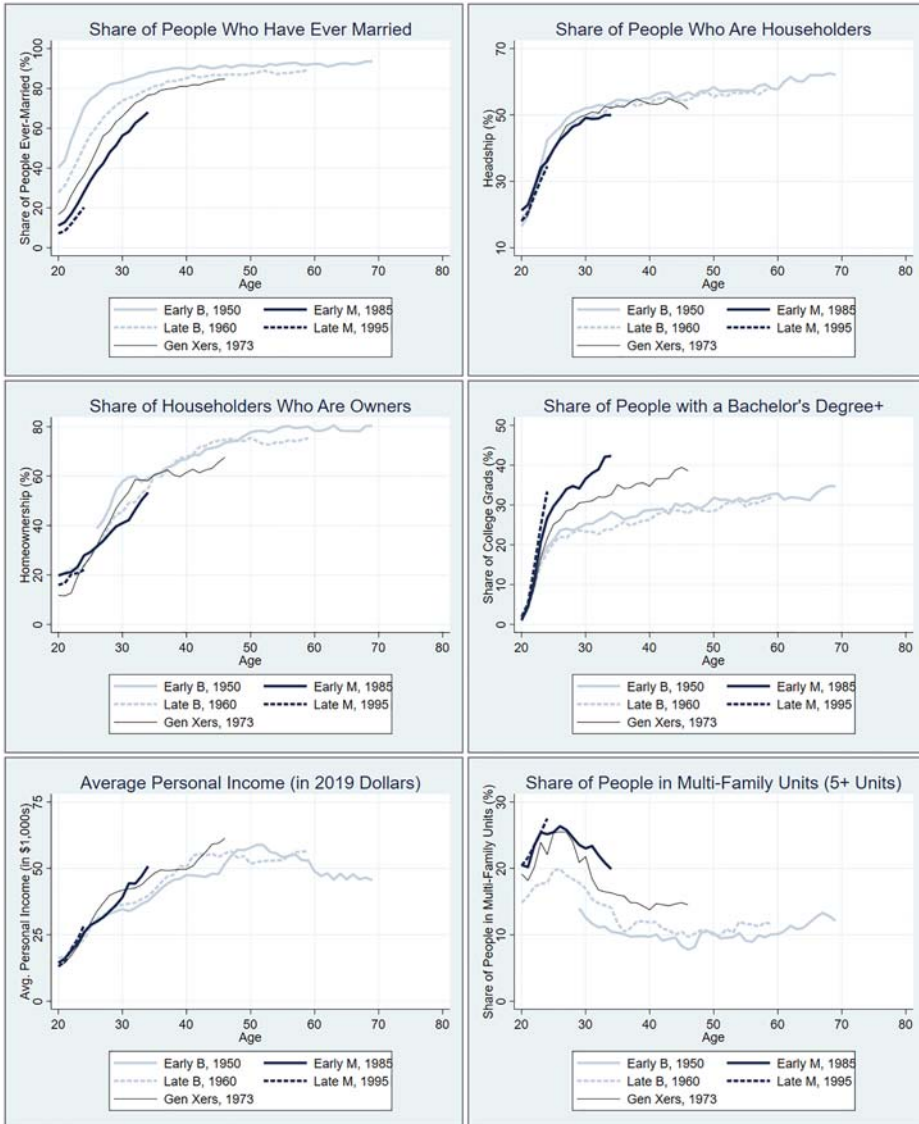
Figure 1. Key demographic and socio-economic characteristics by generations. Source: Authors' analysis based on the 1962–2019 Integrated Public Use Microdata Series, Current Population Survey: Version 7.0. Note: Early/Late B = Early/Late Boomers; Early/Late M = Early/Late Millennials. All figures are computed using three-year moving averages to avoid yearly fluctuations. All dollars are adjusted to 2019 dollars.

Millennials have a sharply lower likelihood of ever being married than earlier generations, as shown in the upper left panel of Figure 1. About 40% of the early Baby Boomers born in 1950 were ever married (including currently married, widowed, separated, and divorced) when they were 20 years old, while that was only 7.2% among the late Millennials born in 1995. While the ever-married share tends to increase with age for a birth cohort, the shares of the younger generations are consistently lower at the same age than those of the older ones, even after they became flattened. Thus, there have been not only delays but also declines in marriage over the life course among younger generations. When analyzed separately for men and women, it is found that the decline has been stronger among women than among men (Appendix Figure A1).[3] This pattern is consistent with the previous studies that suggested the changes in social norms regarding marriage and family formation were attributed to increases in women's economic independence and standards for a potential spouse (Becker, 1991; Oppenheimer, 1988).

The next two variables, headship (upper right panel of Figure 1) and homeownership (middle left panel), measure how Millennials are faring in the housing market compared to the earlier generations in their 20s and 30s. During and after the Great Recession, several researchers were concerned that many Millennials stayed home longer and doubled up with their parents rather than forming their own households (Fry, 2015; Mawhorter, 2018). According to the CPS data, however, the headship rates among Millennials were about the same or slightly lower than those of the earlier generations. The discrepancy between statistics and reality can be at least partially explained by the decline in marriage among younger generations. This is because there is only one householder per household, regardless of whether that is a married-couple household or not. Technically, a spouse of a householder would be classified as a non-head person while s/he would be socially considered as a quasi-householder. Therefore, although the headship rates look similar, there would be more householders and quasi-householders in the past compared today.

The gap between Millennials and earlier generations, however, is more pronounced in homeownership as reported elsewhere (Choi, Zhu, Goodman, Ganesh, & Strochak, 2018; Gabriel & Rosenthal, 2015). For example, the homeownership rate at the age of 30 was 50.5% among the Gen Xers born in 1973, while that was 41.0% among the early Millennials born in 1985. However, as found in Myers et al. (2020), the Millennial homeownership has been rapidly catching up in recent years, narrowing the early Millennial-Gen Xer gap from 9.5 percentage points at the age of 30 to 4.8 percentage points at the age of 34.

The recovery of Millennial homeownership could be explained by their higher educational level, on average, and the recent economic boom in the United States. As shown in the middle right panel of Figure 1, the Millennial generation is known to be the most educated in American history (Frey, 2018). The share of people who have a bachelor's degree or higher is substantially greater among the Millennials than the earlier generations at any age, and the late Millennial generation has even higher educational attainment than the early Millennials. This reflects the growing labour demands of the knowledge economy, which influence average personal income, shown in the lower left panel of Figure 1.[4] While the average personal income of the early Millennials born in 1985 had been lower than that of the Gen Xers born in 1973 in their late 20s, after 2015 and the recovery from the Great Recession the Millennial's income surpassed that of the earlier generations. Women have taken an important role in these

changes in educational attainment and personal income (Appendix Figure A1). In addition to their relatively large increase in educational attainment, the long-term increase in female labour force participation and low unemployment in recent years have contributed to the higher average personal income among the Millennials.

The Millennial generation is living in denser housing much more frequently than previous generations. This is reflected in the share of people living in multifamily buildings with five or more units (Figure 1, lower right panel). For example, when they were 30 years old, the share of the early Boomers who were in multifamily units was 12.6%, while the shares at the age were 17.0% among the late Boomers, 21.8% among the Gen Xers, and 23.0% among the early Millennials. Also, it is notable that the share tends to peak at around mid-20s and then decline rapidly as people start to make transitions into adulthood and move into single-family housing units in the late 20s and early 30s. Given the pattern, we might expect to see a greater share of Millennials will move into single-family units as they age into their 30s and 40s, as their parents and grandparents did. When we consider that multifamily units have been predominantly built in urban areas in the United States (Airgood-Obrycki, Hanlon, & Rieger, 2020), the share can be viewed as a proxy for their location as urban and suburban areas. If this holds, the inverted U-shaped pattern is consistent with the peak Millennial hypothesis.

4. The changing geography of young adult population: method and data

The results of the previous section help us deepen our understanding of Millennials' basic capacities and lifestyles, comparing those to preceding generations, but they do not address the changes in residential location choice among them. More recent data sets are needed to secure greater geographic detail. The American Community Survey (ACS) collects annual data since 2006 and affords a sample size some 20 times greater than the CPS. The time frame is too short to compare generations when they were at the same age, but the 13-year scope from 2006 to 2019 is sufficient to judge the movements of Millennials as they adjust their locations in the critical time period after the Great Recession.

The following analysis investigates how population distribution has changed by age and birth cohort groups. In doing so, ages are grouped as follows: under 25 years old; 25–34; 35–44; 45–54; 55–64; and 65 years and over. Among those, this paper is particularly interested in the location choice of young adults 25–34 years as these ages tend to be when people are forming their households, getting their first jobs, getting married, having children, and buying homes for the first time. In terms of generations, this paper uses the same definitions as before: Baby Boomers (1946–1965); Generation Xers (1966–1980); and Millennials (1981–2000).

The confidential version of the ACS microdata sample files not only includes extensive information on demographic and socio-economic characteristics of about 3.2 million individuals and 1.3 million households each year but also provides their residential location geocoded at the census block-level. The restricted-use ACS microdata can be only accessed from Federal Statistical Research Data Centers (RSRDC) by qualified researchers for approved projects, and there are several restrictions on disclosure of research results. However, the detailed geographic information, substantial sample size, and annual survey interval make the data ideal for the analysis of the changes in

geographic population distribution by age and birth cohort. The personal sample weights were used to provide nationally representative estimates and were aggregated into corresponding metropolitan and/or urban status categories. The results shown in this paper have been reviewed by the U.S. Census Bureau's Disclosure Review Board, and the authorization number is CBDRB-FY21-POP001-0026.

Using the data, this paper first analyzes the number and share of people for each age or cohort group who reside in the largest 50 Metropolitan Statistical Areas (MSAs), the rest of MSAs (hereafter smaller MSAs), and non-MSAs. The MSA boundaries are standardized to 2010 geographic definitions, determined by the U.S. Office of Management and Budget. While often overlooked, a substantial portion of people is living in smaller MSAs (about 30%) and non-MSA areas (about 15%), and the changes in population distribution across those areas might have significant implications. Therefore, the analysis across the top 50 metros, smaller metros, and non-metro areas would offer valuable insight into the changes in population distribution by age or cohort from a broader perspective.

Following the national analysis, this paper exclusively focuses on the largest 50 MSAs, examining the proportion of the residents of the top 50 metros in each age or generation who are in urban centres. However, defining cities and suburbs has never been easy, and different researchers have chosen different classification methods that were the most appropriate for their research question. While each approach has its own advantages and disadvantages, the ambiguity has been one of the reasons that researchers have reached different conclusions on population growth in urban and suburban areas (Airgood-Obrycki et al., 2020; Drew, 2015; Lee, 2020). Therefore, this paper reviews various approaches proposed to define central areas and suburbs, show the results based on them, and discuss similarities and differences across them. In doing so, it adopts the following four approaches: absolute distance, relative distance, principal cities, and urbanization perceptions.

(1) Absolute distance

The most direct and intuitive method is to analyze population distribution by distance from the city centre. Several studies adopted this approach and consistently reported substantial population growth, especially among non-Hispanic white, well-educated, and high-income young adults, within a 2- or 3-mile radius from the city centres in the 2000s and within a broader 10-mile radius in the 2010s (Cortright, 2014; Lee, 2020; U.S. Census Bureau, 2012). In this paper, the spherical distance from block centroids to their corresponding city centres was calculated by using their longitudes and latitudes and the haversine formula. The location of the city centres of the top 50 MSAs was provided by the 2010 Census Special Reports, C2010SR-01 (U.S. Census Bureau, 2012), and that of census blocks was obtained from the 2010 Census Summary File 1.[5] Built on the findings from previous studies, people are classified into those people within a 1-, 3-, and 10-mile radius from the city centres of the largest 50 MSAs.

(2) Relative distance

While simple and convenient, the absolute distance method does not take the varying geographic size of MSAs into account. For example, the farthest block in New York-Northern New Jersey-Long Island, NY-NJ-PA Metro Area is about 118 miles away from its city centre, while that is about 39 miles in Milwaukee-Waukesha-West Allis, WI Metro Area. To standardize the varying size, some researchers used the 'relative' ranking of tracts within each MSA in terms of city centre proximity, rather than absolute geographic distance. For example, Hwang and Lin (2016) classified census tracts within a metropolitan area based on the cumulative share of the total metropolitan population nearest to the city centre and defined 'downtown tracts' as the closest 10%. Following this approach, census blocks were sorted into percentiles (closest 5%, 10%, and 30%) for each MSA based on their distance to the MSA's city centre and 2010 population. The median distances for the census blocks within the 5%, 10%, and 30% ring (excluding the closest 4%, 9%, and 29%, respectively) are 2.8, 4.5, and 9.4 miles, respectively.[6]

(3) Principal cities

Another popular approach is to use established administrative and jurisdictional boundaries in delineating urban areas. Notably, William Frey at Brookings Institution has long analyzed population growth in primary cities and suburbs using this approach based on the U.S. Census Bureau's annual population estimates (Frey, 2012, 2020). In the process, the largest city in each MSA was designated as a principal city, and up to two additional cities could be considered as principal cities if they had a population of more than 100,000 people. Following the Brookings typology, this paper identifies the census blocks within the largest city and up to two additional cities with a population of over 100,000 people for each of the top 50 MSAs and analyzes their population distribution by age and birth cohort groups.[7]

(4) Urban perceptions

Recently, Bucholtz, Molfino, and Kolko (2020) proposed a novel urbanization model and classification product, the Urbanization Perceptions Small Area Index (UPSAI), based on how people perceive or describe their neighbourhood as urban, suburban, and rural in the 2017 American Housing Survey (AHS). Based on the survey responses, they developed a model that predicts how out-of-sample households would describe their neighbourhood and made the resulting tract-level UPSAI data publicly available. This paper uses its final classification of the urban area, which enables us to analyze the population changes based on what consumers perceive or describe their neighbourhood, rather than what policymakers or researchers do.

Figure 2 illustrates how the four approaches used in this paper result in different selections of 'urban' neighbourhoods in New York, Los Angeles, and Chicago metro areas. The urban areas identified by the absolute and relative distance approaches tend to have limited geographic coverage around downtown areas and are potentially more suited for monocentric cities (e.g. Chicago). On the other hand, the principal cities and the urban perception classifications include broader areas and might perform
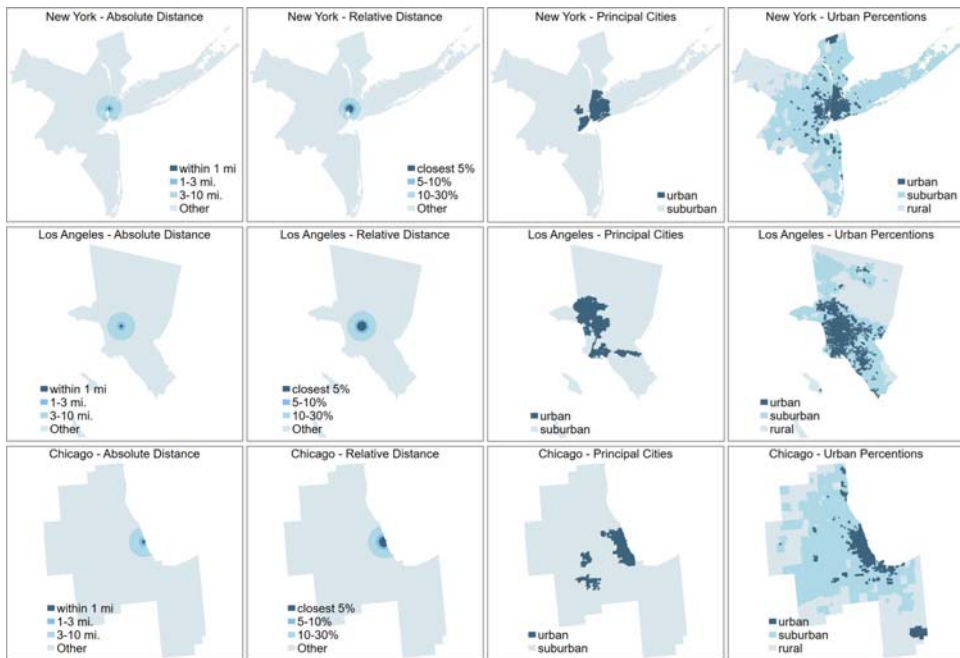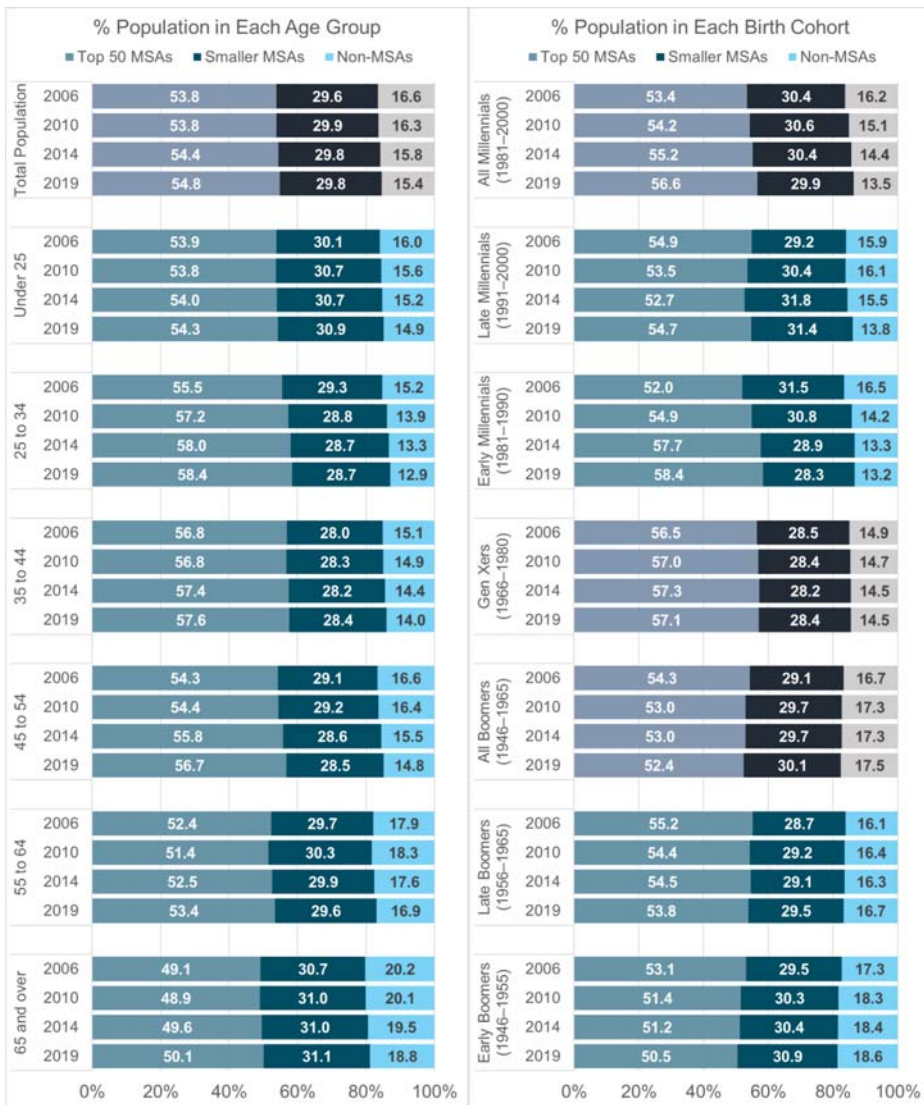
Figure 2. Classifications of urban and suburban areas by varying definitions, New York, Los Angeles, and Chicago MSAs.

better at identifying urban centres in polycentric metropolitan areas (e.g. Los Angeles). The differences suggest that there are substantial heterogeneities across cities in terms of their urban structure, and researchers should carefully evaluate the strengths and weaknesses of various approaches.

5. The changing geography of young adult population by metropolitan status

This section examines changes in the geographic distribution of the U.S. population by metropolitan status: the most populous 50 MSAs, smaller MSAs, and non-MSA areas. Figure 3 shows the shares of people in each age group (left) and birth group (right) by metropolitan status in selected years.[8] In aggregate, the top 50 MSAs experienced a modest increase in the share of the total population as a whole from 53.8% in 2006 to 54.8% in 2019. Among the age groups, the share of young adults 25–34 years old in the largest 50 MSAs grew the most during the period from 55.5% to 58.4%, and the middle-aged adults 45–54 years old also shifted toward the largest 50 cities as well (54.3% to 56.7%). A similar yet modest increase in the top 50 MSAs share was found in other age groups, while the non-MSA shares declined for all the groups.

By cohort group, the share of Millennials in the top 50 MSAs increased during the period from 53.4% in 2006 to 56.6% in 2019. However, the patterns were different between the early and late Millennials. During the period, the top 50 MSAs saw a sharp increase in their share among the early Millennials born in 1981–1990 (52.0% to 58.4%). Otherwise, the top 50 MSAs share among the late Millennials born in 1991–

% Population in Each Age Group — Top 50 MSAs, Smaller MSAs, Non-MSAs

Age Group	Year	Top 50 MSAs	Smaller MSAs	Non-MSAs
Total Population	2006	53.8	29.6	16.6
	2010	53.8	29.9	16.3
	2014	54.4	29.8	15.8
	2019	54.8	29.8	15.4
Under 25	2006	53.9	30.1	16.0
	2010	53.8	30.7	15.6
	2014	54.0	30.7	15.2
	2019	54.3	30.9	14.9
25 to 34	2006	55.5	29.3	15.2
	2010	57.2	28.8	13.9
	2014	58.0	28.7	13.3
	2019	58.4	28.7	12.9
35 to 44	2006	56.8	28.0	15.1
	2010	56.8	28.3	14.9
	2014	57.4	28.2	14.4
	2019	57.6	28.4	14.0
45 to 54	2006	54.3	29.1	16.6
	2010	54.4	29.2	16.4
	2014	55.8	28.6	15.5
	2019	56.7	28.5	14.8
55 to 64	2006	52.4	29.7	17.9
	2010	51.4	30.3	18.3
	2014	52.5	29.9	17.6
	2019	53.4	29.6	16.9
65 and over	2006	49.1	30.7	20.2
	2010	48.9	31.0	20.1
	2014	49.6	31.0	19.5
	2019	50.1	31.1	18.8

% Population in Each Birth Cohort — Top 50 MSAs, Smaller MSAs, Non-MSAs

Birth Cohort	Year	Top 50 MSAs	Smaller MSAs	Non-MSAs
All Millennials (1981–2000)	2006	53.4	30.4	16.2
	2010	54.2	30.6	15.1
	2014	55.2	30.4	14.4
	2019	56.6	29.9	13.5
Late Millennials (1991–2000)	2006	54.9	29.2	15.9
	2010	53.5	30.4	16.1
	2014	52.7	31.8	15.5
	2019	54.7	31.4	13.8
Early Millennials (1981–1990)	2006	52.0	31.5	16.5
	2010	54.9	30.8	14.2
	2014	57.7	28.9	13.3
	2019	58.4	28.3	13.2
Gen Xers (1966–1980)	2006	56.5	28.5	14.9
	2010	57.0	28.4	14.7
	2014	57.3	28.2	14.5
	2019	57.1	28.4	14.5
All Boomers (1946–1965)	2006	54.3	29.1	16.7
	2010	53.0	29.7	17.3
	2014	53.0	29.7	17.3
	2019	52.4	30.1	17.5
Late Boomers (1956–1965)	2006	55.2	28.7	16.1
	2010	54.4	29.2	16.4
	2014	54.5	29.1	16.3
	2019	53.8	29.5	16.7
Early Boomers (1946–1955)	2006	53.1	29.5	17.3
	2010	51.4	30.3	18.3
	2014	51.2	30.4	18.4
	2019	50.5	30.9	18.6

Figure 3. Share of population in each age group and in each birth cohort by MSA status, 2006–2019. Source: Author's analysis based on the 2006–2019 American Community Survey Internal Use Microdata. Note: The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-POP001-0026.

2000 initially declined but rebounded from 52.7% in 2014 to 54.7% in 2019 when many of them graduate from high school and enter college or get a job. Therefore, the top 50 MSAs were not losing Millennials; in aggregate, the big cities gained Millennials, both in absolute and relative terms. It was the non-MSAs that experienced a loss in the Millennial population (Figure 3 and Appendix Table A2).

The geographic distribution of the Gen Xers born in 1966–1980 was relatively stable, while the share of the top 50 MSAs modestly increased among them. On the other hand,

the share of Baby Boomers in the top 50 MSAs declined from 54.3% to 52.4% as the first wave of the Baby Boom generation reached the retirement age of 65 during the period. Since the mortality rate tends to be higher in rural areas (Dwyer-Lindgren et al., 2016), the migration from the top 50 metros to less populous areas might have played an important role in the shifts in population distribution among the boomers.

6. The changing geography of young adult population in the top 50 MSAs

The previous section provides empirical evidence that the shares of young adults and Millennials are gradually increasing in the largest 50 MSAs in recent years. However, the young adults could increasingly concentrate in urban centres or suburbs of those big metros, and each has very different implications for urban planning and policy. To address this issue, this section examines how the population distribution changed within the top 50 MSAs across urban and suburban areas, based on various approaches to defining them.

Figure 4 illustrates the share of people within the most populous 50 MSAs who are in urban areas by age group, from 2006 to 2019.[9] Perhaps surprisingly to some, the varying approaches produce quite similar patterns, and the results based on the different cutoffs for absolute and relative distance methods are not substantially different as well. This might be because all are designed to identify the same 'urban' and 'central' portions of the cities although different approaches include and exclude different areas. For example, the traditional central business districts (CBD) and old downtown areas are
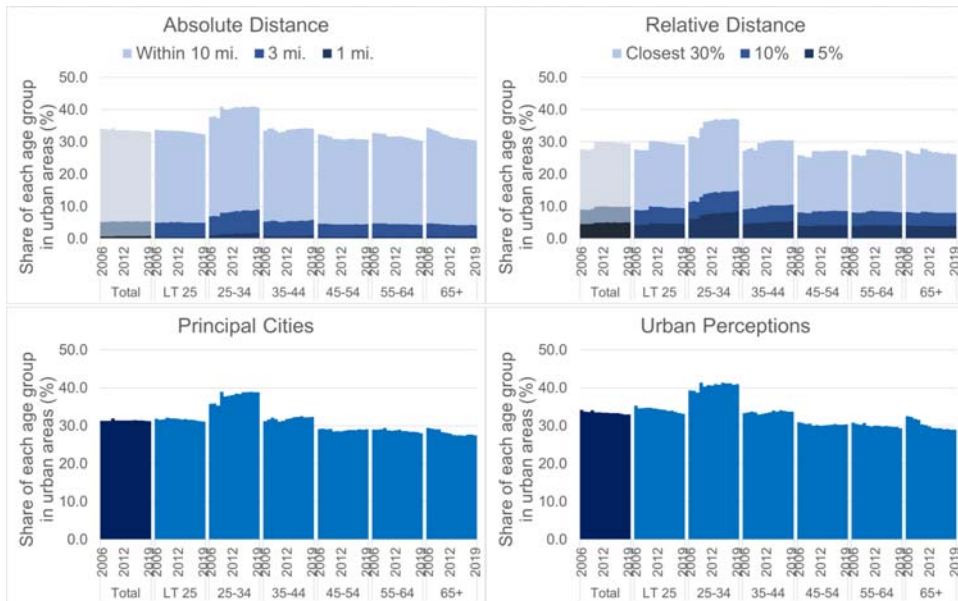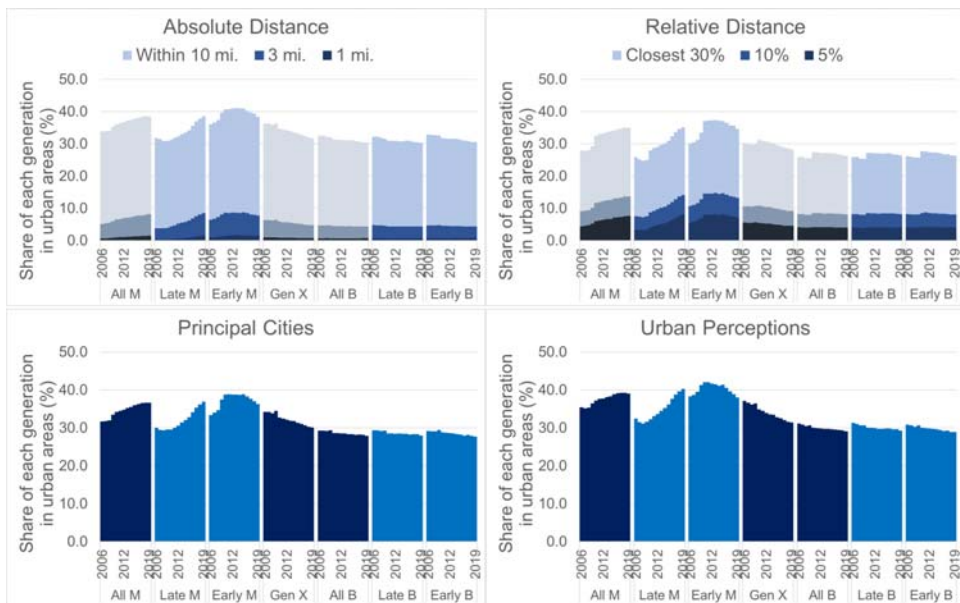

Figure 4. Share of top 50 MSA residents in each age group residing in urban areas, 2006–2019. Source: Author's analysis based on the 2006–2019 American Community Survey Internal Use Microdata. Note: The weighted counts were rounded to four significant digits for disclosure protection. The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-POP001-0026.

commonly included in the urban areas identified through the four different methods, as shown in Figure 2.

In general, the share of the top 50 MSA residents who are in urban areas slightly declined over time, consistent with what the recent reports and newspaper articles find (for example, Frey, 2020).[10] For example, the share of people living within a 10-mile radius of CBD slightly decreased from 34.1% in 2006 to 33.1% in 2019. This declining pattern can be found across all the age groups, except the 25–34 and 35–44 age groups. The growing share of young adults in urban areas is evident and can be consistently found across the results from all the different approaches and cutoffs, giving confidence to the findings. The magnitude of the increase is large among those young adults, as the population shares within a 10-mile radius surged from 37.7% to 40.7% among 25–34 years old and from 33.5% to 34.1% among 35–44 years old in 2006–2019. In contrast, the greatest decline was found among the older adults 65 years old and over. The proportion of the older adults 65 and over within 10 miles of the centre declined from 34.4% to 30.5% during the period. Therefore, the slight decline of the share of urban residents within those top 50 MSAs was mainly driven by middle-aged and older adults, rather than the younger ones. Combined with the findings of the previous section, the youths of the nation are increasingly concentrating in the 50 MSAs and the central cities of those metros. That is, the trend of youthification is still ongoing, both in absolute and relative terms (Figure 4 and Appendix Tables A3).

After confirming the sustained youthification process, this paper examines whether the peak Millennial hypothesis can be supported by evidence, and the results are

Figure 5. Share of top 50 MSA residents in each birth cohort residing in urban areas, 2006–2019. Source: Author's analysis based on the 2006–2019 American Community Survey Internal Use Microdata. Note: The weighted counts were rounded to four significant digits for disclosure protection. The U.S. Census Bureau reviewed this data product for unauthorized disclosure of confidential information and approved the disclosure avoidance practices applied to this release. CBDRB-FY21-POP001-0026.

shown in Figure 5. Overall, the urban share of the Millennials in the top 50 MSAs, who were 6–25 years old in 2006 and 18–37 years old in 2018, increased over time regardless of the different ways to define them. For example, the proportion of the Millennials in the top 50 MSAs who are living within a 10-mile radius of CBD grew from 33.9% in 2006 to 38.5% in 2019. However, there are some differences in the patterns between the earlier and later Millennials. The urban share of the early Millennials, who were 16–25 years old in 2006 and 29–38 years old in 2019, had rapidly grew from 2006 to 2010, plateaued until 2015, after which it gradually fell in general. On the other hand, that share among the late Millennials, who were 6–15 years old in 2006 and 19–28 years old in 2019, had slightly declined from 2006 to 2008, after which it rapidly increased. During the same period, the urban shares declined among Gen Xers and Boomers, while the pace was faster among Gen Xers. Broadly, this trend of entering and exiting urban living is largely consistent with the changes in the share of people living in multifamily units shown in Figure 1. This reflects the well-known housing consumption patterns over the family life cycle (Clark & Dieleman, 1996; Myers, 1999), as well as the peak Millennial hypothesis (Myers, 2016).

The age and birth cohort analyses show how the youthification hypothesis can be compatible with the peak Millennial hypothesis. In the 2000s and early 2010s, cities rapidly grew as young adults at that time, the early Millennials, clustered into the urban neighbourhoods following their life-cycle paths of housing consumption and adjusting to economic disruption after the financial crisis of 2007–2008. The urban concentration of the early Millennials had started to slow its growth in 2010 when the oldest member of the birth cohort reached 29 years old, and that was even reversed in 2015 when the oldest became 34 years old. Even though the first wave of the Millennials started to leave the downtown areas, however, the growth of the young adult population continued for the sake of a robust influx of the late Millennials and a relatively slow pace of out-migration of the early Millennials compared to older generations. Given that the oldest members of the late Millennials were 28 years old in 2019, it would not be surprising to witness their migration into suburban areas in the near future; yet, we can still expect that the urban concentration of young adults, or youthification, will continue as post-Millennials will move into their 20s and therefore flock into city districts.

7. Conclusion

Since even before the COVID-19 pandemic began, there have been bold arguments that Millennials are moving away from cities and that the era of cities is about to end. While these have substantial implications for how we plan and manage urban spaces and how our economy operates, the arguments often lack substantive evidence or are drawn from misinterpretations. The findings of this paper provide supportive evidence for the Millennial's exit but strongly disagree with the argument on the end of cities. This paper found that the early Millennials, of which the oldest members are approaching 40 years old in 2020, were making their transitions deeper into adulthood, albeit more slowly than their parents' generation, in 2006–2019. In this situation, the large metros appeared to have passed their peak attraction of the early Millennials. However, the big cities and urban centres were still drawing young adults from among the later-born Millennials during the period, replacing the early Millennials in those cities. As a

result, the number and share of people in the largest 50 metropolitan areas and their urban portions slightly grown, or at least not substantially decreased, in 2006–2019 (Figure 4 and Appendix Table A3). That is, the era of cities is far from its end.

The key issue is whether the trends found in the pre-COVID-19 era will hold in the post-pandemic world. This will ultimately depend on the severity and duration of the crisis, and it might be too early to determine this. However, robust and even overheating housing markets in Asian cities recovering from the pandemic might indicate that the pandemic did not substantially alter the values and preferences of people for urban amenities. If so, the findings of this paper imply that the demand for urban living would not suddenly disappear as there would be a sufficient number of Millennials, especially those well-educated singles, who would decide to remain, and post-Millennials, who would prefer to spend their 20s in urban centres. However, these demographic trends might worsen the housing affordability crisis, threatening the viability of downtown areas. Indeed, a shortage of affordable housing has been a defining issue in most of the U.S. metros limiting their further growth, and it has been one of the factors that contribute to the outflow of the early Millennials to suburbs that provide diverse and affordable options. The large and growing base of the young adult population may not guarantee the growth of big cities and urban centres if this housing affordability issue persists. Policymakers and community leaders should continue their efforts to reduce unnecessary regulatory burdens that strain the supply of housing and develop their strategies to attract talents and investments.

On the other hand, the results also confirm there would be more and more middle-aged Millennials and even post-Millennials who are interested in settling in suburbs. When it happens, the Millennial migration into suburbs could have a substantial impact as the Baby Boomers did in the 1970s and 1980s, when their cohort transitions into homeownership and single-family residence result in greater urban sprawl in metropolitan regions (Myers & Pitkin, 2009). We shall not make the same mistake again. Given that the Millennials do prefer high density, walkability, and access to mass transit, urban planners and policymakers should take this opportunity created by the demographic shifts to build healthy, sustainable, and resilient communities (Beske & Dixon, 2018; Dunham-Jones & Williamson, 2011). The retrofit of suburbs would broaden housing and neighbourhood options desired by current and future residents, which will ultimately help them prosper in vibrant and thriving communities.

Notes

1. While it was not mentioned in the article, the number of people 25–34 years old is projected to grow to nearly 50 million in 2060 according to the U.S. Census Bureau's population projection.
2. Homeownership (1976–2019) and multifamily residence share (1979–2019) were analyzed for different years due to the availability of related variables.
3. I thank an anonymous reviewer for suggesting this idea.
4. The average personal income was calculated as the aggregate income of people in a birth cohort divided by the number of people in the birth cohort.
5. The report used the location of the city hall or similar main municipal building for the largest principal city of each MSA as a proxy for the metropolitan area's city center.
6. Using the population distribution in 1960, Hwang and Lin (2016) reported that the average and median distance of census tracts in the 10-percent ring were 3.3 km (about 2.0 miles)

and 2.6 km (about 1.6 miles), respectively. The difference between the two could be explained by the expansion of metropolitan areas from 1960 to 2010.

7. These are slightly different from those principal cities identified in Frey (2020). Frey (2020) selected the 53 MSAs with more than 1 million residents using the 2019 geographic definition of MSAs, while this paper uses the largest 50 MSAs using the 2010 definition. The MSAs that were included in Frey (2020) but not in this paper are Rochester, NY, Tucson, AZ, and Grand Rapids, MI. The results are not sensitive to the inclusion of those three metropolitan areas.

8. The number of people in each age group and each birth cohort by MSA status are shown in Appendix Tables A1 and A2.

9. The numbers of people within the top 50 MSAs who are in urban areas by age group and by birth cohort are shown in Appendix Tables A3 and A4, respectively. The share of people who are in urban areas by age group and birth cohorts are shown in Appendix Figures A2 and A3.

10. However, the share slightly increased at around the immediate city center from 2006 to 2019 (within 1-mile: 0.7% to 0.9%; within 3-mile: 5.2% to 5.4%; closest 5%: 4.5% to 5.1%; closest 10%: 9.0% to 9.9%).

Acknowledgement

Disclosure statement

ORCID

Hyojung Lee 🄳 http://orcid.org/0000-0002-0471-6650

References

Airgood-Obrycki, W., Hanlon, B., & Rieger, S. (2020). Delineate the U.S. suburb: An examination of how different definitions of the suburbs matter. *Journal of Urban Affairs*. Advance online publication. doi:10.1080/07352166.2020.1727294

Bauerlein, V. (2019, July 1). American suburbs swell again as a new generation escapes the city. *The Wall Street Journal*. Retrieved from http://www.wsj.com

Becker, G. ((1991) [1981]). *A treatise on the family*. Cambridge, MA: Harvard University Press.

Beske, J., & Dixon, D. (2018). *Suburban remix: Creating the next generation of urban places*. Washington, DC: Island Press.

Bucholtz, S., Molfino, E., & Kolko, J. (2020). *The Urbanization Perceptions Small Area Index: An application of machine learning and small area estimation to household survey data*. Washington, DC: U.S. Department of Housing and Urban Development.

Carlson, E. D. (2008). *The Lucky Few: Between the greatest generation and the Baby boom*. New York, NY: Springer.

Choi, J., Zhu, J., Goodman, L., Ganesh, B., & Strochak, S. (2018). *Millennial homeownership: Why is it so low, and how can we increase it?* Washington, DC: Urban Institute. Retrieved from https://www.urban.org/sites/default/files/publication/98729/millennial_homeownership_0.pdf

Clark, W. A. V., & Dieleman, F. M. (1996). *Households and housing: Choice and outcomes in the housing market*. New Brunswick, NJ: Rutgers University, Center for Urban Policy Research.

Cortright, J. (2014, October). *City report: The young and restless and the nation's cities*. Portland, OR: City Observatory. Retrieved from http://cityobservatory.org/wp-content/uploads/2014/10/YNR-Report-Final.pdf

Cortright, J. (2020, March 28). *Not peak Millennial: The coming wave*. Portland, OR: City Observatory. Retrieved from http://cityobservatory.org/not-peak-millennial-the-coming-wave/

Couture, V., & Handbury, J. (2020). Urban revival in America. *Journal of Urban Economics*, *119*, 103267.

Dougherty, C. (2017). Peak Millennial? Cities can't assume a continued boost from the young. *The New York Times*. Retrieved from http://www.nytimes.com

Drew, R. B. (2015, August 20). *A city revival? It depends on your definitions*. Cambridge, MA: Joint Center for Housing Studies. Retrieved from http://housingperspectives.blogspot.com/2015/08/a-city-revival-it-depends-on-your.html

Dunham-Jones, E., & Williamson, J. (2011). *Retrofitting suburbia: Urban design solutions for redesigning suburbs*. Hoboken: John Wiley & Sons.

Dwyer-Lindgren, L., Bertozzi-Villa, A., Stubbs, R. W., Morozoff, C., Kutz, M. J., Huynh, C., … Flaxman, A. D. (2016). US county-level trends in mortality rates for major causes of death, 1980–2014. *Journal of the American Medical Association*, *316*(22), 2385–2401.

Easterlin, R. A. (1980). *Birth and fortune: The impact of numbers on personal welfare*. New York, NY: Basic Books.

Flood, S., King, M., Rodgers, R., Ruggles, S., & Warren, J. R. (2020). *Integrated Public Use microdata Series, current population Survey: Version 7.0 [dataset]*. Minneapolis, MN: IPUMS, 2020. doi:10.18128/D030.V7.0

Frey, W. H. (2012). *Demographic reversal: Cities thrive, suburbs sputter*. Washington, DC: Brookings Institution. Retrieved from https://www.brookings.edu/opinions/demographic-reversal-cities-thrive-suburbs-sputter/

Frey, W. H. (2018). *The Millennial generation: A demographic bridge to America's diverse future*. Washington, DC: Brookings Institution. Retrieved from https://www.brookings.edu/wp-content/uploads/2018/01/2018-jan_brookingsmetro_millennials-a-demographic-bridge-to-americas-diverse-future.pdf

Frey, W. H. (2020). *American cities saw uneven growth last decade, new census data show*. Washington, DC: Brookings Institution. Retrieved from https://www.brookings.edu/research/new-census-data-show-an-uneven-decade-of-growth-for-us-cities/

Fry, R. (2015, July 29). *More Millennials living with family despite improved job market*. Washington, DC: Pew Research Center. Retrieved from https://www.pewsocialtrends.org/2015/07/29/more-millennials-living-with-family-despite-improved-job-market/

Gabriel, S. A., & Rosenthal, S. S. (2015). The boom, the bust and the future of homeownership. *Real Estate Economics*, *43*(2), 334–374.

Glaeser, E. L., & Gyourko, J. (2005). Urban decline and durable housing. *Journal of Political Economy*, *113*(2), 345–375.

Graves, L. (2018, July 26). Welcome to suburbia: the millennials done with city life – and city prices. *The Guardian*. Retrieved from: https://www.theguardian.com

Haase, A., Kabisch, S., Steinführer, A., Bouzarovski, S., Hall, R., & Ogden, P. (2010). Emergent spaces of reurbanisation: Exploring the demographic dimension of inner-city residential change in a European setting. *Population, Space and Place*, *16*(5), 443–463.

Harvard Joint Center for Housing Studies. (2020). *The state of the nation's housing 2020*. Cambridge, MA: Harvard Joint Center for Housing Studies. Retrieved from https://jchs.harvard.edu/sites/default/files/reports/files/Harvard_JCHS_The_State_of_the_Nations_Housing_2020_Report.pdf

Henninger, D. (2020, June 17). The coming urban exodus. *The Wall Street Journal*. Retrieved from https://www.wsj.com/articles/the-coming-urban-exodus-11592435672

Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation*. New York, NY: Vintage.

Hunt, E. (2020, October 26). The great rebalancing: working from home fuels rise of the 'secondary city' *The Guardian*. Retrieved from https://www.theguardian.com/cities/2020/oct/26/the-great-rebalancing-working-from-home-fuels-rise-of-the-secondary-city

Hwang, J., & Lin, J. (2016). What have we learned about the causes of recent gentrification? *Cityscape: A Journal of Policy Development and Research*, *18*(3), 9–26.

Kahn, L. B. (2010). The long-term labor market consequences of graduating from college in a bad economy. *Labour Economics*, *17*, 303–316.

Lee, H. (2020). Are Millennials Coming to town? Residential location choice of young adults. *Urban Affairs Review*, *56*(2), 565–604.

Lee, Y., Lee, B., & Shubho, T. H. (2019). Urban revival by Millennials? Intraurban net migration patterns of young adults, 1980–2010. *Journal of Regional Science*, *59*(3), 538–566.

Malmendier, U., & Nagel, S. (2011). Depression babies: Do macroeconomic experiences affect risk-taking? *Quarterly Journal of Economics*, *26*, 373–416.

Mannheim, K. (1952, [1926]). The problem of generations. In K. Mannheim (Ed.), *Essays on the sociology of knowledge* (pp. 276–322). London: Routledge & Kegan Paul.

Mawhorter, S. L. (2018). Boomers and their boomerang kids: Comparing housing opportunities for Baby Boomers and Millennials in the United States. In M. Moos, D. Pfeiffer, & T. Vinodrai (Eds.), *The Millennial city: Trends, implications, and prospects for urban planning and policy* (pp. 143–152). New York, NY: Routledge.

Moos, M. (2016). From gentrification to youthification: The increasing importance of young age in delineating high-density living. *Urban Studies*, *53*(14), 2903–2920.

Moos, M., Pfeiffer, D., & Vinodrai, T. (2018). *The Millennial city: Trends, implications, and prospects for urban planning and policy*. New York, NY: Routledge.

Myers, D. (1999). Cohort longitudinal estimation of housing careers. *Housing Studies*, *14*(4), 473–490.

Myers, D. (2016). Peak Millennials: Three reinforcing cycles that amplify the rise and fall of urban concentration by Millennials. *Housing Policy Debate*, *26*(6), 928–947.

Myers, D., Lee, H., & Simmons, P. A. (2020). Cohort insights into recovery of Millennial home-ownership after the Great Recession. *Journal of Housing Economics*, *47*, 101619.

Myers, D., & Pitkin, J. (2009). Demographic forces and turning points in the American city, 1950 to 2040. *Annals of the American Academy of Political and Social Sciences*, *626*, 91–111.

Oppenheimer, V. (1988). A theory of marriage timing. *American Journal of Sociology*, *94*(3), 563–591.

Pfeiffer, D., Pearthree, G., & Ehlenz, M. M. (2019). Inventing what Millennials want downtown: Housing the urban generation in low-density metropolitan regions. *Journal of Urbanism: International Research on Placemaking and Urban Sustainability*, *12*(4), 433–455.

Reyes, C., & Lourgos, A. L. (2019, April 18). Chicago area drops population for fourth straight year, census data show; Cook, DuPage and Lake counties also decline. *Chicago Tribune*. Retrieved from https://www.chicagotribune.com

Roberts, S. (2019). Is New York City's 'remarkable growth story' ending? *The New York Times*. Retrieved from https://www.nytimes.com

Ryder, N. B. (1965). The cohort as a concept in the study of social change. *American Sociological Review*, *30*, 843–861.

Shuman, H., & Scott, J. (1989). Generations and collective memories. *American Sociological Review*, *54*, 359–381.

U.S. Census Bureau. (2012). *Patterns of metropolitan and micropolitan population change: 2000 to 2010. (2010 Census Special Reports C2010SR-01)*. Washington, DC: U.S. Census Bureau. Retrieved from https://www.census.gov/content/dam/Census/library/publications/2012/dec/c2010sr-01.pdf