AURORA

INDUSTRIAL CITIES INITIATIVE

Edited by Susan Longworth

Acknowledgements

The Industrial Cities Initiative (ICI) is a project of the Federal Reserve Bank of Chicago's Community Development and Policy Studies Division, led by Alicia Williams, vice president. Susan Longworth edited this document.

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Introduction

The Community Development and Policy Studies (CDPS) division of the Federal Reserve Bank of Chicago undertook the Industrial Cities Initiative (ICI) to gain a better understanding of the economic, demographic, and social trends shaping industrial cities in the Midwest. The ICI was motived by questions about why some Midwest towns and cities outperform other similar cities with comparable histories and manufacturing legacies. And, can 'successful' economic development strategies implemented in 'outperforming cities' be replicated in 'underperforming cities?'

The effort to improve the economic and social well-being of these cities and their residents occurs in an environment shaped by:

- **Macroeconomic forces:** Globalization, immigration, demographic trends including an aging population, education and training needs, and the benefits and burdens of wealth, wages, and poverty impact these cities, regardless of size or location.

- **State and national policies:** Economic development leaders contend that state and national policies pit one city against another in a zero-sum competition for job- and wealth-generating firms.

- **The dynamic relationship of city and region:** Although cities remain the economic entities, regional strengths and weaknesses to a large extent determine the fate of their respective cities.

As a first phase, we profiled ten midwestern cities whose legacy as twentieth century manufacturing centers remains a powerful influence on the well-being of those cities, their residents and their regions. However, the objective of the ICI was not only to look at the individual conditions, trends and experience of these places, but to also explore these cities in comparison to peers, their home states and the nation.

Therefore in addition to reviewing an individual profile that may be of particular interest, we also advise reading the Summary of Findings (http://www.chicagofed.org/ici_summary.pdf) which explains further the motivation and context for the ICI and provides thematic observations that emerged from the interviews, as well as supporting data. Overarching trends, relating to human capital – its quantity and quality, industry concentrations, employment and productivity outlooks, educational attainment, diversity and inclusion, housing and poverty, and access to capital that are described in each of the profiles are coalesced in the Summary of Findings to arrive at conclusions and next steps. They constitute an essential component of the overall narrative.

In addition, attached to each profile is a series of appendices. These important documents provide insight into the data methodology and resources used, and a data summary for each city.

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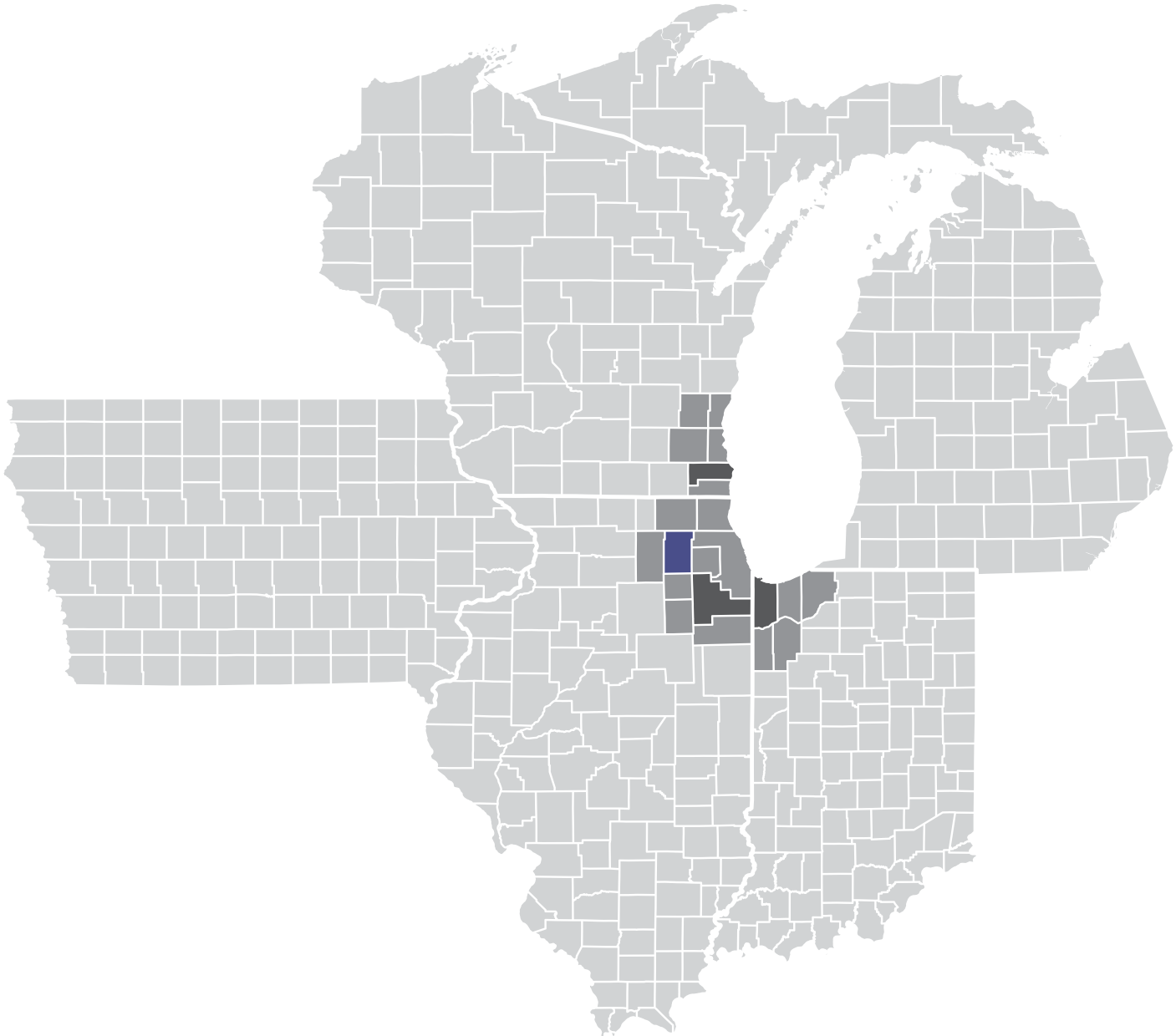
ILLINOIS

FEDERAL RESERVE BANK OF CHICAGO



AURORA, IL

Overview

Aurora, Illinois, is the state's second largest city and is located approximately 40 miles west of Chicago in an area known as the Fox Valley. The city is surrounded by expressways, and served by commuter rail, O'Hare International Airport, and Midway International Airport. Aurora is close to regional employment centers and offers access to the many commercial, civic, and cultural assets of the Chicago metropolitan area. Once a regional manufacturing center, the percentage of workers employed in manufacturing and heavy industry has declined significantly since 1970. In 1970, nearly 44 percent of Aurora's workforce was concentrated in manufacturing. In 2010, approximately 18 percent of Aurora residents work in manufacturing, still above the state and national levels, but by a smaller margin (chart 1).[1]

Incorporated in 1845, Aurora's early growth is a familiar, midwestern profile of railroads and immigration, leading to a reputation for tolerance, inclusion, and progressive, forward-looking thinking. As examples, in 1851, Aurora opened the first free public school in Illinois.[2] In 1881, Aurora became the first midwestern city to install electric streetlights.[3] Aurora was home to one of the world's first municipal electric power plants built by 1886. That gave rise in 1908 to the city's enduring nickname: the "City of Lights."[4]

Aurora weathered recent local and global economic pressures, continuing to meet its financial obligations, but with some predictably difficult choices. Indeed, Aurora has leveraged its geographic location to position itself for continued growth and prosperity. Nevertheless, it faces challenges common to other older industrial cities: an aging workforce with the next generation unprepared for available jobs, changing demographics, and a school system struggling to adapt, as well as acute impact from the recent housing crisis.

Aurora has been one of the Midwest's fastest growing cities for the past ten years, stemming in large part from immigration and annexation.[5] Its population shifted from one that was predominantly White in 1980 to one that is almost 40 percent minority, including a significant and growing Hispanic population in 2010.

The population of Aurora grew to 197,899, a growth of approximately 165 percent between 1970 and 2010 (chart 2). Chart 3 represents population growth indexed to state and national levels and shows Aurora's disproportionate growth over the past 20 years.

In 1970, Aurora's unemployment rate was almost 3 percent compared to approximately 8 percent today; while the percentage of families living in poverty was 4 percent in 1970, compared to 9 percent in 2010.[6]

Chart 1. Percent employed in manufacturing: Aurora and comparison areas, 1970-2010

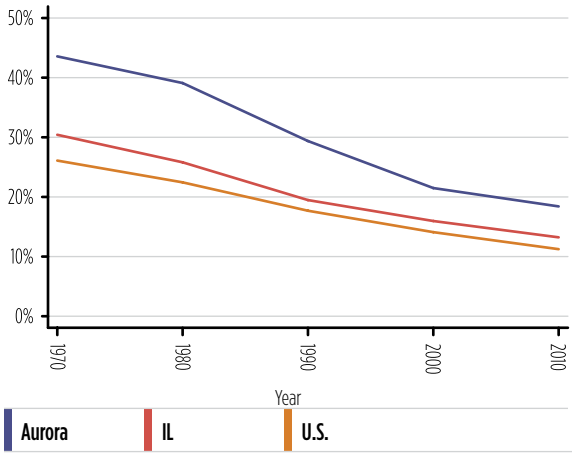
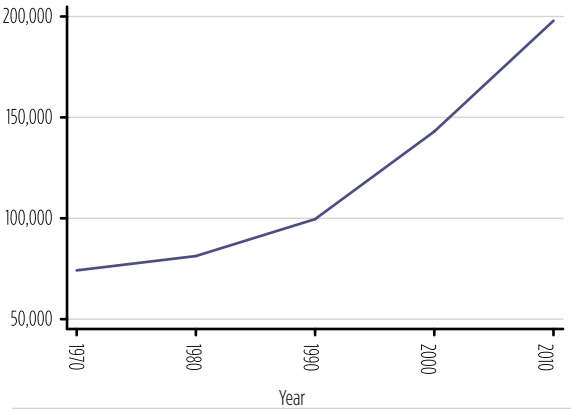


Chart 2. Total population: Aurora, 1970-2010



Source: U.S. Census Bureau (A-1).

Chart 3. Total population (indexed, 1970=100): Aurora and comparison areas, 1970-2010

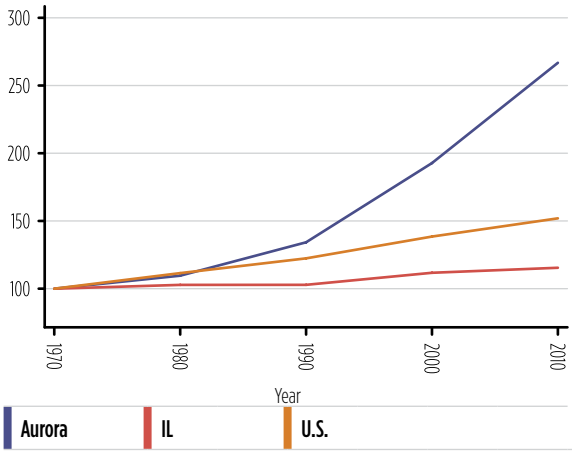
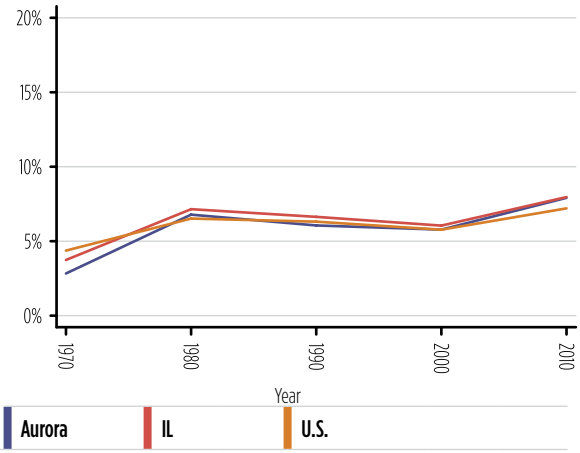


Chart 4. Percent civilian unemployment: Aurora and comparison areas, 1970-2010



Source: U.S. Census Bureau (A-1).

These percentages now align more closely with levels seen at the state of Illinois and nationally, whereas in 1970 these indicators were below national and state levels (chart 4).

In 2008 Aurora was ranked 74th by *Money Magazine* as one of the 100 "Best Places To Live" in the United States, a ranking supported by a 2008 city-sponsored quality of life survey of 4,900 randomly selected households.[7] Survey responses indicated that public safety and crime prevention had improved, that Aurora was a good place to live, but that further downtown revitalization would enhance the general attractiveness of the area.

Regional presence

Passenger rail service between Aurora and Chicago was initiated in 1864.[8] Today, although there is some discussion of building an extension, Aurora is the final stop for commuters coming from Chicago on the Metra line.[9]

Aurora's geographic location allows it access to big city amenities and the advantages of a burgeoning economic region. Interviewees acknowledged that Chicago and other nearby job centers – Schaumburg and Naperville, for example – drive economic growth for Aurora. Aurora has its own small regional airport that serves primarily corporate customers, but is close to O'Hare International and Midway Airports.

In addition to being close to several major rail lines, Aurora is also near two interstate highways (I-88 and I-355) providing a supportive infrastructure for business and residential development. Aurora has also sought to leverage this location by completing a 42-square-mile fiber optic network to attract technology and financial services companies, with further plans for expansion pending.[10]

Nevertheless, interviewees are split on whether Aurora is economically dependent on Chicago or could thrive independently. While Aurora certainly boasts a rich and unique history, its position within the Chicago metropolitan market drives much of the city's recent development. The construction of Chicago Premium Outlets demonstrates these advantages.[11] Built in 2003, the outlet mall includes 120 higher-end retail stores and about 440,000 square feet of shopping space. In 2011, the mall announced a 30 percent expansion to add 130,000 additional square feet of retail space.[12] This mall is perceived to be a regional advantage for Aurora by drawing shoppers and tourists from miles away into the community, and it is unlikely that developers would have chosen this location were it not for Aurora's position within easy access to the buying power of the larger Chicago market.

Major employers in the area also leverage Aurora's regional position and its advantageous infrastructure. Three of the top 20 employers are distributors and others such as the regional health centers, casinos, and

the previously mentioned Chicago Premium Outlets draw from the larger Chicago-area market.[13]

Economic development

Aurora encompasses nearly 46 square miles and is bordered by the smaller communities of Batavia, Montgomery, Naperville, North Aurora, Oswego, Plainfield, Sugar Grove, and Warrenville.[14] Aurora has grown significantly in population and size since 1970, when it covered just 15 square miles. The city has used annexation as a growth tool several times over the recent decades to build its tax base. By 1990 it had grown to 35 square miles and has since expanded to its current size, enabling the municipality to capture land, residents, taxes, and jobs.[15]

During the recent financial crisis, Aurora fully funded its pension liabilities. However, to stay solvent the city completed two rounds of layoffs, reduced benefits for new employees, and outsourced waste management. The 2012 city budget shows evidence of recovery with the rehiring of a special events coordinator and reintroducing pay raises.[16]

Aurora uses a variety of funds to finance economic and business development, as well as community improvement projects, including but not limited to: Neighborhood Stabilization Funds (NSP), Gaming Tax Revenues, Block Grant Funds, Tax Increment Financing (TIF) Funds, and revenues from Special Service Areas (SSAs). The largest segment (53 percent) of Aurora's Capital Improvement Budget for the next ten years is allocated to transportation, to projects that will improve traffic flow, reduce energy consumption, and address other infrastructure improvement needs. Smaller amounts are allocated to downtown (9 percent), economic development (2 percent), and neighborhood redevelopment (2 percent).[17]

Over the next ten years, over $50 million will be spent in an effort to revitalize the city's downtown area, in particular the RiverEdge Park and associated RiverWalk. The largest allocation is for projects in TIF District No.6 ($4.3 million) "to further the redevelopment of the downtown area as an economic engine and an enticing social environment…"[18] Other planned economic development activities, noted from sources, include the expansion of public parking options at the outlet mall, development of vacant land to capitalize on commercial synergies between the Walmart and the outlet mall, and the rehabilitation of a vacant office building to create 160 jobs at a youth family center. The city also plans to extend its fiber optic loop to include the expanding DuPage Technical Park and the North Farnsworth Avenue area "to facilitate better partnerships within the region and network connectivity with other municipalities." Over $50 million is allocated to improvement and expansion of the municipal airport, responding, according to the Plan, to the requests of current and potential corporate customers (e.g., "To accommodate six businesses that have expressed a desire to relocate from Midway Airport").[19]

There are six TIF districts in Aurora.[20] Interviewees described efforts to attract developments and businesses via TIF benefits as mildly successful. For example, the Chicago Premium Outlets received $24 million in TIF, and although the debt was not scheduled to mature until 2025, it has already been paid in full. Two additional TIF districts were approved by the City Council in November 2011 to speed up redevelopment of obsolete manufacturing properties near the outlet mall.[21] The city's largest revenue source continues to be property taxes, which amount to 24 percent of all income. However, with equalized assessed values having fallen to 2006 levels, property taxes are rebounding slowly. Another indication of the collapse of the housing bubble on Aurora's budget are plummeting revenues from real estate transfer taxes (RETT). From a high of roughly $3.5 million in 2007, RETTs were projected to be $1.3 million in 2012, slightly less than 2011 actuals. Building permit revenue was also expected to remain flat from 2011, indicating that the construction market has yet to recover.[22]

Established in 1993, the Hollywood Casino has been a significant source of revenue for the city, contributing $10 million to $16 million annually. Revenue has been declining due to the opening of a casino in Des Plaines, Illinois. Revenues are expected to fall to $7 million in 2012. The impact of this decrease has been contained, as, by statute, casino-derived revenues were never relied upon for operating funds. However, they are a significant source of capital improvement funds impacting the city's ability to plan for and undertake larger infrastructure projects.[23]

Economic development initiatives for the city are led by the Aurora Economic Development Commission (AEDC), which works to attract and

retain commercial and industrial businesses to expand jobs and increase revenue in the form of property taxes, sales taxes, and other generators. In 2011, the AEDC led or participated in business attraction and expansion projects that are expected to create more than 600 jobs.[24]

As mentioned previously, one of the major current economic redevelopment areas is RiverEdge Park. It has been touted as the "centerpiece" of a ten-year master plan for the city of Aurora called "Seize the Future," or STF, that was approved by the City Council in 2006.[25] RiverEdge Park is a thirty-acre regional festival park located along the Fox River that, along with the adjoining properties, is part of Illinois' River Edge Redevelopment Zone communities.[26] As a major architect of the River Edge Initiative, Aurora Mayor Weisner was granted funding and certain tax incentives for cleanup and redevelopment of brownfield sites in three riverfront communities, including Aurora. Despite some public resistance to funds being used for beautification rather than business development, the RiverEdge Park development has been generally well-received.

Industry analysis

Table 1 lists the top five industries in Kane County as measured by location quotient (LQ). Four of the top five are in manufacturing and the fifth is in amusements, gambling, and recreation. Only amusements has shown any significant increase in employment since 2001 (electrical equipment and appliance manufacturing gained 31 jobs). These five industries represent 11 percent of all jobs in Kane County. In terms of output growth, amusements, fabricated metals and plastics are projected to grow at a rate over the next ten years that is greater than the rate of contraction experienced over the past decade. And job growth, if any, is not projected to compensate for the job losses of the past ten years, again, with the exception of amusements, gambling, and recreation.

Manufacturing remains a leading source of employment in Aurora, employing over 18 percent of residents. Earth moving equipment manufacturer Caterpillar is the city's largest employer. Other manufacturers include Westell, O'Cedar, and Henry Pratt in the telecommunications, household goods, and valve industries, respectively.

Table 2 shows the top five industries in Kane County by employment. All of the top five are in service industries. Ten percent are in health-related industries. With the exception of administrative and support services, these top five employing industries have shown growth over the past decade and that growth is expected to continue.

However, beyond what is represented in table 2, over 30 percent of Aurora's jobs are in the often low-paying and/or cyclical/seasonal sectors of retail trade; arts, entertainment, recreation, accommodation, and food services; transportation, warehousing, and utilities; and construction.[27] These concentrations are driven by the Premium Outlet Mall, the casino, numerous distribution companies that leverage Aurora's strategically positioned infrastructure, and (until recently) Aurora's housing boom. The sustainability of these types of jobs depends largely on regional, national or even global forces, leading one community leader to state: "All macro (economic) issues play out in Aurora."

Human capital

In 2010, over 50 percent of Aurora residents had attended or graduated from college, compared to approximately 19 percent in 1970 (chart 5). However, the percentage of the population without a high school diploma remains stubbornly above 20 percent, while nationally it is 8 percentage points lower.[28]

Further, as can be seen in chart 6, the percentage of the over-25 population with only a high school diploma increased slightly over the past decade, while there was virtually no increase in the percent that advanced on to college. Although incremental, these shifts represent some of the challenges faced by Aurora in light of demands from employers for increasingly skilled employees.

Those interviewed expressed concern that the lack of skilled labor would persist into the future and potentially undermine Aurora's competitiveness and ability to attract and retain employers offering high-skilled jobs. Nevertheless, persistent negative opinions regarding the perceived value of a manufacturing job and the perceived value of an education, combined with restricted funding and other resources, challenge efforts to prepare Aurora's high school students for 21st century jobs.

Table 1: Top 5 industries in Kane County, IL by 2011 location quotient

	Kane County, IL						U.S.			
	Location Quotient		Employment				Employment		Output	
Industry	2001	2011	2001	2011	% Share	Annual Rate of Change, 2001-2011	Annual Rate of Change, 2000-2010	Annual Rate of Change, 2010-2020 (Projected)	Annual Rate of Change, 2000-2010	Annual Rate of Change, 2010-2020 (Projected)
Plastics and rubber products manufacturing	4.08	4.24	5,645	4,009	2.48%	-3.36%	-4.10%	1.40%	-2.30%	2.90%
Electrical equipment and appliance manufacturing	2.07	3.30	1,768	1,799	1.11%	0.17%	-4.80%	-0.80%	-2.80%	2.50%
Fabricated metal product manufacturing	2.10	2.68	5,431	5,380	3.33%	-0.09%	-3.10%	1.10%	-0.30%	2.90%
Paper manufacturing	1.71	2.43	1,531	1,402	0.87%	-0.88%	-4.10%	-0.80%	-1.90%	1.80%
Amusements, gambling, and recreation	1.90	2.34	3,802	4,863	3.01%	2.49%	0.60%	1.60%	-0.70%	2.20%
Total, top 5 industries by location quotient			18,177	17,453	10.80%	-0.41%				
Total, all industries			169,119	161,589	100.00%	-0.45%				

Source: U.S. Bureau of Labor Statistics (A-2).

Table 2: Top 5 industries in Kane County, IL by 2011 employment

	Kane County, IL						U.S.			
	Location Quotient		Employment				Employment		Output	
Industry	2001	2011	2001	2011	% Share	Annual Rate of Change, 2001-2011	Annual Rate of Change, 2000-2010	Annual Rate of Change, 2010-2020 (Projected)	Annual Rate of Change, 2000-2010	Annual Rate of Change, 2010-2020 (Projected)
Administrative and support services	1.81	1.31	20,815	14,326	8.87%	-3.67%	-1.10%	2.00%	0.90%	3.40%
Food services and drinking places	0.80	0.89	10,188	12,792	7.92%	2.30%	1.30%	0.90%	1.40%	2.50%
Professional and technical services	0.73	0.80	7,721	9,175	5.68%	1.74%	1.00%	2.60%	2.50%	3.60%
Ambulatory health care services	0.91	0.99	6,249	9,066	5.61%	3.79%	3.30%	3.70%	3.40%	3.30%
Hospitals	0.72	1.02	4,475	7,120	4.41%	4.75%	1.70%	1.70%	2.30%	2.30%
Total, top 5 industries by employment			49,448	52,479	32.48%	0.60%				
Total, all industries			169,119	161,589	100.00%	-0.45%				

Source: U.S. Bureau of Labor Statistics (A-2).

Chart 5. Percent some college and college grad: Aurora and comparison areas, 1970-2010

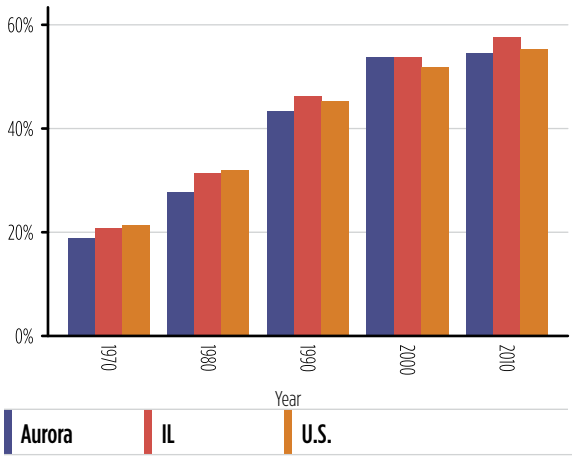
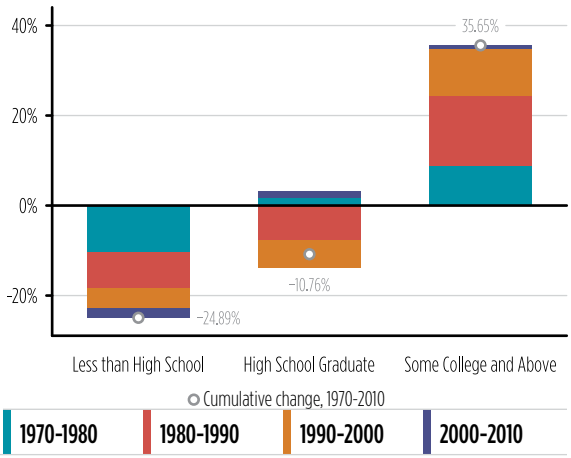


Chart 6. Percentage point changes in educational attainment: Aurora, 1970-2010



Source: U.S. Census Bureau (A-1).

Interviewees feel Aurora's educational attainment rate is further complicated by the perception on the part of students regarding the types of skills needed for more sophisticated jobs, such as those in advanced manufacturing. Aurora has also experienced a significant demographic shift (discussed later) and faces the challenges of educating a growing, foreign-born Hispanic population and their children, for whom English is a second language for many.

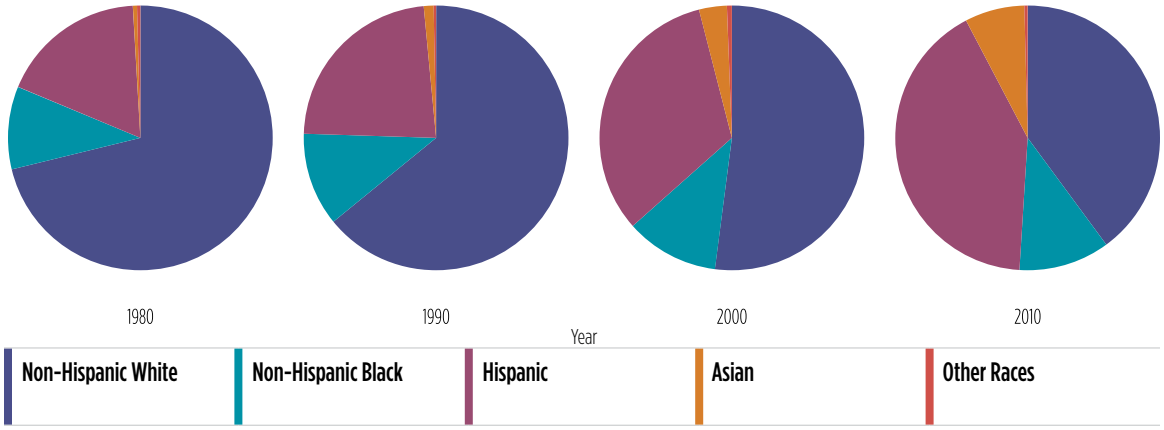
Waubonsee Community College (Waubonsee) is the city's only community college and has long recognized the gap between the availability of well-paid positions, and the skills needed to fill those positions. Waubonsee works with employers, such as Caterpillar, and high schools to create targeted internships in anticipation of employment trends. Waubonsee, like many community colleges, continues the tradition of local community colleges as workforce development and training centers that coordinate with chambers of commerce and local industries to create training programs for community residents. For example, Waubonsee offers trade certification courses and subsidies in the amount of $500 for non-credit courses targeting the unemployed and underemployed. Another example is the comprehensive welding program, ranging from a beginning certificate to a full associate degree.[29] In addition, there are non-credit options for those interested in advancing their job skills and personal performance, such as workforce development, computer literacy, and community-based learning.[30]

For over a decade, Waubonsee has worked with the Valley Industrial Association (VIA) to create a supervisors' class that is offered annually (and sometimes biannually). The curriculum is written by Waubonsee, and the VIA partners with the college to market and deliver the supervisory program to VIA member companies. Class topics range from management skills to labor laws to safety in the workplace.

VIA was also part of a grassroots effort to secure funding to administer the National Career Readiness Certificate to all Illinois high school juniors across Illinois (at the discretion of the individual school districts). This certification, which ranks career readiness from bronze to platinum, created a standard against which employers can evaluate prospective employees. The certificate program is also available to un- or underemployed older workers who need to improve their skills. The VIA was also crucial in bringing the Illinois Mathematics and Science Academy, a public boarding school that focuses on math and science, to Aurora,[31] with the intention of creating a larger base of professional and skilled labor in the city. Unfortunately, as a boarding school, many of the students do not have attachments to the community.

Local manufacturing firms report that finding good skilled labor is difficult even at a higher wage. With the lack of skilled employees available, Caterpillar has rehired retirees to fill open positions and bridge the knowledge gap to ensure current employees are

Charts 7-10. Racial and ethnic composition: Aurora, 1980-2010



Source: Brown University (A-8).

able to learn from previous ones, in both day-to-day operations, as well as from a company culture perspective. In short, Aurora has approached the skills mismatch from a variety of angles, including the hiring of temporary workers. However, the efficacy of these approaches (individually and in the aggregate) remains to be seen.

Race and diversity

Early industry building heavy machinery for railroads attracted generations of European immigrants. This migration early in the town's history introduced a spirit of tolerance and inclusion. Long-time residents contacted during the course of this study indicated that many people came to Aurora when the Burlington and Quincy railroads located their construction and repair shops in the town in the 1850s, remaining the largest employer until the 1960s. Mexican immigrants began arriving around 1910.[32] The Hispanic population in Aurora grew significantly from 23 percent in 1990 to 41 percent in 2010.[33]

With the large influx of foreign-born, Spanish-speaking residents, there is great need for additional adult literacy and ESL education. Waubonsee Community College[34] and other organizations like the Dominican Literacy Center[35] are seen as sources for administering English as a Second Language (ESL) courses to help assimilate new residents to Aurora.

Even for younger residents, language remains a problem. Standardized tests remain in English, but can be read to students in Spanish, if necessary. National scholastic tests (i.e., SAT/ACT) may not be read in Spanish, however, which impacts the success rate for students at this stage.

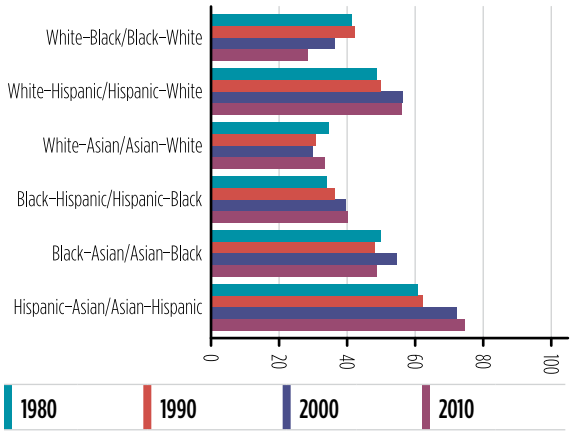
As the mauve area on pie charts 7-10 indicate, and has been mentioned previously, since 1980 the share of Aurora residents who are Hispanic has been increasing steadily.[36]

However, various indicators point to a Hispanic population that is relatively isolated and self-sufficient, echoing repeated anecdotes. The Aurora 2010-2014 Strategic Plan states the following: "When race and ethnicity are considered, there appears to be no special need among the Hispanic community for housing assistance, although one is tempted to speculate whether the sharing of housing units by families dampens the estimates of need."[37]

A dissimilarity index[38] further indicates that while the segregation of Whites and Hispanics is moderately high (rates of 40 percent to 50 percent are considered moderate), it has been increasing, as opposed to the segregation that exists between Whites and Blacks, which is relatively low and has been trending downward since 1980 (chart 11).

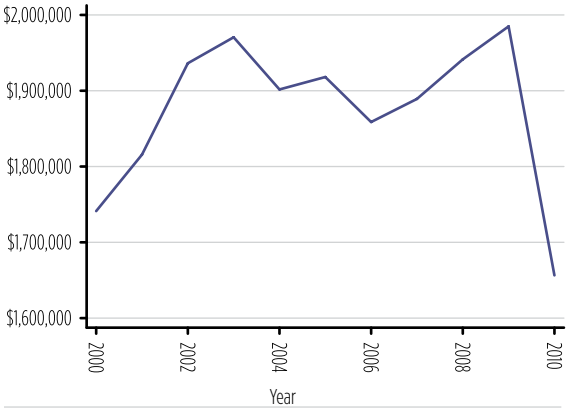
Finally, Hispanics are largely absent from leadership positions, and therefore are at risk of leaving their interests and concerns out of the public dialogue. Interviewees noted this shortcoming, but struggled with how to address it.

Chart 11. Dissimilarity index: Aurora, 1980–2010



Source: Brown University (A-8).

Chart 12. Total deposits (thousands of real $, 2010=100): Aurora, 2000–2010



Source: FDIC Summary of Deposits (A-6).

Banking and lending

Aurora's location ensures that its residents have access to a variety of financial institutions whether close to home or near work. Nevertheless, a local community bank retains dominant deposit market share in the community. Old Second National Bank opened its doors in Aurora in 1871[39] and remains the city's primary community bank, although its deposit market share has decreased since 2002 due to an increased presence of larger, national, and regional institutions.[40] The market for financial institutions became more crowded between 2002 and 2012, with the number of financial institutions operating in the market increasing from 13 to 17.

Real total deposits in Aurora fluctuated between 2000 and 2010 (chart 12). Further analysis would be needed to fully understand this uneven trend.

Leading up to the recent recession, the value of real small business lending as reported under the Community Reinvestment Act (CRA) peaked in Aurora in 2006, while the number of these loans peaked in 2007. From their respective highs, the number of small business loans fell by 74 percent and the real dollar value fell by 59 percent. Both the number and real value of loans rebounded slightly by 2011 (chart 13). Nevertheless, this trend creates challenges for smaller, younger businesses that have less equity and shorter operating histories to use in qualifying for loans.

Small business lending activity, when measured as a percentage of 2006 (pre-recession peak) levels, has increased only slightly from 2009 (end of recession) levels (chart 14).

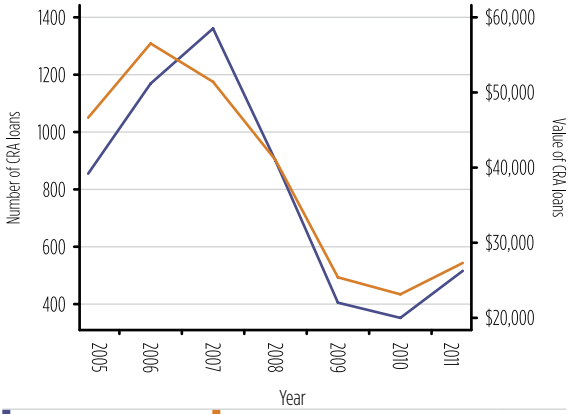
Regional community development financial institution (CDFI), Accion, has a partnership with Waubonsee Community College's Small Business Development Center to provide microlending services to qualified businesses. These smaller loans help to fill a gap in small business lending, as well as potentially build the credit of new business owners.[41]

As demonstrated by HMDA data, Aurora's housing market peaked in 2005 when almost 4,300 home mortgages were originated in the city. The market has yet to recover, with only 753 home mortgage loans made in 2011 – a decrease of approximately 80 percent in both real dollars and numbers.[42] Demand for HMDA loans has remained flat, or slightly declining, since the end of the recession, as reflected in both originations and denials (chart 15). The housing challenges facing Aurora are discussed in the next section.

Housing

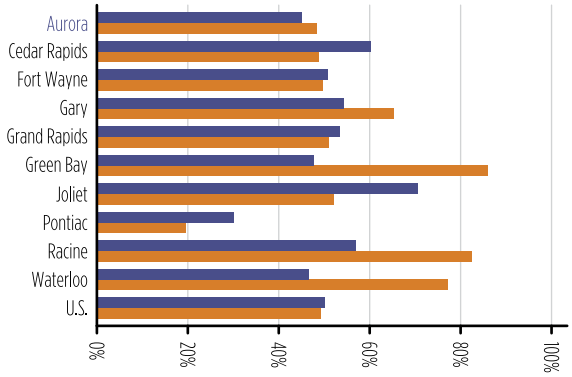
Aurora had 24,244 residential housing units in 1970. By 2010, housing units had increased to an estimated 62,273 in line with population growth. Over this 40-year period, real median owner-occupied home values

Chart 13. Number and value of CRA loans (thousands of real $, 2010=100): Aurora, 2005-2011



Number of CRA loans | Value of CRA loans

Chart 14. Value of CRA loans (thousands of real $, 2010=100) in all case study cities as a percentage of 2006 levels



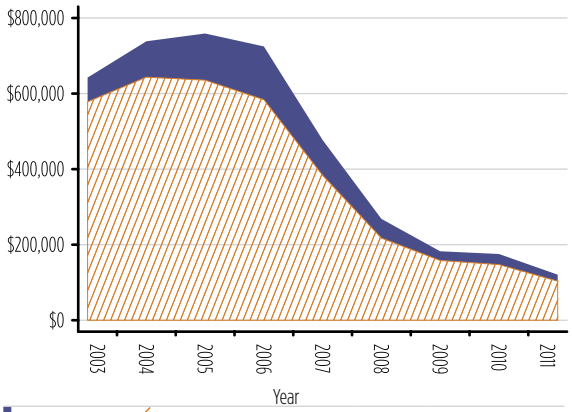
2009 | 2011

Limited to loans made to businesses with less than $1M in annual revenues

Source: CRA (A-5).

rose from $93,700 in 1970, to $132,448 in 1990, and to an estimated $202,184 in 2010.[43] One interviewee concluded that Aurora is on the western edge of the growth of the metropolitan Chicago region, providing a source of affordable housing with good schools for families needing access to area job centers.

Chart 15. Value of HMDA loan originations and denials (thousands of real $, 2010=100): Aurora, 2003-2011



Denials | Originations

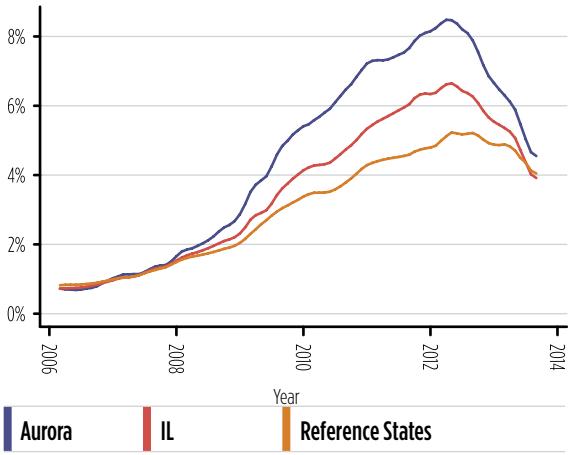
Source: HMDA (A-4).

Aurora experienced a significant housing "boom" as new residents began to flock back to its downtown and surrounding neighborhoods. This growth led to notable increases in development across the city. Residential housing in Aurora began to thrive as large tracts of open land attracted developers.[44] Aurora residents welcomed this new development and an image of revitalization and rebirth after the downturn of the 1970s.

However, as reflected in chart 16, Aurora has struggled with high levels of foreclosures. Its foreclosure inventory rate still exceeds that of the state of Illinois and other states with foreclosure processing periods of more than 180 days, although rates have declined since 2012. As can be seen by the chart below, the foreclosure inventory rate[45] for Aurora outpaced state and national trends in recent years, and remains high.

Certain characteristics of Aurora's population made it particularly vulnerable to economic downturns and the community was particularly hard hit during the recent foreclosure crisis. According to the city's HUD Consolidated Plan for 2010-2014, 40 percent of Aurora home owners are either extremely low-income (ELI), very low-income (VLI), low-income (LI) or moderate-income (MI). This amounts to almost 10,000 households. Individuals in these

Chart 16. Foreclosure inventory rate: Aurora and comparison areas, Jan 2006 – Sep 2013



For smoothing purposes, rates are expressed as 3-month moving averages. Reference group consists of states in which the typical foreclosure process period is over 180 days.

Source: LPS Applied Analytics (A–7).

income brackets have limited resources to maintain or improve their homes and limited ability to absorb loss of or reductions in employment. Based on these factors, addressing the persistent foreclosure inventory in Aurora would likely require a variety of interventions and assistance ranging from home improvement to financial literacy to job training.[46]

To mitigate the impact of the housing crisis, Aurora received $3,083,568 in Neighborhood Stabilization Program (NSP) funding to purchase and rehabilitate abandoned and foreclosed homes, as well as eventually create land banks, demolish blight, and develop vacant properties.[47]

Aurora's Neighborhood Redevelopment Division supports the stabilization and revitalization of neighborhoods through Community Development Block Grant (CDBG) funds and the Home Investment Partnership Program (HOME), offered through the Department of Housing and Urban Development (HUD). This division's key function is to collaborate with community partners, residents, and elected officials to address community development and housing needs for low- and moderate-income citizens.[48]

Several community representatives indicated that the long judicial foreclosure process in Illinois has contributed to vandalism and the decline in neighborhood home values because homes stay vacant longer. Collectively, lower home values resulted in diminished property tax revenue and real estate transfer tax revenue, putting increased pressure on local leaders to maintain the same level of municipal services on a smaller budget.

Conclusion

Aurora is intrinsically connected to the Chicago region and has been since its inception, linked by passenger rail for more than 150 years. Aurora provides access to amenities important to young families and immigrants – affordable housing, good schools, and viable jobs. Nevertheless, Aurora struggled to maintain its footing through the recent recession. Downtown development that preceded the recession came to a halt with the economic downturn, undermining residents' confidence. Still plagued by a backlog of foreclosures, Aurora, which has traditionally pursued growth strategically, appears to have made careful decisions during the recession in the management of its finances that may make for a smoother recovery. Aurora has a strong sense of what it has to offer its residents, its businesses, and the region. It also knows it faces challenges, including the preparation of a 21st century workforce and the development of a new generation of leadership that reflects the current population. These challenges are not unique to Aurora, and the city has had some successes that can be shared.

Notes

1. U.S. Census Bureau (see Appendix A-1). Full citations and descriptions for datasets used throughout the ICI profiles are provided in Appendix A. These include data from the U.S. Census Bureau, U.S. Bureau of Labor Statistics, HMDA, CRA, Summary of Deposits, Lender Processing Services, Brown University, and Living Wage Project.

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5. Aurora, Economic Development. Available at http://www.aurora-il.org/development_services/economicdevelopment/index.php.

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8. Metra History. Available at http://metrarail.com/metra/en/home/about_metra/leadership/metra_history.html.

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11. Chicago Premium Outlets. Available at http://www.premiumoutlets.com/outlets/outlet.asp?id=63.

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18. Ibid.

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24. City of Aurora, Annual Budget. 2012. pp. 241-242. Available at http://www.aurora-il.org/documents/finance/budget_2012.pdf.

25. City of Aurora Seize the Future. Available at http://www.aurora-il.org/documents/planning/Seize_the_Future_Master_Plan.pdf.

26. RiverEdge Park. Available at http://riveredgeaurora.com/about.

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28. U.S. Census Bureau (A-1).

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42. HMDA (A-4).

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44. 2008. Chicago Tribune. A new dawn in Aurora. Available at http://articles.chicagotribune.com/2008-12-19/classified/chi-aurora-profile_chomes_1219dec19_1_westfield-fox-valley-housing-diversity-open-land.

45. LPS Applied Analytics (A-7).

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47. Aurora, Illinois, Neighborhood Stabilization Program. Available at http://www.aurora-il.org/community_services/neighborhoodredevelopment/nsp_program.php.

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Appendix A: Overview of key data sources and compilation methods

[1] U.S. Census Bureau

The U.S. Census collects information on the American population and housing every ten years for use in policy-making and research. Until recently, it was distributed in two forms: a short form that counts all residents as mandated by the Constitution, and a long form that samples the population for characteristics such as income, housing, and education. After the 2000 Census, the long form was replaced by the American Community Survey (ACS). All three are discussed below.

With a few exceptions, the Census-derived time series presented in these profiles represent an amalgamation of data points from these three sources. While we made every effort to ensure comparability between figures over time, in some cases – detailed in table 2 – this was not possible and/or was difficult to assess. Furthermore, for the sake of narrative efficiency, we indicated all ACS data as corresponding to 2010 throughout the text and charts, even though the majority of it actually corresponds to the five-year timeframe between 2005 and 2009.

Please note that, for tabulation purposes, the Census treats cities as political units rather than spatially-fixed communities. As such, apparent changes over time may reflect changes caused by annexation, as well as changes within the original city boundaries. The table below indicates the extent of annexation for each of the ten case cities between 1970 and 2010.

Table 1. Change in land area by city, 1970-2010

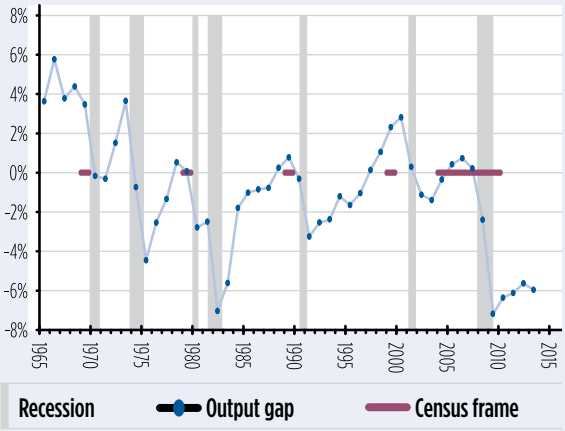
City	Land Area in Square Miles		Percent Change
	1970	2010	
Fort Wayne	51.5	110.6	115%
Gary	42.0	49.9	19%
Grand Rapids	44.9	44.4	-1%
Pontiac	19.7	20.0	1%
Aurora	14.1	44.9	219%
Joliet	16.5	62.1	276%
Racine	13.1	15.5	18%
Green Bay	41.7	45.5	9%
Cedar Rapids	50.7	70.8	40%
Waterloo	59.2	61.4	4%

Notes: 1. Data for 1970 come from 1972 County and City Databook as accessed through ICPSR.
2. Data for 2010 come from the U.S. Census Bureau State and County Quickfacts.

Inset 1: Census data and the business cycle

For most characteristics, observed changes over time neatly capture the long-term trends that interest us. For a handful of characteristics, however, historically meaningful structural changes may be somewhat obscured by short-term fluctuations in the business cycle. To illustrate, Census data indicate that real median family income in Green Bay increased by just over 12 percent between 1990 and 2000. This probably understates the true gain, however, insofar as the first measurement reflects income closer to the peak of a business cycle than the second one.[1]

Chart 1. Real U.S. output gap as a percent of real potential GDP



Source: Congressional Budget Office/Haver Analytics.

This concern mainly applies to income- and employment-related characteristics. Ideally, in the interest of holding cyclical change constant and thereby isolating structural change, comparisons between these types of characteristics should be made between measurements taken during the same stage of the business cycle (e.g., peak-to-peak or trough-to-trough). When not possible, however, such comparisons should at least take into account that differences in timing with respect to the business cycle may be relevant.

These differences are captured in chart 1, which displays the timeframe for income questions (Census frame) from the Census and ACS in relation to fluctuations in the business cycle. Note that both the formal definition of business cycles (in shading, and an informal measure depicted by the output gap (i.e., the difference between actual GDP and potential GDP), are depicted. The output gap rises during economic expansions and falls during contractions. We express it as a percent of real potential GDP to isolate this cyclical effect from long-term, structural increases in GDP. In the context of our example, the red line in 1989 highlights the period for which income was reported in the 1990 Census and the red line in 1999 highlights the same for the 2000 Census. Visually, we can see that the 1990 frame is closer to a recession and decline in the output gap; indicating it occured closer to the peak of a business cycle.

Lastly, in addition to the official U.S. Census website for sharing recent data (American FactFinder), for historical data we relied on two intermediary venues that organize the myriad older Census products into a coherent framework. In particular, for the period 1970-1990, we relied heavily on the National Historical Geographic Information System (NHGIS) maintained by the University of Minnesota. As a supplement, we also used data provided by the Interuniversity Consortium for Political and Social Research (ICPSR) maintained by the University of Michigan. Accordingly, the full citation for any specific Census-derived figure should be considered as "[the source] as obtained through [the venue], [the year]". Additional detail for each of these venues is provided below.

Sources

[i] Short Form

Citation: *U.S. Census Bureau, Decennial Census, Short Form.*

In contrast to the long form or ACS, all persons complete the short form. All households and group quarters receive a questionnaire by mail every ten years. It asks for the age, sex, and race/ethnicity for each person living at the address, as well as whether the residence is owned or rented.[2] Addresses are primarily obtained from the Master Address File from previous Census years and the Delivery Sequence File from the U.S. Postal Service.[3] Follow-ups are conducted by telephone and personal interviews for nonrespondents. Missing data are imputed. Since the published figures are enumerations and not estimates from a sample, there are no calculable margins of error associated with sampling bias. However, the decennial Census is accompanied by a post-enumeration survey to assess coverage error.[4] The post-enumeration survey for the 2010 Census did not find a significant percent net undercount or overcount for the household population.[5]

[ii] Long Form

Citation: *U.S. Census Bureau, Decennial Census, Long Form.*

For Censuses 1970-2000, one in six residents received a long form questionnaire with detailed questions on population and housing. Though results from the long form are technically estimates (not enumerations), the Census Bureau considers the figures sufficiently precise that it does not publish margins of error.

[iii] American Community Survey

Citation: *U.S. Census Bureau, American Community Survey.*

The Census Bureau officially introduced the ACS in 2005 as a replacement for the Decennial Census long form. Instead of sampling the population at one point in time every ten years, the ACS draws monthly rolling samples from U.S. households and group quarters for release every year.[6] Because these annual samples are smaller than the long form samples (about 1 in 40), geographies with smaller populations require greater than single-year periods to achieve appropriate margins of error.[7] Thus the ACS also releases rolling three-year and five-year estimates, where the multi-year estimates are constructed by pooling data from all years. For our analysis of industrial cities, appropriate margins of error were typically only obtainable from 5-year data. In some cases, our assessment of the standard error relative to the estimate allowed us to use three-year data (this measure is known as the coefficient of variation (CV); see discussion below for additional detail). It should be noted that we only considered margins of error when selecting the timeframe for an estimate. We did not test whether differences in estimates are statistically significant. Comparisons of ACS data made in the profiles may not be statistically significant when the estimates are very close or from a small population.

[iv] County and City Data Book

Citation: *U.S. Census Bureau, County and City Data Book [United States] consolidated files, 1944-1977.*

The County and City Data Book is a compendium of local-area data compiled by the U.S. Census Bureau from a variety of sources. It was published as a supplement to the Statistical Abstract of the United States in 1952, 1956, 1962, 1972, 1977, 1983, 1988, 1994, 2000, and 2007.[8] For budget reasons, the Bureau terminated the program in 2011.

Venues

[i] American Factfinder

Citation: *U.S. Census Bureau, American FactFinder, http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml.*

American FactFinder provides access to data about the United States, Puerto Rico, and the Island Areas. The data in American FactFinder come from several censuses and surveys.

For more information see "Using FactFinder" and "What We Provide."[9, 10]

[ii] NHGIS

Citation: *Minnesota Population Center. National Historical Geographic Information System: Version 2.0. Minneapolis, MN: University of Minnesota 2011, http://www.nhgis.org.*

The National Historical Geographic Information System (NHGIS) provides, free of charge, aggregate census data and GIS-compatible boundary files for the United States between 1790 and 2012.

[iii] ICPSR

Citation: *The Interuniversity Consortium for Political and Social Research. Ann Arbor, MI: University of Michigan, http://www.icpsr.umich.edu/.*

The Interuniversity Consortium for Political and Social Research maintains an extensive archive of data sets in the social sciences. Data are available to researchers at no charge.

[iv] Miscellaneous

Percent manufacturing in 1960 and two other national figures for 1970 were not found in the above venues and thus obtained elsewhere, as indicated below.

- Percent Manufacturing from University of Virginia Library
  Citation: *University of Virginia Library, County and City Data Books, http://www2.lib.virginia.edu/ccdb.*

- Median Family Income from Current Population Reports
  Citation: *U.S. Census Bureau, U.S. Department of Commerce, Current Population Reports, Consumer Income, Series P-60, No. 78. May 20, 1971, http://www2.census.gov/prod2/popscan/p60-078.pdf.*

- Median Value of Owner Occupied Homes from Historical Census of Housing Tables
  Citation: *U.S. Census Bureau, U.S. Department of Commerce, Historical Census of Housing Tables, Home Values, http://www.census.gov/hhes/www/housing/census/historic/values.html.*

Table 2. U.S. Census figures by Decennial Form

Order	Figure	Description	Census Form	Notes
1	Total population	Total number of persons	Short	--
2	% < 19	% of total population aged 19 and under	Short	--
3	% 20-24	% of total population aged 20-24	Short	--
4	% 25-44	% of total population aged 25-44	Short	--
5	% 45-64	% of total population aged 45-64	Short	--
6	% > 65	% of total population aged 65 and over	Short	--
7	% Black	% of population that identified themselves as Black	Short	To ensure comparability with earlier years, universe is constrained to persons who identified with only one race.
8	% White	% of population that identified themselves as White	Short	To ensure comparability with earlier years, universe is constrained to persons who identified with only one race.
9	% Hispanic or Latino (of any race)	% of total population that reported a Hispanic country of origin	Short	Not found for 1970 and 1980. Unlike race figures, universe includes the entire population.
10	% Less than HS	% of population aged 25 and over that did not graduate from high school	Long	See % HS Grad note.
11	% HS Grad	% of population over 25 who graduated from high school but never attended college	Long	In 1970, there is no explicit distinction between high school graduate and non-high school graduate. Individuals assumed to have graduated high school if and only if they completed 4 years of high school.
12	% Some College & College Grad	% of persons aged 25 and over that ever attended college	Long	--
13	% Manufacturing	% of employed population aged 16 and over that work in the manufacturing industry	Long	Figures for 1970 appear to omit approximately 3-8% of eligible universe. Figures for 1960 come from County and City Data Book.
14	Civilian Work Force	Full civilian work force, including the unemployed	Long	--
15	% Civilian Unemployed	% of individuals who are in the labor force but not employed	Long	--
16	Real Median Family Income	Real median family income, adjusted using CPI-U-RS (2010=100)	Long	See extended note to figure 16 below.
17	% Families Below Poverty Line	% families below poverty line	Long	--
18	Mean Commute Time	Mean travel time to work (minutes)	Long	Only found for 2000 and 2010.
19	% Married (individuals 15 years and over)	% of population aged 15 and over that are married	Long	In 1970, includes persons 14 years and over.
20	Average HH size	Average number of persons per household	Short	Only found for 2000 and 2010.
21	Average Family Size	Average family size	Short	Not found for 1970 and 1980.
22	Total Units	Total number of housing units	Short	--
23	% Owner Occupied	% of occupied housing units that are owner occupied	Short	--
24	Real Median Value of Owner Occupied Homes	Real median value of specified owner occupied homes	Long	See extended note to figure 24 below.
25	% homes w- 0 Vehicle	% of occupied units with no vehicles	Long	--
26	% homes w- 1 Vehicle	% of occupied units with exactly 1 vehicle	Long	--
27	% homes w- 2+ Vehicles	% of occupied units with 2 or more vehicles	Long	--

... continued on next page

Table 2. U.S. Census Figures by Decennial Form

28	% Foreign Born	% of entire population that was born abroad to non-native parents	Long	See extended note to figure 28 below.
29	Real Median Household Income	Real median household income, adjusted using CPI-U-RS (2010=100)	Long	See extended note to figure 29 below.
30	% Rent Burden	% of renting HHs whose gross rent is greater than or equal to 35% of income	Long	See extended note to figure 30 below.

General notes

In all cases:

- All data from 2000 and after were obtained through American FactFinder.
- Non-ACS figures that take into account income (median family income, median household income, and rent burden) are based on income from the year immediately prior to the indicated year (e.g., 1970 income data corresponds to 1969); the timeframe for ACS income-related figures is also offset by one year (e.g., income data from the 2005-2009 timeframe corresponds to 2004-2008).
- Real dollar amounts were adjusted using the CPI-U Research Series (CPI-U-RS, 2010=100).

Unless otherwise indicated:

- Figures indicated as deriving from the "Short Form," do in fact derive from the Decennial Census Short Form for all years.
- Figures indicated as deriving from the "Long Form" derive from the Decennial Census Long From for all years except 2010; in that case, data were derived from the 2005-2009 American Community Survey.
- All figures from 1960-1990 were obtained through the NHGIS.

Extended notes to figures

16 In 1970, city- and state-level figures were taken from the County and City Data Book as obtained through the ICPSR, while the U.S. level figure was taken from a Current Population Reports publication (see http://www2.census.gov/prod2/popscan/p60-078.pdf). We were unable to find sufficient documentation to confirm comparability between 1970 and later years.

24 The following caveat applies to comparisons between 1970 and later years: For 1980-2010, the population of units includes only "specified" units, which represents a subset of single-family homes (see http://quickfacts.census.gov/qfd/meta/long_HSG495210.htm for the definition of "specified" as employed in the ACS). In 1970, however, city- and state-level figures were taken from the County and City Data Book as obtained through the ICPSR. The codebook entry for that year is indicated as "OOU.SINGLE FAMILY MEDIAN VAL. $1970." We were unable to determine if this contains all single family homes, or just a subset thereof. The U.S. level figure for 1970 was obtained from Historical Census of Housing Tables (see http://www.census.gov/hhes/www/housing/census/historic/values.html), and appears to subset the population of units in a manner consistent with the definition of "specified." Any potential difference in the underlying universe should be mitigated by our using the median rather than the mean.

28 For 1970 and 2000: We assume, but cannot verify, that "foreign" excludes individuals born abroad to native parents. In Joliet in 1970, 2.3% of the eligible universe appears to be missing. For the last data point, we used a narrower three-year timeframe (2009-2011), as the coefficients of variation were generally acceptable. The CV for Gary, however, straddled the informal threshold between "Good" and "Fair".

29 We assume, but cannot verify, that the population includes all households, as opposed to a subset of households that meet a certain criteria. For 2010, we used ACS data from the 2009-2011, as all coefficients met the informal criteria for "good" reliability.

30 2010 figures correspond to ACS five-year estimates from the 2007-2011 timeframe. Due to changes in the universe, comparability might be problematic for 1970, and is definitely problematic for 2007-2011. Figures relating to 1980-2000 all take into account "specified renter occupied housing units," while 1970 takes into account "renter-occupied units for which rent tabulated," and 2010 takes into account "renter-occupied housing units." The Census Bureau makes the disclaimer that the ACS data is not suitable for comparison with earlier long form data due to this change in the universe. By this logic, 1970 may be problematic as well. Renters who did not pay rent or who had a non-positive income are omitted from all calculations. Although we cannot verify the definition of gross rent for all years, in recent years "Gross rent is the contract rent plus the estimated average monthly cost of utilities...and fuels...if these are paid for by the renter." (For example, see http://www.socialexplorer.com/data/ACS2012/metadata/?ds=Social+Explorer+Tables%3A++ACS+2012+(1-Year+Estimates)&table=T102B.)

Inset 2: Detailed discussion of ACS reliability and the coefficient of variation

Inherent in the design of the ACS is a tradeoff between timeliness, accuracy, and geographic specificity; given limited resources and therefore a limited sample size, it's impossible to have all three of these desirable properties simultaneously.

To give researchers better control over how exactly these tradeoffs are calibrated, the ACS provides estimates of demographic characteristics in terms of 5-year, 3-year, and 1-year timeframes. The 5-year estimates are the most reliable because they have the largest sample size. Furthermore, 5-year estimates are available for all geographies for which the ACS tabulates data. The obvious downside of the 5-year data is that it applies to a long period, and may therefore be unsuitable for understanding short-term trends and/or the current picture. The 1-year data, on the other hand, is suitable for analyzing short-term dynamics. The downside is that it is only available for larger geographies, and that estimates may have a high margin of error. The properties of the 3-year data are somewhere in between those of the 1-year and 5-year data.

Given that we are dealing with midsize cities, the choice was really between the 3-year and 5-year estimates. (1-year estimates are available for most cities, but omit Pontiac as well as several cities used for comparison. Further, as will be explained below, cities that barely met the population thresholds for inclusion in the 1-year data may suffer from high margins of error that would make their use questionable.)[11]

To make the decision between the 3-year and 5-year data, we follow the Census Bureau's advice and look at a metric known as the Coefficient of Variation (CV). The Bureau emphasizes that an acceptable CV should ultimately be a function of the estimate's intended use, and declines to provide specific interpretive thresholds. However, an informative user guide compiled by the Washington State Office of Financial Management suggests that, as a general rule, estimates with CVs less than 15% may be considered "good," estimates with CVs between 15% and 30% may be considered "fair," and estimates with CVs in excess of 30% should be used "with caution."[12]

Throughout, we only used 3-year data when the CVs were acceptable for all case study cities.

[2] U.S. Bureau of Labor Statistics

[i] Quarterly Census of Employment and Wages

Citation: *Bureau of Labor Statistics, U.S. Department of Labor, Quarterly Census of Employment and Wages [www.bls.gov/cew/].*

Employment and location quotient data by industry are from the Quarterly Census of Employment and Wages as obtained through the Location Quotient Calculator.[13] Employment is calculated from quarterly reports filed by nearly every employer in the U.S.[14]

When used in the profiles, these data reflect annual averages for the county corresponding to the case-study cities. Please see below for the definition of "location quotient." Information on living wage calculations, which generally accompany these data in the profiles, is provided in A-9.

[ii] Occupational Employment Statistics

Citation: *Bureau of Labor Statistics, U.S. Department of Labor, Occupational Employment Statistics, (www.bls.gov/oes/).*

Employment, location quotient, and wage data by occupation are from the May 2012 release of the Occupational Employment Statistics for Metropolitan and Nonmetropolitan Areas. These estimates were calculated based on a rolling sample of establishments from May 2012, November 2011, May 2011, November 2010, May 2010, and November 2009.[15] The Employer Cost Index is used to express wage data across the timeframe in terms of May 2012 constant dollars.

When used in the profiles, these data reflect figures for the CBSA or Metropolitan Division corresponding to the case study cities. Please see below for the definition of "location quotient." Information on living wage calculations, which generally accompany these data in the profiles, is provided in A-9.

[iii] Employment Projections

Citation: *Bureau of Labor Statistics, U.S. Department of Labor, Employment Projections (www.bls.gov/emp/).*

All employment and output projections by industry are at the national level, and were taken from table 2.7 of the 2010-2020 Employment Projections Program.[16]

Inset 3: Location Quotient Definition

A location quotient (LQ) measures the concentration of a characteristic in one level of geography relative to that same concentration in a reference geography.[17] In the profiles, we employ location quotient to examine employment by industry between county and U.S., and employment by occupation between MSA and U.S.

LQs greater than one indicate that the characteristic is more concentrated in the local geography than the nation, while LQs less than one indicate it is less concentrated. For example, the 2011 LQ of paper manufacturing in Kane County, IL, is 2.43. This means that the share of paper manufacturing employment in Kane County is 2.43 times greater than the national share.

Mathematically, a LQ is a representation ratio defined by:

$$LQ = \frac{e_i / e}{E_i / E}$$

Where:

e_i = Local employment in industry i

e = Total local employment

E_i = Base area employment in industry i

E = Total base area employment

[3] CPI-U-RS

Citation

- For 1978 and onward: U.S. Bureau of Labor Statistics, Consumer Price Index Research Series Using Current Methods (CPI-U-RS), U.S. city average, all items, December 1977=100 (see http://www.bls.gov/cpi/cpiursai1978_2012.pdf).

- For years prior to 1978: extrapolations as calculated by the U.S. Census Bureau (see http://www.census.gov/hhes/www/income/data/incpovhlth/2012/CPI-U-RS-Index-2012.pdf).

All values presented in real dollars were adjusted for inflation using the Consumer Price Index research series (CPI-U-RS) as employed by the U.S. Census Bureau. The CPI-U-RS is officially published by the Bureau of Labor Statistics (BLS) for a period beginning in 1978.[18] The Census Bureau derives values for prior years by applying the ratio of the CPI-U-RS and CPI-U in 1977 to the 1947-1976 CPI-U. Though the index is published such that December 1977=100, we transformed the series to present values in terms of 2010 dollars.

The CPI-U-RS tracks historical changes in the cost of living more consistently and accurately than the commonly reported Consumer Price Index for All Urban Consumers (CPI-U). It is more consistent because it applies current methodology to all years in the series, while the CPI-U – despite improving over the years – is not adjusted retroactively. Incorporating these improvements, in turn, improves accuracy. Current methods have reduced upward bias, which the Boskin commission reported to be 1.1 percent per year.[19] For example, the CPI now accounts for lower-level substitution bias (i.e., substitutions made among purchases within the same class of good.) Accordingly, the research series exhibits lower rates of inflation than the CPI-U. These improvements are especially significant for longitudinal analysis where rates compound over time. The CPI-U estimates that the price level rose by 462 percent between 1970 and 2010, whereas the CPI-U-RS estimates the increase at 401 percent.[20]

It should be noted that the CPI-U-RS, while an improvement over the CPI-U, still does not represent the BLS' best measure of a cost-of-living index because it does not accommodate for substitutions made between classes of goods (aka, upper-level substitutions).[21] To appreciate the significance of this type of substitution, it's helpful to note that a cost-of-living index should estimate the increase in income necessary to make a consumer just as happy after an increase in the price level as before. As an example, if the price of pork increases relative to beef, a consumer may be just as happy purchasing more beef and less pork. Thus an index which presumes the consumer purchases the same amount of pork at a higher price is upwardly biased. The BLS produces a series that accounts for this effect, the Chained CPI-U, but it only extends back to year 2000.[22] Examining the change in price level between 2000 and 2010 (years for which all three indices are available), the Chained CPI estimates an increase of 23 percent, while the CPI-U and CPI-U-RS both estimate an increase of 27 percent.[23]

It should also be noted that the CPI-U-RS is a national index and may not reflect regional differences in the cost of living across the 10 cities. Thus readers are cautioned against interpreting cities with comparatively lower median incomes or median incomes that fail to keep pace with the CPI-U-RS as strictly worse off.

[4] HMDA

Main Citation: *Federal Financial Institutions Examination Council (FFIEC), Home Mortgage Disclosure Act (HMDA) loan application register flat files (http://www.ffiec.gov/hmda/hmdaflat.htm).*

Tract-to-City Crosswalk: *2000 U.S. Census Bureau boundary data, as obtained through Maptitude Version 5.*

The Home Mortgage Disclosure Act (HMDA) requires that certain lending institutions publically report information pertaining to loan applications for home purchases, improvements, and refinancing.[24] Policymakers and regulators use the resulting report – which includes borrower characteristics such as race and income – to assess whether institutions are meeting the credit needs of the community, as well as to deter discriminatory practices. In addition to these regulatory purposes, the data are well suited to place-based analysis in general because they include the Census tract of the property.

In the profiles, we limited our data to home purchase loans that were either originated or denied by the lending institution after a full review of the application. Preapprovals and withdrawn applications were not considered. Data were aggregated by Census tract and then converted to city-level data using 2000 Census boundary data as obtained through Maptitude. All dollar values were adjusted for inflation using the CPI-U-RS.

[5] CRA

Main Citation: *Federal Financial Institutions Examination Council (FFIEC), Community Reinvestment Act (CRA) aggregate flat files (http://www.ffiec.gov/cra/craflatfiles.htm).*

Tract-to-City Crosswalk: *2000 U.S. Census Bureau boundary data, as obtained through Maptitude Version 5.*

The Community Reinvestment Act (CRA) requires certain depository institutions to report data on business lending for the public.[25]

Data include loans made in amounts of less than $1 million; to better focus on lending to small businesses we further limit the data to loans made to businesses with less than $1 million in revenues. Tract-level data was converted to city-level data using 2000 Census boundary data as obtained through Maptitude. All dollar values were adjusted for inflation using the CPI-U-RS. Note that, unlike HMDA, CRA does not provide data regarding applications.

[6] FDIC Summary of Deposits

Main Citation: *FDIC Summary of Deposits (http://www2.fdic.gov/sod/).*

Geocoding-related Citations:

- Maptitude Version 5.
- 2000 U.S. Census Bureau boundary data, as obtained through Maptitude Version 5.
- The Google Geocoding API, Version 2 (https://developers.google.com/maps/documentation/geocoding/).
- Federal Reserve Bank of Chicago calculations.

The Federal Deposit Insurance Corporation (FDIC) Summary of Deposits is an annual report that reflects, among other things, the geographic distribution of deposits held by all FDIC-insured institutions. Information in the report is obtained from two sources: 1) a mandatory survey required of all FDIC-insured institutions that operate two or more branch locations, including foreign institutions that operate in the U.S. and 2) the Call Report, which may be used in place of the survey in cases where an institution operates in only one location.[26] These data comprise the vast majority of deposits and deposit-like instruments held in the U.S.; credit unions – whose deposits collectively summed to about 12 percent of that of commercial banks in 2004 account for the remainder.[27]

In the survey, institutional respondents are asked to allocate total deposits to physical bank locations in a manner consistent with their respective internal practices.[28] For example, the allocation of a certain account to a certain branch office for SOD purposes might derive from matching the account holder's address to the nearest branch, where the account is most active, or where the account was opened.

Furthermore, respondents are instructed to consolidate the deposits of limited-service outlets (such as ATMs) into more substantial branches located nearby (preferably in the same county). The sum of deposits distributed over the various locations should match the analogous figure in the Call Report or Report of Assets and Liabilities.[29]

The subsequent availability of detailed address fields in the report can be used to pinpoint the exact latitude and longitude of bank locations (and their corresponding deposits), thereby making this source particularly useful for the sort of place-based analysis employed throughout the profiles. This process of converting addresses to coordinates is known as "geocoding", and is implemented by a piece of software called a "geocoder."

We used two geocoders to match deposits with the profiled cities: Maptitude (v5) and the Google Geocoding API (v2). After determining the coordinates of bank locations, we then used Maptitude again to determine the corresponding city with respect to boundaries from the 2000 Census.

It is important to note that all geocoders rely on matching techniques with degrees of uncertainty in order to reconcile text-based address fields between multiple data sources. Consequently, any geocoding procedure is subject to multiple types of error including: 1) failure to match at all, 2) matching to the wrong location, and 3) matching to a correct but imprecisely defined location (e.g., a zipcode as opposed to a building).

Regarding the first type of error, our geocoding success rate generally fell between about 90 percent and 95 percent, depending on the year. The second type of error, while important, is difficult to quantify. Since our goal was to link banking data with a relatively large target (cities), we imagine that the third type of error is insignificant.

A few general caveats are worth mentioning given how deposits are reported and geocoded:

- First, note that deposits figures reported throughout the profiles relate to deposits corresponding to bank locations in the cities, not residents of the cities. Throughout the profiles, however, we implicitly presume that these two measures are highly correlated, and use them interchangeably.

- Second, between the survey instructions and Banks' internal practices, an area's figures may be skewed upward if it contains a central location within which large amounts of deposits from nearby limited-service locations are consolidated. (This effect was particularly noticeable in the case of Green Bay, WI, where one location with consolidated deposits drove per-capita deposits to a level nearly three times higher than that of the next highest case study city.)

- Lastly, given that geocoding outcomes tend to be more successful for recent periods than for earlier periods, estimated growth in deposits may be subject to upward bias. Using two geocoders mitigates but does not eliminate this bias.

Miscellaneous notes:

- While all discussions pertaining to deposits amounts draw from geocoded data, discussions relating to institutional characteristics and market structure (e.g., number of branches, market share, community versus non-community bank) draw from Summary of Deposits data as assigned to cities based on their zipcodes. This assignment, in turn, was based on 2000 city and 2007 zipcode boundaries from the Census, as obtained through Maptitude.

- The FDIC began including the results of its internal geocoding procedure starting with the 6-2012 release. All deposits figures in our analysis, however, are entirely based on geocodes obtained through Maptitude and Google as described above.

- Data were aggregated by Census tract and then converted to city-level data using 2000 Census boundary data as obtained through Maptitude. All dollar values were adjusted for inflation using the CPI-U-RS.

[7] LPS Applied Analytics

Main Citation: *Lender Processing Services (LPS) Applied Analytics.*

Zipcode-to-City Crosswalk: *2000 U.S. Census Bureau boundary data, as obtained through Maptitude Version 5.*

Proprietary loan-level microdata furnished by LPS Applied Analytics details the monthly performance of mortgage loans in the residential housing market. LPS collects this data from large mortgage servicers, who collectively represent about two-thirds of this market.

The underlying raw data include numerous mortgage types including first mortgages, second mortgages, and various grades of home equity lines of credit. In an effort to better align our measures with properties as opposed to loans, however, we take into account only first-lien mortgages. Furthermore, we used Census data (as obtained through Maptitude V5) to assign loans to case study cities using the zipcode of the underlying property.

A variety of possible metrics may be derived from mortgage performance data to help gain insight into the health of a given housing market, including but not limited to: the foreclosure start, transition, and inventory rates. Throughout the profiles, we focus exclusively on the foreclosure inventory rate, a static measure that represents the number of mortgages in foreclosure as a proportion of all mortgages. The start and transition rates, on the other hand, are dynamic measures that provide insight into the flow of loans into and out of foreclosure status.[30]

It's important to note that foreclosure inventory rates are highly sensitive to state laws that govern how foreclosures are processed. A foreclosure in Illinois, for example, takes about 300 days and often longer because every foreclosure must be processed through the courts. However, some states, like Michigan, do not require foreclosures to go through the courts. Still, depending on the situation, certain states like Iowa and Wisconsin employ both methods. All things being equal, foreclosure rates tend to be lower in states that rely primarily on non-judicial procedures, as any potential buildup resulting from new foreclosures in these states is tempered by the speed with which they can be resolved.[31]

Given this sensitivity to various legal procedures, foreclosure inventory rates should only be compared among states with similar process periods. In the profiles, we compare the foreclosure inventory rate in a given city with its home state and the average of a group of reference states. The four reference groups were constructed based on the quartiles of the process period, as shown in table 3.

Table 3. Typical foreclosure process period for reference states

Group	Process Period (days)	States
1	< 63	AL CT DC GA MD **MI** MO NH RI TN TX VA WY
2	63-136	AK AR AZ CA FL KS MA MN MS NC NV VT WA WV
3	136-180	CO **IA** ID KY LA MT ND NE NM OR SC SD UT
4	>180	DE HI **IL** **IN** ME NJ NY OH OK PA **WI**

Source: RealtyTrac (see http://www.realtytrac.com/real-estate-guides/foreclosure-laws/).

[8] Brown University

Citation: *Spatial Structures in the Social Sciences, Brown University, US2010 Project, (http://www.s4.brown.edu/us2010/Data/data.htm).*

Measures of residential segregation and racial/ethnic composition are from US2010, a project of Spatial Structures in the Social Sciences at Brown University, and based on data from the Decennial Census and the 2005-09 American Community Survey.

The dissimilarity index measures the extent to which one group is distributed proportionally across census tracts in a city relative to another group.[32] The index ranges from 0 to 100 and equals zero if every tract exhibits the same ratio between groups as the city as a whole. The index equals 100 if the two groups are entirely segregated by census tract. Values of 60 or above are considered fairly high. It means that 60 percent of one group must move to a different tract to achieve a proportional distribution. Values between 40 and 60 are considered moderate, while values less than 40 are fairly low.

More generally, the index for two racial groups is defined as:[33]

$$\frac{1}{2}\sum_{i=1}^{N}\left|\frac{x_i}{X}-\frac{y_i}{Y}\right|$$

Where:

x_i = the population of group X in census tract i

X = the total population of group X in the city

y_i = the population of group Y in census tract i

Y = the total population of group Y in the city

[9] Living Wage Project

Citation: *Poverty in America, Massachusetts Institute of Technology, Living Wage Project, Living Wage Calculator (http://livingwage.mit.edu/).*

Estimates of living wages are from the Living Wage Calculator, a tool provided by the Living Wage Project under the Poverty in America program at the Massachusetts Institute of Technology. A living wage represents a minimum cost of living for low wage families in a particular area based on cost estimates for food, child care, healthcare, housing, transportation, other necessities, and taxes. It is intended to highlight that working families may not earn enough to live locally, even if they earn more than the minimum wage and are not officially in poverty.

All estimates cited in the profiles are for one adult raising one child. The calculator uses data from a variety of federal sources to estimate costs, including the Bureau of Labor Statistics, the U.S. Department of Housing and Urban Development, and the U.S. Department of Agriculture. Estimates are made with respect to the latest source data that was available in June 2012.

Though the calculator allows users to select estimates for either place or county, it does not detail the various levels of geography represented by the source data. Therefore we cannot distinguish which cost estimates, if any, are particular to the place or county, and which represent some broader level of geography. Estimates cited in the profiles were selected by place, and these are likely more representative of the MSA or metropolitan division, where one exists.

Additionally, the calculator does not report whether values are given in constant dollars. Given the latest update in June 2012, we speculate that all values can be generally assumed to be in "recent" dollars.

Notes

1. As the table below indicates, please note that income reported in the 1980 and 1990 Census corresponds to income from 1979 and 1989, respectively.

2. U.S. Census Bureau, Explore the Form, available at http://www.census.gov/2010census/about/interactive-form.php.

3. U.S. Census Bureau, Summary Population and Housing Characteristics, Selected Appendixes, May 2012, available at http://www.census.gov/prod/cen2010/cph-1-a.pdf.

4. U.S. Census Bureau, Coverage Measurement, available at https://www.census.gov/coverage_measurement/.

5. U.S. Census Bureau, Census Coverage Estimation Report, May 2012, available at http://www.census.gov/coverage_measurement/pdfs/g01.pdf.

6. U.S. Census Bureau, American Community Survey, Design and Methodology, available at http://www.census.gov/acs/www/methodology/methodology_main/.

7. Basic information on sample size and data quality by state can be found at http://www.census.gov/acs/www/methodology/sample_size_and_data_quality/.

8. U.S. Census Bureau, County and City Data Book: 2007, available at http://www.census.gov/prod/2008pubs/07ccdb/ccdb-07.pdf.

9. U.S. Census Bureau, Using FactFinder, available at http://factfinder2.census.gov/faces/nav/jsf/pages/using_factfinder.xhtml.

10. U.S. Census Bureau, What We Provide, available at http://factfinder2.census.gov/faces/nav/jsf/pages/what_we_provide.xhtml.

11. U.S. Census Bureau, American Community Survey, Guidance for Data Users, available at http://www.census.gov/acs/www/guidance_for_data_users/estimates/.

12. Washington State Office of Financial Management, American Community Survey User Guide, May 2012, available at http://www.ofm.wa.gov/pop/acs/userguide/ofm_acs_user_guide.pdf.

13. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Location Quotient Calculator, available at http://data.bls.gov/location_quotient/ControllerServlet.

14. Bureau of Labor Statistics, Quarterly Census of Employment and Wages, Frequently Asked Questions, available at http://www.bls.gov/cew/cewfaq.htm#Q14.

15. Bureau of Labor Statistics, Occupational Employment Statistics, Overview, available at http://www.bls.gov/oes/oes_emp.htm.

16. Bureau of Labor Statistics, Employment Projections, available at http://bls.gov/emp/ep_table_207.htm.

17. Bureau of Labor Statistics, Help & Tutorials, available at http://www.bls.gov/help/def/lq.htm#location_quotient.

18. Bureau of Labor Statistics, CPI Research Series Using Current Methods, available at http://www.bls.gov/cpi/cpirsdc.htm.

19. Bureau of Labor Statistics, Price Measurement in the United States: a decade after the Boskin Report, Monthly Labor Review, May 2006, available at http://www.bls.gov/opub/mlr/2006/05/art2full.pdf.

20. Calculated from the annual averages of the national CPI-U, All items as obtained from http://www.bls.gov/cpi/data.htm.

21. Bureau of Labor Statistics, Frequently Asked Questions about the Chained Consumer Price Index for All Urban Consumers, available at http://www.bls.gov/cpi/cpisupqa.htm

22. Bureau of Labor Statistics, Note on the Chained Consumer Price Index for All Urban Consumers, available at http://www.bls.gov/cpi/superlink.htm.

23. Calculated from the annual averages of the national Chained CPI-U, All items as obtained from http://www.bls.gov/cpi/data.htm.

24. Depository and non-depository institutions alike are covered by HMDA, subject to their asset size, presence in the MSA, and whether they are involved in the business of residential mortgage lending. See page 3 of the HMDA reporting guide (http://www.ffiec.gov/hmda/pdf/2010guide.pdf) for details.

25. Subject to asset thresholds updated annually (for example, see: http://www.ffiec.gov/cra/pdf/Explanation%20of%20the%20Community%20Reinvestment%20Act%20Asset%20Threshold%20Change%20121712.pdf), all state member banks, state nonmember banks, national banks, and savings associations are required to report. Institutions that do not meet these thresholds have the option of reporting voluntarily.

26. Federal Deposit Insurance Corporation, Summary of Deposits Reporting Instructions, available at http://www2.fdic.gov/sod/pdf/SOD_Instructions.pdf, page 1.

27. Federal Reserve Bank of San Francisco, Are credit unions regulated or supervised by the Federal Reserve System?, Dr. Econ blog, March 2005, available at http://www.frbsf.org/education/publications/doctor-econ/2005/march/credit-unions-regulation-supervision.

28. Federal Deposit Insurance Corporation, Summary of Deposits Reporting Instructions, available at http://www2.fdic.gov/sod/pdf/SOD_Instructions.pdf, page 1

29. Ibid, page 3.

30. For a detailed discussion of how these rates interrelate, please see our guest blog at http://midwest.chicagofedblogs.org/archives/2011/10/emily_engel_for.html.

31. Lower inventories, however, do not necessarily translate into healthier housing markets. Properties that moved through foreclosure quickly in Michigan, for example, may show up subsequently as real estate owned (REO) by the mortgagee. We do not track post-foreclosure statuses like REO because we're unsure to what extent LPS tracks them.

32. Spatial Structures in the Social Sciences, Brown University US2010 Project, Interpreting a Data Set, available at http://www.s4.brown.edu/us2010/Data/Explanation.htm.

33. Population Studies Center, University of Michigan, Racial Residential Segregation Measurement Project, available at http://enceladus.isr.umich.edu/race/calculate.html.

	Aurora						Illinois						United States					
	1970	1980	1990	2000	2010	% change, 1970-2010	1970	1980	1990	2000	2010	% change, 1970-2010	1970	1980	1990	2000	2010	% change, 1970-2010
Total Population	74,182	81,293	99,581	142,990	197,899	166.77%	11,113,976	11,426,518	11,430,602	12,419,293	12,830,632	15.45%	203,211,926	226,545,805	248,709,873	281,421,906	308,745,538	51.93%
Age																		
% < 19	38.88%	35.71%	34.16%	34.45%	34.30%	-11.78%	37.72%	32.19%	28.86%	29.03%	27.25%	-27.75%	37.99%	31.98%	28.68%	28.60%	26.97%	-29.02%
% 20 - 24	9.14%	10.07%	8.16%	7.42%	6.30%	-31.07%	7.47%	9.39%	7.52%	6.85%	6.85%	-8.34%	7.93%	9.41%	7.65%	6.74%	6.99%	-11.78%
% 25 - 44	23.53%	28.16%	35.38%	35.93%	32.90%	39.80%	23.86%	27.55%	32.31%	30.56%	27.29%	14.39%	23.61%	27.68%	32.47%	30.22%	26.60%	12.67%
% 45 -64	18.79%	16.15%	13.70%	15.94%	20.00%	6.45%	21.09%	19.82%	18.73%	21.48%	26.06%	23.61%	20.58%	19.64%	18.64%	22.01%	26.39%	28.26%
% > 65	9.66%	9.91%	8.60%	6.25%	6.50%	-32.70%	9.86%	11.04%	12.57%	12.08%	12.54%	27.14%	9.89%	11.28%	12.56%	12.43%	13.04%	31.85%
Race																		
% White	92.87%	80.38%	74.07%	68.07%	59.70%	-35.72%	86.38%	81.11%	78.32%	73.48%	71.53%	-17.19%	87.42%	83.44%	80.29%	75.14%	72.41%	-17.18%
% Black	6.56%	10.40%	11.86%	11.06%	10.70%	63.09%	12.83%	14.65%	14.82%	15.11%	14.55%	13.40%	11.16%	11.69%	12.06%	12.32%	12.61%	13.00%
% Hispanic or Latino (of any race)	-	-	22.96%	32.56%	41.30%	-	-	-	7.91%	12.32%	15.80%	-	-	-	8.99%	12.55%	16.35%	-
Education																		
% Less than HS	47.09%	36.56%	28.76%	24.37%	22.20%	-52.85%	47.39%	33.50%	23.80%	18.57%	14.29%	-69.85%	47.66%	33.53%	24.76%	19.60%	15.42%	-67.64%
% HS Grad	34.13%	35.79%	28.03%	21.93%	23.37%	-31.53%	31.94%	35.09%	29.99%	27.74%	28.09%	-12.04%	31.08%	34.59%	29.99%	28.63%	29.31%	-5.71%
% Some College & College Grad	18.78%	27.64%	43.21%	53.70%	54.43%	189.77%	20.67%	31.41%	46.21%	53.69%	57.62%	178.77%	21.26%	31.88%	45.25%	51.77%	55.27%	159.95%
Industry, Employment, & Income																		
% Manufacturing	43.57%	39.10%	29.37%	21.49%	18.41%	-57.74%	30.43%	25.81%	19.47%	15.96%	13.23%	-56.53%	26.10%	22.44%	17.69%	14.10%	11.24%	-56.92%
Civilian Work Force	32,836	40,321	52,305	72,727	91,330	178.14%	4,591,634	5,458,785	5,803,007	6,208,597	6,624,616	44.28%	80,051,046	104,449,817	123,473,450	137,668,798	152,273,029	90.22%
% Civilian Unemployed	2.83%	6.78%	6.06%	5.78%	7.91%	179.39%	3.74%	7.15%	6.64%	6.05%	7.96%	112.95%	4.37%	6.52%	6.31%	5.77%	7.20%	64.89%
Real Median Family Income	$59,276	$64,474	$67,811	$79,969	$67,104	13.20%	$57,610	$63,665	$65,643	$72,683	$68,777	19.38%	$49,581	$55,747	$59,804	$65,487	$63,392	27.86%
% Families Below Poverty Line	3.64%	6.57%	8.06%	6.24%	9.40%	158.02%	7.65%	8.40%	8.98%	7.87%	9.10%	18.90%	10.67%	9.58%	9.97%	9.22%	9.90%	-7.26%
Mean Commute Time	-	-	-	28.70	29.00	-	-	-	-	28.00	28.10	-	-	-	-	25.50	25.20	-
Household Composition																		
% Married (individuals 15 years and over)	63.44%	56.76%	54.19%	57.16%	50.82%	-19.90%	60.92%	55.87%	53.33%	53.63%	49.54%	-18.68%	61.48%	57.30%	54.79%	54.37%	50.29%	-18.19%
Average HH size	-	-	-	3.04	3.12	-	-	-	-	2.63	2.59	-	-	-	-	2.59	2.58	-
Average Family Size	-	-	3.45	3.55	3.63	-	-	-	3.23	3.23	3.20	-	-	-	3.16	3.14	3.14	-
Housing																		
Total Units	24,244	29,413	35,621	48,936	67,273	177.48%	3,703,367	4,319,672	4,506,275	4,885,615	5,296,715	43.02%	68,679,030	88,411,263	102,263,678	115,904,641	131,704,730	91.77%
% Owner Occupied	60.12%	62.00%	61.45%	69.90%	69.60%	15.78%	59.42%	62.66%	64.23%	67.27%	67.47%	13.54%	62.86%	64.43%	64.20%	66.19%	65.10%	3.57%
Real Median Value of Owner Occupied Home	$93,700	$123,696	$132,446	$171,558	$202,183	115.78%	$99,798	$135,789	$130,829	$165,608	$203,708	104.12%	$85,186	$119,162	$127,918	$151,427	$188,461	121.23%
% homes w- 0 Vehicle	13.66%	11.55%	9.09%	6.24%	6.42%	-52.98%	20.22%	17.13%	14.00%	11.84%	10.36%	-48.75%	17.47%	14.75%	11.53%	10.30%	8.80%	-49.62%
% homes w- 1 Vehicle	53.85%	47.16%	36.69%	32.68%	32.39%	-39.85%	50.94%	46.52%	35.13%	35.38%	34.60%	-32.08%	47.71%	46.57%	33.76%	34.25%	33.21%	-30.38%
% homes w- 2+ Vehicles	32.49%	41.29%	54.22%	61.08%	61.19%	88.31%	28.83%	36.35%	50.87%	52.78%	55.04%	90.87%	34.83%	38.68%	54.71%	55.46%	57.99%	66.50%

Cover art by

Donald K. Lake

Industry: Chamber
Transparent Watercolor

For addtional information about the artist and other works by Donald K. Lake featured in this publication please visit:
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