Great Cities Institute

Mayoral Forum on a New Industrial Vision for Chicago

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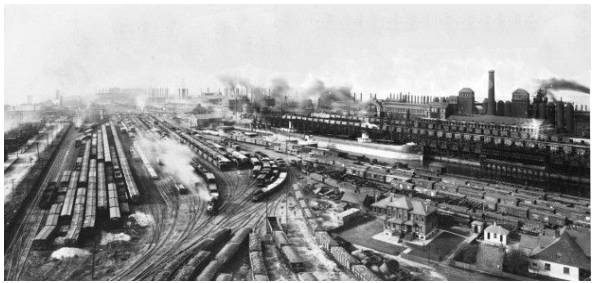
Industrial Growth in Chicago

- “Hog butcher for the world”
- “Tool maker, stacker of wheat,” “nation’s freight handler”
- Large # of industrial jobs attracted more people to Chicago
- Chicago becomes one of the most important industrial cities in the world
- “City of Broad Shoulders”



Manufacturing in Chicago

At its height in 1950, Chicago had **668,000** manufacturing jobs.

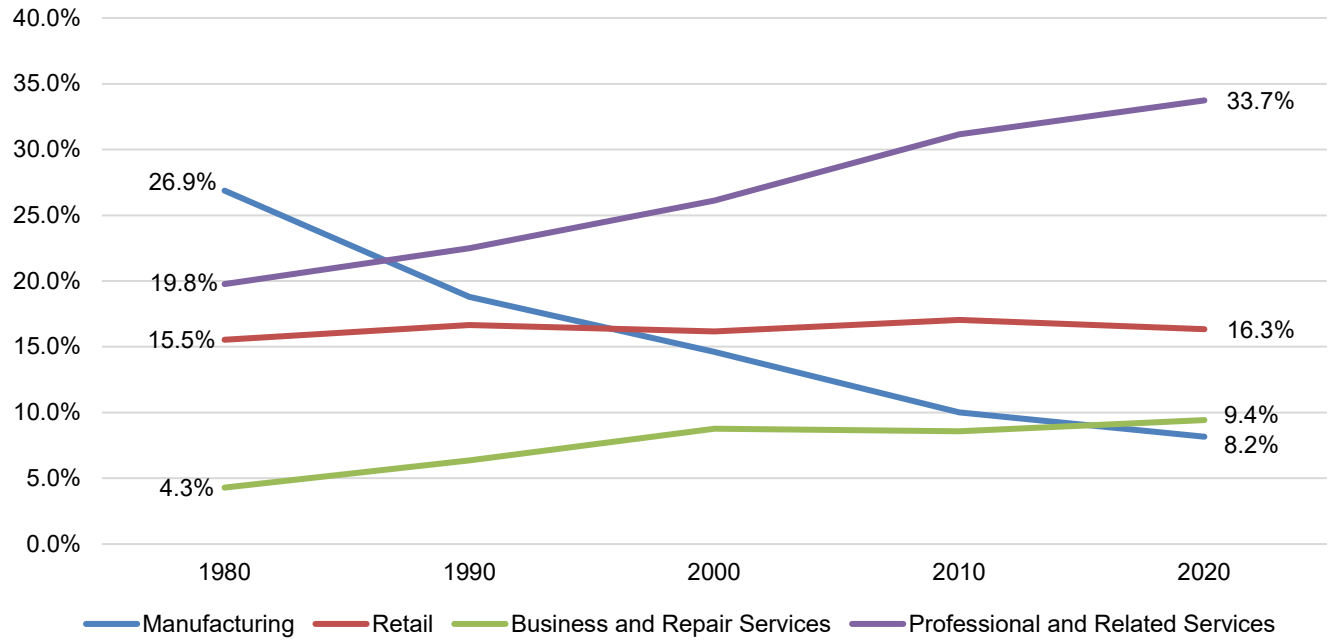
In 1980, the number dropped to **277,000**

By 2001 Chicago had **123,000** manufacturing jobs.

In 2022, this number decreased to **63,000.**

Employment by Industry in Chicago, 1980 to 2020

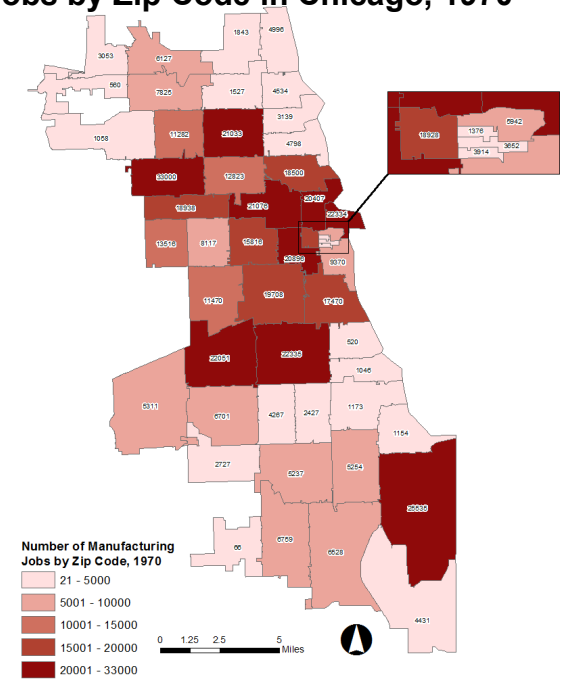
The proportion of Chicago's population in manufacturing has decreased by 70%



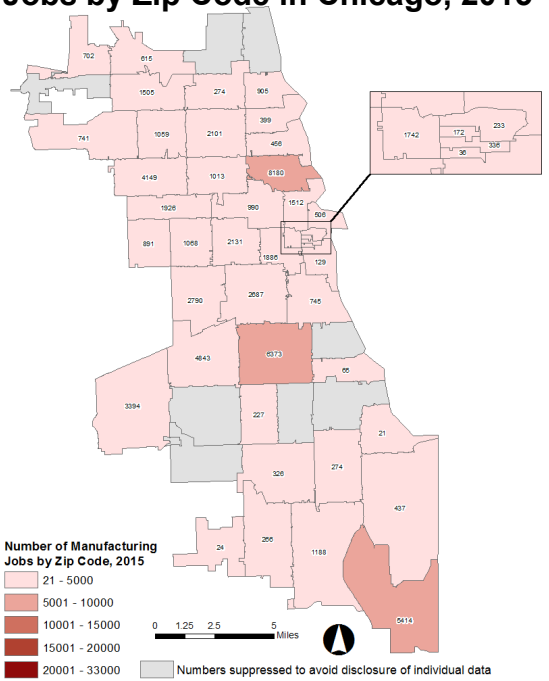
Data source: 1980, 1990, and 2000 Decennial Censuses, 2008-2012 and 2016-2020 American Community Survey, Public use files. Tabulations by Great Cities Institute.

Location of Manufacturing Jobs 1970 to 2015

Map 3: Number of Manufacturing Jobs by Zip Code in Chicago, 1970



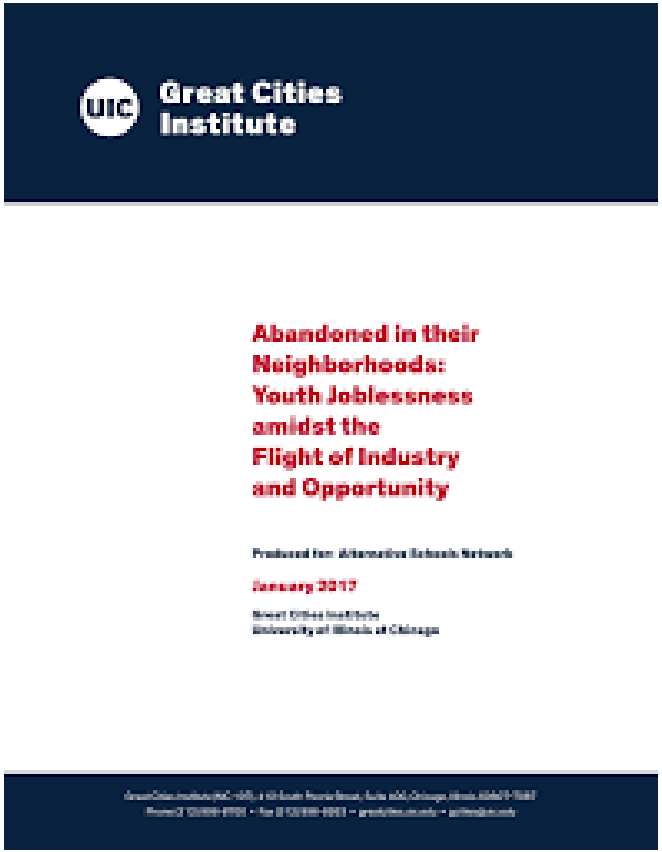
Map 4: Number of Manufacturing Jobs by Zip Code in Chicago, 2015



Data Source: 1970 and 2015 Where Workers Work. Illinois Department of Employment Security.
Maps Prepared by Great Cities Institute, University of Illinois at Chicago.

Impact on Neighborhoods of Job Loss

Southside Neighborhood



Youth Joblessness

- 20 to 24 year olds were worse off in Chicago in 2015 than in 1960. (In Illinois and the U.S., this trend is reversed, where they were better off in 2015 than 1960).
- The Great Recession severely impacted every racial/ethnic group of 16 to 19 year olds in Chicago, Illinois and the U.S. but had the largest impacts in Chicago. Even after a period of recovery from 2010 to 2015, no group of 16 to 19 year olds in Chicago, Illinois and the U.S. had employment to population ratios at pre-recession levels.
- Latinos in Chicago were the only racial/ethnic group of 16 to 19 year olds that did not show any recovery after the recession but continued to decline after 2010.
- Data on Impact of COVID not yet available

Our reports dramatically revealed a downward and long-term trend of economic abandonment in many of Chicago's neighborhoods, leaving behind *chronic and concentrated* conditions of joblessness that have affected generations of young people, their households and their communities. https://greatcities.uic.edu/news/youth-employment-research-news/

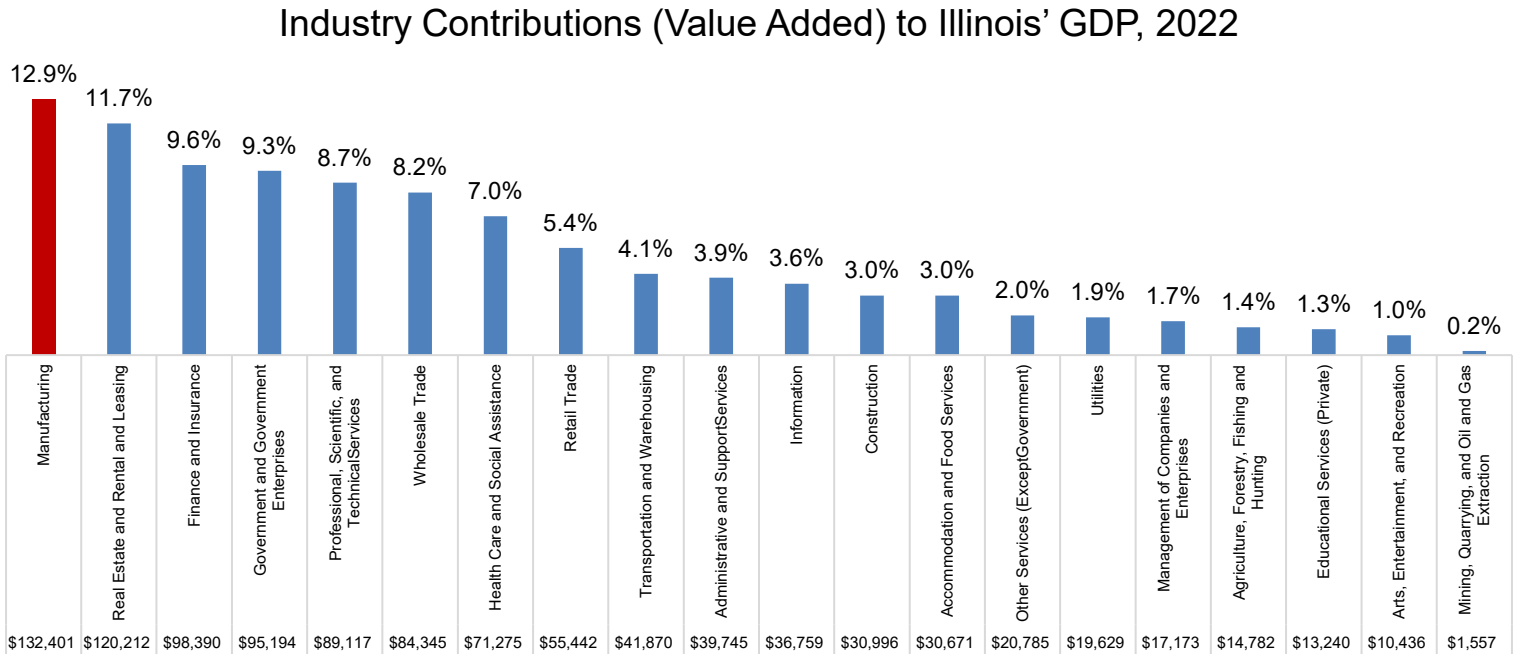
Thus,

- In a region where manufacturing was once the largest sector in the economy, economic restructuring that began in the late 1970s resulted in deindustrialization that left behind massive numbers of jobless residents and disinvested neighborhoods that continue to display the legacy of decline.
- Populations that once had a high concentration of their workforce in manufacturing have found themselves in a changing economy where most occupations are becoming increasingly technical and require high levels of education or training.

Manufacturing Is Not Dead

- Not only is manufacturing not dead in Chicago, but it is vital to a vibrant, stable economy
- There is already evidence of growth of the sector in Chicago
- Everyone here is committed to ensuring that we do not experience further deterioration of such a vital sector while simultaneously build on the many opportunities of new technologies in what is called, Advanced Manufacturing
- There are opportunities

Manufacturing is still important to our economy



Elevating Manufacturing: Marketing Manufacturing's Multiplier

- Durable manufacturing creates 7.44 indirect jobs for every direct job
- Manufacturing contributed to 11.1% of the U.S.'s GDP in 2021

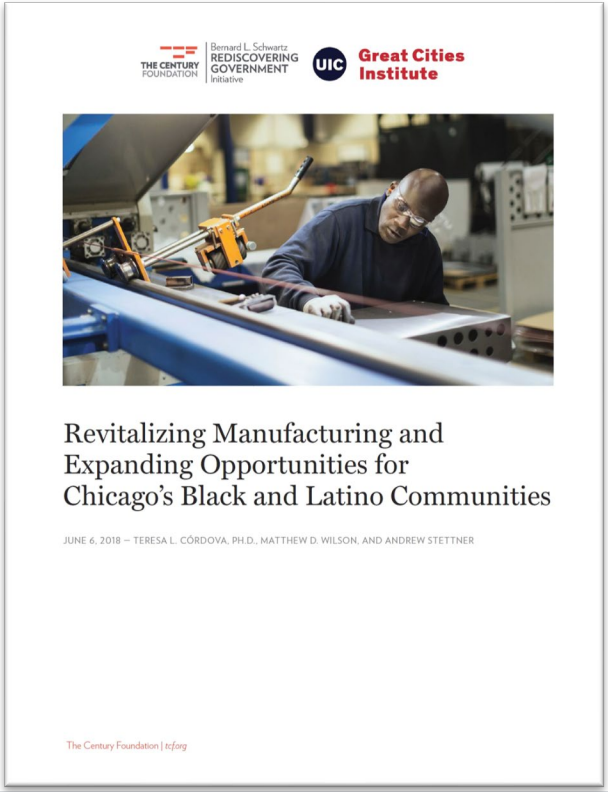
Employment multipliers per 100 direct jobs, by major private-sector industry group

Major industry group	Direct jobs	Supplier jobs*	Induced jobs**	Total indirect jobs
Agriculture, forest, fishing, and hunting	100	93.6	134.8	228.5
Mining	100	224.0	166.0	390.0
Utilities	100	515.4	442.2	957.7
Construction	100	88.0	138.1	226.1
Durable manufacturing	100	289.1	454.9	744.1
Nondurable manufacturing	100	184.8	329.5	514.3
Wholesale trade	100	107.3	128.0	235.3
Retail trade	100	46.7	75.4	122.1
Transportation and warehousing	100	112.8	163.3	276.0
Information	100	252.0	321.1	573.1
Finance and insurance	100	149.7	214.7	364.4
Real estate and rental leasing	100	396.6	483.1	879.7
Professional, scientific, and technical services	100	142.1	276.2	418.3
Management of companies	100	144.4	255.4	399.9
Administrative and support services and waste management	100	45.5	89.1	134.5
Educational services	100	63.8	129.9	193.7
Health care and social assistance	100	69.4	136.2	205.6
Arts, entertainment, and recreation	100	123.3	255.2	378.5
Accommodation and food services	100	53.8	107.4	161.2
Other services (except public administration)	100	70.7	139.6	210.3

Source: EPI analysis of data from the Bureau of Labor Statistics (BLS) Employment Requirements Matrices, the BLS Current Employment Statistics program, and the Bureau of Economic Analysis GDP-by-industry accounts

Economic Policy Institute

Revitalizing Manufacturing and Expanding Opportunities for Chicago's Black and Latino Communities



- First, the report presents a new analysis of job openings in the manufacturing industry.
- Next, the report explores the current state of employment conditions in Chicago.
- After that, the racial/ethnic makeup of the manufacturing sector is examined to measure the extent to which inclusion occurs in the industry.
- Lastly, to combat underrepresentation and occupational disparities within the industry, the report outlines some actions that would help manufacturers meet their needs for skilled workers while creating pathways to opportunities for more blacks and Latinos into well-paid manufacturing careers.

https://greatcities.uic.edu/2018/06/06/revitalizing-manufacturing-and-expanding-opportunities-for-chicagos-black-and-latino-communities/

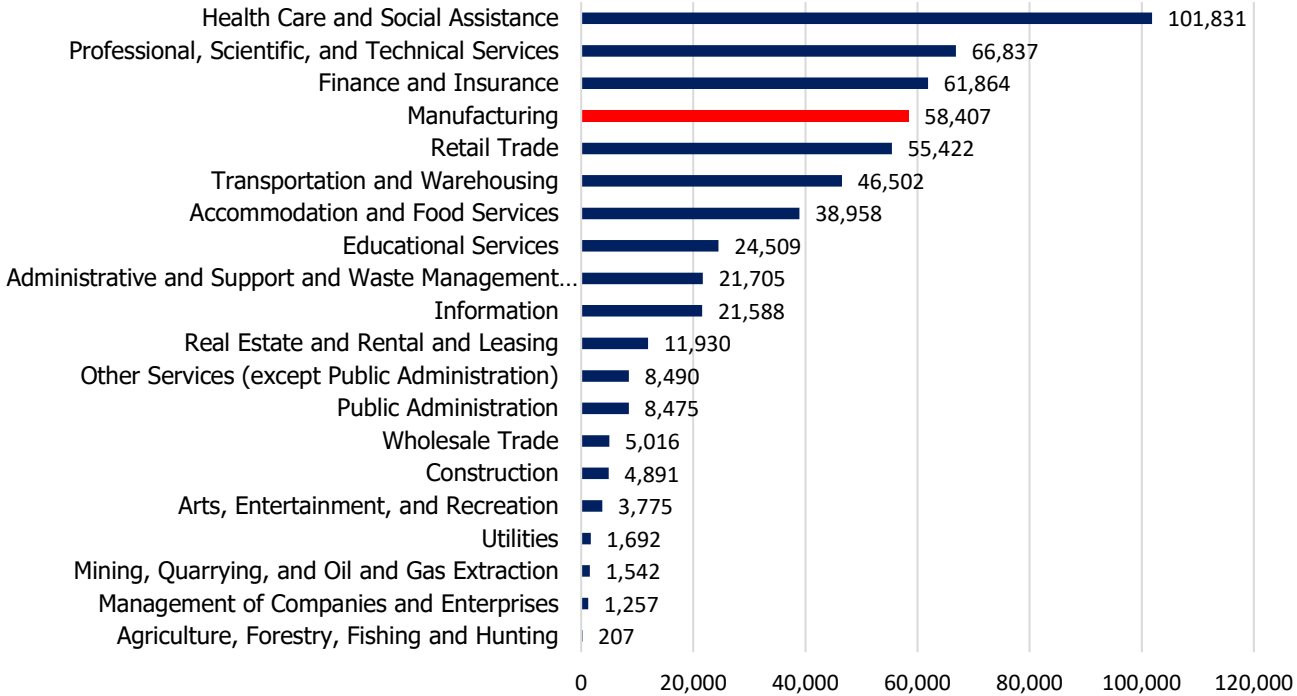
Job Openings in the Manufacturing Sector

Analysis of job postings data shows:

- 58,407 job postings in manufacturing sector in the Chicago Region.
- Manufacturing had the 4th most job postings out of 20 sector groups.

Manufacturing sector has a high capacity for new and potentially more diverse hiring.

Figure 1: Job Postings by Industry in the Chicago Region, April 1, 2017 - March 31, 2018



Data Source: Labor Insight Jobs (Burning Glass Technologies).

There are unfilled jobs in manufacturing

The ratio of job postings to hires shows a high number of postings compared to hires:

- Manufacturing had two openings for every hire in 2017.
- Manufacturing had the sixth highest ratio of job postings to hires.

Manufacturers may be unable to fulfill job postings because of a skills shortage.

Table 2: Total Employment, Hires, Job Postings, Ratio of Openings to Hires, and Ratio of Openings to Total Employment for Industries in the Chicago Region, 2017

Industries	Job Postings	Hires	Ratio of Job Postings to Hires
Mining, Quarrying, and Oil and Gas Extraction	1,669	175	9.5
Finance and Insurance	66,275	20,360	3.3
Utilities	1,825	750	2.4
Information	24,458	10,688	2.3
Transportation and Warehousing	54,472	24,233	2.2
Manufacturing	**61,468**	**30,892**	**2.0**
Health Care and Social Assistance	111,984	60,701	1.8
Real Estate and Rental and Leasing	13,691	9,038	1.5
Professional, Scientific, and Technical Services	69,710	48,731	1.4
Public Administration	8,505	8,760	1.0
Retail Trade	56,838	68,551	0.8
Educational Services	23,920	29,370	0.8
Accommodation and Food Services	42,514	96,457	0.4
Other Services (except Public Administration)	8,964	22,564	0.4
Wholesale Trade	5,285	23,417	0.2
Management of Companies and Enterprises	1,313	7,034	0.2
Agriculture, Forestry, Fishing and Hunting	209	1,157	0.2
Administrative and Support and Waste Management and Remediation Services	25,788	151,451	0.2
Construction	5,012	34,888	0.1
Arts, Entertainment, and Recreation	4,312	36,125	0.1

Data Source: Quarterly Workforce Indicators (QWI), U.S. Census Bureau and Labor Insight Jobs (Burning Glass Technologies).

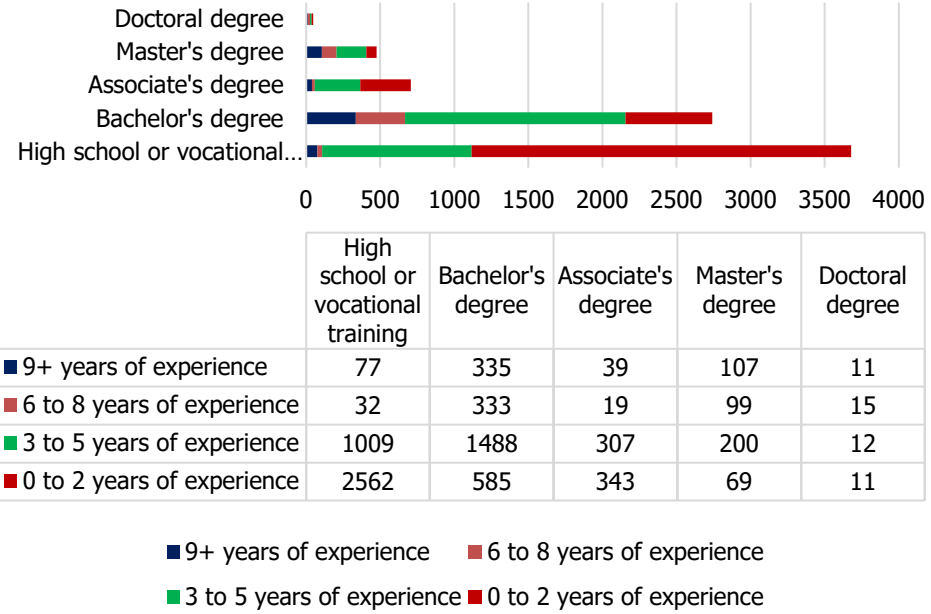
Manufacturing Openings and the Education and Experience Required for Employment

Figure 3: Levels of Education and Experience Requested for Manufacturing and Production Occupation Job Postings in the Chicago Region, April 1, 2017 - March 31, 2018

A high levels of job postings in manufacturing required just a high school diploma or vocational training and 0-2 years of experience:

- Nearly 40% of openings required just a high school diploma or vocational training and 0-2 years of experience.
- Separating school and experience requirements, high school or vocational training and 0-2 years of experience had the highest numbers of job postings for their respective categories.

Manufacturing and production occupations have immediate potential for hiring of lower skilled and less experienced workers.



	High school or vocational training	Bachelor's degree	Associate's degree	Master's degree	Doctoral degree
9+ years of experience	77	335	39	107	11
6 to 8 years of experience	32	333	19	99	15
3 to 5 years of experience	1009	1488	307	200	12
0 to 2 years of experience	2562	585	343	69	11

Data Source: Labor Insight Jobs (Burning Glass Technologies)

Embracing Manufacturing: Expanding Opportunities

With a commitment to expand opportunities for education and job training, the manufacturing sector and communities of color can simultaneously address their respective employment needs.

Importance of Education and Training Manufacturing 4.0

- Groups like Manufacturing Renaissance have worked consistently for 40 years to elevate the importance of the manufacturing sector – there is much that we can learn from them, e.g., Manufacturing Connect
- Germany – established as priority with pathways created
- Basque Country – value-driven with cooperative structure

Embracing Manufacturing: Succession Planning for Manufacturing Business Longevity

- The mortality of family-owned businesses due to closure is often attributed in the business and management literature to the lack of succession planning and adequate preparation of a successor.
- Business successions play a vital role in promoting economic stability and growth by reducing the evident exposures of local economies to disruptions resulting from business closures, even if closure is a more probable exit strategy (Ip & Jacobs, 2006).
- A significant social and economic challenge facing the United States and other advanced western economies, is the aging of the population. The increasing population over age 65 will have an impact on the number of business transfers in the coming years not only in terms of the ownership of businesses but also on potential employment and economic growth.

Results

- 73% of survey respondents indicated that they were over the age of 55 years old, indicating a high likelihood of retirement in the next few decades. However, 48.3% indicated that they plan to retire more than 5 years from now. 19.1% plan to retire in 3 to 5 years, and 12.4% plan to retire in 13 months to 2 years from now.
- Of the family-owned firms surveyed, 86.5% of them had one or more family members working for the company.
- Of the respondents, 48.3% of firms have made plans for succession while 50.6% have not yet made plans for succession. 61.8% of firms surveyed had no successor indicated. Of those that did have a successor chosen, 6.7% chose a family member currently working in the company, 12.4% chose a family member from outside of the company, 7.9% chose a family member but didn't not indicate whether they work for the company or not, 6.7% chose a non-related successor from within the company, one firm had chosen a non-related successor from outside of the company, and the remaining firms indicated they had other succession plans such as selling the company or transferring ownership to another entity.

Government Fight for Industrial Retention

While the initial decline was occurring, industrial retention was key for some figures within Harold Washington administration, e.g., Rob Mier, Bob Giloth, etc.

- Funded infrastructure improvements in industrial areas, e.g., roads
- Business Incubators
- Concepts of “Jobs not Real Estate” and “Balanced Growth”
- Other job training and retention strategies
- Eventual shifts in personnel delayed some progress, e.g., enabling legislation for PMDs)

CBO Fight for Industrial Retention

- Multiple organizations formed and coalesced Local Employment and Development Council (LEED), Community Workshop for Economic Development (CWED), Center for Urban Economic Development (CUED), Manufacturing Renaissance, Chicago Jobs Council, North Branch Works, etc.
- Job training, Local hiring, community benefits agreements
- Fight against plant closures, PMDs etc.

Elevating Manufacturing: Preserving the zoning/manufacturing corridors

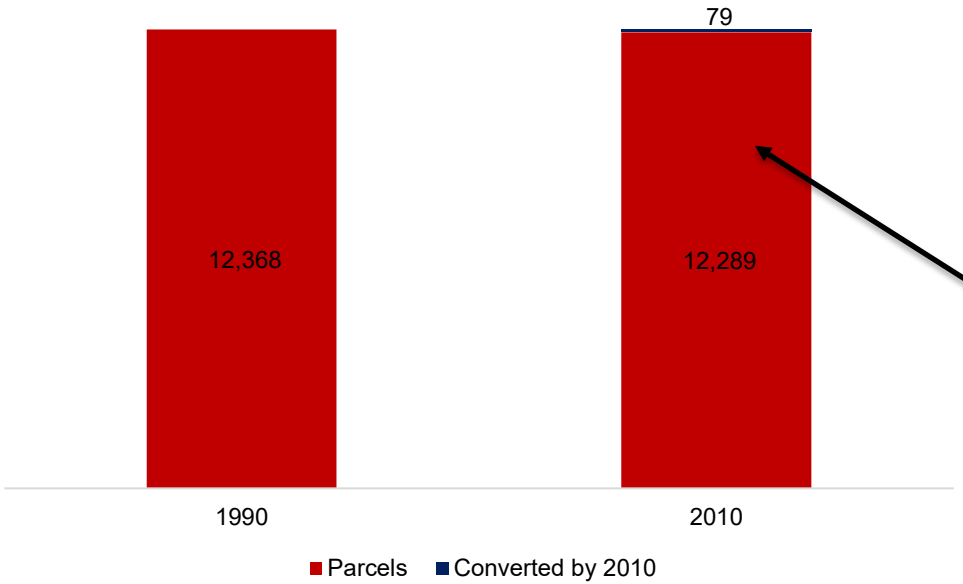
- In the 1980s, the conversion of buildings from manufacturing use to residential lofts and upscale commercial, e.g., Clyborn Corridor, Near North River Industrial Corridor, Goose Island, Elston, etc.
- Zoning changes fought – lengthy land use battles but nothing to stop speculation and rise in the property values
- PMDs (Planned Manufacturing Districts) devised to stem displacement – late 1980s

DuCharme; Giloth

Industrial land conversion

- Pressure for cities to convert land from industrial uses to new housing or commercial uses as urban economies restructure and demand for urban living increases
- Converted industrial land to commercial and residential
- Many cities responded to loss of manufacturing by building another sector, e.g., Pittsburgh
- Cities confronts a tradeoff between preserving manufacturing jobs and generating residential and commercial property tax revenues
- Since 2010, industrial conversion in Chicago has accelerated

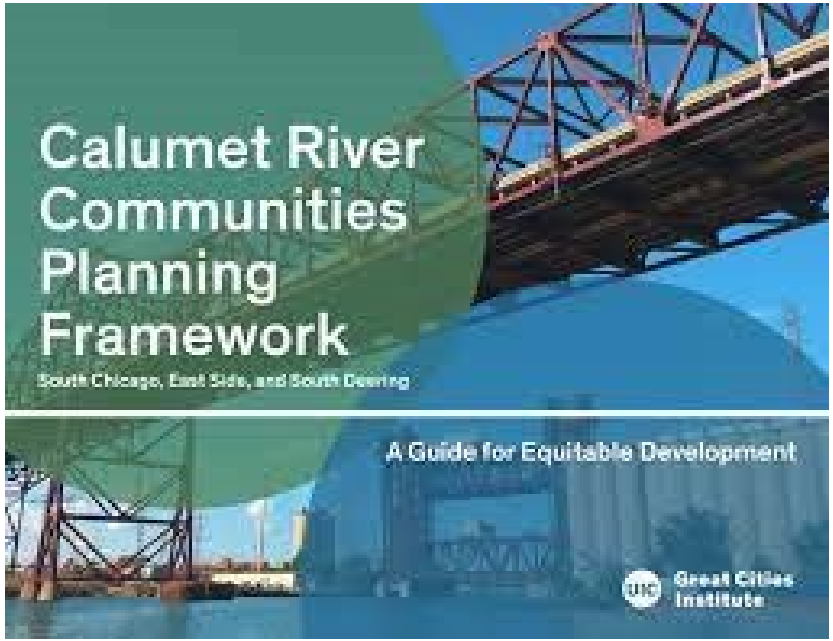
Land preservation efforts have been successful



- Industrial preservation policies effectively slow land conversion
- Chicago's Industrial Corridor (IC) program is effective
- There were 12,368 industrial parcels located within Chicago's industrial districts, of which only 79 were converted from 1990-2010 (0.6%) (Lester et. al. 2014).
- Conversion more likely in areas closer to Loop where real-estate markets have shown price appreciation.

Data Source: Lester, Thomas W., Nikhil Kaza, and Sarah Kirk. "Making room for manufacturing: Understanding industrial land conversion in cities." *Journal of the American Planning Association* 79.4 (2013): 295-313.

Manufacturing does not have to create concentrated and contaminated sites



CalumetRiverCommunitiesPlan_Web.pdf
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Public Health and Environment Assessment

While the industries along the Calumet River provide employment to residents, they also greatly contribute environmental toxicity, poor health quality, and increased morbidity. Several toxic substances are released from factories, including lead, manganese, nickel, zinc, mercury, and cadmium. All of these compounds are known to have negative health effects when inhaled, even in trace quantities. Several are linked to central nervous system disease, cardiovascular and respiratory diseases, asthma, and stroke. According to the Environmental Protection Agency's Toxics Release Inventory, companies like Horsehead Corporation/American Zinc Recycling and Cargill are some of the main producers of toxic substances within the study area (EPA Toxics Release Explorer, 2017). Horsehead recycles and processes zinc, and Cargill processes food products. Many other companies, including Agri-Fine, S.H. Bell Co., and BP, have been responsible for foul odors and dangerous particles that have plagued the community (Pete, 2017).

Compared to the City of Chicago average, many more study area residents live without health insurance. This makes the issue of toxic exposure all the more pressing because access to necessary treatment for pollution-related health issues is limited.

Cadmium

Cadmium is a heavy metal present in many industrial settings such as refining zinc and manufacturing batteries. Inhalation of cadmium, even in small quantities, can cause cadmium toxicity, which is untreatable and can lead to respiratory disease, kidney failure, liver failure, bone weakening, and severe joint pain (Godt et al., 2006).

Lead

Lead is commonly used in metal manufacturing and refining, particularly in conjunction with zinc and silver. High levels of lead exposure, particularly in children, can cause abdominal pain, anemia, kidney failure, learning disabilities, behavioral problems, blindness, and more (Papanikolaou, 2005).

Manganese

Manganese is a heavy metal used in steel manufacturing. Overexposure to the neurotoxin through inhalation can lead to muscle spasms, aggression, and other complications. Manganese toxicity is often confused with Parkinson's disease (Chicago Department of Public Health, 2018).

Nickel

Nickel is a heavy metal often used in metal manufacturing and refining. Early nickel-toxicity symptoms include chest pain, rapid heart beat, and cough, and prolonged exposure may lead to cancer, kidney and liver failure, cardiovascular disease, and childhood development problems (Das et al., 2008).

https://greatcities.uic.edu/uic-neighborhoods-initiative/calumet-river-communities-planning-framework/

Elevating Manufacturing: Embracing The Changing Nature of Manufacturing Work

- Manufacturing's perception problem requires popular marketing campaign to change perception of manufacturing work.
- Some state Manufacturing Extension Partnerships (MEPs) credit success to branding manufacturing programs as mechatronics and robots.
- Leverage workforce and innovation hubs as facilities that can expose young people to emergent manufacturing technologies.

MxD, Chicago

mHUB, Chicago

If we elevate manufacturing in Chicago

We can benefit from a clean, green, sustainable economic boom that:

- stabilizes the economy and reduces wealth inequality
- avoids economic decline
- provides potentially good jobs with livable wages
- strengthens the industrial supply chain
- tackles the climate crisis and social justice issues

Industrial Policy must include:

- Job training and education; vocational training – focus on inclusion
- Succession strategies for ownership – focus on inclusion
- Industrial retention through industrial land preservation
- Geographic dispersion in multiple corridors
- Industrial retention through strategic incentives, particularly for clean energy manufacturing
- Clean-up and mitigation of contaminated sites with no further contamination

But this time,

- There must be more opportunities for Blacks and Latinos in firm ownership and advancement within the occupational ladder
- It can’t be dirty – therefore causing global warming and health risks to workers and surrounding neighborhoods
- We need a Just Transition for workers affected by changes
- There must be a commitment of good corporate citizenship

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Thank you!

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