

Analyzing The Extent of Financial Wealth Distribution Regionally in Chicago

Keyan Dunmore

Data Engineering Intern

Renaissance EXL

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Abstract

This research investigates the financial wealth distribution in Chicago, focusing on disparities in income across different neighborhoods. Despite Chicago's prominent stature in global trade and finance, significant inequalities persist among its residents. By leveraging income and demographic data from the IRS and the U.S. Census Bureau for years 2015 and 2020, this study provides a granular analysis of wealth distribution based on zip codes. Initial visual analyses reveal pronounced income differences across zip codes, with specific ones consistently emerging as high-income outliers, while others highlight economic disparities. Geospatial illustrations further emphasize this divide, portraying a concentrated wealth pattern in the Northeastern area of the city, with the vast expanse of Chicago showing diminished income levels. A targeted focus on salaries and wages echoes these findings, further highlighting the spatial consistency in high-income zones. A significant part of the study is the correlation between demographic trends and income levels, revealing a profound racial disparity: while the majority of the White population resides in affluent areas, marginalized communities, especially Black and Latinx populations, predominantly inhabit areas with lower incomes. These findings underscore the need for equitable economic policies and raise pertinent questions about the deeply rooted socioeconomic structures in Chicago.

1. Introduction

The financial sector in Chicago has thrived due to its strategic location, well-established infrastructure, and historical significance in global trade and finance. Moreover, the city's prominent banking and investment firms have attracted a pool of talented individuals, further fueling the growth of the sector.

Yet, the success of Chicago's financial sector has not translated into equitable prosperity for all of its residents. Across the city's neighborhoods, significant disparities in wealth, income, and access to financial resources persist, perpetuating a cycle of economic disadvantage that disproportionately affects marginalized communities.

The primary objectives of this research paper are to analyze the extent of financial wealth distribution in Chicago, focusing on income inequality, to identify the key factors and underlying systemic challenges of this distribution.

1. Data

Data was sourced to analyze income and demographic trends in Chicago. Income values and Salaries & Wages values in 2015 and 2020, separated by Chicago zip codes, were accessed from the Internal Revenue Service (IRS) in the *ZIP Code Data Tax Year 2015 (& 2020) Documentation Guide*. The data encompasses the entire range of income brackets, from the lowest percentile to the highest in all of Chicago. This comprehensive view is necessary to discern patterns or trends in income changes over the mentioned years.

Population concentration values by demographic in Chicago were also used and accessed from The U.S. Census Bureau American Community Survey (ACS) 5-year estimates (ZIP Code) and 1-year estimates (Citywide) in *Chicago Population Counts*.

IRS data for Income and Salaries & Wages was filtered down to Illinois values, then Chicago values. Demographic data was filtered to the year 2020 and to only Chicago zip codes.

3. Scope and Methodology

This research employs a mixed-method approach, combining quantitative and qualitative data analysis. To assess financial wealth distribution, statistical data was gathered and analyzed

on income distribution, salaries and wages distribution, and demographic concentration. Python 3, pandas, and other packages were used to visually represent datasets

The study of financial wealth disparities in Chicago holds significant importance, not only for local policymakers and community activists but also for the broader field of urban economics and policy. By understanding the nuances of wealth disparities within a city renowned for its financial prowess, we can gain valuable insights into the potential pitfalls and challenges that may emerge in other thriving financial centers worldwide.

4.1. Income Amounts (2015 & 2020, IRS)

The initial visual analyses conducted consist of two bar charts illustrating the distribution of income levels across different Zip Codes in Chicago. The data is segregated for two distinct years: 2015 and 2020, and within each chart, the Zip Codes have been arranged in descending order based on their respective income amounts, allowing for a clear comparative perspective.

Upon a closer inspection of these visualizations, one can discern subtle fluctuations in the income distributions across different Zip Codes. Nevertheless, the overarching trend delineates a remarkably stable income distribution pattern over the half-decade span.

Certain Zip Codes emerge as consistent high-income outliers. Notably, 60611, 60614, and 60657 stand out as prominent financial epicenters, registering income values that are significantly elevated in comparison to the majority of other Chicago Zip Codes. These areas, thus, appear to be the affluent areas of wealth within the city.

Conversely, there are Zip Codes, specifically 60633, 60602, and 60621, that report considerably lower income amounts. The income values for these regions are not just modest, but are essentially a mere fraction when compared to the top-performing Zip

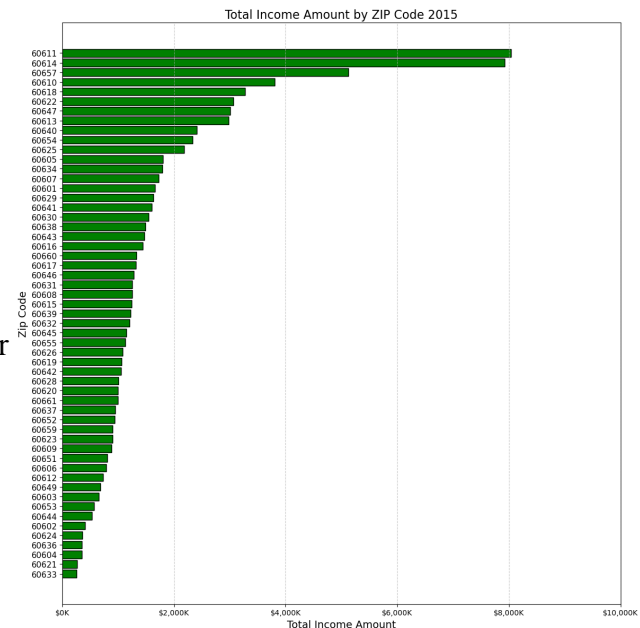


Figure 1: Highest-lowest income amounts in Chicago by Zip Code (2015)

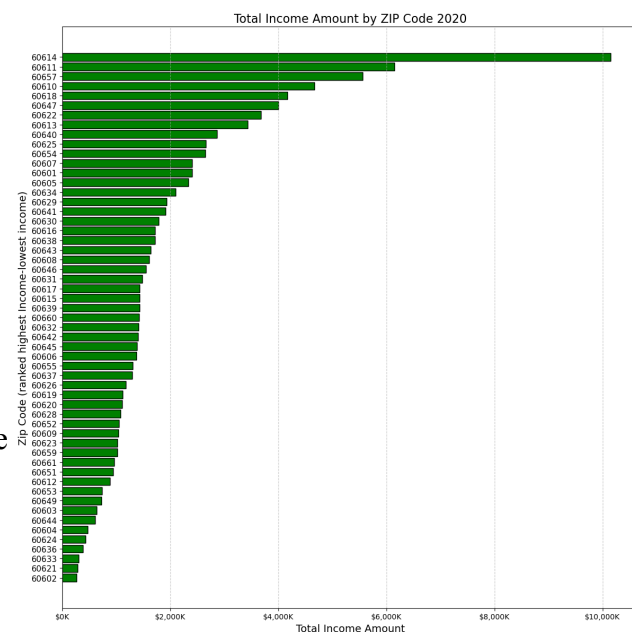


Figure 2: Highest-lowest income amounts in Chicago by Zip Code (2020)

Codes, highlighting economic disparities within the city's bounds.

4.2. Income Amounts (2015 & 2020, IRS, Geospatial)

To present a more spatially explicit understanding of income distributions across Chicago, I transitioned from bar charts to choropleth maps. These maps, crafted utilizing the geopandas package in Python, reveal layers of geographical information, enabling a more nuanced understanding of the income landscape.

Upon analyzing the choropleth maps, it becomes evident that Chicago's income topography is not evenly spread. The Northeastern quadrant of the city emerges as a distinct high-income enclave. Key neighborhoods such as Lincoln Park, The Loop, and Gold Coast are luminescent with higher income hues, reflecting their wealth.

However, a contrast is apparent when one pans their view to the vast expanse of Chicago's land area. Neighboring regions to these districts, although not low, do exhibit slightly diminished income levels. Moving further out, the narrative shifts dramatically. The majority of Chicago is swathed in colors representing substantially reduced income levels. These areas, both in terms of geographical spread and population density, constitute a significant portion of the city.

4.3. Salaries & Wages Amounts (2015 & 2020, IRS)

For a more targeted analysis of the economic landscape in Chicago, Figures 1 and 2 diverge from the broad "Income" to focus specifically on "Salaries & Wages." These figures employ bar charts, similar to the prior visualizations, delineating amounts by Zip Codes.

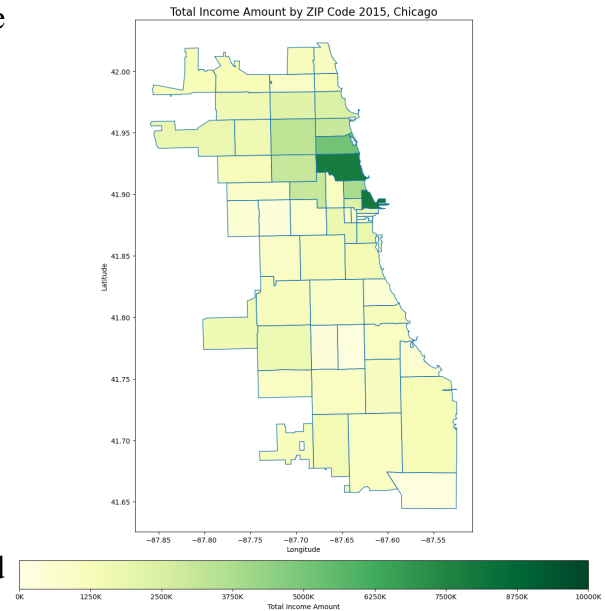


Figure 5: Income amounts in Chicago by Zip Code (2015, Geospatial)

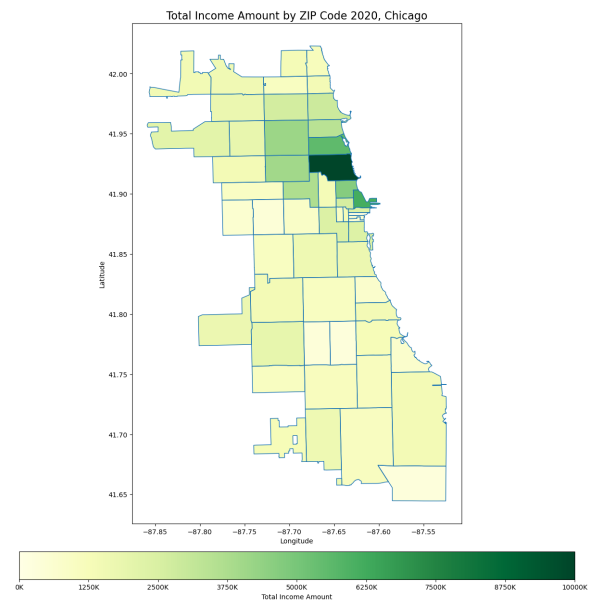


Figure 6: Income amounts in Chicago by Zip Code (2020, Geospatial)

When analyzing these figures, a familiar pattern unfurls. Just as with the income distributions, there are shifts and fluctuations in the Salaries & Wages values, per specific Zip Codes. However, these variations don't deviate substantially from the overarching narrative.

The general distribution of Salaries & Wages over the city remains stable, mirroring the consistency seen in the income data. Moreover, there's a spatial consistency: the Zip Codes that emerged as strongholds of higher incomes also appear to dominate when it comes to higher salaries and wages. This trend highlights that areas with higher incomes are likely supported by higher salaried jobs, cementing their economic stature within the city.

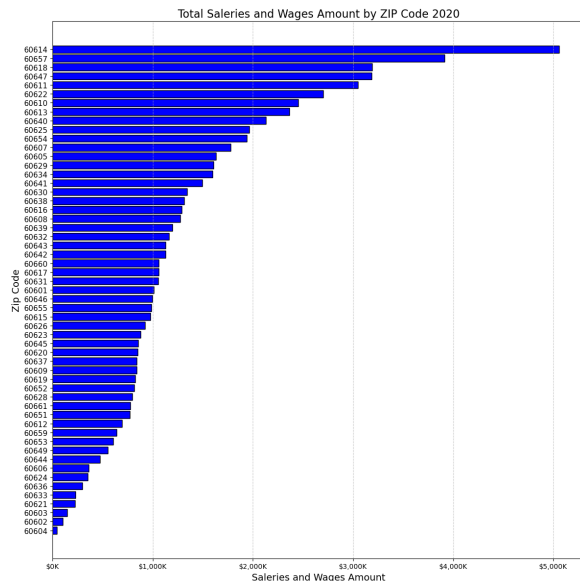


Figure 4: Highest-lowest Salaries and Wages amounts in Chicago by zip code (2020)

guided by the compelling insights they previously revealed when visualizing income distributions.

Upon analyzing these maps, a familiar narrative re-emerges, with subtle nuances. The Northeastern precincts of Chicago continue to lead as centers of economic prosperity, echoing the high-income patterns demonstrated earlier. However, the intensity and range of these high

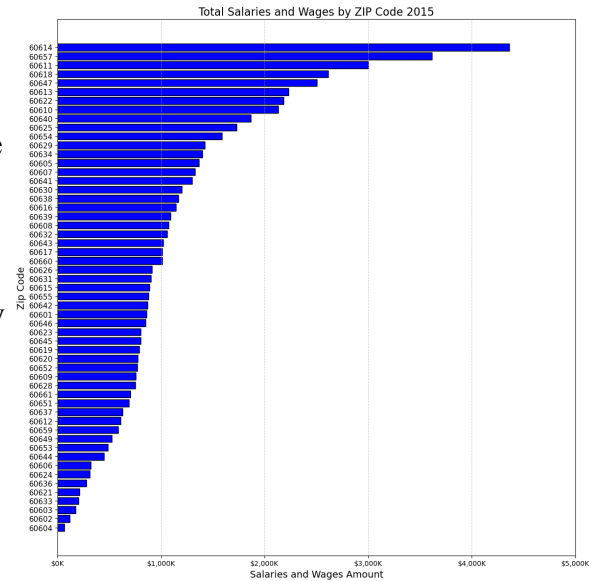


Figure 3: Highest-lowest Salaries and Wages amounts in Chicago by zip code (2015)

4.4.Salaries & Wages Amounts (2015 & 2020, IRS, Geospatial)

Transitioning from the bar charts, I once more used the choropleth maps to spatially depict the distribution of "Salaries & Wages" across Chicago. This decision to utilize choropleth maps was

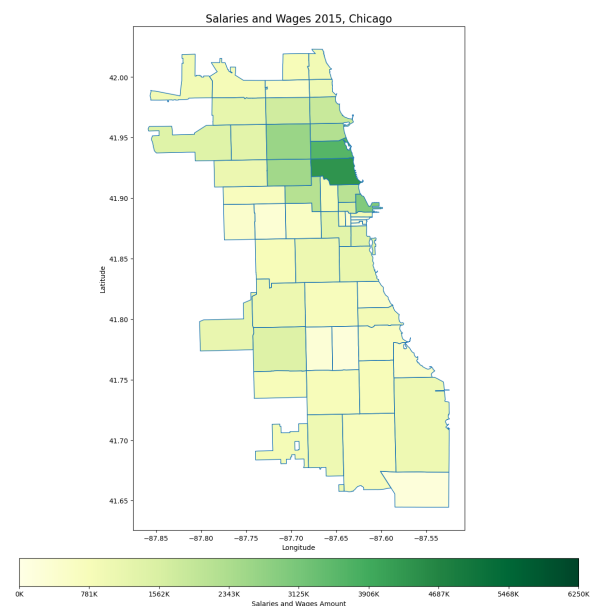


Figure 7: Salaries and Wages amounts in Chicago by Zip Code (2015, Geospatial)

salaries and wages values appear to be somewhat concentrated. The gradient, while still pointing to the Northeastern region as a focal point of affluence, is less stark, suggesting a milder disparity between the highest and the subsequent high values.

Yet, despite these subtle variations in the values, the geographical trend remains essentially unchanged. Zip Codes outside of this Northeastern area, in a vast majority, register markedly lower salaries and wages. These areas, when compared to the Northeastern quadrant, underline the city's economic imbalances.

4.5. Demographic Trends

In an effort to uncover potential correlations between demographic distributions and income levels in 2020, I conducted a comprehensive study based on population data segmented by zip code.

Upon introducing the Asian demographic data, and using income as a reference, there were no pronounced trends or strong correlations. Nonetheless, the majority of the Asian population was observed to reside in higher income areas, particularly concentrated in the northeastern regions.

Subsequently, when analyzing the Latinx demographic, a stark contrast was observed: there was a notably higher concentration in areas of lower income and a reduced presence in affluent regions.

This pattern was mirrored in the Black demographic, where the densest populations were predominantly situated in the lower income areas, with minimal representation in wealthier locales. In contrast, the White demographic, which is spread across numerous areas, displayed its highest concentrations in the most affluent zones. This analysis underscores a profound racial disparity in income distribution within Chicago.

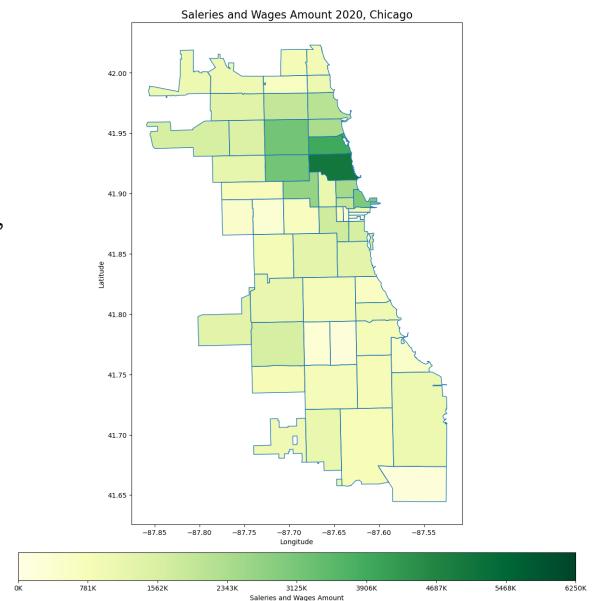


Figure 8: Salaries and Wages amounts in Chicago by Zip Code (2020, Geospatial)

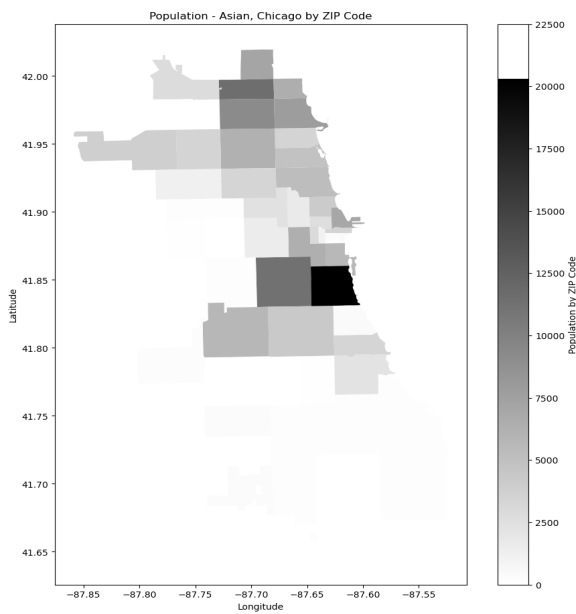


Figure 9: Asian Population in Chicago by Zip Code

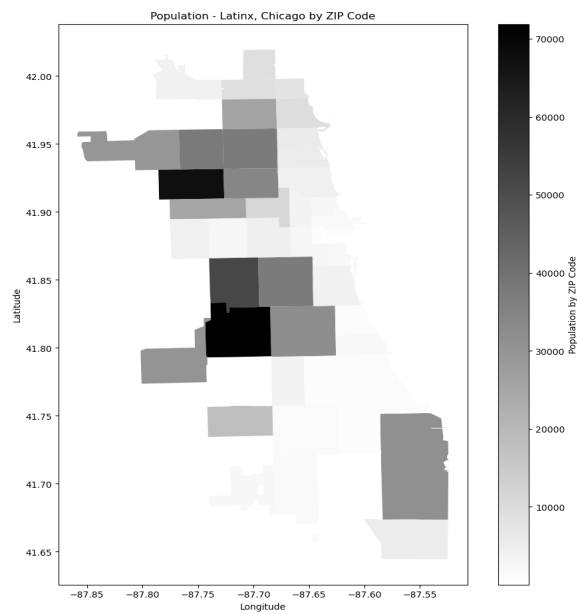


Figure 10: Latinx Population in Chicago by Zip Code

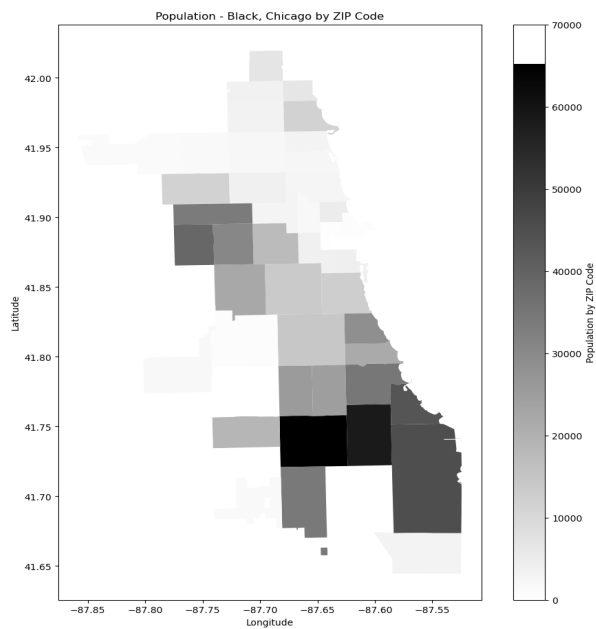


Figure 11: Black Population in Chicago by Zip Code

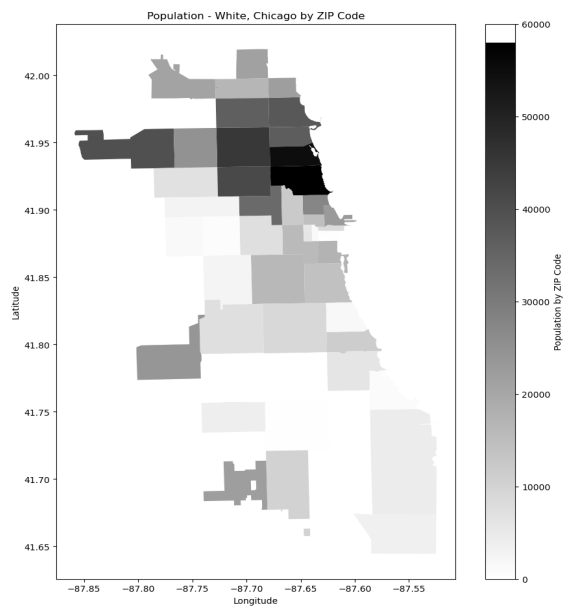


Figure 12: White Population in Chicago by Zip Code

5. Discussion

Wealth is notably localized, with areas such as Lincoln Park, the Loop, and Gold Coast emerging as significant concentrations of affluence, as opposed to a more uniform wealth spread across the city.

Secondly, there exists a pronounced racial and ethnic disparity within these pockets of wealth. Areas with significant affluence were found to have a higher concentration of the White population, while marginalized groups, primarily the Black and Latinx communities, predominantly reside in regions with diminished wealth.

Furthermore, a review of financial trends from the past five years has shown that, despite observable fluctuations in individual incomes and wages, the overarching wealth distribution in Chicago has remained remarkably consistent, indicating deeply rooted socioeconomic structures that appear largely unaffected by short-term economic shifts.

6. Acknowledgements

I'd like to extend my heartfelt gratitude to the entire Renaissance EXL team. A special thanks to the participants, and all our dedicated mentors. A very special acknowledgment goes to Justin Alt, my personal mentor.

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