



Understanding the Varied Economic Impact of Tax Increment Financing (TIF)

TIF Demographics Team

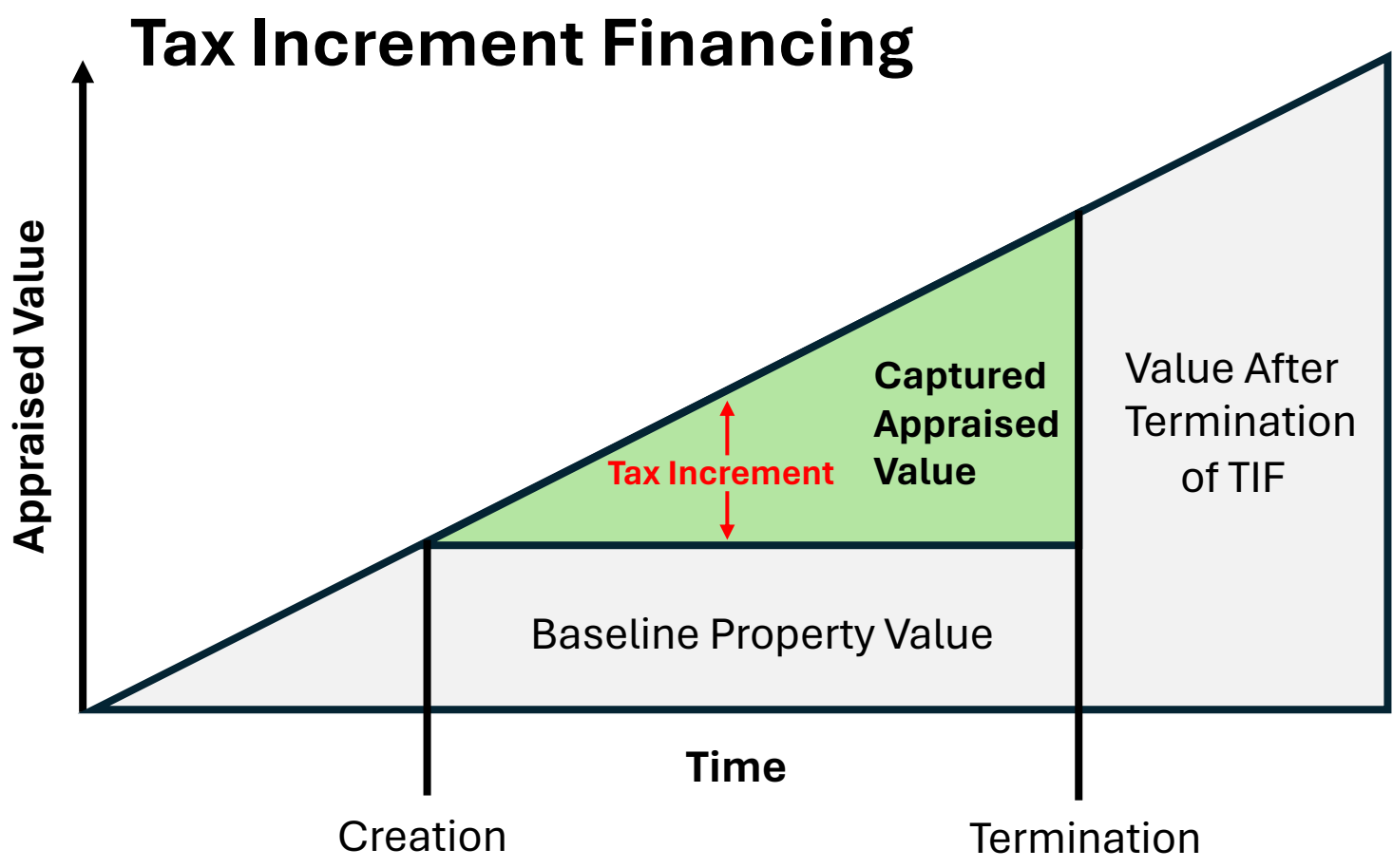
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Advisor: Dr. Robert Ellis (IIT Applied Math), Consulting Expert: Tom Tresser (CivicLab Co-Founder)

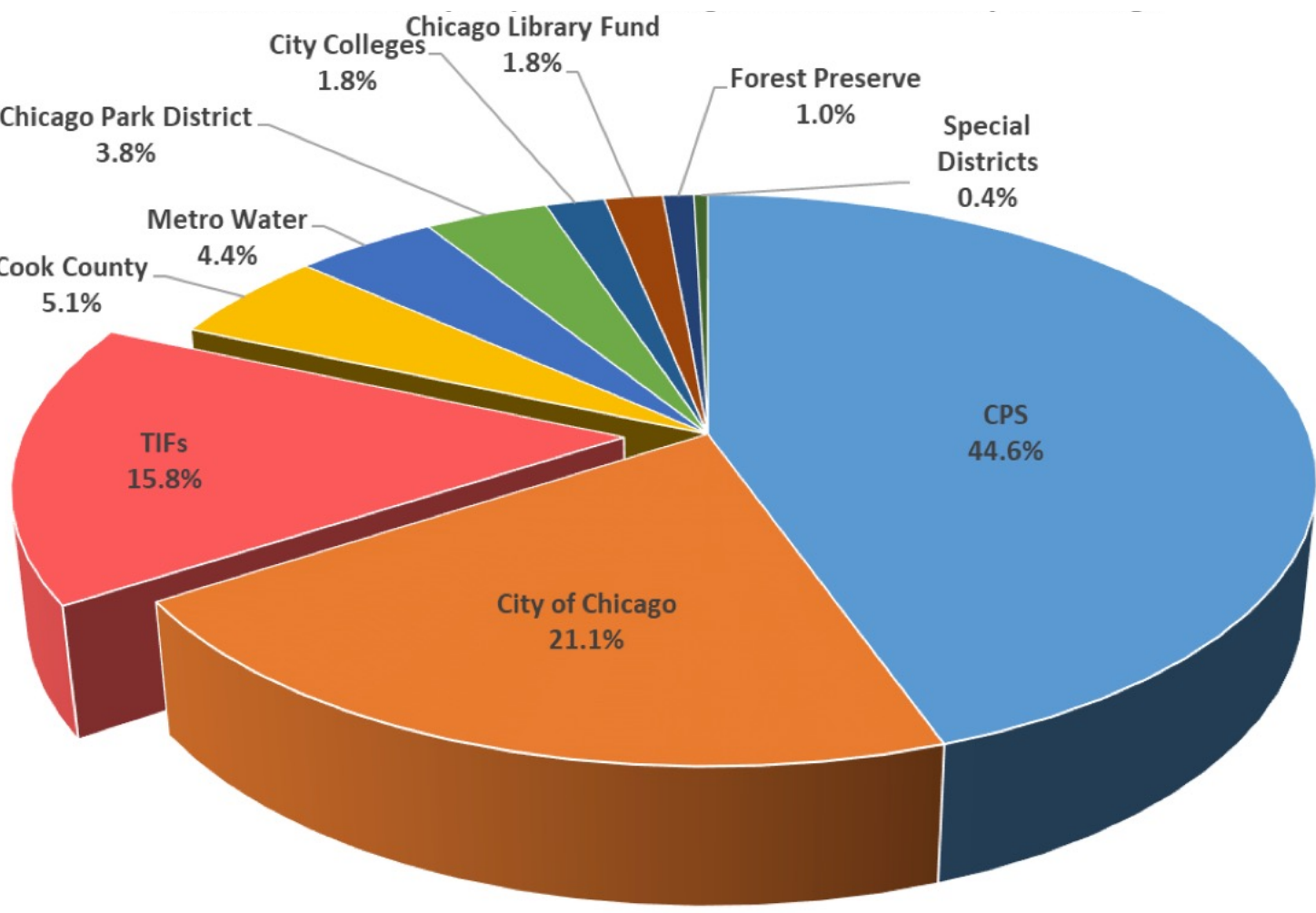
What is TIF?

- Tax Increment Financing (TIF) is a funding tool used to promote investment in “blighted” areas.
- TIFs work by “freezing” property values within a region, while any increase in value generates revenue for the TIF through property tax.



Why are TIFs Important?

- Lack transparency – complicated to track & fully under the City Council's jurisdiction.
- In 2022, Chicago collected **\$960M** (~16% of all property tax)
- Unspent TIF funds totaled **\$2.5B** at the end of 2022.
- Positive effects for TIFs come at the expense of other tax districts.



Daly, S. (2023). Cook County TIFs to generate nearly \$1.7 Billion in Revenue. Real Estate and Tax Service.

Chicago TIF and Equity

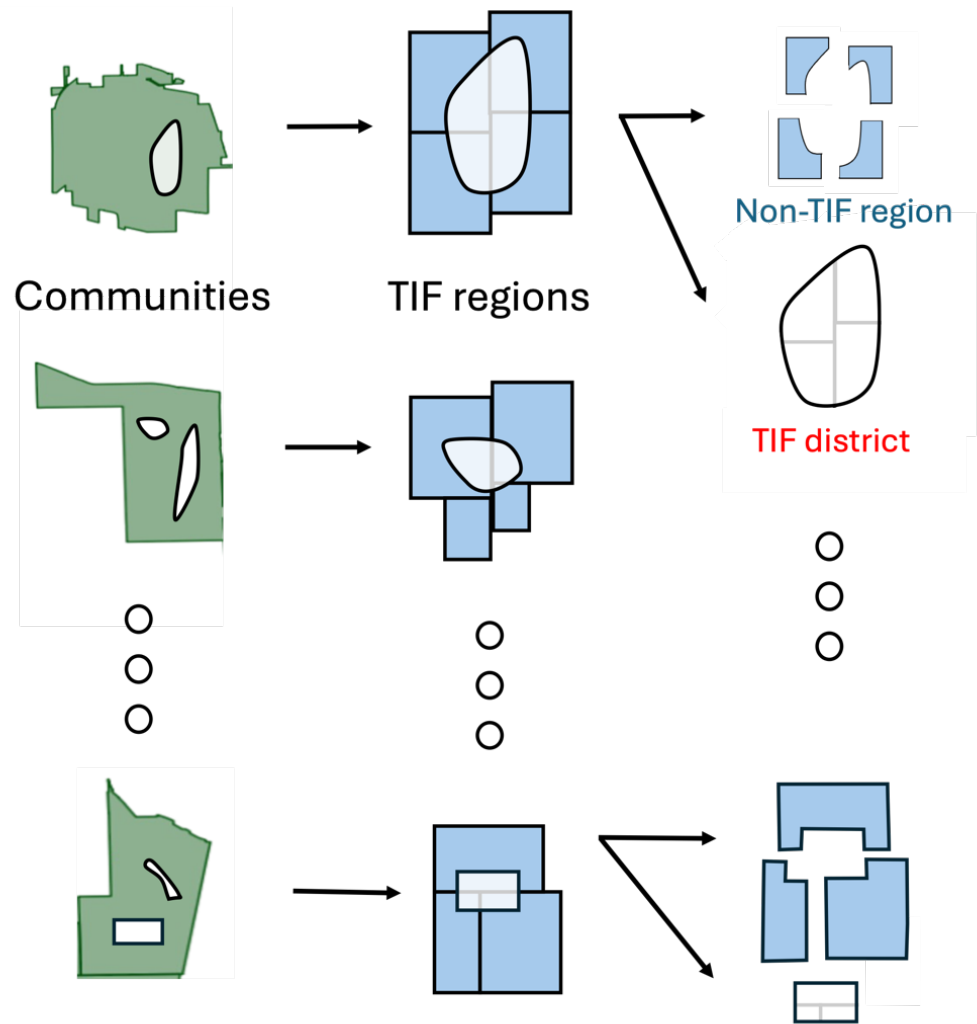
- Majority Black wards contribute more, while majority White wards receive greater TIF allocations.
- TIF is being widely used in whiter and higher income areas far from “blighted”.
- Nearly half of the spending goes to central districts within the Loop.

Knight, J. F. (2015), Johnston, K.L. (2023), Joravsky, B. (2015), Schaps, M. (2017)

Aim of the Study

Assess the **economic impact of TIF** via comparison between TIF and non-TIF regions for **different racial groups**.

Methods



Convert Demographic Data

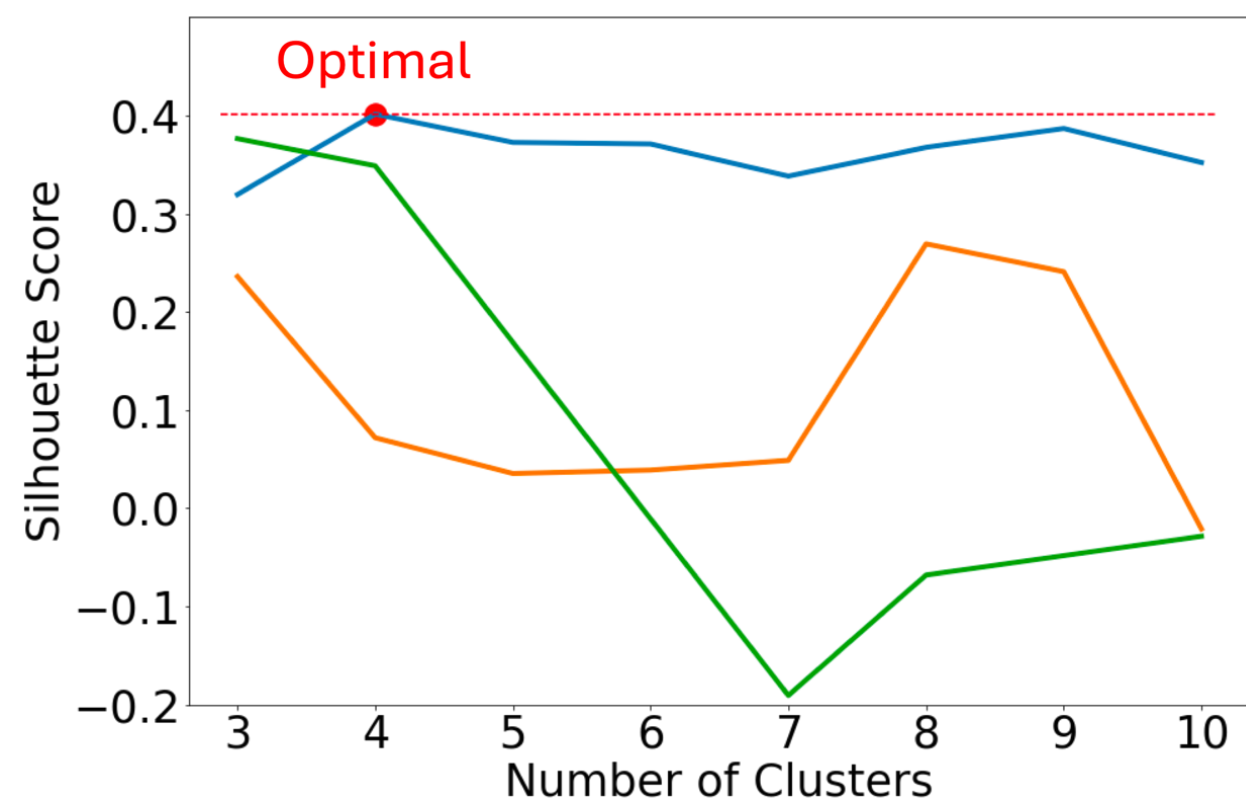
Community	White Population Inside TIF	White Population Outside TIF	Black Population Inside TIF	Black Population Outside TIF	Latino Population Inside TIF	Latino Population Outside TIF	Median Income of White Inside TIF	Median Income of White Outside TIF	Median Income of Black Inside TIF	...
1	A	A'	B	B'	C	C'	D	D'	E	...
2	F	F'	G	G'	H	H'	I	I'	J	...
77	K	K'	L	L'	M	M'	N	N'	O	...

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Aggregate All Demographic Data

KMeans
Gaussian Mixture Model
DBScan



Find Appropriate Clustering

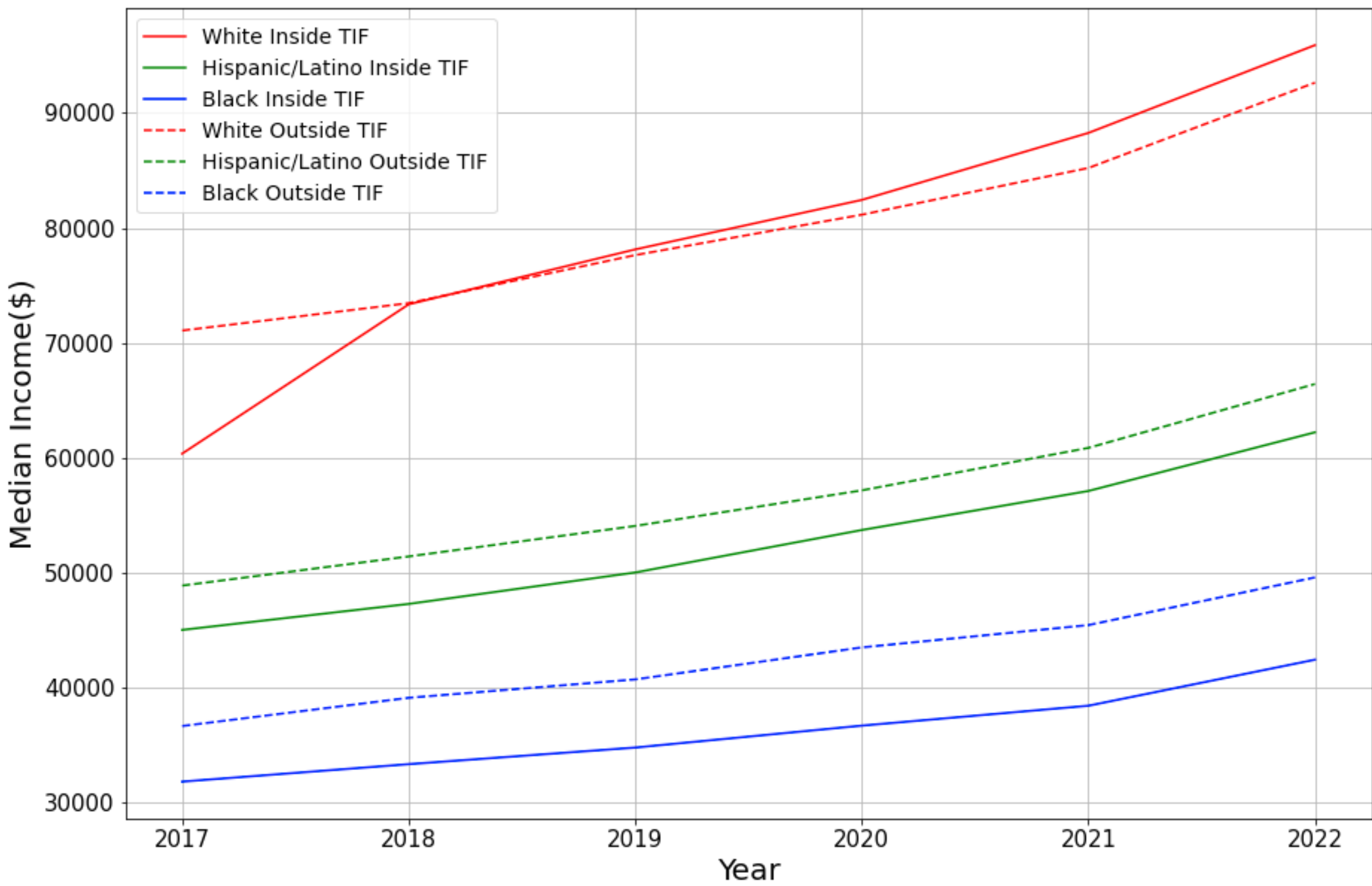
Acknowledgments

We would like to thank our advisor Robert Ellis and consulting TIF expert Tom Tresser for their valuable guidance throughout the semester.



Results

Figure 1) Annual Median Income for Chicago for inside/outside TIF, three racial groups



- Differences in the rate of change in median income between TIF and non-TIF districts were extremely small for majority Black and Latino areas, compared to areas with a majority White population.

Figure 2) Cluster map of Chicago

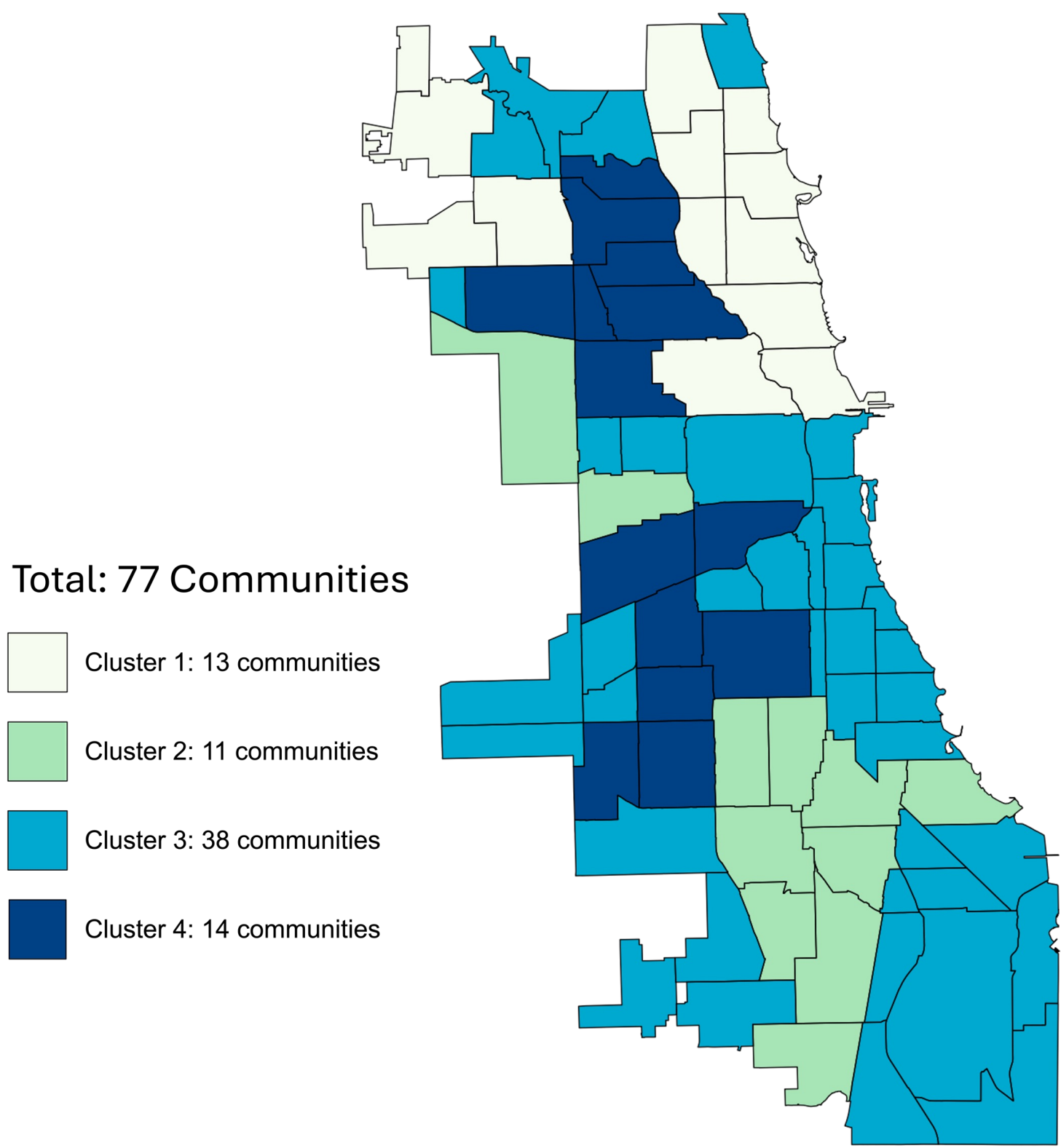


Figure 3) Population percentage of three race groups in each clusters

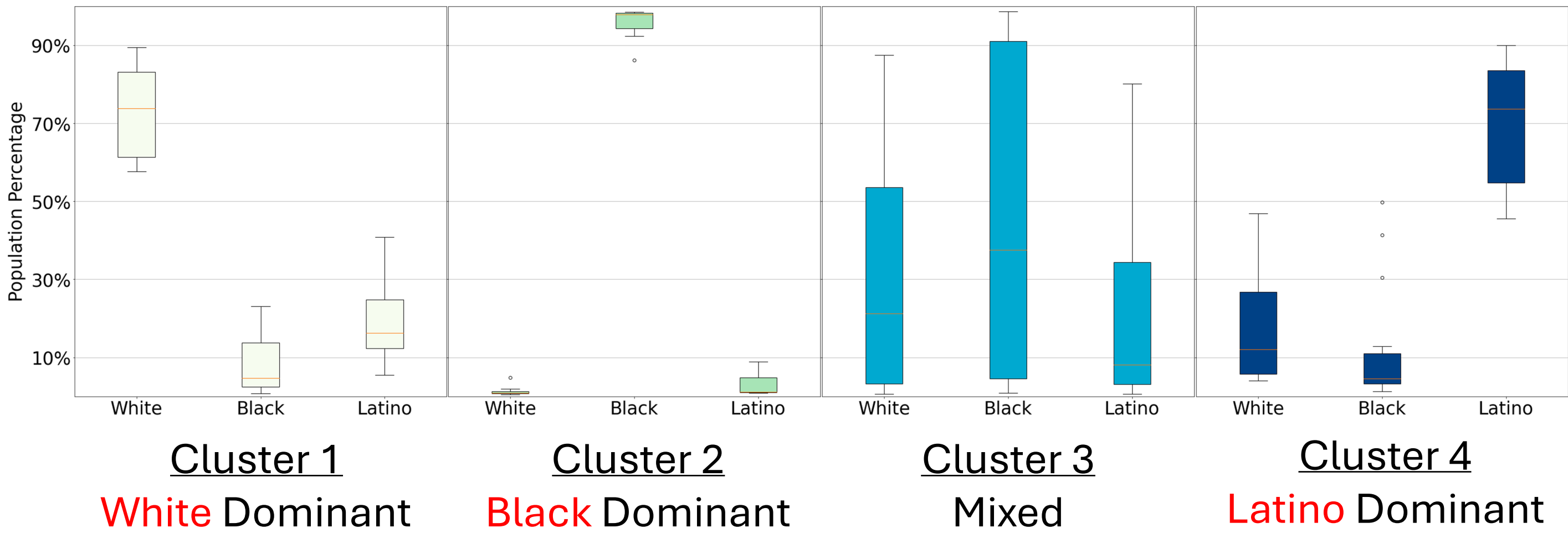


Figure 4) Median income of each clusters

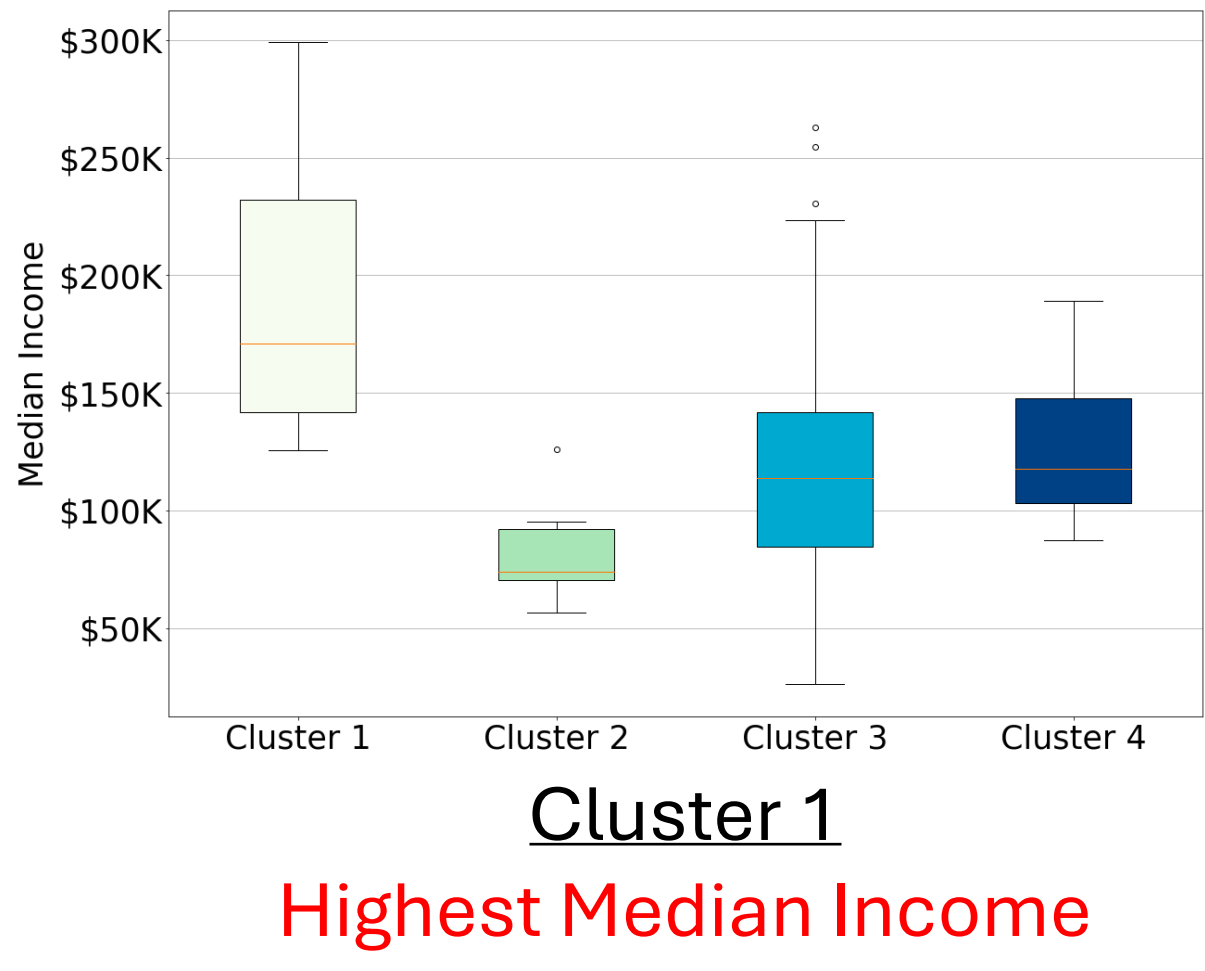
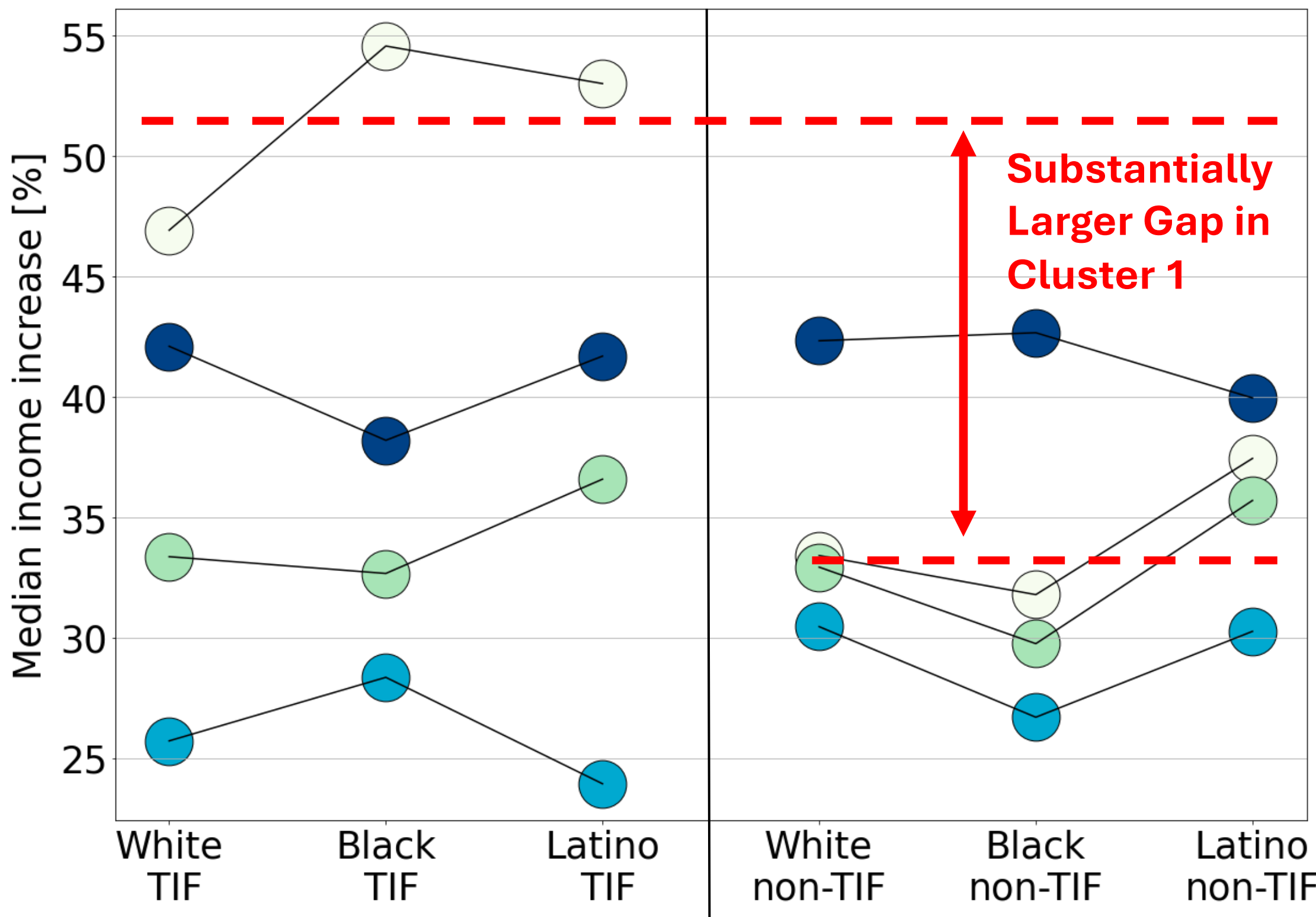


Figure 5) Median income increase percentage of three race groups in each clusters



Conclusions

- TIF helped increase the median income of majority White regions inside of TIFs, while it did not affect other races as significantly.
- Cluster 1, which was the majority White wealthy region, had a much higher increase in median income compared to any other clusters.

Ethics

Stakeholders

Problems

Stakes

Solution

Residents

Misleading information can result in unfairness towards certain residents.

Residents want fair distribution of tax funds across the city.

It is crucial to verify that results are based on trustworthy data without any bias present.

Lower income population

Increased TIF collections can lead to increases in property tax for that region.

Lower income populations won't be able to afford increased taxes.

The impact our study could have on disadvantaged groups of people must be carefully considered.