# PROBLEM SET 3

Examining Economic and Spatial Disparities in Bergen County, NJ

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#### NTRODUCTION: HISTORY AND STRUCTURE

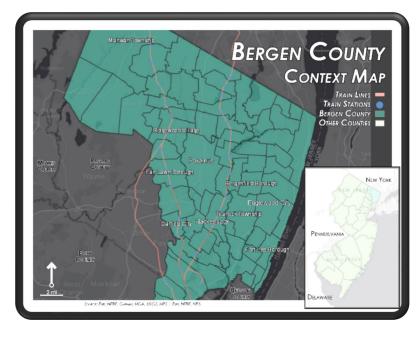
In Radburn, NJ, the picturesque image of an ideal American suburb came into focus. Built throughout the 1920s, its winding parklands, single family-homes and quiet cul-de-sacs provided a stark contrast to the heavy-industrial character of nearby New York City. Visitors were impressed by the functional and attractive model of an automobile-friendly community. As automobile-dominance spread across the country, so too did thousands of new Radburn-inspired suburbs.

The Radburn-model came into vogue just as its own Bergen County began a steady boom of development and population growth. The County already had a long history of pioneering railroad and other inner suburban typologies.

However, it became a proving ground for the emergent auto-oriented society when the George Washington Bridge opened in 1931.

The bridge was an impressive feat of infrastructure for its time. It was one of the largest examples of a suspension bridge in the world and created the first pedestrian and road connections between Manhattan and Bergen County, at Fort Lee. This spurred development in Bergen County in a major way. Its proximity to Manhattan made it a prime location for commuters looking to live outside the city. Thus, it added tens of thousands of new residents even amidst the Great Depression, and almost 500,000 more by the 1970s.

Beginning in the 1950s, the County grew into a retail hub as well. It had all the perfect conditions: proximity to Manhattan, high-capacity highways, a dearth of



retail corridors (thanks to the dominance of single-family housing), and a high concentration of wealthy commuters with disposable income. Thus, in 1957, one of the largest malls in the world opened in Paramus, NJ—

Garden State Plaza. It was soon followed by the opening of two more malls in Paramus, and another in Hackensack. These mega malls all abutted major highways and attracted customers from all over the region. In 2018, Bergen County is the only county in the state still enforcing "blue laws" (restricting sales on Sundays) yet it continues to be a major retail destination. Garden State Plaza still ranks among the most lucrative malls in the country—with assets valued at more than \$2.7 billion.<sup>1</sup>

Today, Bergen County depends on seven basic industries to fuel its economy. Of the seven, its most crucial industries are "Wholesale Trade" and "Management of Companies and Enterprises"—each with location quotients above 2. It is also competitive in "Retail Trade", "Information", "Real Estate and Rental and Leasing", "Professional, Scientific, and Technical Services," and "Health Care

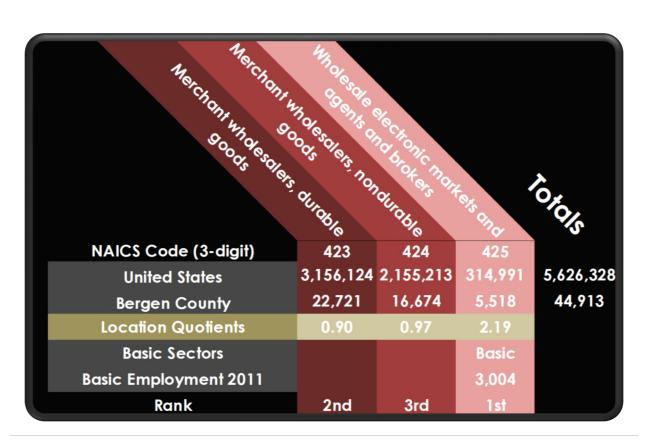
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and Social Assistance" industries. Together, these industries provide over 48,500 jobs in export employment, with a base multiplier of 8.47; if the "Wholesale Trade" industry expanded its export employment by 1,000 jobs it would on average support the creation of another 7,470 jobs in the county.

National employment figures for the United States were sluggish in the first decade of the 21st century; coinciding with one of its worst recessions in recent history. Overall, national employment contracted by 0.47% between 2001 and 2011. Unfortunately, employment in Bergen County declined even more precipitously between 2001 and 2011, by 12.7%—a contraction of about 60,000 jobs. Bergen was hit especially hard in two industries: "Administrative and Support and Waste Management and Remediation Services" and "Manufacturing;" both were among the largest employers for the county in 2001. By 2011, Bergen's Manufacturing Industry contracted slightly less than national trends suggested, but Administrative jobs nearly halved at a time of national growth in the field. Most importantly, Bergen's Wholesale Trade sector contracted significantly less than national trends, and its Retail Trade sector grew at a time of national decline; this is likely a result of Bergen's history and existing infrastructure as a retailing hub for the region.

#### HREE DIGIT ANALYSIS

The power of Bergen Wholesale Trade is now derived from its wholesale electronics markets. The subsector accounts for only a small portion of the whole industry, but it has a much higher location quotient than the two other subsectors. This would be consistent with recent changes to the Garden State Plaza mall. There are very high-profile kiosks and shops that are devoted to the sale of a whole host of consumer technologies. They garner high profit margins and have easy access to the wealthy consumers of Bergen County and other region-wide visitors.



## CONOMIC INEQUALITY

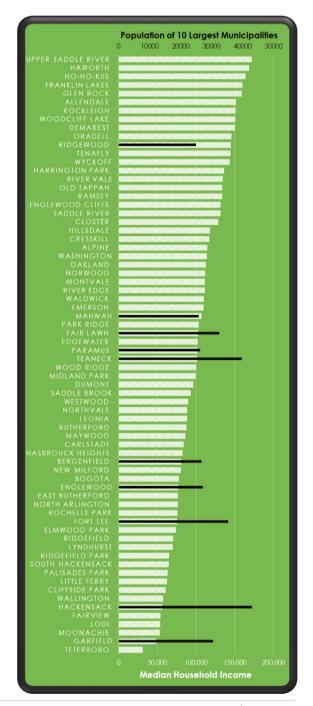
Bergen County is not a representative region of the overall American economy.

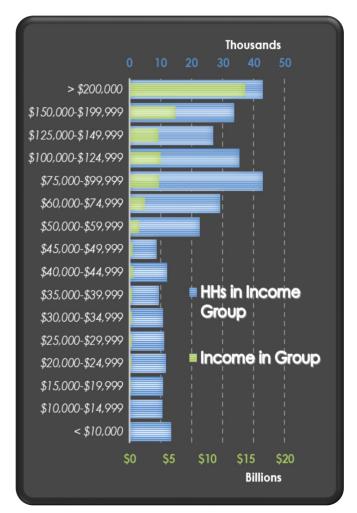
Beyond its employment characteristics, the income inequality and spatial disparities are significantly different than national trends. In general, the county

has a significantly larger proportion of wealth and wealthy people than the country. This is first seen in a simple distribution of its 70 municipalities and their incomes.

Bergen County's median household income is \$114,335, where only two of Bergen's 70 municipalities have figures below the national median of \$52,762.

However, 47 of them have lower Median Household incomes than that of the county overall. Ridgewood is the only one of the ten largest municipalities to meet or exceed the county's median household income; with an income more than triple that of the largest municipality—Hackensack. This all points to a county





that is very wealthy overall, but with a large glut of extremely wealthy communities.

The households of Bergen by-and-large have an unexpected degree of equality. The GINI coefficient of the county is nearly the same as the nation overall—both around .45. Bergen's mean household income is only about \$11,000 above the national average.

However, the proportion of wealthy households in Bergen is far higher

than the national average. Only about 30% of Bergen County households make up to \$50,000 in income, compared to 47.5% for the country overall. The income of this group has a radically smaller proportion of the income as well—6.8% in Bergen County, versus 17.1% overall. Inversely, the wealthiest three brackets include about 30% of Bergen households and about 55% of its income—the national figures are about 15% and 30%, respectively. This means that the GINI coefficient will be skewed, as there is a critical mass of very wealthy residents and a small proportion of poorer residents.

**ACIAL SEGREGATION** 

Bergen County's suburban dominance includes a raft of municipal zoning codes that effectively exclude inexpensive or denser housing forms. This has likely contributed to the extraordinary dearth of lower-income households in the county. However, the codes have also been effective methods to restrict the free flow of minority populations around it.

Only six of Bergen's municipalities are home to greater than one thousand black residents; four of which are also among the largest municipalities in the county. Overall, the black population of Bergen is miniscule, about 7% in 2000 and 8% in 2010. What's interesting, is that the change is larger than it appears. The dissimilarity index declined from 62% to 53%, meaning many fewer residents would have to move around to achieve a regular distribution of Black and White residents. However, this is largely due to a significant change in the population. The White population contracted by more than 40,000 where the Black population grew slightly by 6,000. The contraction hit the largest, and most diverse, municipalities the least.

Measuring the dissimilarity index by census tract made little difference. The fact that most municipalities are very small in size means that they are similar units of population. However, the overall data is skewed. Segregation of black residents and white residents is not the only form of segregation. Bergen County has one of the largest populations of Asian and Hispanic residents in the state; both of

which dwarf its black population. A more descriptive analysis of the county would examine the spatial distribution of each population. In several communities, Asian or Hispanic residents may have occupied the lower cost housing that might otherwise have been occupied by black residents. On the other hand, the county may instead be carved up into several very different racial or ethnic enclaves.

### ITE OPTIMIZATION FOR RECYCLING FACILITY

Determining the location of a major public facility is a complex decision. Public institutions must cater to a diverse array of interests. However, a recycling facility would inevitably prioritize, among other factors, distance and population.

Institutions that center on freight or any other form of transportation are likely to prioritize locating its main facility at a point which maximizes proximity to the areas it services. An optimal location would improve the efficiency and cost of its hauling. Such an institution would also have to factor in the population (or customers) within each area it will service. Proximity to a market with five customers is simply not as important as one with 50,000.

If a new recycling facility were to be built in Bergen County, Hackensack would be a leading contender. Examining the population and location of the ten largest municipalities in the county offers a quick shorthand for this decision. The largest municipalities of Bergen are largely clustered in the central and southern areas of the county, with a few outliers. Hackensack has the largest population to service and is the most convenient for connections to the rest of the target areas.

In a real-case scenario, this sort of decision would require consideration of other important factors. For one, the proximity to the various service areas would have to be tempered by the transportation routes available. It is not possible—or desirable—to transport a large amount of recycling exclusively on small

residential streets nor on highways that are at capacity. This is a balancing act that has to include proximity, community impacts, as well as the traffic environment. The cost of real estate and availability of skilled workers is another important consideration. A recycling facility on cheap land at the outskirts of Hackensack might be an easy sell. However, it might not be a convenient or desirable area for skilled employees to be able to get to. Lastly, the environmental impacts will be tied to every single decision made about any recycling facility: noise impacts on the community, potential for pollution, how runoff will be managed, etc.