Inclusive Commuting Facilities via Integration of Bicycle Routing Infrastructure

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Executive Summary:

The following memo identifies the bicycle routing densities of the Los Angeles county provided by the Southern California Association of Governments (SCAG). It outlines the feasibility and inclusive metrics of bike installation points by keeping the followings in considerations: bike volume count, land use, transit points, transport facilities and demographic data (white vs non-white)

Background:

The slow moving transport groups are the most vulnerable in the street and requires special protection. And there comes the special provisions like bike lanes. But with these provisions there comes other issues. Rightly or wrongly, gentrification is often seen as a process that arrives on two wheels. Expensive restaurants, dog parks and gyms have long been seen as symbols of gentrification. A loaded term generally understood to mean new wealth and people that flood into an area, displacing longtime residents or making new amenities unaffordable to them.

- **Parameters Affecting Gentrification with Respect to Transport Facilities:**

Public investment in the transportation sector has a mixed impact on the people of low-income category. First of all, they would be able to enjoy the more advanced transportation facility. However, they are enforced to be displaced because of the financial difficulties resulting from higher housing rents and property values. Table 1 reinforces this fact of displacement. It is noticeable that the transferal of low income people is higher from Riverside to San Bernardino, Los Angeles to Riverside and Orange to Los Angeles and median gross household rent is one of the key factors for this displacement.

County	Median Household Income (2017)	Change in Median Household Income (2012 to 2017)	Median gross household rent (2017)	Change in Median gross household rent (2012 to 2017)
Los Angeles	$61015	$804	$1322	$51
Orange	$81851	$951	$1693	$106
Riverside	$60807	-$313	$1251	$6
San Bernardino	$57156	-$1458	$1182	$5
Ventura	$81972	$91	$1643	$94
Imperial	$44779	$612	$805	$29

**Table 1:** Economic characteristics of the people under SCAG region

Correlating Bicycle commuting vs Gentrification:

We plotted the bicycle routing infrastructure which includes the bicycle numbers and the volume of bike usage. Median Household Income, other transport facilities like Metro link, demographic data (white vs non-white population) and land usage data were analyzed with respect to the bike transport facility.

- **Median Household Income & Metro Link**

In the commercial and industrialized zones having a lower income population, we can see an extensive usage of bicycles.

- Low income population tend to use active transportation as it is cheap and they do not have the means to go for private transport facilities.
- Low income group tend to live closer to their working place as it reduces their travel time and helps them to actively engage in long working hours.
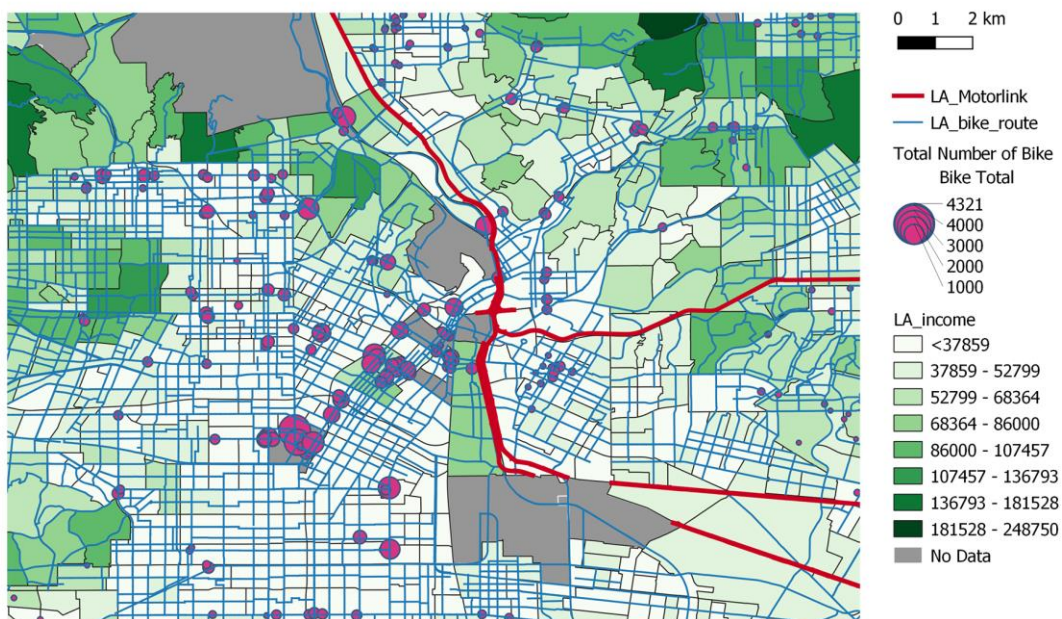

Irrespective of the income groups, we see a dense concentration of bike usage closer to the transit facilities and metro lines. It increases further when there is a presence of metro-lines intersection.

- Bike routing facilities are provided abundantly in areas surrounding the metro lines. People of all classes tend to use the facilities in order to reach the metro stations quickly.
- Due to the presence of metros the mandate of living closer to work places diminishes to a great extent.

Along the coastline and bay area, even though there is a heavy concentration of high income groups the usage of bicycles is found to be in great extent.

- Suitable biking facilities are provided and it encourages the higher income group to switch to active transport mode as this is seen as an aristocratic cultural shift on one hand and a nobility of saving the environment that comes as a trade-off.
- The culture of bicycle riding is established and class conflicts are not found. As such, people tend to switch from private transport ownership to public and active ones.
- Possible degree & cause of gentrification: The probability of gentrification is less in these areas as it is seen that mostly the high income groups use bicycles to a large extent.
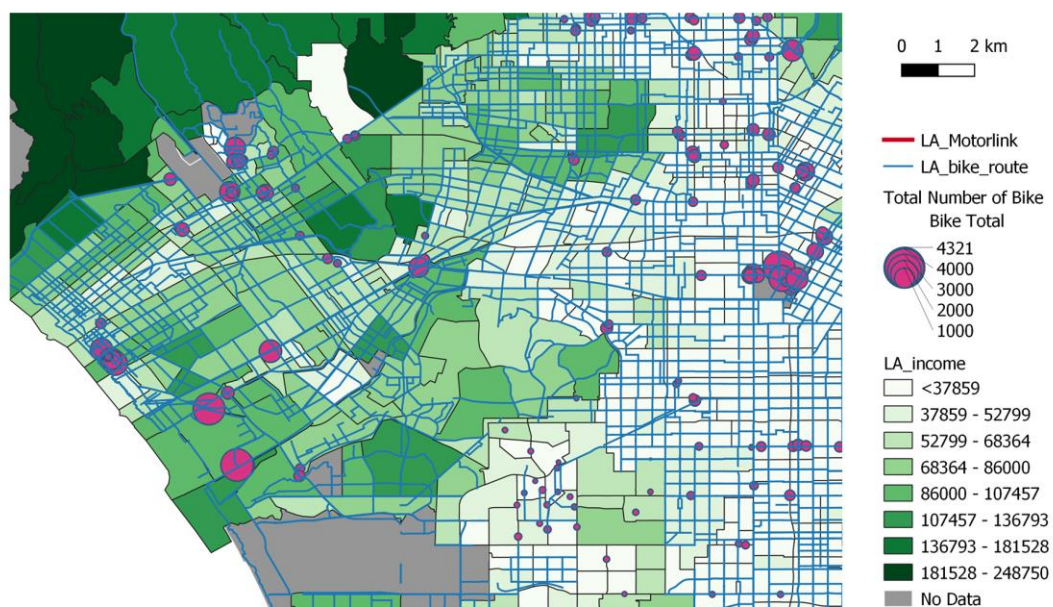
Policy Recommendation:

- Equity and class inclusion:

The following policy recommendations are made by taking lower income group, higher income group and middle income group in considerations. Besides, land usage pattern like industrial and commercial zone, rural and, bay area plays significant role in deciding the level of possible gentrification.

- The gentrification will be higher if the workplaces of the working groups are situated far from their neighborhoods. In absence of public transport facilities, it will force

them to change neighborhood. The addition of bike lanes could be a primer of a developed urbanization that may lead to increased housing prices, making it difficult for the lower and middle income groups.

Recommendation:

1. Connect working-class residential neighborhoods to local job centers
2. Provide bike-sharing opportunities in neighborhoods where owning a bicycle is impractical or unaffordable
3. Lower taxation policy for lower income groups where new development is initiated due to installation of bike units so that price control mechanism is maintained in order to avoid displacement

- Possible degree & cause of gentrification: The gentrification possibility in the regions closer to the proximity of metro lines and their intersection will be less compared to other places due to the presence of alternate transport facilities. As there is already the provision for public transportation, the only thing that needs to be ensured is the parking facilities for bicycles.

Recommendation:

1. Proper bike parking facilities closer to metro stations
2. Creating connections between neighborhoods that are not adequately served by Mass transit

Reference:

Regional Bike Infrastructure:
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Median Household Income:

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Transit-oriented development and gentrification: a systematic review:

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Bike Statistics:

http://peopleforbikes.org/our-work/statistics/statistics-category/?cat=participation-statistics

SCAG EJ Technical Report:

https://www.connectsocal.org/Documents/Adopted/0903fConnectSoCal_Environmental-Justice.pdf