

Recovering from COVID: Infrastructure Impacts on Socioeconomic Indicators

Regional Economic Models, Inc.

Why is this topic important?



2020-21 Short-term economic shock is unprecedented:

- Moving back home; shift to suburbs; interstate migration
- Massive jobs losses
- Monetary/Fiscal response

National Macroeconomic Implications:

- GDP
- Employment
- Productivity
- Prices

Structural shift in economic geography:

- States and localities face ongoing and persistent challenges.

Analysis to highlight socioeconomic challenges for states and cities, in particular, the widening of income and racial disparities.

Wealth inequality:

- All asset classes (stocks, bonds, housing) appreciated.
- Widened gap between have and have-nots.

Wage inequality:

- Job losses concentrated in lower wage jobs.
- Wage gains for professional, remote workers.

Racial and gender equality:

- Black and Hispanic workers, women disproportionately impacted.

Educational inequality:

- Job market weakest for those with less education.

Focus on Transportation Infrastructure



Bipartisan Infrastructure Package

- In total, the deal includes \$550 billion in new federal investments in America's infrastructure over five years.



Broad-based Economic benefits

- Public good: common use by everyone
- Employment of construction and materials workers
- Supporting manufacturing, commerce, personal transportation



Public Transportation

- Connecting workers to employment opportunities
- City center to suburbs

Joint REMI-KPMG Study; Bus Electrification Component



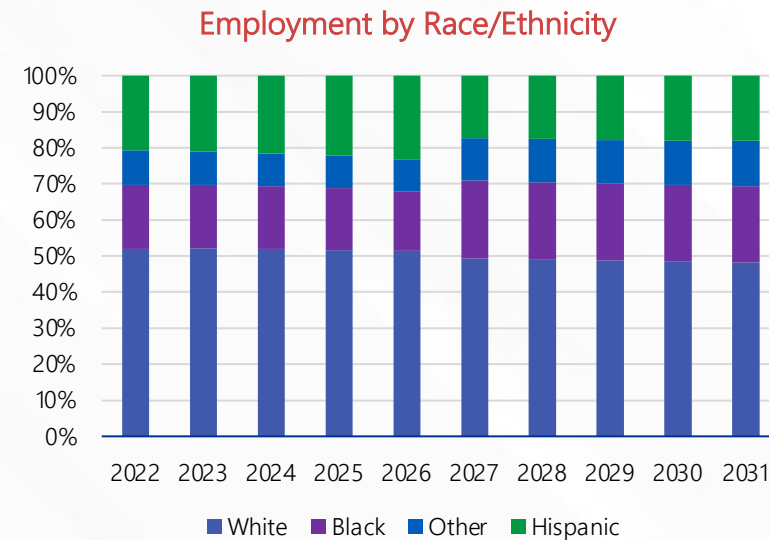
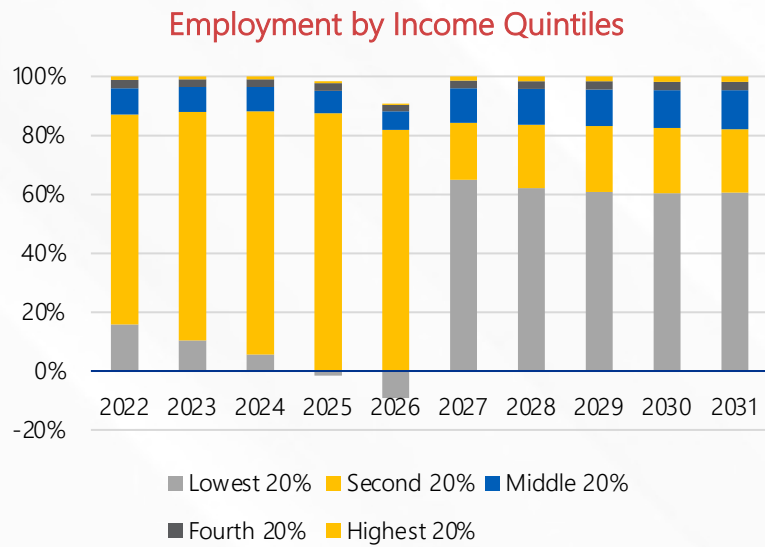
- Bus Electrification and Expansion of the Network in the DC Metro Area
- Motivation: connecting labor force to jobs; environmental benefits

Assumptions	
Timeline	Analysis period: 2022-2031 Electrification completed in 5 years (2022-2026) Construction of BRT conducted concurrently
Initial Costs	Expensed evenly through the five-year replacement period Entirely paid for with federal funding
Input	Components
Manufacturing costs (2020\$)	Vehicle facility charging facility costs
Construction costs (2020\$)	Charging facility installation and BDT construction costs
O&M cost savings (2020\$)	Difference between the O&M costs of the existing fleet and the cost of operating an expanded electric bus fleet
Labor Access Index	Lower commuting costs

Bus Electrification Effect on Income and Employment



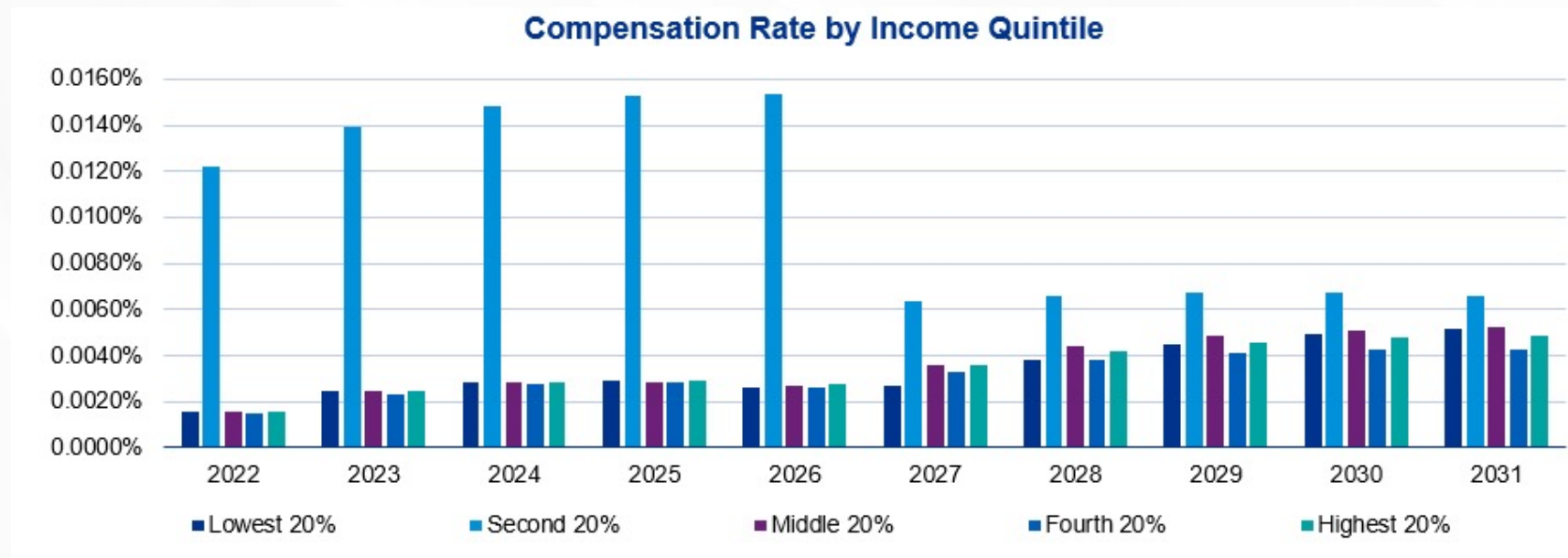
- Approximately 50% of new jobs benefit ethnic and racial minorities.
- More job opportunities for low-income and Hispanic workers.
 - 80% of employment gains benefit from over 20% of the total jobs gained during the construction phase, exceeding the population share in MSA.
 - During the operation phase, black workers are expected to have the most significant gains in employment among minority groups, accounting for approximately 21% of all new jobs.



Bus Electrification Effect on Compensation Rate



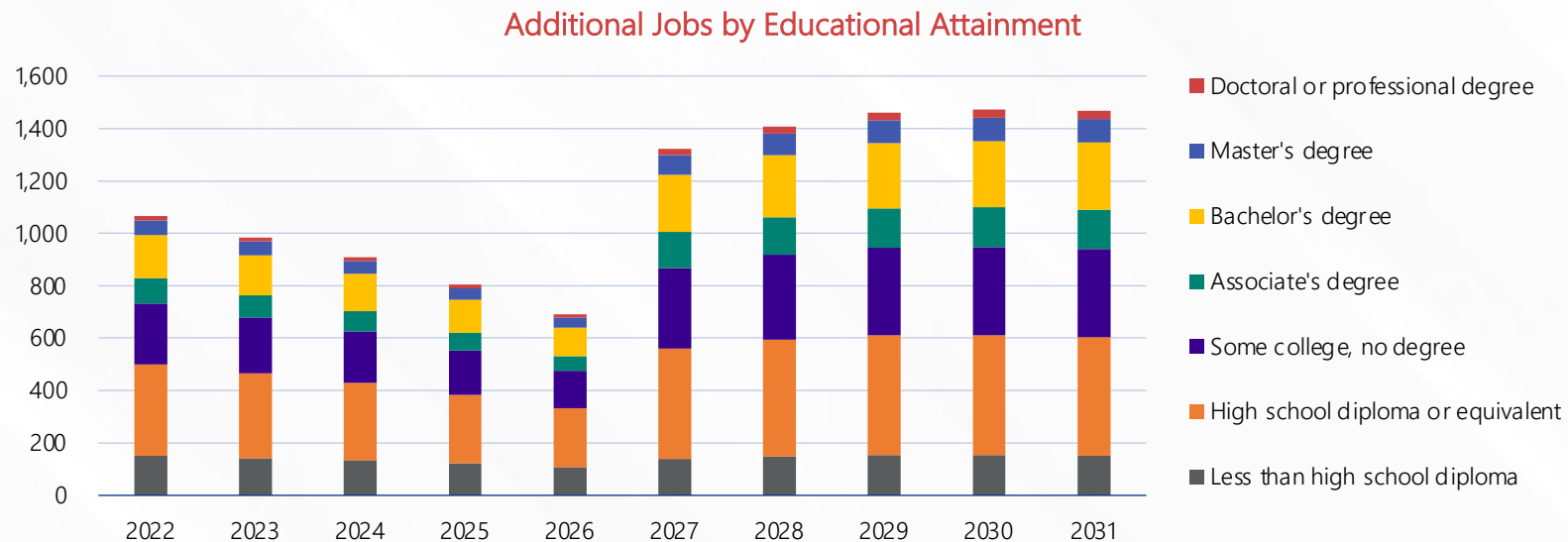
- High Compensation rate for all income groups
- The largest growth for the second quintile ranging from 0.012% to 0.015%, which includes the construction sector during the construction period
- More evenly distributed among quintiles after construction, buoyed by improved labor access.



Bus Electrification Effect on Educational Experience



- More job opportunities for workers with at most a high school degree
- By 2023, about 400 jobs would be added for workers with a high school degree.
 - 76.1% of the newly employed will not need a bachelor's degree (relative to 62.5% of the overall workforce)



Conclusion



The COVID-19 Shock has changed the economy in many ways

Economic Disparities, already a concern pre-pandemic, have been exacerbated:

Wealth, Income, Educational Background, Race/Ethnicity, Gender, Regional

Addressing these issues is a political and policy problem.

REMI provides a framework for evaluating the macroeconomic and socioeconomic effects of policies.

We provide an illustration for one potential project from the Bi-Partisan Infrastructure Bill.