

TELECOMMUTING IMPACTS OF COVID-19



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State & Local Policy Program



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eWorkplace Phases



Phase I

Marketing,
awareness and
implementation
campaign

Promoted
teleworking and
flexible work
scheduling

Reduced peak
period commuting
on congested
roads

Phase II

Focused on
Hennepin County

Aimed to reduce
congestion and
improve air quality
by increasing
telework

Phase III

Focused on
35W/94

reconstruction
Collaborated with
MnDOT, Hennepin
County, City of
Minneapolis

Funded by Federal
TDM grant and
MnDOT till
12/2018

COVID-19: The World Went Remote



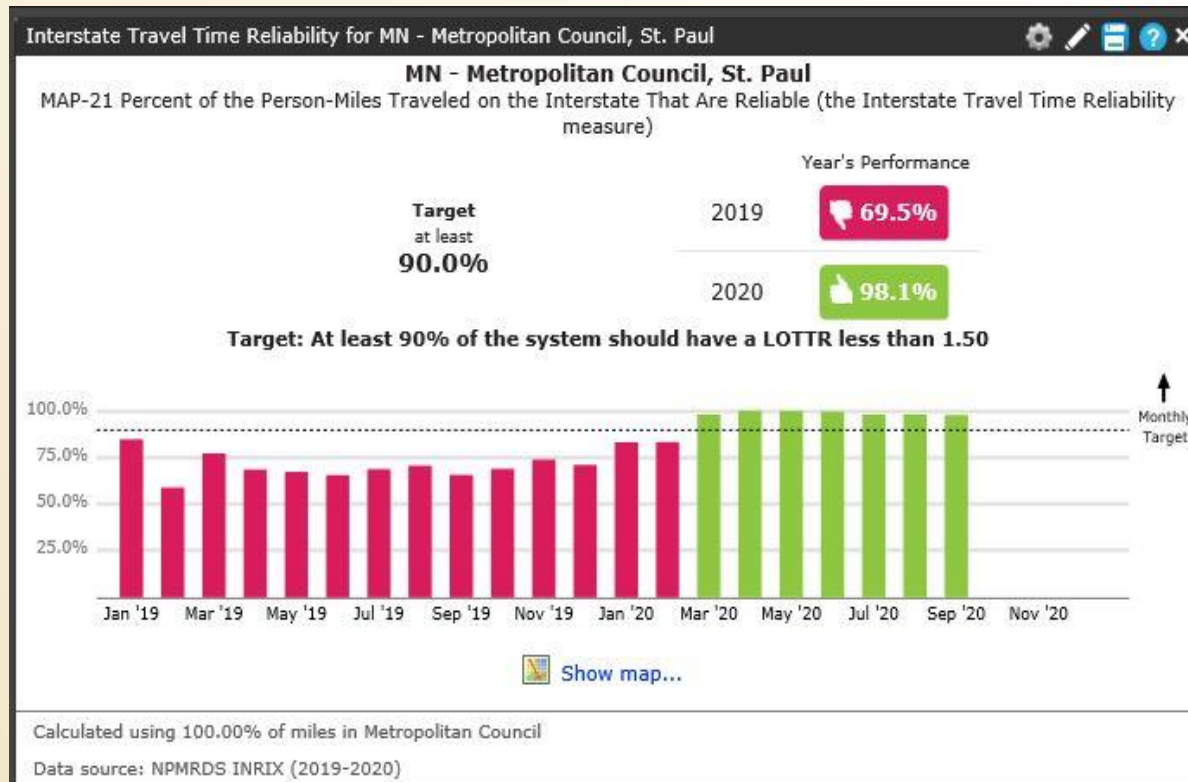
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- 43.5% of Household had atleast one person telecommuting in MN (BTS)
- 48% full time WFH in May vs. 12% before (Met. Council)
- 12.2% of workers in Minneapolis Downtown this summer of 218,00 in February 2020 (Minneapolis Downtown Council)
- 32% reduction in trips to workplace (Minnesota)
- 45% reduction in trips to workplace (Hennepin County)
 - Google Mobility changes on October 9th vs. baseline
- 35.2% full time WFH in May vs. 8.2% in February (Federal Reserve)
- 71.7% of workers that could work from home effectively did (Federal Reserve)

Reliability Impacts



Twin Cities Interstate Reliability



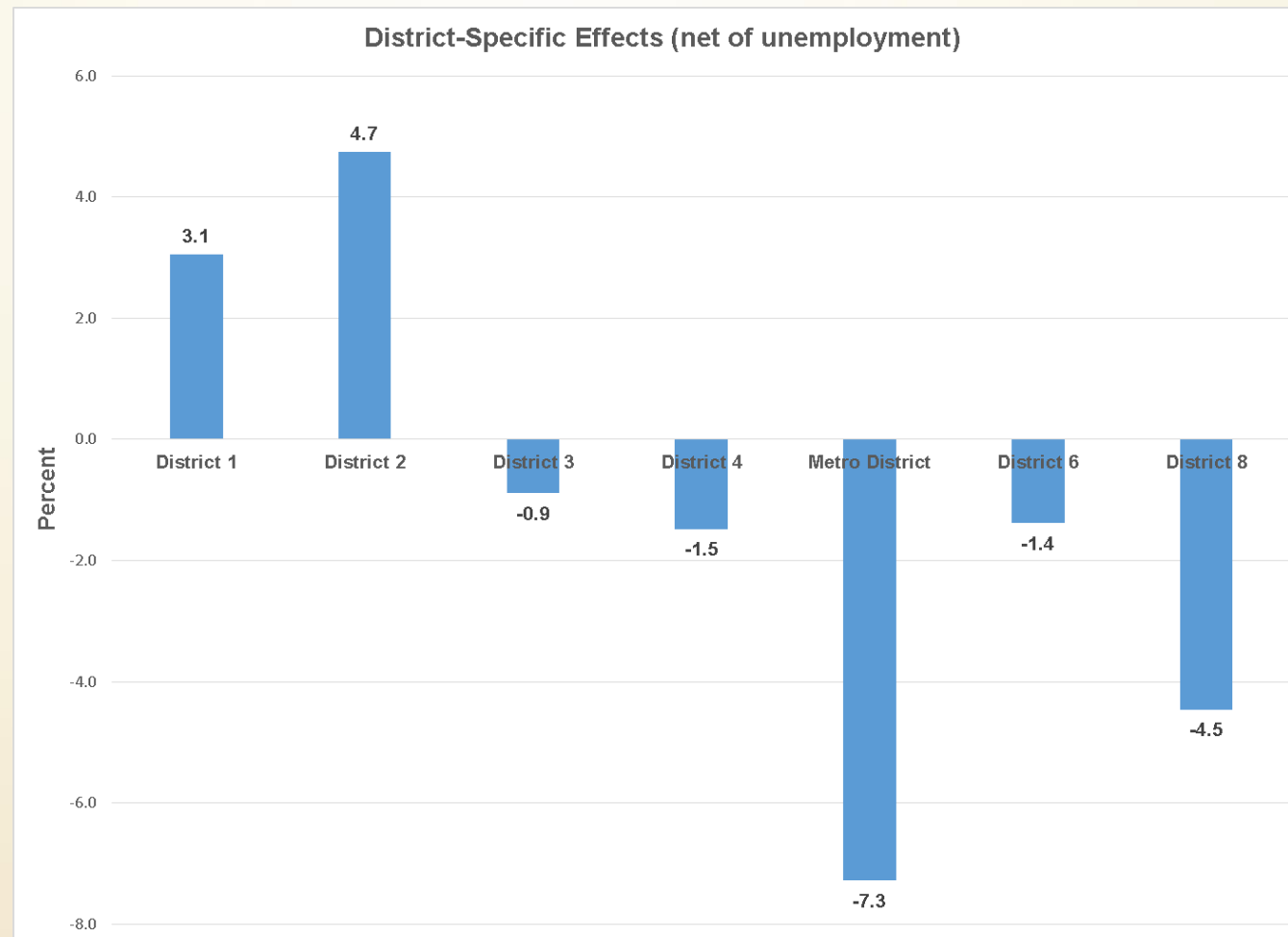
Twin Cities Non-Interstate NHS Reliability



District-Specific Fixed Effects



District specific effects are the change in traffic volumes minus caused by unemployment in those districts.



Working from home is not for everyone



Race

- White 29.9%
- Asian 37.0%
- Black 19.7%
- Hispanic 16.2%

Educational Attainment

- Less than High School 4.2%
- High school graduates 12.6%
- Some college or associate degree 24.2%
- Bachelor's degree or higher 51.9%

Gender

- More women can work from home
- But more women dropping out of workforce

This is not your father's recession



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- Recessions of 1990, 2001 and 2008 impacted the top 25% of income earners and bottom 25% income earners at about the same rate
- Covid-19 recession, the top 25% whose jobs can be done remotely has bounced mostly back but for the bottom 25% working at restaurants, hotels, theme parks etc. have experience job losses of more than 20%



- A number of the companies (Target, Facebook, Microsoft etc.) have announced WFH till the middle of 2021 or later
- It will be at least 15 months of WFH. Habits form, new culture?
- Banks announced permanent closing of branches, telemedicine approved by Medicare, automation speeding up, iPhone has 5G




- Long lasting change depends upon how we respond
 - 1973 Oil Embargo
 - 6 months
 - CAFÉ Standards, 55 mph speed limit, alternative modes promoted
 - I-35W Bridge Collapse
 - 14 months
 - Traffic patterns reverted to status quo
 - There are differences in these examples, but the point remains: without long-term responses, behavior reverts to status quo, vulnerabilities remain, and gains from innovation may be lost

Research Questions



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- Potential long-term impact of telecommuting on vehicle miles travel, congestion, transit, finance and emissions
 - Impact on women, minority communities, low income and strategies to overcome
 - Strategies to sustain environmental benefits achieved by working from home
 - Viability of transportation capacity improvement projects
 - Strategies to maintain Transit services
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THANK YOU! Questions?



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Not All Vehicle Volume is Decreasing

