Are Government Broadband Internet Subsidies a Waste of Money?

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Topic Importance:

With the rising importance of the internet in people's daily life, broadband has become a hot topic in recent years. The government has offered various funds to support rural areas in developing broadband. With such a large amount of money involved, whether the funds help with broadband deployment is essential in designing future government and company policies.

Background Information & Methods Applied:

Dataset: 1. FCC-477; 2. Census Data; 3. USAC High-Cost Funds

Methods Used: 1. Data Cleaning; 2.Data Visualization; 3.Correlation Analysis;

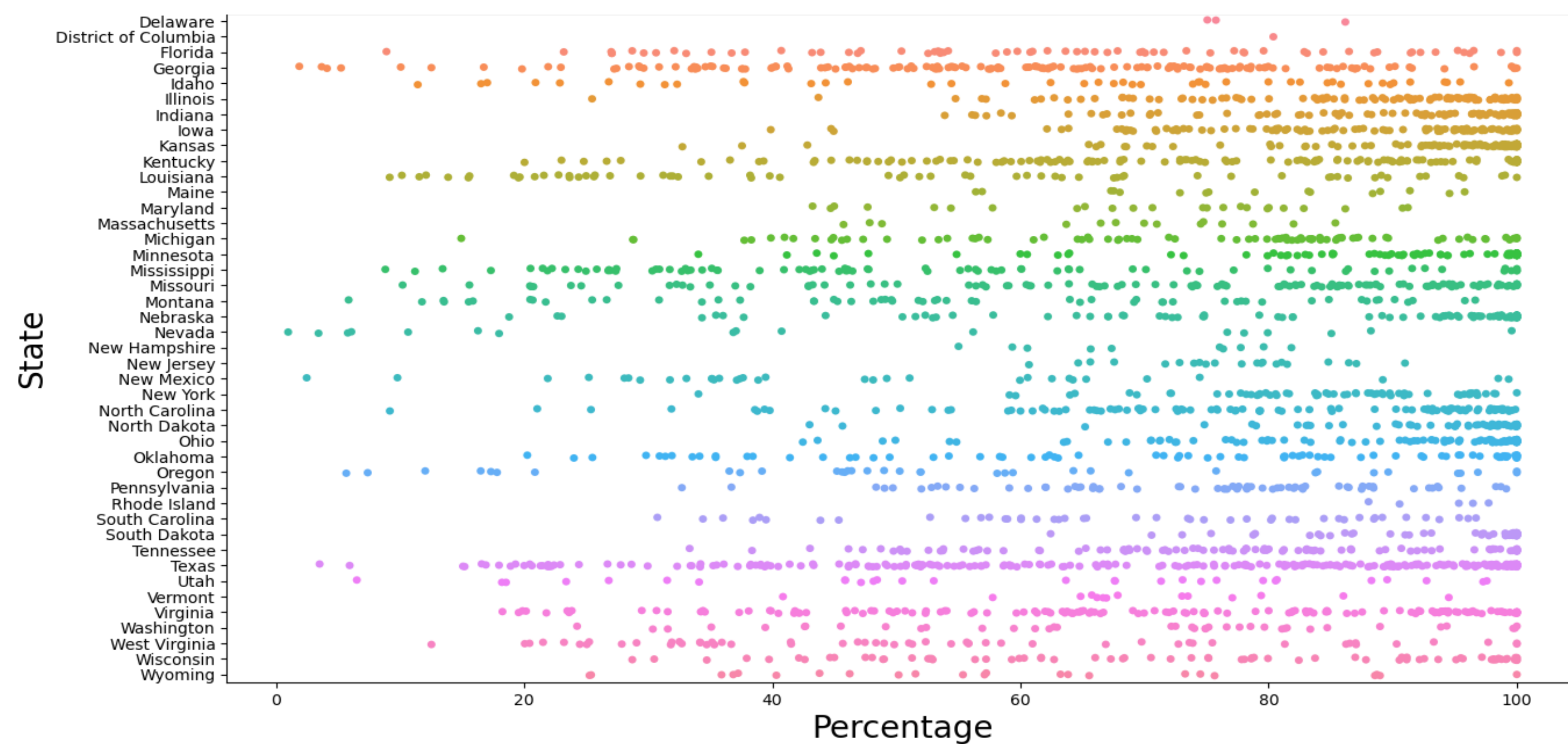4. Linear Regression; 5. Random Forest; 6. Casual Inference

Figure 1. 2021 State Level Broadband Deployment Situation

Figure 2. Correlation Matrix for Each Feature

Results:

Using the Causal Inference, the result is positively significant, which means the funds positively affect broadband deployment in rural areas.
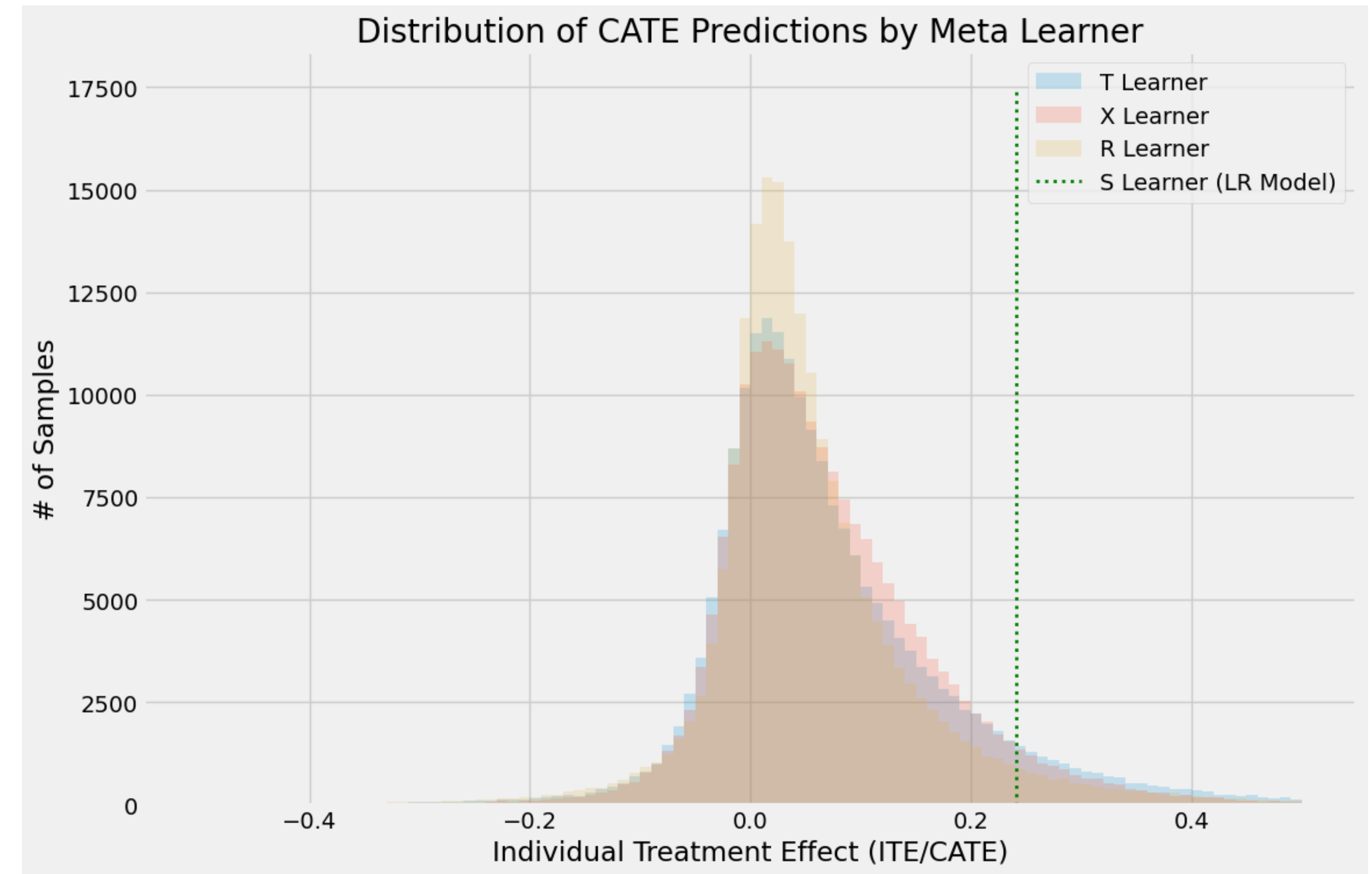

Figure 3 Estimated CATE for Fund

Conclusion & Recommendation:

USAC High-Cost Funds have a positive effect on promoting broadband deployment in rural areas. Considering all other effects, we recommend continuing to apply funds to suitable rural areas to help build broadband across the US.

References:

Gadiraju, V., Panat, A., Poddar, R., Sherriff, Z., Kececi, S., & Schulzrinne, H. (2018). Who gets broadband when? A panel data analysis of demographic, economic, and technological factors explaining U.S. broadband deployment. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3142479