This is a Heroic Stride Forward in the Measurement of Infrastructure

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two divergent paths to its measurement

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2. Count spending on infrastructure and adjust for prices and depreciation
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Where the heroism lies

- today’s real capital = (yesterday’s capital / price index) * depreciation
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- depreciation is hard to measure
- and so are prices
Comments in Three

1. Why do we care?
2. Puzzle 1: BEA “quantity” does not look like spending per mile
3. Puzzle 2: Spending per mile does not look like other prices
4. Where do increases go?
1. Why Do We Need Good Measures of Infrastructure?

Good measures of infrastructure help us

1. To understand and predict growth, if infrastructure is a key input into growth
2. To evaluate claim that US infrastructure is wanting
3. To evaluate potential value-added from additional government investment

Hendren and Sprung-Keyser, 2020
2. Puzzle 1: BEA “Quantity” Not Like Spending per Mile

- Zach Liscow and I show a **large** increase in spending per new Interstate mile. (Brooks and Liscow, forthcoming)
- BKSW show relatively flat total spending over time, even as population declines.
- These need not follow the same path, but their deviation is noteworthy.
Spending Per New Interstate Mile Increases
2. Puzzle 1: BEA “Quantity” Not Like Spending per Mile

- **Real spending per mile**
- **Gross real inf. spending**

Index Level:
- 1960: 1.0
- 1970: 1.0
- 1980: 2.5
- 1990: 3.0

Graph showing the trend of real spending per mile and gross real infrastructure spending from 1960 to 1990.
3. Puzzle 2: Per New Mile Spending Increase, No Price Increase

Interstate Spending per Mile

Series indexed to 1961 = 100
So, Not Because We are Paying More Per Unit of Input

Interstate Spending per Mile

Materials

Series indexed to 1961 = 100
So, Not Because We are Paying More Per Unit of Input

- Interstate Spending per Mile
- Construction Compensation / FTE
- Materials
- Hourly Wage

Series indexed to 1961 = 100
Real Spending Per Mile Increases More Than DOT Price Index

- **Real spending per mile**
- **Adjusted DOT price index change relative to inflation**
3. So Where Is The Money Showing Up?

![Graph showing the increase in millions of sq ft of noise wall construction over time from 1970 to 1990.](image-url)
Where Else?
Where Else? Curvier Roads

![Graph showing the wigglinez of curvy roads over the years.](image-url)
Thinking Broadly: How Do We Interpret Capital Stock Over Time?

- Our work suggests that a real 1970 dollar buys more than a real 1990 dollar
- Deflating with input prices does not capture this difference
- If the goal is to give a measure of the physical stock, this is a concern
- Should the measure of stock be additionally deflated? If so, how?
Thank you!