



**What Do *Economists*
Really Know About
Broadband and Economic
Development?**



First-mover case studies are dramatic

Cedar Falls, Iowa, 2003

New Construction Valuation

Year	Cedar Falls	Waterloo
1996	\$32 M	\$58 M
2001	\$65 M	\$76 M
2002	\$101 M	\$53 M



The first to get broadband wins

MIT, 2005

Communities with mass-market broadband available by December 1999 had faster growth in employment, number of businesses and IT-intensive businesses by 2002.



First movers win again – sort of

Kolko, 2010

- Going from no broadband in 1999 to some broadband in 2006 increases jobs in most industries
- **BUT** no effect on employment rate or average pay; negative effect on median household income



The relationship between broadband and economic development today:

- Single
- Engaged
- Divorced
- It's Complicated**
- Separated
- In a Relationship
- Married



Why?

- The rule, not the exception
- Moving target
- Two-way causality
- Communities respond differently
- It takes more than broadband
- Many ways to measure broadband, economic development



Penetration and speed increase GDP

Swedish studies, 2010–2017

- Each 10 percentage point increase in broadband penetration increases GDP by 1%
- Doubling broadband speed increases GDP by 0.3%



In rural areas, adoption is key

- Higher adoption leads to higher income growth, less unemployment
(Whitacre/Gallardo/Strover 2013+)
- Adoption explains economic trends four times better than access (Rinehart, 2018)
- SNG work on business utilization



Location matters

- Metro-adjacent rural counties show more new businesses (Kim & Orazem, 2017) and farm income (Kandilov, Kandilov, Renkow & Liu, 2017)
- Medium-sized towns nearer big cities benefit most from speed increases. (University of Connecticut, 2018)



Last movers lose out

(Ross, 2013–2018)

- Counties with the worst broadband access in their states suffer population loss.
- Effects on income are less clear – because the emigrants take their low income with them.



Lessons for communities

- Define your goals
- Allocate budget for adoption and training efforts
- Be realistic about what you can expect to accomplish