Economic Impacts of Mining: Overview

• **Usual expectations:**
  - great for local economy
  - counteracts rural decline

• **Actual findings:**
  - where resources rich, people usually poor
  - in North America, ~ half of all findings BAD
    > incomes
    > unemployment
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- **Logic 150 yrs out of date.**
  Today, more growth from *preserving* nature

Key “Amenities”: Topography, shorelines, climate
Source: David McGranahan, *Natural Amenities Drive Rural Population Change*. USDA Report No. AER781
Best-known example of declining industry, US: Agriculture (compared to end of own “golden era”)

Employment in Agriculture
(Proportionate to Industry Totals, 1920)
During most of the 20th Century, extractive industries declined just as fast.
Economic Impacts of Mining: Overall Findings

- Good data; mining has “own SIC“ (summary, Freudenburg/Wilson, Soc Inquiry 72 [2002])
- three categories: 
  - incomes, 
  - unemployment, 
  - poverty
- threw out many “adverse” findings, few “favorable” ones (need apples-apples comparisons)
Economic Impacts of Mining: Overall Findings

- across three categories (incomes, unemployment, poverty), get 301 "apples-to-apples" comparisons:
  - 139 (46.2%) adverse
  - 88 (29.2%) favorable
  - 74 (24.6%) neutral

- 12 significance tests:
  - 1 "good," 7 "bad"

- Since 1982, worse:
  - 102/57.3% bad, 36/20.2% good, 40/22.5% neutral

- Region with fewest “favorable?” Great Lakes
  - (6.5%; 2 of 31 studies)
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• Otherwise not very sensitive to specific studies

**Figure 5**
Ratios of adverse to favorable findings without the indicated sources.
Economic Impacts of Mining: Other Findings

- Other data also reinforce
- National Rural Job trends, by type of county:
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- National Rural Job trends, by type of county:
  - Wyoming, ’69-91:
    - > 90% new jobs *not* in logging/mining/agriculture
    - > 75% in “services” (including univ’s, engineering, etc.)
  - Preliminary evidence: New jobs more dependent on environmental *preservation* (not extraction); seek higher environmental quality
Common Pattern: “cost-price squeeze”
Cost-Price Squeeze

Prices

Costs

Profit
concessions from
• workers
• local politicians
• labor/safety regulators
• environmental groups
Worse for Underground Mines
(Higher initial employment; more risk of early shut-down)
Example: Marquette Range (UP, MI; 100% underground~100 yrs)
Please, Lord!
Give us one more
Oil Boom,
and we promise
not to piss it away!
JOBS VS. ENVIRONMENT

WELL, THAT'S THE LAST ONE!

YOU'RE FIRED!
So — is common logic wrong?
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(2) nature/value of “economic linkages” completely changed, last 150 years
Useful concept #2: “Economic Linkages”

Other industries, tied to raw material extraction
• “upstream”: Provide *inputs* (machinery/tools, services)
• “downstream”: Process raw material *outputs*

EXAMPLES?
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EXAMPLES?

- Estimate from Economist:

  1000 trees $\rightarrow$ ? jobs

  raw logs: 3 jobs
  moulding, components: 20 jobs
  furniture/final prod’s: 80 jobs
Reconsider common logic

• “all wealth comes from the earth”
• “England got rich from coal”
• California is "gold(en) state"
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Largely true/Britain:
- “Linkages” (but that was 150+ years ago)
“Linked Prosperity,” British Coal: *Not just mining.*
- ”Silicon Valley of the Industrial Revolution?”
- Need revised understanding of “economic linkages”
The BEST resource areas usually get today: “temporally delimited” linkages

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• Not necessarily “limited” to same (boom-bust) times as markets for coal

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Reminder: usual focus = input/output (upstream/downstream)

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• relevant to “U.S. Frontier”:
  until ~1850s, U.S. had “manufacturing frontier”

see: Margaret Walsh, 1972. The Manufacturing Frontier: Pioneer Industry in Antebellum Wisconsin, 1830-1860
The BEST resource areas usually get today: “temporally delimited” linkages

Contrast: 20\textsuperscript{th}, 21\textsuperscript{st}-centuries:

- most extraction =
  - very few linkages
  - same cycles (e.g. sawmills)
Why differences in “temporally delimited” linkages?

(1) Transportation efficiency/effectiveness
   – pre-1600: wagon of coal 5 mi., double cost: Move TO coal?
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   - England was #1 in world in coal
   - "boomed" ~1550-1800
   - Best estimate: TOTAL mined 1550-1633 ~34 Million T
1550-1633 total, ~34 Million Tons
= "Black Thunder" mine, WY, 1993 alone

...and that’s *not* top production year
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∴ Net effects: Since ~1820s,
   — extractive regions
     “capture” few linkages
   — most are “linked”
     in same basket
   — basket empties faster
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(3) Cost-price squeeze
Direct, Linked, and Total Employment, Louisiana Four-Parish Region

- Total Regional Employment (right scale)
- Linked Employment (Left Scale)
- Total Extractive Employment, All Four Parishes (left scale)
Direct, Linked, and Total Employment, Louisiana Four-Parish Region

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Data spans from 1959 to 1986.
Direct, Linked, and Total Employment, Louisiana Four-Parish Region
OILFIELD EQUIPMENT
FOR SALE