Moving Idaho's Economy

BUILDING ON SUCCESS

Chandler Duncan

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Why Transportation Matters

Basic “Traded” Industries

SUPPORT

Population Serving Industries

But you need transportation to get it there!

Products & Services Sent Out

Income Flowing In

GOVERNMENT
EDUCATION
HEALTH CARE
RETAIL
PERSONAL/BUSINESS SERVICES
CONSTRUCTION

NATURAL RESOURCES
MANUFACTURED PRODUCTS
DISTRIBUTION CENTERS
TOURISM
Goods flow out, money flows in

$33 \text{ B}$ outgoing trade in 2013; $22 \text{ B}$ by truck & truck-rail

**OUTGOING TRADE BY MODE**

- **Rail**: Commodity 2013 $\text{B}$
  - Manufactured goods: 5.1
  - Agriculture and food: 5.3
  - Other: 6.4

- **Other**: Total outgoing $16.8 \text{ B}$

- **Pipeline**: mostly natural gas

- **Truck & truck-rail**: 64%

**ROAD DEPENDENCE**

- Wholesale, dairy, manufacturing, agriculture

**SOURCE**: TREDIS
Basic (for export) industries:
(Source: United Dairymen of Idaho)

Tourism, dairy, potatoes, wheat, corn seed, computer chips, lumber & wood products, metal mining, phosphate mining and fertilizer, and cheese.

Idaho’s Dairy Industry

• Dairy farms; Dairy manufacturing
• Supports other business: feed grains, dairy equipment & maintenance, fuels, transportation, business services (e.g. veterinary, accounting, and legal services).

Other manufacturing…

e.g. Fleetwood residential manufactured homes, Hewlett-Packard, Micron, Simplot Co.

Transportation and Jobs

INDUSTRY PRODUCTION RELATED TO OUTBOUND COMMODITY FLOW(S) BY TRUCK – 2013
(WITH MULTIPLIER EFFECTS)

<table>
<thead>
<tr>
<th>Economic Impacts:</th>
<th>Output  ($B)</th>
<th>Value Added ($B)</th>
<th>Employment</th>
<th>Wages ($B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total from Outbound Truck Freight:</td>
<td>$19.5 B</td>
<td>$7.7 B</td>
<td>96,956 jobs</td>
<td>$4,180 M</td>
</tr>
<tr>
<td>as a percent of the state economy:</td>
<td>19%</td>
<td>14%</td>
<td>11%</td>
<td>12%</td>
</tr>
</tbody>
</table>

Commodities with the greatest export growth (by truck, foreign & domestic):

<table>
<thead>
<tr>
<th>Commodity Description</th>
<th>Change (2013-2030)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufactured goods</td>
<td>$2.8 B</td>
</tr>
<tr>
<td>Agriculture and food</td>
<td>$1.0 B</td>
</tr>
<tr>
<td>Other</td>
<td>$6.4 B</td>
</tr>
<tr>
<td><strong>ALL COMMODITIES</strong></td>
<td><strong>$10.2 B</strong></td>
</tr>
</tbody>
</table>

Source: TREDIS
Transportation and Earnings

- Wages in traded industries were 23% higher than Idaho median income in 2012.
- Growth in traded industries leads to higher wages and bigger local markets for others as well.
- The quality of the transportation system is what enables this money to enter Idaho’s economy.
Transportation Costs and Households

- $1,495 Per Household in 2012
  - Gas, Mileage, Environmental and Crash Costs
  - Does not include insurance or auto ownership costs
  - Will increase to $1,911 by 2030
  - 30 Year Cost is Equivalent to a bank account of $20,013 today

- Additional $819 for Roads
  - Federal and state taxes and user fees
Transportation Efficiency

- 2013 Performance-Related Household Costs
  - $616 Fuel, Gas and Mileage
  - $277 Productive time at work
  - $375 Quality time at Home
  - $189 Crashes
  - $38 Environmental & Health Related

How much could you save?
Paying for Roads

- Largest source of transportation funding
- **Fixed rate**: 25¢ per gallon in ID & 18.4¢ federally with no adjustment for rising costs of building & maintaining roads
- Greater fuel efficiency means more miles on the road but less revenue from the gas tax
- Idaho Gas Tax: pays for **36% less** than it did when the tax rate was last changed (1996)*

<table>
<thead>
<tr>
<th>Average Annual Household Expenditures: A Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phone Service</strong></td>
</tr>
<tr>
<td>(Consumer expenditures survey 2012, BLS)</td>
</tr>
<tr>
<td>$1,239</td>
</tr>
<tr>
<td><strong>Electricity</strong></td>
</tr>
<tr>
<td>(Consumer expenditures survey 2012, BLS)</td>
</tr>
<tr>
<td>$1,388</td>
</tr>
<tr>
<td><strong>Health Insurance</strong></td>
</tr>
<tr>
<td>(Consumer expenditures survey 2012, BLS)</td>
</tr>
<tr>
<td>$2,061</td>
</tr>
<tr>
<td><strong>Idaho State &amp; Federal Highway User Fees</strong></td>
</tr>
<tr>
<td>$819</td>
</tr>
</tbody>
</table>

*Source: Institute on Taxation and Economic Policy, 2011*
Some Things are Priceless

Quality Time
Natural Environment
Life and Health
Key Concepts

- Transportation Performance Makes Jobs and Money available.
- Improving Transportation Performance enable households to both earn and save more money.
- The costs of highway infrastructure are less than the costs time, mileage and other factors that can be saved by system improvement.
- The payoffs of transportation investment go beyond dollars.
Thank You

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Speaking Transportation Economics

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What’s A Benefit?

- Benefits are always *absolute* gains to the economy that can be measured in *real dollars*.

- They arise in three ways:
  - **SAVING MONEY** to Households and Businesses
  - Increasing **PRODUCTIVITY** of Businesses
  - Attracting, Creating or Expanding **NEW ECONOMIC ACTIVITY**
Money-Saving Benefits

- Vehicle Operating Costs
  - Same Activity, Less Mileage on Vehicles or
  - Same Mileage, but better travel conditions

- Travel Time
  - Same Activity, Fewer Hours Spent Traveling
Money-Saving Benefits

- Reliability
  - Greater Certainty about Arrival Times
- Safety
  - Fewer Crashes and Fatalities
- Environmental
  - Less Emissions, Public Health, Wildlife and other Benefits
Productivity Benefits

- Market Access
  - More buyers, suppliers and workers to use from

- Site Efficiency
  - Business can produce more with the same resources because of site-specific features
Contingent Development Benefits

- New Business Attracted (or Created)
  - Must be “net-new” to the state or region
  - Only count “value-added”
  - Do not count “transfers”
What’s an Impact

- Impacts show what the economy does with its benefit

- Over 10 years, a firm saves $100,000 in reliability time and invests it in a new machine, the firm can then..

- Make and Sell $225,000 worth of additional goods

- Retain $20,000 in additional profits

- Employ 2 new workers

- Pay $130,000 in wages
Benefits and Impacts

- Economic BENEFIT = $100,000

- Economic IMPACTS:
  - $225,000 Business Output (Goods Sold)
  - $20,000 Business Profits
  - 2.3 Jobs
  - $130,000 in Wage Income
  - Tax Revenue, etc. etc.
Sources of Impacts

- Transportation Efficiency
  - Using the benefit from transportation system performance (savings)

- Market Access
  - Using the benefit from increased productivity
Sources of Impacts

- **Contingent Development**
  - Often not a benefit, but derived from new business attracted (not simply relocated)

- **Construction**
  - The multiplier effects of capital and operational outlays

- **Adverse Tax/Tolling Impacts**
  - Multiplier effects of taxing/tolling or other revenue mechanisms
What are Multiplier Effects?

- Apply Only to Impacts (never benefits)
- Induced Effects
  - Money is “re-spent” in the economy
- Indirect Effects
  - Market is made for supporting inputs to production
What about Intangibles?

- Beauty, Wildlife, other strategic outcomes?
  - Never occur in transactions
  - Often distributive in nature
  - Often long-term vs. short-term
  - Best NOT to be monetized
# Multi-Criteria Analysis

<table>
<thead>
<tr>
<th>Measure</th>
<th>Score</th>
<th>Weight</th>
<th>Weighted Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Environment</td>
<td>2</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Mobility</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Livability</td>
<td>3</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Future Generations</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td><strong>TOTAL SCORE</strong></td>
<td><strong>37</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Why Multi-Criteria Analysis?

- Avoids indefensible dollar values
- Avoids distraction of public debate
  - Focuses debate on performance areas and not on “what’s a bird’s life worth”
- Recognizes time-value of money and importance of long-term benefits.
Engaging the Discussion

- What kind of outcomes are the most important?
- Who experiences these effects and how?
  - What might the benefits and impacts be?
Thank You

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