Evaluating Economic Development

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Background

- IDED committee brought together May 2003
  - Standardized way of evaluating future projects
  - Provides on-going evaluation of projects
  - Committee consisted of academic and state officials involved in economic measurement
- Iowa Values Fund, Summer 2003
  - Mandated evaluation using “return on investment”

Using “Return on Investment”

- What is a “return on investment”? Can it be used for evaluation in this context?
  - Government doesn’t have “cash flow” or “IRR” merely has a revenue or fiscal flow
  - Revenue flow may only capture some of the benefit to a state

Broad Approaches to Evaluation 1

- Cost-per-job (or per $1,000 investment)
  - Is one job equivalent to another job?
    - How much does it pay? How long does it last? How many hours a year?
  - What program costs are added up here?
  - Lowest common denominator effect
- Economic Impact
  - Multipliers give direct, indirect, induced impacts
  - Input-output analysis (REMI®, IMPLAN®)
  - What does it not tell you?
    - Costs of the investment
    - The growth of local clusters (changing local industry matrix)
    - Wider social and economic benefits and costs
    - Outside of differences in impact multipliers, it tells you very little about alternative uses of the investment funds

Broad Approaches to Evaluation 2

- Fiscal Impact
  - Taxes forgone + incentives provided [+ cost of services provided]
  - Additional future revenues
  - *Business only* revenues and costs or *business and personal* revenues and costs
  - Discounting – government costs tend to be all upfront but tax payback is longer term
  - Other important issues:
    - What sorts of forgone revenues should be included (should the costs of single factor apportionment be included?)
    - What about tax interaction effects – hypothetical firm models
    - Costs of providing government services to a firm vary widely from place to place depending on spare infrastructural capacity
    - If we include personal taxes then what are the costs of servicing those new employees and their families
      - Where do the new employees and their families live? What is the cost of providing services at that place?
  - Does fiscal impact leave some important things out
    - Economic impacts and broader social and economic costs and benefits

The New Employees

- Job chaining
  - If a new investment creates 100 jobs, those moving into those jobs will leave behind their old jobs (where are these old jobs located?), and so on
- In the long run, where do new employees come from?
  - For MSAs, for each 100 new employees, 6-7 go to residents currently unemployed, 16 go to residents current out of labor force, 77-78 to in-migrants. State numbers could be different to MSA numbers
- In the long run, where do they live?
- Cost of providing services to employees will vary by city depending on spare capacity in city/county/school district infrastructure
- One option is to use some sort of state average cost-per-person
- Will a job pay enough to meet these costs
  - Income taxes at the state level
  - Property and local option sales taxes at the local level
  - For example - is the income from a job enough to buy a house whose property taxes will on average fully pay for the cost of services of those living in the house?
  - From this can calculate a fiscal surplus / deficit

Broad Approaches to Evaluation 3

- Benefit-cost analysis
  - Conceptual difficulties with the method
    - Measuring change in producer and consumer surpluses
  - 2nd best option - use proxies for benefits and costs
    - But what are the relevant benefits and costs (when do we stop counting?)
      - Benefits = earnings (net of reservation wages) , business income and property income ...
      - Costs = tax costs, cost-of-living changes, environmental/congestion costs, higher local factor costs
    - Need to know something of the opportunity costs involved
      - This is quite difficult for economic development, when projects are being evaluated one at a time
  - Practical difficulty of then setting up an automated benefit-cost modeling system
  - Further difficulties: capturing things like growth clusters etc., dealing with secondary economic impacts and so on

The Committee's Model

- Basic Design Parameters
  - Simple enough to be used in the field and to be understood by the media and public
  - Comprehensive:
    - No need for external analyses
    - Cover all important issues
  - Defensible
    - Economically and politically
  - Provide clear statement of a project's fiscal feasibility

How the Committee's Model Works 1

1. State personal taxes
   - For the model, each worker needs to generate $2,258 in state taxes for the state to break even – $28,000 is the wage break even point
   - Issue of immigration
   - Produced fiscal surplus or deficit – i.e. **results positive or negative**
   - Not currently used in the IDED model (immigration? marginal costs lower than average costs?)
2. Income impact
   - Direct wage impact
   - Input-output SAM Type II multiplier on wages – gives direct, indirect and induced impact
   - **Result will always be positive** (surplus) and multiplier impact will always be greater than the direct wage impact
3. Public investment
   - Loans, grants, guarantees, abatements, TIFs
   - One time or large new service costs to government
   - Other economic development incentives, which are part of the basic tax structure not taken into account (apportionment)
   - On-going service costs to state and local government not taken measured
   - **Results will always be negative**

How the Committee's Model Works 2

4. Business taxes
   - Calculation of future tax payments by the firm
   - Need for clawback arrangement to ensure these numbers are "real"
   - **Results will always be positive (but should they be)**
5. Local personal taxes
   - Local option sales taxes and property taxes
   - Similar treatment to state personal taxes
   - Regression formula
   - For the model, worker income of $32,870 will produce the break even taxes of $620.35
   - Explicit recognition of chaining in the model
   - Deficit or surplus – **results can be positive or negative**
6. Outcome measures
   - Fiscal – essentially government revenue change (discounted or not discounted) – could be **positive or negative**
   - Total impact – income (direct or direct and secondary) compared to net fiscal (discounted or not discounted) – **always positive**

- The model as implemented by IDED
  - Cost-of-growth numbers not being used in final impact calculations

State Personal Taxes

Project name here

Project employment growth 3% per year beyond year 3

Projected annual wage categories	Projected annual wage rates	Estimated Iowa taxes	Estimated tax surplus	Projected number of employees (FTEs) for each wage							
				Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year
16,000-17,999	$17,000	1,467.82	-$790	0	0	0	0	0	0	0	0
18,000-19,999	$19,000	1,608.36	-$650	0	0	0	0	0	0	0	0
20,000-21,999	$21,000	1,748.90	-$509	0	0	0	0	0	0	0	0
22,000-23,999	$23,000	1,889.44	-$369	0	0	0	0	0	0	0	0
24,000-25,999	$25,000	2,033.18	-$225	0	0	0	0	0	0	0	0
26,000-27,999	$27,000	2,179.27	-$79	0	0	0	0	0	0	0	0
28,000-29,999	$29,000	2,325.36	$67	0	0	0	0	0	0	0	0
30,000-31,999	$31,000	2,471.44	$213	0	0	0	0	0	0	0	0
32,000-33,999	$33,000	2,620.51	$363	0	0	0	0	0	0	0	0
34,000-35,999	$35,000	2,77									0
36,000-37,999	$37,000	2,92									0
38,000-39,999	$39,000	3,07									0
40,000-44,999	$42,500	3,33									0
45,000-49,999	$47,500	3,71									0
50,000-54,999	$52,500	4,13									0

$27,000	2,179.27	-$79	
$29,000	2,325.36	$67	
$31,000	2,471.44	$213	

Income Impact

Project name here

Select the industry or sector that most closely describes the industry or sector of the project

SIC Code — Industry / Sector

- 0241 - Dairy Farm Products
- 0810 - Forestry Products
- 0910 - Commercial Fishing
- 0710 - Agricultural, Forestry, Fishery Services
- 1310 - Natural Gas & Crude Petroleum
- 1480 - Nonmetallic Minerals (Except Fuels) Service
- 2011 - Meat Packing Plants
- 2013 - Sausage and Other Prepared Meats
- 2015 - Poultry Processing
- 2023 - Condensed and Evaporated Milk
- **2024 - Ice Cream and Frozen Desserts**

Industry: Ice Cream and Frozen Desserts
SIC Code(s): 2024
NAICS Code(s): 311520
Income Multiplier: 2.134492

Employees' or proprietors' income growth that would result from this project

Year	Direct payroll only	Direct payroll + vendor payroll + household impact
0	0	$0
1	0	$0
2	0	$0
3	0	$0
4	0	$0
5	0	$0
6	0	$0
7	0	$0
8	0	$0
9	0	$0
10	0	$0

Cost of new building: including furniture, fixtures and equipment purchased in Iowa

$0

This factor will be entered in **Year 0**

Public Investment

Project name here

Public share of investment:	$0	0.0%
Private investors' share:	$0	0.0%
Total project investment:	$0	0.0%

Dollar E

Investor	Year 0	Year 1	Year 2	Year 3	Year 4
State Investments:					
State Grants/forgivable loans	$0	$0	$0	$0	$0
State loan subsidy #1:					
Estimates from Calculator, or	$0	$0	$0	$0	$0
Applicant estimates	$0	$0	$0	$0	$0
State loan subsidy #2					
Estimates from Calculator, or	$0	$0	$0	$0	$0
Applicant estimates	$0	$0	$0	$0	$0
State tax credits	$0	$0	$0	$0	$0
Refundable R&D tax credits	$0	$0	$0	$0	$0
Value-added tax credits	$0	$0	$0	$0	$0
State Job training	$0	$0	$0	$0	$0
Other state investment	$0	$0	$0	$0	$0
Total state investment	$0	$0	$0	$0	$0
Local Investments:					
Local Grants/forgivable loans	$0	$0	$0	$0	$0
Local loan subsidy #1					
Estimates from Calculator, or	$0	$0	$0	$0	$0
Applicant estimates	$0	$0	$0	$0	$0
Local loan subsidy #2					
Estimates from Calculator, or	$0	$0	$0	$0	$0
Applicant estimates	$0	$0	$0	$0	$0
Local loan subsidy #3					
Estimates from Calculator, or	$0	$0	$0	$0	$0
Applicant estimates	$0	$0	$0	$0	$0
Local tax abatements	$0	$0	$0	$0	$0
Local In-kind: land and improvements	$0	$0	$0	$0	$0

BusinessTaxes

Project name here

Taxes expected to grow: 3.0% for years beyond year 1 Project the taxes

Category	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
							Increase in Tax Collections Associated with
State business taxes							
State corporate income tax:							
Estimates from calculator, or	$0	$0	$0	$0	$0	$0	$0
Applicant estimates	$0	$0	$0	$0	$0	$0	$0
State business sales and use	$0	$0	$0	$0	$0	$0	$0
State insurance premium	$0	$0	$0	$0	$0	$0	$0
Other state business taxes	$0	$0	$0	$0	$0	$0	$0
Total state business taxes	$0	$0	$0	$0	$0	$0	$0
Local business taxes							
Local real estate property	$0	$0	$0	$0	$0	$0	$0
Special assessments/permits	$0	$0	$0	$0	$0	$0	$0
Local option sales	$0	$0	$0	$0	$0	$0	$0
Other local business taxes	$0	$0	$0	$0	$0	$0	$0
Total local business taxes	$0	$0	$0	$0	$0	$0	$0
Total state & local business taxes	$0	$0	$0	$0	$0	$0	$0
Corporate income tax calculator							
Net corporate income	$0	$0	$0	$0	$0	$0	$0
Federal taxes paid or accrued	$0	$0	$0	$0	$0	$0	$0
Percent of sales that occur in Iowa	0%	0%	0%	0%	0%	0%	0%
Iowa taxable sales	$0	$0	$0	$0	$0	$0	$0
Iowa corporate income tax liability	$0	$0	$0	$0	$0	$0	$0
Federal corporate income tax estimators:							
Regular C corporations	$0	$0	$0	$0	$0	$0	$0
Small business S corporations:							

Local Personal Taxes

Project name here

Projected annual wage categories	Projected annual wage rates	Estimated local taxes	Estimated tax surplus	Projected number c			
				Year 1	Year 2	Year 3	Year 4
16,000-17,999	$17,000	90.02	-$530	0	0	0	0
18,000-19,999	$19,000	161.39	-$459	0	0	0	0
20,000-21,999	$21,000	232.75	-$388	0	0	0	0
22,000-23,999	$23,000	304.12	-$316	0	0	0	0
24,000-25,999	$25,000	375.49	-$245	0	0	0	0
26,000-27,999	$27,000	446.86	-$173	0	0	0	0
28,000-29,999	$29,000	518.23	-$102	0	0	0	0
30,000-31,999	$31,000	589.59	-$31	0	0	0	0
32,000-33,999	$33,000	660.96	$41	0	0	0	0
34,000-35,999	$35,000	732.33	$112	0	0	0	0
36,000-37,999	$37,000	803.70	$183	0	0	0	0
38,000-39,999	$39,000	875.07	$255	0	0	0	0
40,000-44,999	$42,500	999.96	$380	0	0	0	0
45,000-49,999	$47,500	1,178.38	$558	0	0	0	0
50,000-54,999	$52,500	1,356.80	$736	0	0	0	0
55,000-59,999	$57,500	1,535.22	$915	0	0	0	0

Summary Statistics

Project name here

Sector: Ice Cream and Frozen Desserts - SIC: 2024

Impact of the project on income growth	Total impact of the project	State & local gov't share of total impact	State gov't impact	Local gov't impact
Includes direct effects only:				
Dollar effect on income for each public dollar spent (ratio)	**0.00**	**0.00**		
Total dollar impact on income resulting from the project	$0	$0		
Comparison to 2002 Iowa Personal Income	0.000%			
Includes secondary effects:				
Dollar effect on income for each public dollar spent (ratio)	**0.00**	**0.00**		
Total dollar impact on income resulting from the project	$0	$0		
Comparison to 2002 Iowa Personal Income	0.000%			
Impact of the project on net tax revenue				
Total taxes collected as a result of the project		$0	$0	$0
The ratio of taxes received to incentives paid		**0.00**	**0.00**	**0.00**
Net dollars of taxes minus the incentives		$0	$0	$0
Projected tax receipts that result from the project in year 11 and beyond		$0	$0	$0
Impact of the project on net tax revenue deducting the cost of public services				
The ratio of 'surplus taxes' * received to incentives paid		**0.00**	**0.00**	**0.00**
Net dollars of 'surplus taxes' * minus the incentives		$0	$0	$0
Impact of the project on employment				
Average number of new jobs per year		0		
Average wages per job		$0		

* Note: surplus taxes refers to the taxes collected in excess of the cost of delivering government services

Iowa Public Impact Index - Project name here

Income Impact:

The net present value (NPV) of a 10-year stream of increases in the personal income component of the GSP that results from the increased revenue of the applicant.

Direct effects only	$0
Direct & indirect effects	$0

Public Investment:

The NPV of a 10-year stream of public investments and additional costs to the public that are associated with this project

State government costs	$0
Local government costs	$0
State & local government costs	$0

Impact on Iowa Personal Income:

Personal income impact is the annual increase in income that the project applicant is expected to generate through its payrolls and the payrolls of its vendors

Direct effect to 2002 Iowa Personal Income	0.000%
Multiplier effect to 2002 Iowa Personal Income	0.000%

Business taxes:

The NPV of a 10-year stream of business taxes that the project applicant is expected to be paying to state and local government

State business taxes	$0
Local business taxes	$0
State & local business taxes	$0

Employment Impact:

Number of new jobs by the 4th year	0
Average wages per job	#DIV/0!

Personal taxes:

The NPV of a 10-year stream of personal income sales and use taxes that is expected to result from the project's payroll

State personal taxes	$0
Local personal taxes	$0
State & local personal taxes:	$0

Economic Impact Calculations:

Impact on income for each public dollar spent (ratio)	
Direct effects only	0.00
Direct & indirect (mutiplier) effects	0.00
Total impact on Iowa employee income	
Direct effects only	$0
Direct & indirect (mutiplier) effects	$0

11th Year and Beyond:

Projected yearly state tax receipts	$0
Projected yearly local tax receipts	$0
Projected yearly total tax receipted	$0
Projected yearly personal income increase	$0
Projected yearly income increase (multiplied)	$0

Fiscal Impact Calculations:

Impact of the project on net tax revenue	State & Local	State only	Local only
Total taxes collected as a result of the project	$0	$0	$0
The ratio of taxes received to incentives paid	0.00	0.00	0.00
Net dollars of taxes minus the incentives	$0	$0	$0
Projected tax receipts that result from the project in year 11 and beyond	$0	$0	$0
Impact of the project on net tax revenue deducting the cost of public services			
The ratio of 'surplus taxes' * received to incentives paid	0.00	0.00	0.00
Net dollars of 'surplus taxes' * minus the incentives	$0	$0	$0

Issues with the Model 1

- Technical
  - The origin of new employees – how many are from out of state?
  - The wage impact for the currently unemployed or not in the labor force may be overstated
  - Does every new investment truly meet the “but for” condition?
    - Where a firm does not, income impact and business tax impact is ‘0’ and state and local personal taxes are necessarily ‘0’ or negative.
  - Capturing growth clusters – the input-output numbers do not do this
  - No secondary measurement of cost-of-growth
  - No measurement of on-going service costs of business

Issues with the Model 2

- Behavioral
  - Can give potential clients much greater access to a state's decision-making process. In Iowa, input forms used in the field but not model so solve problem.
  - Need for legal checks like clawbacks on performance outcomes (in Iowa, clawbacks tied to employment etc.)
- Institutional
  - Need for constant review – like any other decision-making criteria it will bias decisions in particular ways. Have to make sure that these coincide with what's appropriate
  - What numbers to use – discounted or undiscounted, with costs fully accounted for, with indirect and induced economic impact

Issues with the Model 3

- Current implementation of model
  - Besides the costs of the incentives themselves, nearly all costs of growth are not currently used
  - Need to make consistent use of discounted numbers
  - Need to make decision on the right income impact (direct or direct and secondary)
    - In the context of the use of the model, using direct only makes most conceptual sense and is in line with standard benefit-cost practice