

# Module 3 Overview

## Principles for Analytical Policy Evaluation II

7. Define **principal stakeholders** and **policy accounting domain**

8. Understand **Allocational efficiency** and the **benefit-cost principle**

9. Understand **cost-efficiency** and the **cost-effectiveness principle**

10. Distinguish the **efficiency** and **distributional effects** of decision-making

## 7. Define principal stakeholders and policy accounting domain

- “Standing Issue.” Whose well-being counts?
- Geographic Accounting Domain
  - National Accounting Domain is Common
  - Regional-Local
  - Multi-country
  - Global

## 7. Define **principal stakeholders** and **policy accounting domain**

- Global Accounting Perspective
- Social Cost of Carbon (SCC)
- See Gayer, T., & Viscusi, W. K. (2016). Determining the Proper Scope of Climate Change Policy Benefits in US Regulatory Analyses: Domestic versus Global Approaches. Review of Environmental Economics and Policy, rew002.
- Greenstone, M. Statement of Michael Greenstone, before the United States House Committee on Science, Space, and Technology, Subcommittee on Oversight, hearing on “At What Cost? Examining the Social cost of Carbon”

## 7. Define principal stakeholders and policy accounting domain

**ADM:** Clearly states the accounting boundary, or provides conceptually-consistent multiple accounting domain perspectives.

**CDM.** Often not clear about the policy accounting stance.

# 8. Understand Allocational efficiency and the benefit-cost principle

- Resources like time, capital, and material are scarce and tradeoffs are made when resources are allocated among competing alternatives.  
(Resources have opportunity costs)
- Efficiency criterion compares:
  - the aggregated value of resources to achieve an organizational goal or policy objective (Benefit=B)
  - the value of the same resources in their best alternative use (Opportunity Cost=C)
- Decision Criteria: Net-Benefit (NB) =  $B - C > 0$ . Economic efficiency increases when the value of resources to achieve an organizational goal or policy objective is larger than their opportunity cost.
- **ADM** promote decisions that increase “net-benefits” ( $B - C > 0$ ) => economic efficiency, along with other criteria (e.g., equity).  
**CDM** not concerned with economic efficiency.

# Example

Reassign employee from group A to B with no change in employee work time or salary

	Group A	Group B	Net
Benefit (Value of productivity increase in Group A)	B		B
Opportunity Cost (Value of productivity loss in Group A)		-C	-C
Net	B	-C	B-C

# Another Example with the Same Distributional Structure

## Uncompensated Regulatory Standard

	Public Who Benefits	Industry	Net
Benefit	B		B
Cost		-C	-C
Net	B	-C	B-C

## 9. Understand cost-efficiency and the cost-effectiveness principle

- Achieve a performance goal at lowest cost:
  - boost recycling rates by some amount
  - reduce pollution emissions by some amount
  - raise tax revenue by some amount
- Find most cost-effective program alternative:
  - cost per unit mortality risk reduction (or life year or “quality adjusted life year” gained) from flu vaccinations versus traffic safety intervention;
  - cost per unit test score increased from additional teacher training versus reducing class size versus better computerization.
- Organizational Context: find lowest cost strategy for boosting organizational output.
- Organizational Performance Measure: compare cost per unit of organizational output (crime rate reduction, electricity provision) now versus in the past.



# 10. Distinguish the efficiency and distributional effects of decision-making

Example: The decision to have a market exchange

	Buyer	Seller	Net
Benefit (Maximum WTP)	B		B
Transfer	-T	T	0
Cost (minimum compensation)		-C	-C
Net	B-T	T-C	B-C



“Pareto Improving”. No losers. Highest standard for economic efficiency.

# Course Kaldor-Hicks Tableau

Course KHT	Public	Gov Dept Financing Course	Venue	Participants	Course Staff	ENAP	Net
<b>Benefits</b>	B1			B2	B3		B1+B2 +B3
<b>Transfers</b>							
Course Financing		-T1				T1	0
Wages					T2	-T2	0
Room Rental			T3			-T3	0
<b>Costs</b>							
Time Costs				-C1			-C1
Admin/Time Costs					-C2		-C2
OC Room			-C3				-C3
<b>Net</b>	B1	-T1	$T3 - C3 < 0$	$B2 - C1 \geq 0$	$B3 + T2 - C2 \geq 0$	$T1 - T2 - T3 = 0$	B1+B2 +B3- C1-C2- C3

# Worker Training Program

		Trainees	Firms	State Government			In-State Public	Federal Government	Net
				Welfare Department	Revenue Department	Employment Training-Dept.			
<i>Training Year</i>									
Benefit	Social benefit						4,000		4,000
Costs	Trainee time	-8,000							-8,000
	Administration cost					-4,000			-4,000
	Training cost		-11,667						-11,667
Transfers	Input tax		-2,333		1,167			1,167	0
	After-tax training wage	13,600	-6,800			-6,800			0
	Tax on training wage		-1,200		800	-1,200		1,600	0
<i>Operational Period</i>									
Benefits	Productivity		281,498						281,498
	Social benefit						35,392		35,392
Cost	Time	-63,706							-63,706
Transfers	After-tax regular wage	198,885	-198,885						0
	Tax on regular wage		-35,097		11,699			23,398	0
	Welfare	-138,029		69,015				69,015	0
<i>Net</i>		2,749	25,516	69,015	13,666	-12,000	39,392	95,180	233,518
				70,681					
Fiscal Impact on State Aggregated									

# Case Application:

## Thinking About Employment Creation

1. Increasing employment is an important equity or distributional goal that all societies promote.
2. Labor is used for any activity, so all projects create employment.

Implication: employment creation is not an argument to do a particular project, notwithstanding the importance of the social goal.

A new highway created jobs. But using the money to finance an alternative project would also have created jobs.

The question is the net effect.

# Case Application:

## Thinking About Employment Creation

4. In considering the net-employment impact, the baseline must be considered. How many workers came from unemployment, and how many were diverted from other jobs? What is the net-effect on the employment rate?
5. Employment has a benefits: labor productivity. That's why labor is hired. However, labor productivity is reflected in the value of output – the benefits of a project. So the value of labor productivity does not need to be independently counted in benefit-cost analysis.
7. Labor usage also comes with a time opportunity costs. That might be quite low – if labor is diverted from a large unemployed pool. It is also might be high. For example, if the only doctor in a rural area moves to take a job in the city.

Labor opportunity costs must be considered in the cost of policy or programs.

# **Case Application: Thinking About Employment Creation**

ADM suggests thinking creatively about alternative ways of generating employment, and being precise about the net employment effect of policies and labor opportunity costs. ADM suggest policies to promote employment creation at lowest net-cost to society.

CDM will use employment creation as an argument to support any project, without sufficient consideration of alternatives that might promote employment at lower cost.

Example. Estimated cost per worker employed as a result of the I-69 highway (cost per gross employment). About \$350,000 per job.

# Conclusion

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8. Distinguish the **efficiency** and **distributional effects** of decision-making

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10. Understand **cost-efficiency** and the **cost-effectiveness principle**