Discussion of the new Ministry of Finance guidelines for CBA

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My focus

- Government expenditures $\Rightarrow$ need to raise revenue $\Rightarrow$ effects on economic efficiency (tax distortions)

- How to include this in CBA?

- Size of marginal cost of public funds (MCPF), Skatteforvridningsfaktoren, Forvridningstillæg…:

- Traditional approach:

$$\text{MCPF} = \frac{1}{1 - \dfrac{m}{1-m}\varepsilon}$$

- But the theoretical foundation is flawed!

Traditional approach

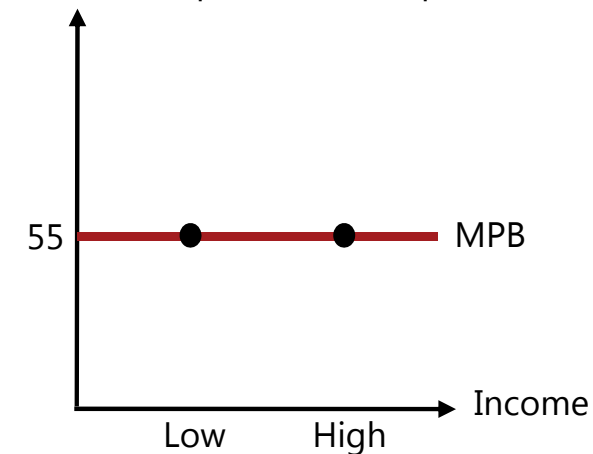Consider a 100 kr. expansion of public expenditures

Private benefits: $\sum MPB = 55+55 = 110$

Private costs: $\sum MPC = 25+75 = 100$

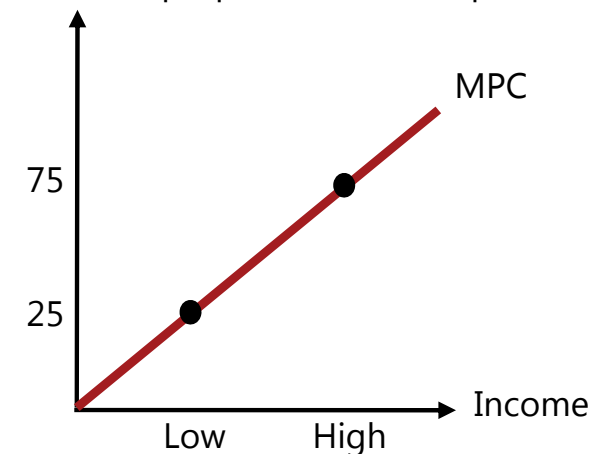Samuelson: $110>100 \Rightarrow$ **Do it**

A. Distribution of benefits/price willingness
Effect of expenditures on private welfare

B. Distribution of costs:
Effect of proportional tax on private welfare

Traditional approach

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Private costs: $\sum$ MPC = 25+75 = 100
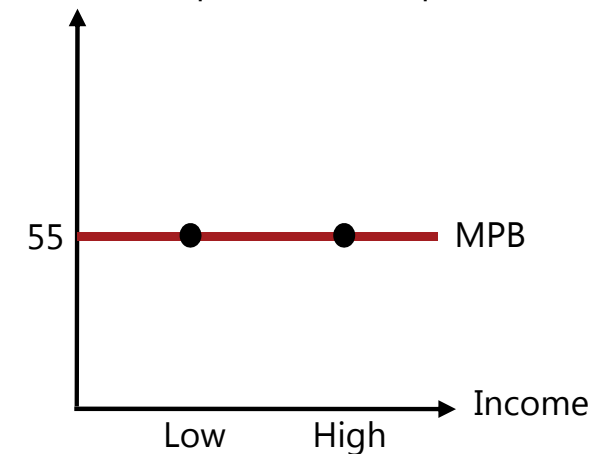
Samuelson: 110>100 $\Rightarrow$ **Do it**

Tax distortion: MCF = 1.2

Total costs: $\sum$ MPC × MCF = 100×1,2 = 120

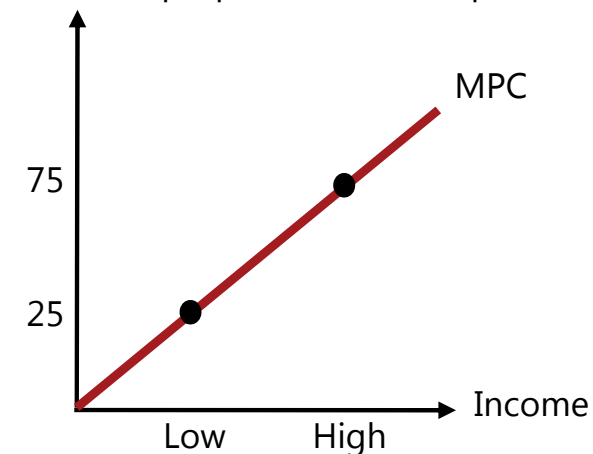Modified Samuelson: 110<120 $\Rightarrow$ **Don't**

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Traditional approach

Consider a 100 kr. expansion of public expenditures

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Modified Samuelson: 110<120 $\Rightarrow$ **Don't**

Problems

Includes social costs of proportional taxation (distortion), but not social benefits (redistribution) $\Rightarrow$ tax system is inoptimal within the model

No reason to finance uniform benefits with proportional taxes $\Rightarrow$ may reject Pareto improvements
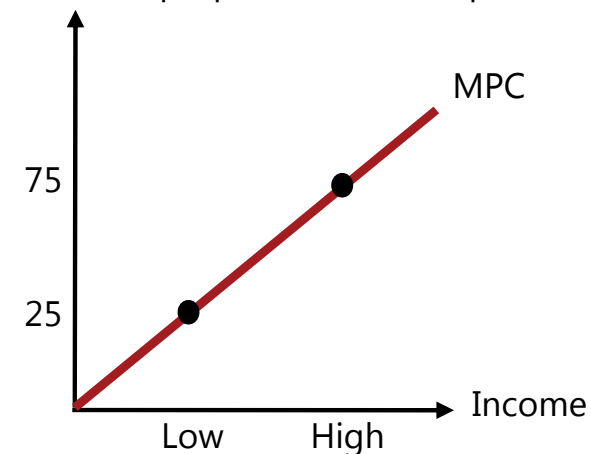
A. Distribution of benefits/price willingness
Effect of expenditures on private welfare
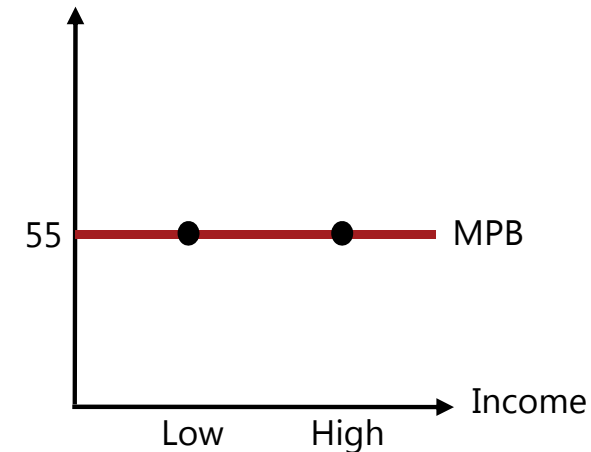
B. Distribution of costs:
Effect of proportional tax on private welfare

Theory with socially optimal redistribution and public goods

Taxes are set optimally $\Rightarrow$ reason to have distortionary taxes within the model

Trade-off between gains from redistribution and distortionary effects of taxation

Optimal level of public expenditures?

- Restores the original Samuelson rule**!**

- Tax distortions should not be included in CBA**!**

- Intuition is that the welfare loss from distortionary taxation will be offset by distributional gains

Modern approach

Use the same income profile for costs as for benefits when financing gov. expenditures $\Rightarrow$

Private benefits: $\sum$ MPC = 55+55 = 110

Private costs: $\sum$ MPC = 50+50 = 100

Tax distortion: MCF = 1

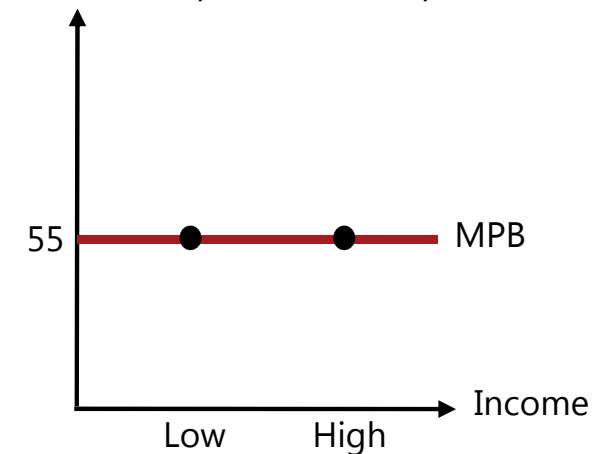Total costs: $\sum$ MPC $\times$ MCF = 100

Modified Samuelson: 110>100 $\Rightarrow$ **Do it**

This is a Pareto improvement!
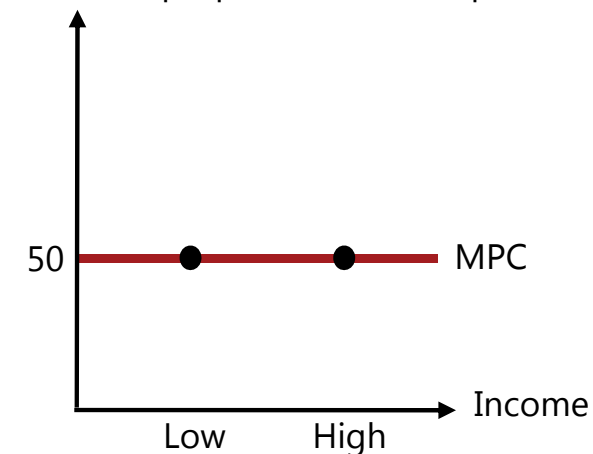
Rejected by the traditional approach!

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Modern approach
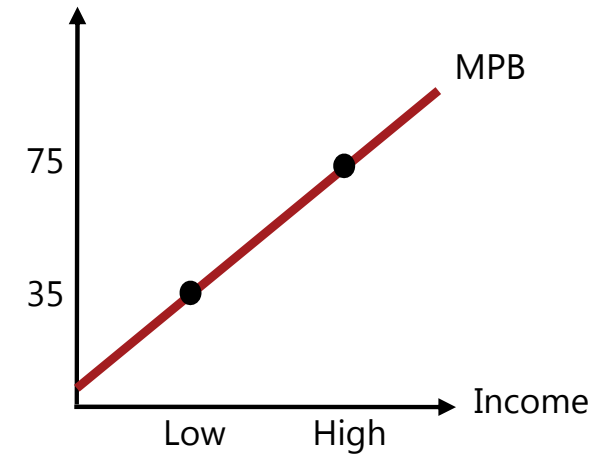
What if benefits are increasing with income?

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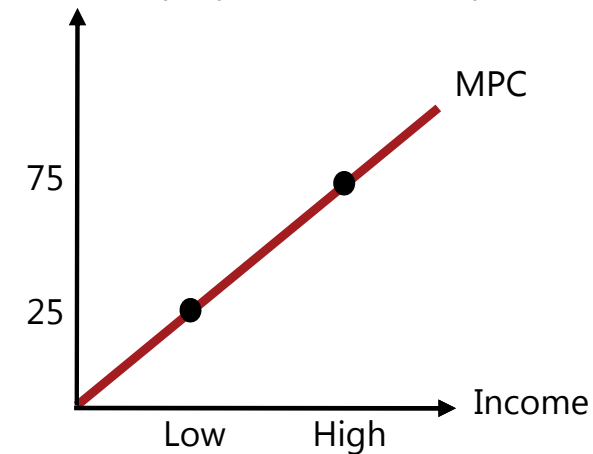
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Tax distortion?

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Modern approach

What if benefits are increasing with income?

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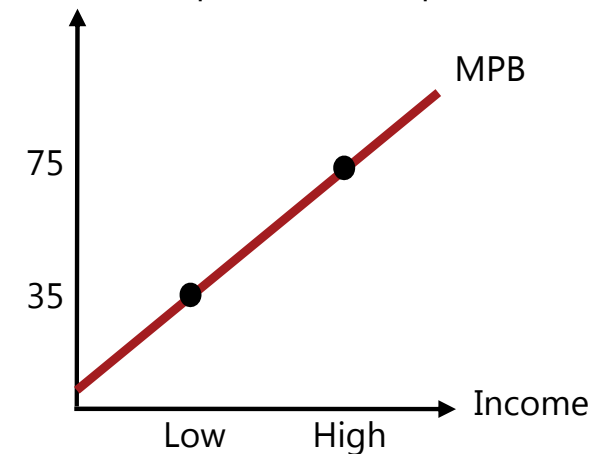Private costs: $\sum$ MPC = 50+50 = 100

Tax distortion?

Higher MC from working because of tax increase, but also higher MB because the expenditures are valued more by high-income people

Restores the original Samuelson rule!
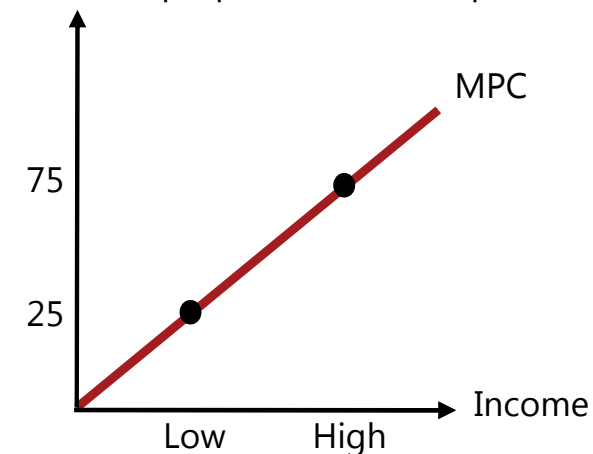
Should not include tax distortions!

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Conclusion?

MCPF = 1 but…

1. Tax evasion and tax avoidance
2. Tax administration
3. No price system to allocate public expenditures $\Rightarrow$ efficiency loss

$\Rightarrow$ MCPF = 1.1 is not a bad guess.