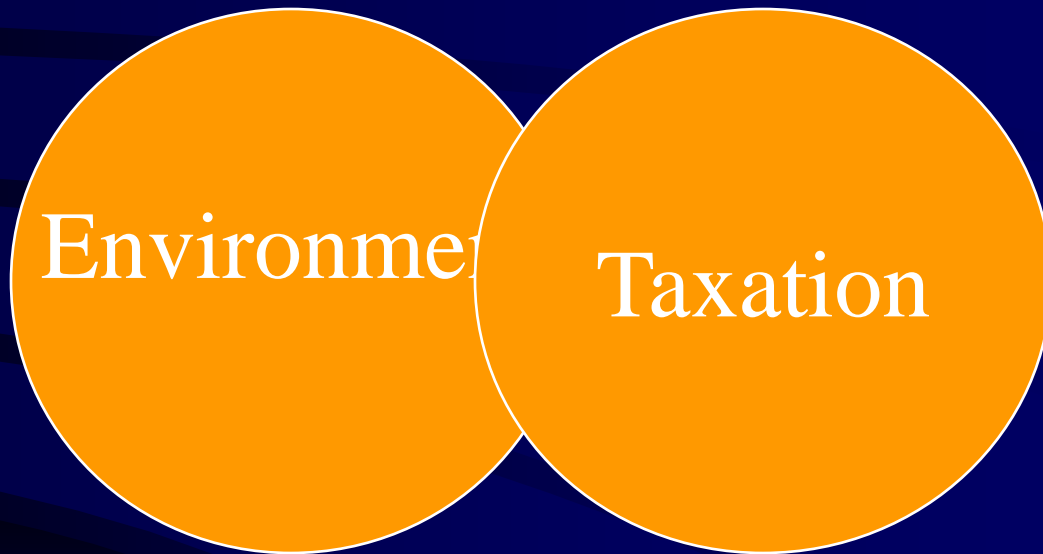


The Role of Taxation in Carbon Management

Prof. Janet Milne
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Joint Energy Committee, October 16, 2015



Carbon management

What's in a name?

Carbon tax

Carbon pollution tax

Carbon pollution fee

Carbon dioxide emissions charge

Tax base

x

Tax rate

=

Revenue

Tax base

x

Tax rate

=

Revenue

Environmental effect

Tax base

x

Tax rate

=

Revenue

Environmental effect

Economic effect

Equity

Administrative feasibility

Political feasibility

British Columbia

Tax base

x

Tax rate

=

Revenue

Fossil fuels
CO₂-e

Limited
exemptions

Tax base

x

Tax rate

=

Revenue

Fossil fuels
CO₂-e

\$10/ton 2008



\$30/ton 2012

Limited
exemptions

“Upstream” tax collection

$$\boxed{\text{Tax base}} \times \boxed{\text{Tax rate}} = \boxed{\text{Revenue}}$$

Fossil fuels
CO₂-e

\$10/ton 2008



\$30/ton 2012

Limited
exemptions

Tax base

x

Tax rate

=

Revenue

Fossil fuels
CO₂-e

\$10/ton 2008



\$30/ton 2012

Revenue
neutral
tax relief

Limited
exemptions

Tax rate

x

Tax rate

=

Revenue

Comprehensive
Simple
Quick
Here to stay
Effective

$$\boxed{\text{Tax base}} \times \boxed{\text{Tax rate}} = \boxed{\text{Revenue}}$$



fuels outside
EU emissions trading scheme



fiscal crisis

Ireland 2010

$$\boxed{\text{Tax base}} \times \boxed{\text{Tax rate}} = \boxed{\text{Revenue}}$$



123 euros or \$141

Sweden 1991

$$\boxed{\text{Tax base}} \times \boxed{\text{Tax rate}} = \boxed{\text{Revenue}}$$



result-based rate

Switzerland 2008

$$\boxed{\text{Tax base}} \times \boxed{\text{Tax rate}} = \boxed{\text{Revenue}}$$



green energy
investments

Japan 2012

Tax base

x

Tax rate

=

Revenue

BC	Economy-wide	\$30/ton	Revenue neutral
Ireland	Household, transportation, light industry	20 euros (\$23)	General fund, green projects, fuel allowances
Sweden	Household, transportation, light industry	123 euros (\$141)	Tax relief, green projects
Japan	Economy-wide	289 yen (\$2.40)	Green projects
VT bills	Non-electricity	\$100	Combination

Tax base

x

Tax rate

=

Revenue

VT

Non-electricity

\$100/ton

Combination

MA

Non-electricity

\$40

100% rev. neutral

WA

Economy-wide

\$25+3.5%

Tax relief—sales,
manufacturing

CAP AND TRADE

RGGI

\$6.02

Mitigation

California

\$12.52

Mitigation

Carbon taxes are real.

One size doesn't fit all.

A delicate mix of policy and politics—
but robust enough to stand the test of time.

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Tax base

x

Tax rate

=

Revenue

H. 395 Non-electricity \$100
VT (\$50 to start)

80% Redistribution
Refundable tax credit
Employee rebate
20% Energy programs

H. 412 Non-electricity \$100
VT (\$10 to start)

90% Redistribution
Reduced sales tax
Refundable tax credit
Low-income rebate
Employee rebate
10% Energy programs