



Climate-related taxes

– Who pays?

Extensive use of micro-
and macro-economic
models

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Micro- and macro-economic models

1. A computable general equilibrium(CGE) model
2. Distributional analysis system for income and transfers
3. Firm Register and Individual Database
4. Simulation model for the Firm Register and Individual Database

General Equilibrium model

- › ”Original situation” ”future situation”
- › Long term effects of the tax restructuring (2010-2015)
- › Impact on the entire Swedish economy
- › 6 types of households, 26 trade and industry sectors
- › Perfect competition in all markets - key assumption

Findings based on CGE

Small long-term effects of the tax restructuring

- › Only marginal effects on emissions
- › Marginal effects on the economy as a whole
- › Increased cost-effectiveness

Distributional analysis system for income and transfers

- › Distribution of expenditure for climate-related taxes and emissions among household groups
- › Module for indirect taxation
- › No behavioural changes (2007 consumption patterns)

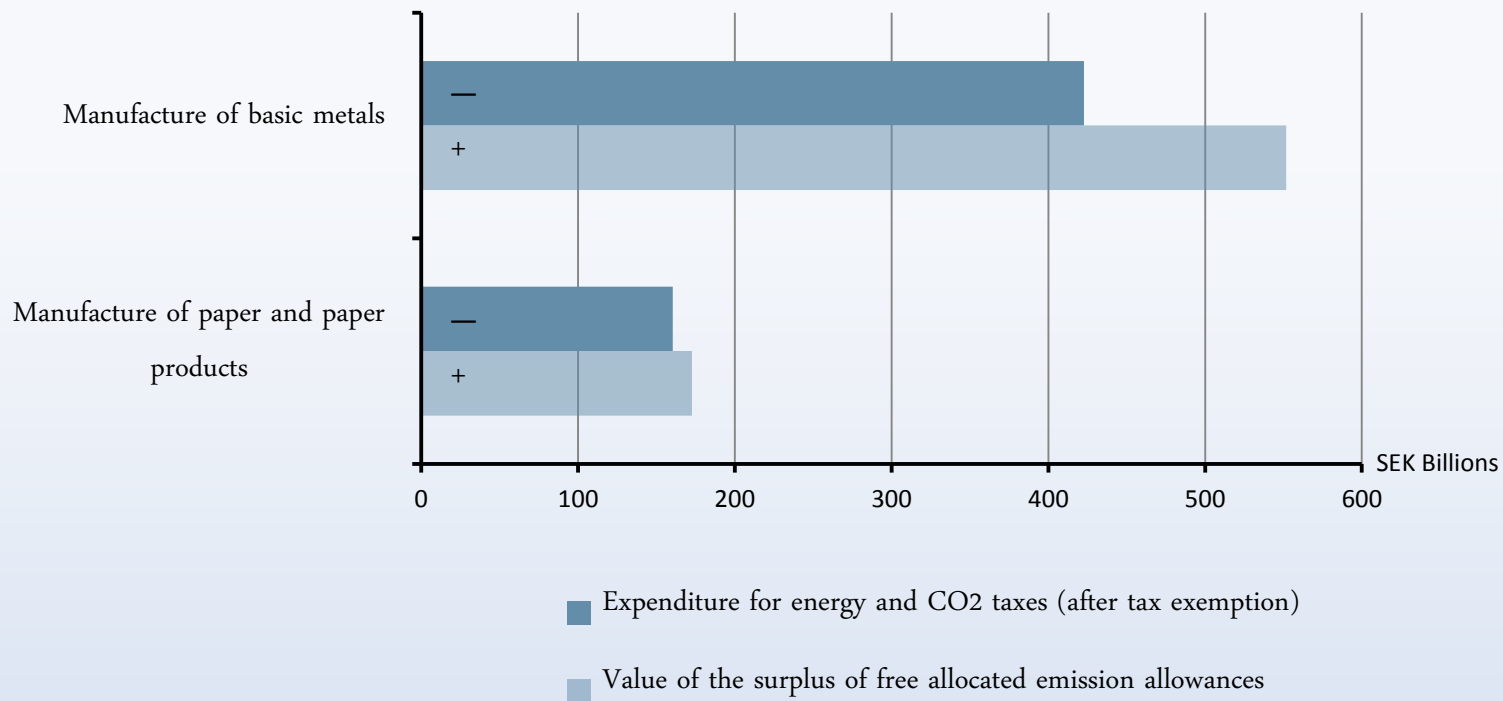
Household expenditure for taxes and emissions

Household type	Carbon dioxide tax	Energy tax excl. electricity	Vehicle tax	Total carbon dioxide, energy and vehicle taxes (excl. electricity)	Emissions from private vehicles and oil heating	Energy tax on electricity
Single women	600	700	400	1,800	700	800
Single men	1,300	1,500	1,000	3,800	1,400	900
Cohabiting without children	2,100	2,400	1,600	6,000	2,200	1,700
Cohabiting with children 0–19 years	1,700	2,000	1,200	4,900	1,800	1,300
Single women with children	800	1,000	600	2,300	800	800
Single men with children	1,400	1,700	1,200	4,300	1,500	1,500
Total, all household types	1,500	1,700	1,100	4,300	1,600	1,200

Firm Register and Individual Database

- › Expenditure for climate-related taxes and emissions between trade and industry sectors
- › Energy volumes
- › Calculated emissions
- › Expenditures for energy and CO₂ taxes
- › Revenues and Costs

Expenditures for emissions and value of emission allowances



New simulation model

- › Fiscal outcome of the tax restructuring (2010-2015)
- › Inflow of tax revenues for energy and CO₂ to the central government
- › Differences of expenditures between NETS and ETS before and after the tax restructuring

Effects on ETS and NETS of the tax restructuring

	Energy tax on fuels and motor fuels	Carbon dioxide tax	Total
The trading sector	1.5	-6.9	-5.4
The non-trading sector	3.4	2.3	5.7
Total	4.9	-4.5	0.3

The Swedish NAO's calculations etc.

- › Calculation of the value of the surplus or deficit of emission allowances
- › Summing ups of the surplus of allowances and calculations of its value
- › Illustration of the differences in caused emissions and expenditures between households and the trade and industry and other sectors

Unevenly distributed expenditures

