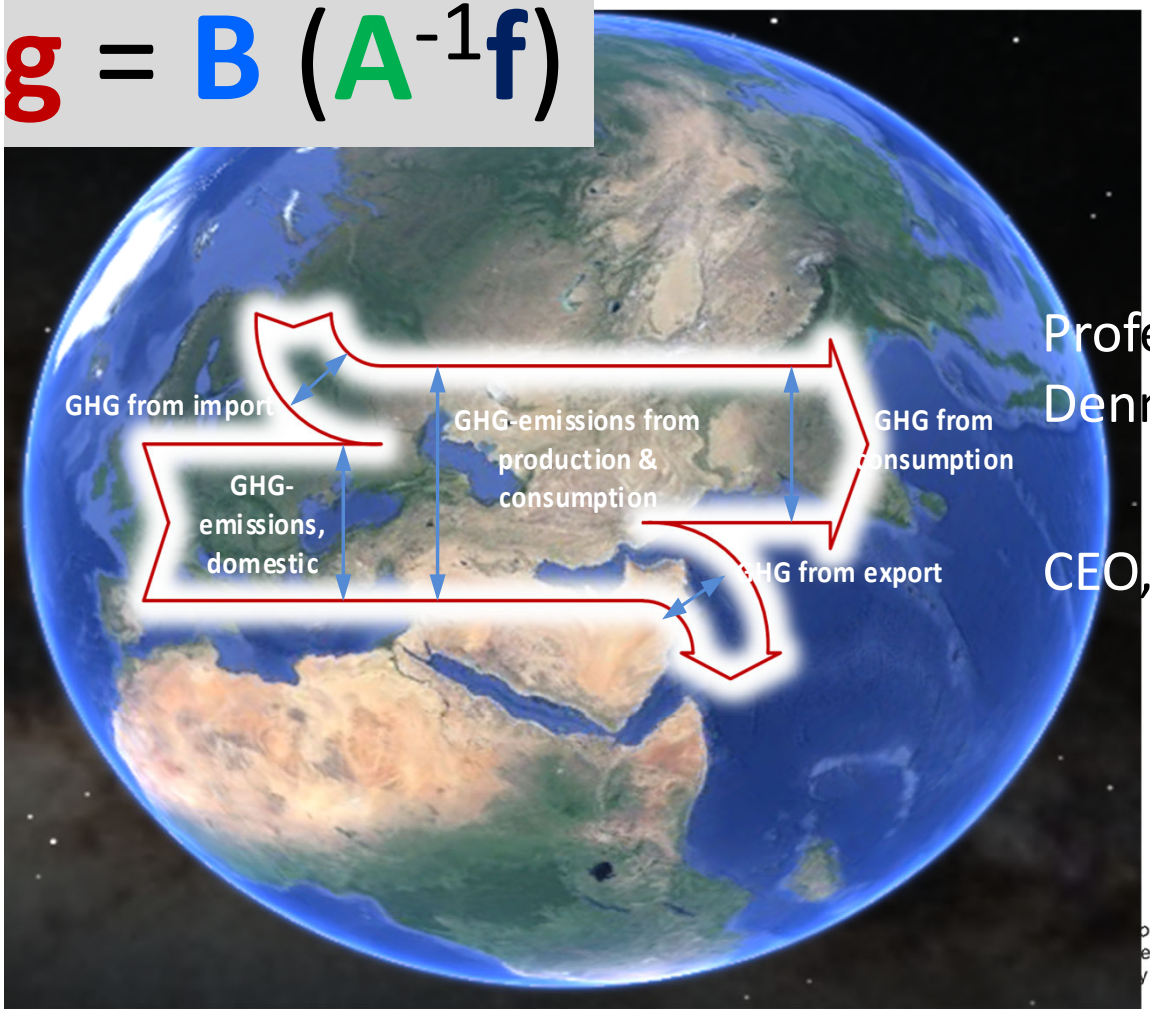
Input-output modelling

Basic and purchaser's prices and the role of markets

$$g = B\,(A^{-1}f)$$



Jannick Schmidt

Professor, PhD, Aalborg University, Denmark

DCEA | THE DANISH CENTRE FOR ENVIRONMENTAL ASSESSMENT

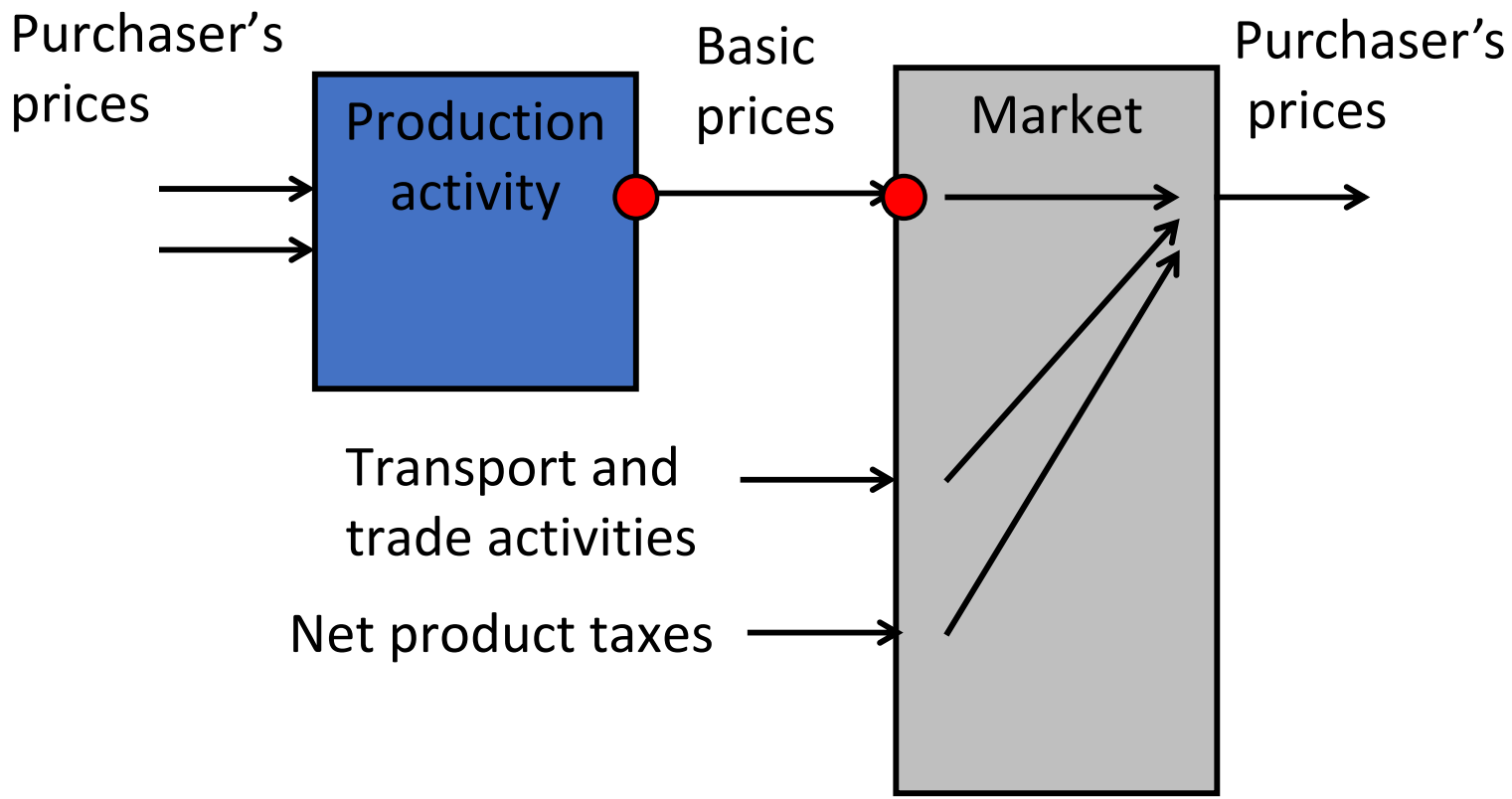
CEO, 2.-0 LCA consultants

Updated: 3rd April 2022

Agenda

- What is basic and purchaser's prices?
- How to handle the basic-purchaser's price via markets in the SUT framework?

Basic and purchaser's prices



Purchaser's and basic prices in raw SUTs

- **q** is in purchaser's price
- **U** => purchaser's price
- **V'** + valuation => purchaser's price

- Before making IO model: Important to ensure that the same flows are accounted in same unit:
  - transform **U** to basic prices[1], or
  - handle purchaser's and basic prices via markets

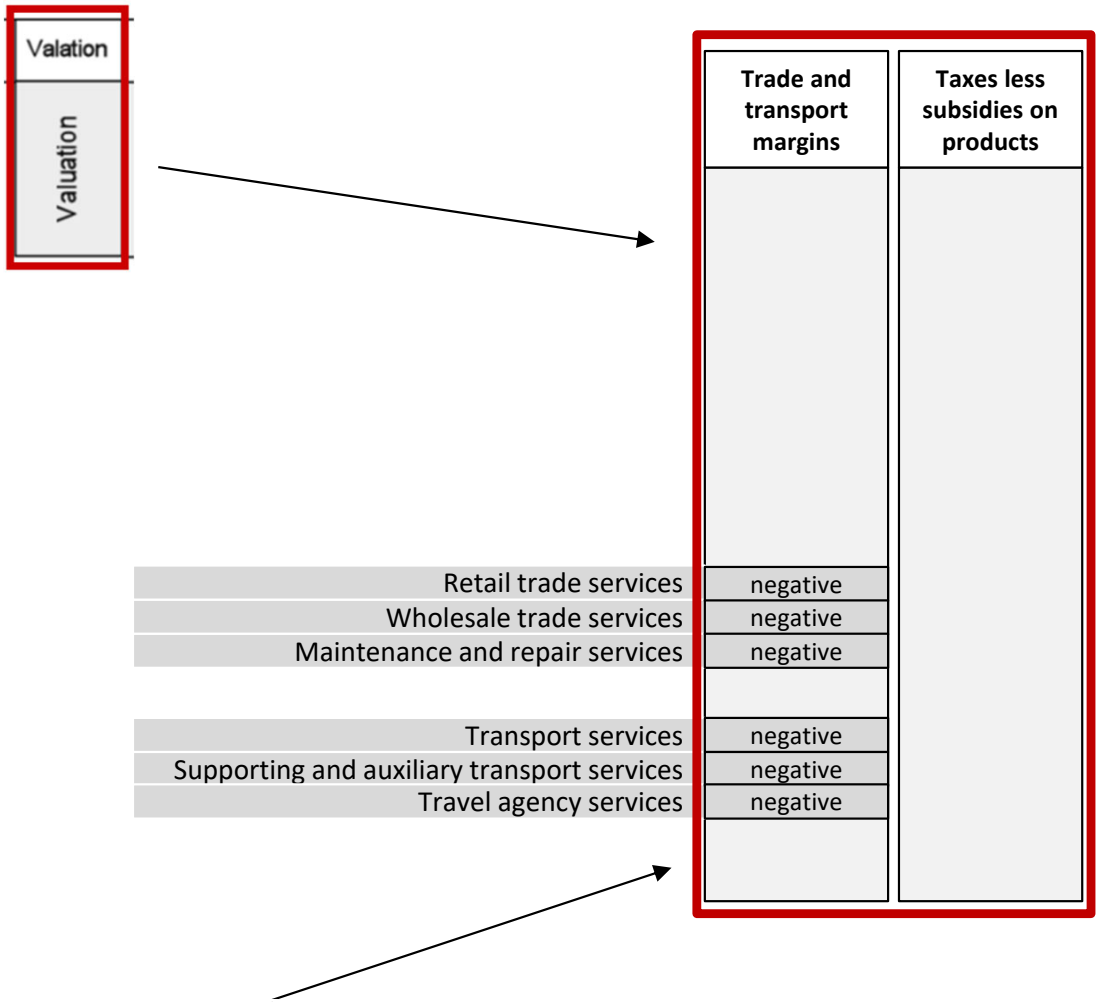
Balanced MSUT	Activities	Import	Final use	Export	Valation	**Total**
Products	V'	N			Valuation	q
Total	g					
Products	U		y	E		q
Primary production factors	Labour costs					
	Net taxes					
	Net operating costs					
	Rent					
Total	g					

Purchaser's price = basic price + trade and transport margins + taxes on products

[1] Methodology and procedure:

Schmidt J, Weidema B P, and Suh S (2010), *Documentation of the final model used for the scenario analyses*. Deliverable 6-4 of the EU FP6-project FORWAST. http://forwast.brgm.fr/

What is inside the valuation column?



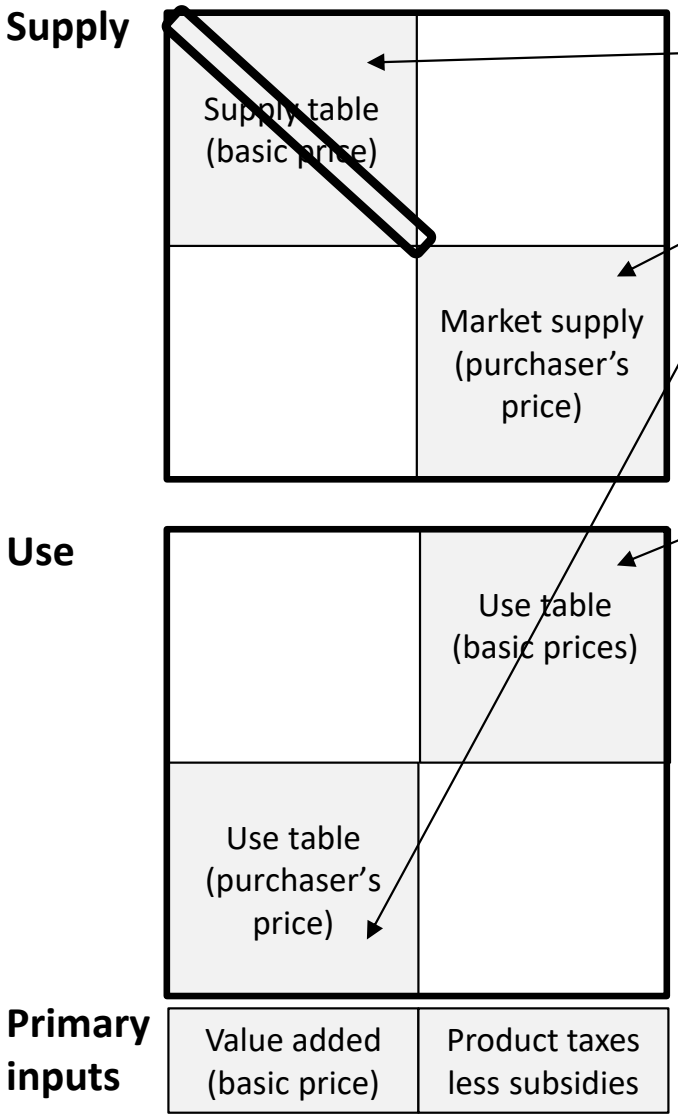
Negative numbers: Trade, repair and transport services
Positive numbers: Other products

Agenda

- What is basic and purchaser's prices?
- How to handle the basic-purchaser's price via markets in the SUT framework?

Making the purchaser's to basic price conversion transparent in the SUT framework

- by introducing markets



Original data from statistical agencies, e.g. EUROSTAT

Diagonalised total supply **q** (see previous slide)

On diagonal: total domestic supply at basic price (from supply table)

+ On diagonal: IF the activity is an activity supplying trade products THEN trade and transport margin

+ IF the activity is an activity supplying trade products THEN =0

ELSE IF product is trade and transport margin product THEN

total trade and transport margin of activity's main product * share of the total trade and transport margins