

WP7: model comparison

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- E3ME(CE) macroeconomic energy-environment-economy (E3) model
- EXIOMOD (TNO) a Global Computable General Equilibrium (CGE) model based on detailed EXIOBASE MREEIO
- FIDELIO (IPTS) a dynamic econometric input-output model based on Eurostat's supply and use tables and the WIOD



All based on MR(EE)IO

- E3ME(CE) macroeconometric – Post-Keynesian, no optimisation, demand led, supply constrained
- EXIOMOD (TNO) Computable General Equilibrium (CGE) model, supply led
- FIDELIO (IPTS) macroeconometric , optimal capital accumulation and private consumption

- E3ME(CE) – 53 – all EU Member States, major economies and political groupings, Row
- EXIOMOD (TNO) – 45 – all major economies, RoW
- FIDELIO (IPTs) – 35 - all EU Member States, 7 major economies, Row



- E3ME(CE) – 69/43 economic sectors (Europe/RoW)
- EXIOMOD (TNO) – 164 economic sectors per country
- FIDELIO (IPTS) – 59 economic sectors

All based on Social Accounting Matrix (NACE)



- E3ME(CE) – 43/28 consumption categories (Europe/RoW)
- EXIOMOD (TNO) – 200 goods and services
- FIDELIO (IPTS) – 59 products, 17 commodities



- E3ME(CE) – 14 GHG and non-GHG emissions, material use
- EXIOMOD (TNO) – 28 types GHG and non-GHG emissions, different types of waste, land use (15 types) and use of material resources (171 types)
- FIDELIO (IPTS) – 5 (energy, air emissions, land, water, materials)



- Different theoretical underpinnings
- Varying levels of detail and treatment of technological change
- All based on IO and trade matrixes
- All can do scenario modelling up to 2050
- All can assess economy wide impacts (incl. rebound effects, carbon (other emissions) leakage)

