Distribution, Growth, Ecology – Squaring the Cycle? Ideas for Reconciling Post-Keynesian and Ecological Economics

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FMM Conference

October 30, 2021

"Storyline"

- Problem:
  - Required speed of transition vs. growth imperative
  - Distribution
- How (not) to think about it?
  - Neoclassical economics
  - National accounts
  - Post Keynesian theory and ecological economics
- What to do? Aspects of achieving transition
  - Politics of power
  - Post Keynesian policy proposals

Multiple Crises

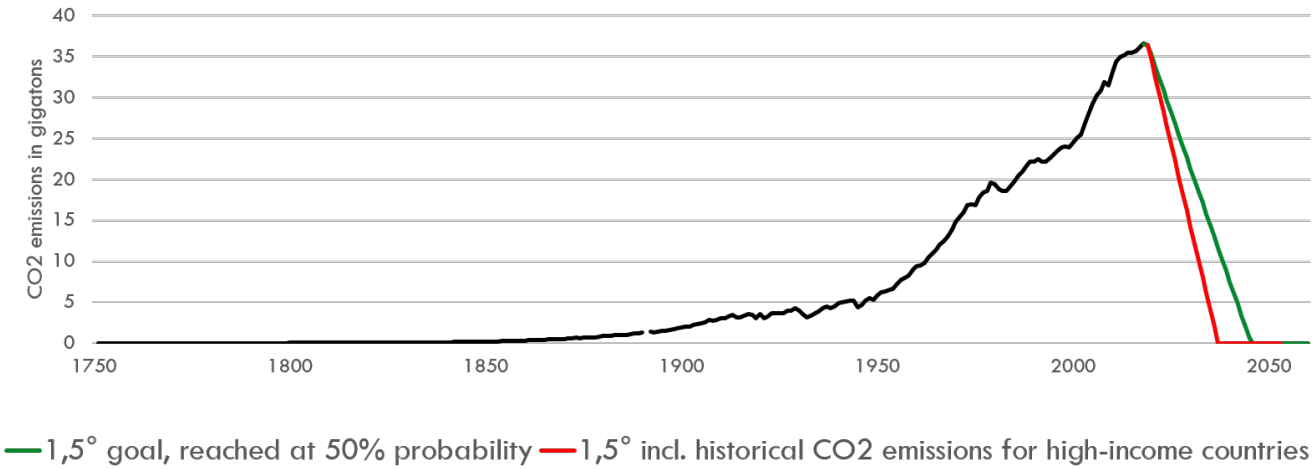
- Ecological*
- Social
- Health
- Economic?

$\Longrightarrow$ Address simultaneously

* Presumed here:

- Global warming is human-made
- Risks are high at 1.5°, escalate eyond
- Earth is largely uninhabitable at 6°

CO_2 Reduction Path for 1.5 Degrees



Data: OWID 2021, IPCC 2021, own calculations

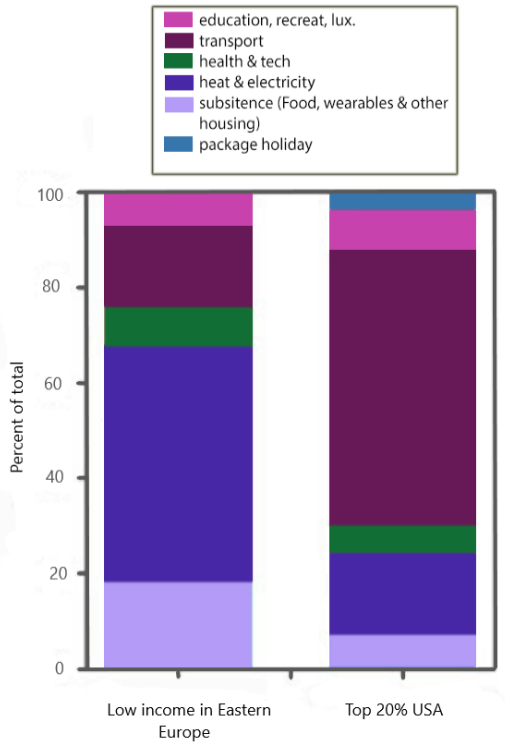
- Yearly CO_2 reduction of 10-12%
- Taking their historical share into account, high-income countries need to reach net zero emissions of CO_2 by 2037 (Anderson ea. 2020)

Growth Imperative?

- Investment/accumulation is one of the key features of capitalism:
  - Competition forces companies to invest, or else perish
  - (But no monetary growth imperative, Fontana/Sawyer 2016)
  - $\Longrightarrow$ Growth of the capital stock
- Historically, there is a near linear 1:1 relationshipof income and energy use (Semieniuk 2018)
- Two possible strategies for severing the positive feedback effect: Decoupling and mitigation (carbon capture storage)

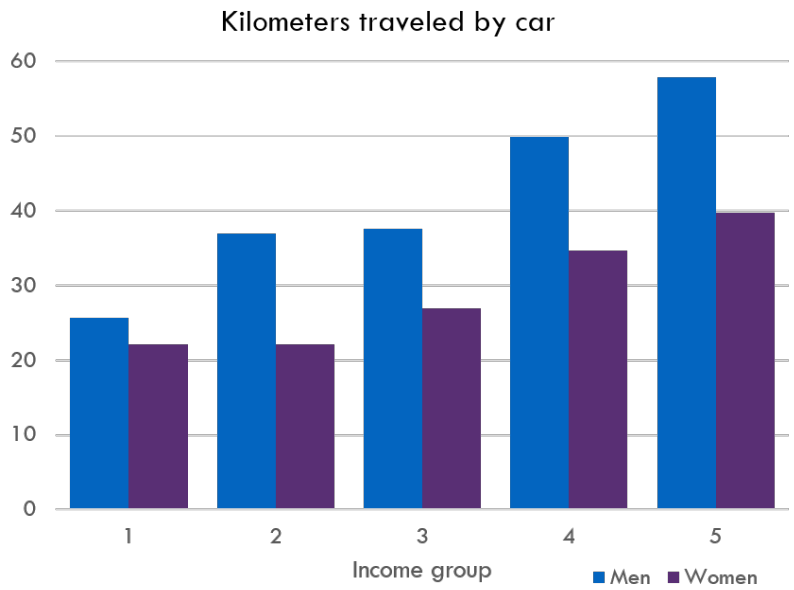
Distribution

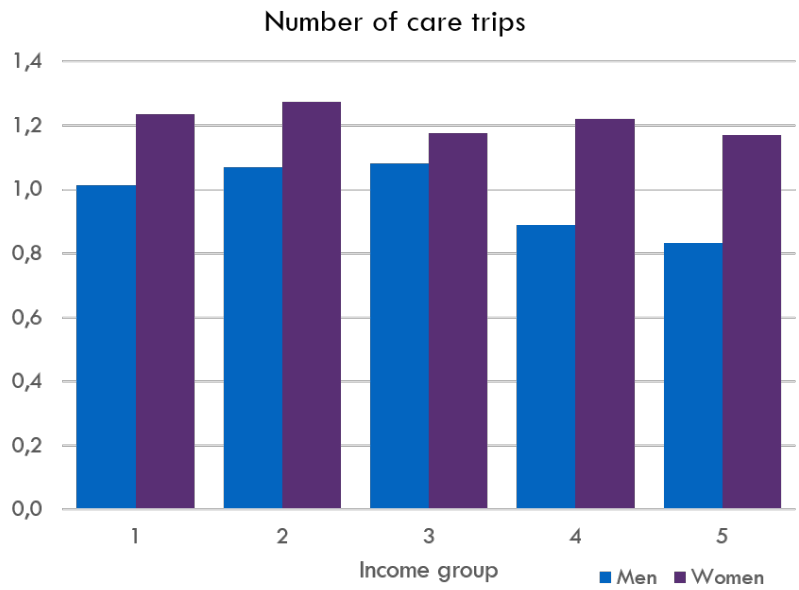
- Differential rates of emission: lower income $\rightarrow$ higher relative CO_2 intensity of consumption
- Higher income $\rightarrow$ higher absolute energy use (Wiedmann et al., 2020; Oswald et al., 2020)
- Dynamics due to composition: Transport more difficult, heating and electricity easier to abate $\Longrightarrow$ lower inequality makes it easier to decarbonize (Oswald ea. 2021)



Source: Oswald ea. 2021

Distribution by Gender in Transportation





Source: Huwe (2021)

- Men travel more kms by car => emit more CO_2
- Women make more care trips (using any mode of transport)

How NOT to think about it? Neoclassical edition

- Nordhaus (2018 AEJ:EP): 6° warming => 8.5% income loss
- Dietz/Rising/Stoerk/Wagner (2021 PNAS) meta analysis of tipping points: 6° => 1.4% consumption loss

- Partly due to methods: self-stabilizing models, perfect factor substitution, misspecified damage functions + discount rates
- But also confidence in capitalism $\Longrightarrow$ Policy recommendation: carbon pricing

How to think about it? Post Keynesian and structuralist

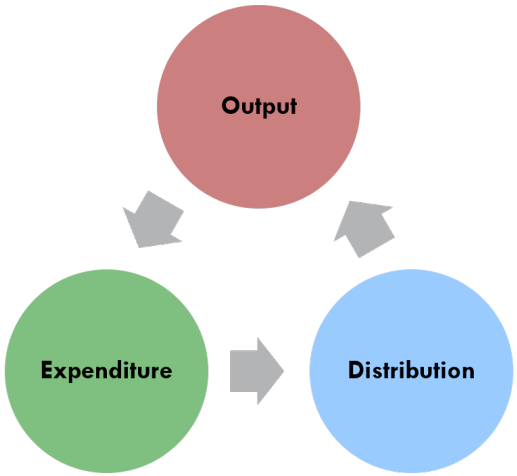
- Decoupling through a technological revolution (new Kondratief cycle, Priewe 2021)
- Mitigation can be achieved by spending 3% of global output per year (initial „big push“ of 6%, Semieniuk/Taylor/Foley/Rezai 2021)
- Takes demand effects of transition into account
- Often critical of degrowth, but modelling possible
- Confidence in governments‘ ability to stabilize capitalism
  $\Longrightarrow$ Policy recommendations: carbon tax (incl. border tax), government investment (Onaran et al. 2020), green finance (Dafermos/Nikolaidi/Galanis 2018), work time reduction (Mechler/Rezai/Taylor 2013), redistribution

Criticism by Ecological Economics: Technological Solutions Necessary, but not Sufficient

- Decoupling
  - CO_2: required rate of reduction even harder to reach with future growth (Haberl ea. 2020), the higher GDP growth, the higher the required rate of decoupling
  - Resource use: No evidence for global decoupling (Hickel/Kallis 2019) problematic socio-economically: worsens North-South dimension (extractivist growth model)
  - Massive technological leaps required for aviation sector, shipping, steel concrete (Davis ea. 2018)
- Mitigation
  - Net negative emissions (carbon capture and storage) baked into IPCC scenarios
  - So far not viable (technologically/economically, Minx ea. 2018)
  - Burning large quantities of biomass: Risks for biodiversity, inequality regarding land use and food security (Creutzig ea. 2021)

How to think about it? National accounts

- GDP
  - Production
  - Consumption
  - Distribution
- Elasticities:
  - Decarbonization/decoupling
  - Net negative emissions (carbon capture + storage)
- No golden bullet: we need all 5



Post-Keynesianism und Ecological Economics I: Growth Models

- Leontief production function (constant marginal cost), mark up over cost, focus on the short run
  ✓ No contradiction: Realistic view of technological change: retro fitting, net investment
- Classes as social actors
  ✓ No contradiction
- Steady state models
  ✓ No contradiction: Growth is not baked into models, adequate parameters yield CO2-neutral steady state (Hein 2021)
- Wage-/profit-led debate
  ✓ No contradiction: Small absolute effects, main point: there is no trade off between equity and efficiency

Post-Keynesianism und Ecological Economics II: Economic policy

- Fiscal policy for stabilization
  ✓ No contradiction: Generating growth is not a goal
- Endogenous monetary policy (money creation)
  ✓ No contradiction: Horizontalist view (Cahen-Fourot/Lavoie 2016), monetary policy is accommodating
- Strong state
  ✓ No contradiction: Active welfare state (investments in socio-ecological transformation), debt thus sustainable

Post-Keynesianism und Ecological Economics III: Contradictions

- Focus on distribution: differential saving rates, demand-driven growth
  – Contradiction: Redistribution to the bottom leads to higher growth, low-income groups have higher relative CO2 emissions
- Growth imperative (net investment/accumulation)
  – Contradiction: Forced accumulation of capital (cut-throat competition)

Post-Keynesianism und Ecological Economics III: Contradictions

- Focus on distribution: differential saving rates, demand-driven growth
  - But: absolute CO2 level relevant for global warming
  - Sustainable consumption paths (Fuchs et al. 2016, Gough 2020)
    $\Longrightarrow$ Public investments (insulation, public transport)
- Growth imperative (net investment/accumulation)
  - Fundamental socio-ecological transformation?
  - Mixed economy?: remove economic domains from the profit/accumulation logic
  - Not necessarily central government, can be under the auspices of cooperatives, NGOs, different levels of government etc.

Political Economy of a Post-Keynesian - Ecological Economics Synthesis

- Major obstacle of political feasibility: power
- Pressure from below (activists)
- Pressure *ex cathedra*
- Strategic coalitions (faction of capital: e.g. renewables)

Conclusions

- 3 schools of thought on ecological issues:
  - Neoclassical: this is fine
  - Post Keynesian: mitigate + redistribute
  - Ecological economics: socio-ecological transition
- Post-Keynesianism and Ecological Economics can be (and in many cases, have been) reconciled: both are necessary

Thank You for Your Attention