Environmental benefits of avoided counterfactual expenditure – why you should eat out!

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How do the environmental impacts of eating out compare to those of eating at home? We can compare the direct and embodied (supply chain) effects of supplying the food and environment but is there more to it?

Consequential LCA – *what would happen?*
In addition to nutrition, meals supply other needs.

How do we ensure like-for-like (*an appropriate functional unit*)?

We can use SYSTEM EXPANSION:

EATING OUT:

EATING IN:

How could we estimate what the counterfactual expenditure or activity would be?

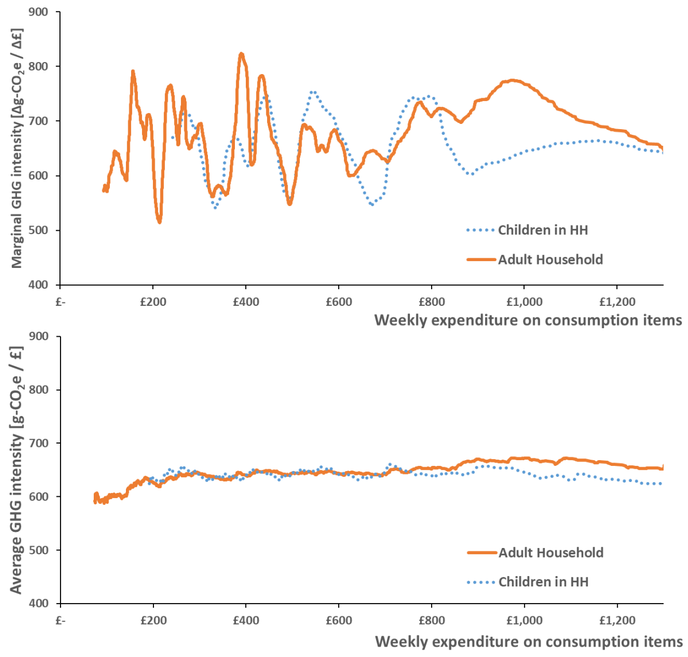
- Patterns of expenditure
  - Marginal
  - Average
  - Machine Learning
  - Other statistical approaches
- Patterns of time-use and interaction
- Clustering "needs" / other behavioural science
- Interviews

studied so far…

Unfortunately, marginal expenditure patterns are not very stable (over the ~5000 households of UK Living Costs and Food survey).

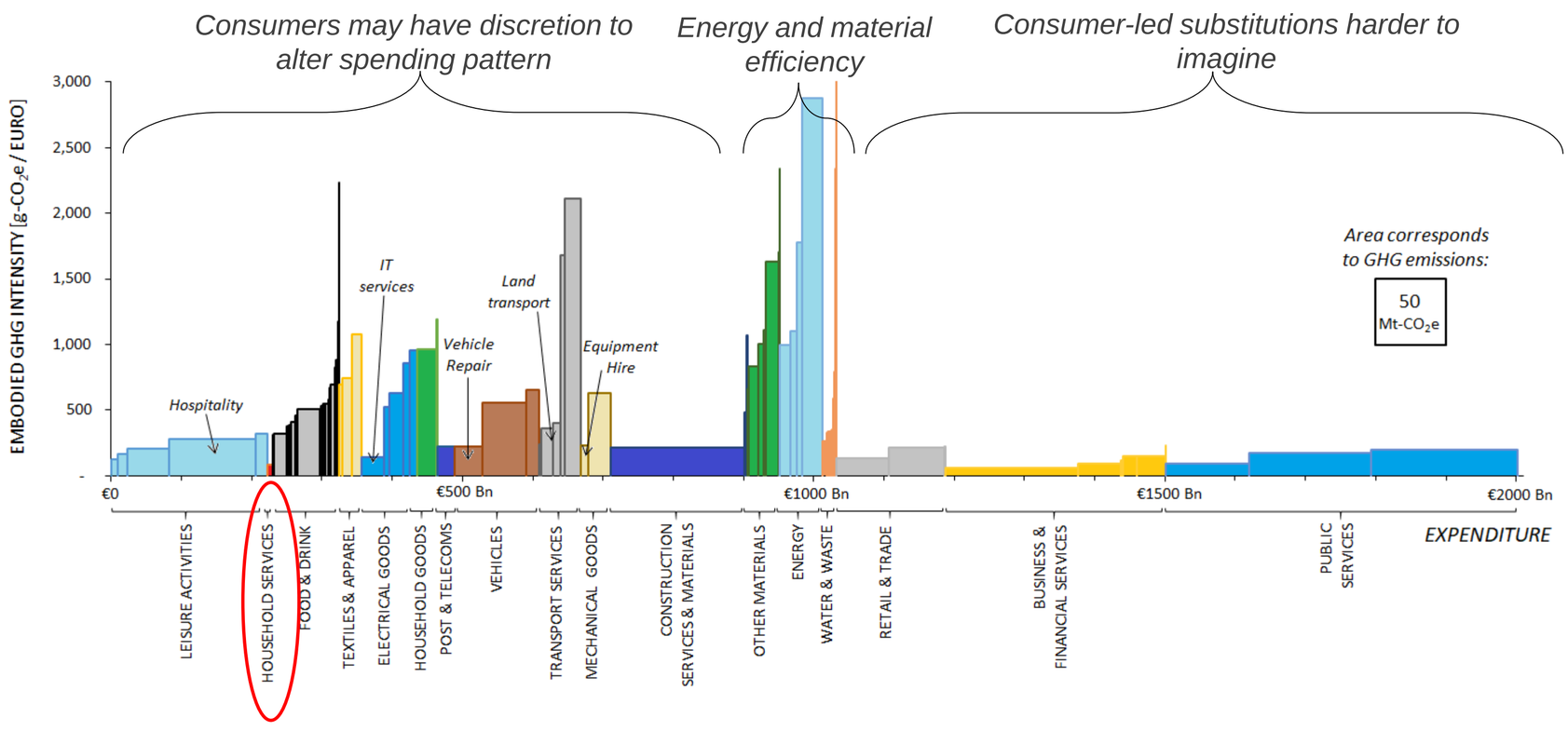
An average could be used but clearly doesn't fully capture the dynamics of people's decisions.

For simplicity, GHG impacts are show here (average **653 g-CO_2e/£**) but situation is similar for other impact categories.



Bigger picture:

For a given size GDP, impacts can be reduced by encouraging consumption from low-intensity sectors if it displaces activity elsewhere. This could be to an alternative means of supplying same products (e.g. repair) or by meeting the "need" in another way.



Future: What is the abatement potential if some of the £1.24T/yr of unpaid work in UK (cleaning, childcare, travel) displaces formal economy activity – i.e. people value their time higher relative to other expenditure and buy it back?

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