

Discussion of: *Measuring
the Economic Value of the
Effects of Chemicals on
Ecological Systems and
Human Health*

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Summary

- Paper presents concise summary of economic valuation of non-market goods
- Technical focus seems appropriate for stock-taking, but more details could be discussed w.r.t. to equilibrium sorting models, incentive compatibility,...
- Health valuation is discussed from the perspective of an environmental economist, whereas health economic approaches are only touched upon
- Take home messages should be stronger

Regulator's perspective on WTP values

- Why is the regulator so interested in WTP values?
- Some thoughts about WTP in day-2-day regulatory work focussing on value of statistical life
- Very important to quantify negative externalities of chemicals use most of which affect health & environ.
- Three competing VSL philosophies:
 - VSL based on meta-analysis of labor market studies
 - VSL based on meta-analysis of stated preference studies
 - VSL based on topical, large-scale stated preference studies

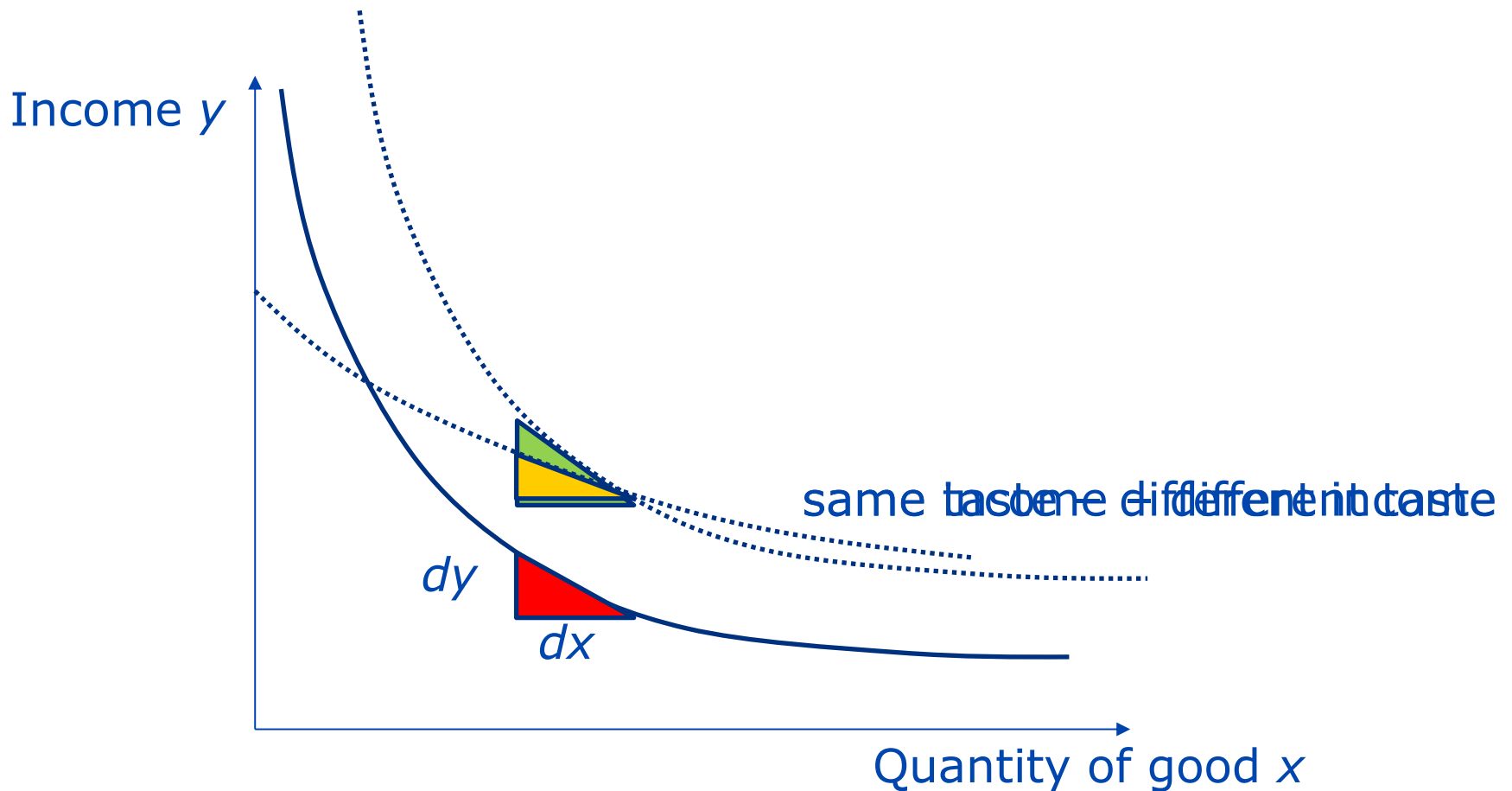
Problems everywhere?

- Labor market studies: generalizability?
- Stated preferences: PGs and incentive compatibility?
- Meta-analyses: too many sources for biases?
- Topical studies: internal and external validity?
 - None of these methods is a priori superior
 - Context matters
 - Biases small compared to those in risk assessment

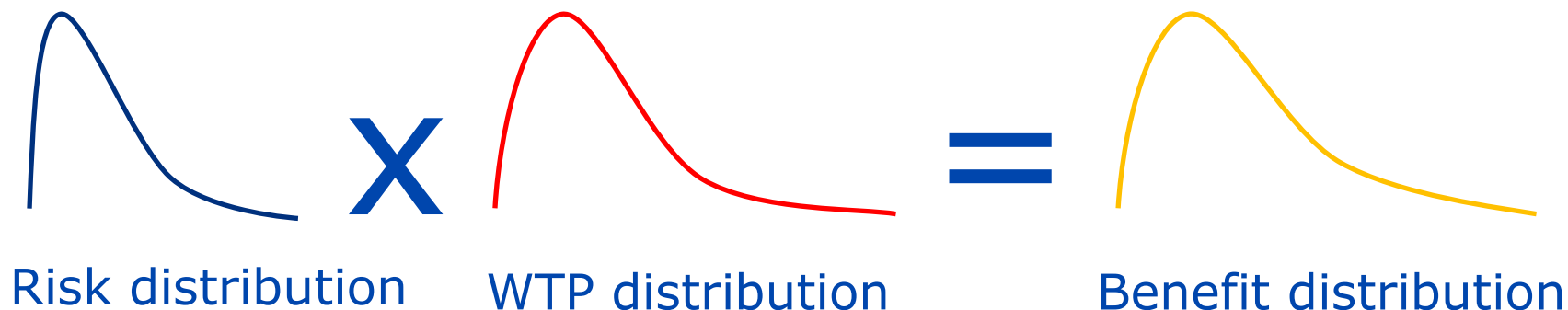
Central value vs distribution

- Policy makers endorse single values, but...
- ...world is complex, single values will never be right
- regulator needs to trade off, keeping in mind both theoretical arguments and communication w/ public
- Why WTP distributions still might be better than endorsed single numbers:
 - avoids certainty illusion in ex ante analysis
 - captures preference heterogeneity across people
 - facilitates sensitivity analysis

Preference heterogeneity in WTP



Sensitivity analysis with distributions



→ No problem to derive “best estimate” for policy analysis

→ Multiplication of 2 lognormals, i.e. can derive any percentile numerically without being a math wizard

Conclusions

- Paper is excellent starting point to reasoning about chemicals impact valuation
- Need for more applied research, especially on environmental impacts
- Paper could stress more that regulator's need to assess both most likely impact & uncertainty bounds
- Exact WTP figure might not be too decisive if consistently applied for ranking policy alternatives
- Important interface between risk assessment and monetization, requires move toward **probabilistic framework for chemicals health impact assessment**

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