

Counting Community

**A review of quantitative methods for measuring
social impacts of food system policies**

Gavin Scoville & Zoë Plakias // WWU Dept. of Economics

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Social impacts matter

Potential social impacts are often touted as a key benefit of local and regional food system investments and policies

Examples: social equity, food sovereignty, food equity, food justice, quality of life, social capital, promoting a sense of community, structural change, community transformation, bridging diverse communities, community cohesion, transformative learning, social integration

How can evidence of potential social impacts be used?

To evaluate policies *ex ante*

- Policy analysis
- Benefit-cost analysis

To secure funding

- Government grants
- Philanthropic donations

To convince decision makers to support or fund projects

Why quantify potential social impacts?

Pragmatism

- Quantitative bias exists in decision making

It may be better than not including them at all

- What gets counted counts (D'Ignazio and Klein 2020, Kling et al. 2012)
- What gets measured gets managed (business adage of disputed origin)

Conventional nonmarket valuation methods

Can we use or adapt them to value social impacts?

Nonmarket valuation methods

What are nonmarket valuation methods?

- Used in Environmental Economics
- Attempt to elicit the value that stakeholders place on a certain good or service (related to the environment)
- Can involve using proxy markets (e.g., housing or labor markets) or surveying people about hypothetical situations

Why monetize?

- Puts all impacts in common terms (today's dollars)
- Perceived procedural justice (Fujii et al., 2004)

The “value” in non-market valuation

Willingness to pay as value

- Preferences and budget constraint
- Inherently extrinsic

Components of value

- *Total economic value*: direct use value, indirect use value, option value, bequest value, existence value

Which methods could be used to quantify social impacts?

Stated preference

- **Contingent valuation:** Ask people their willingness to pay for a particular hypothetical outcome
- **Choice experiment:** Give people multiple sets of choices with varying attributes and costs and ask them to choose between the choices (or doing nothing)

Revealed preference

- **Hedonic valuation:** Use the values of a proxy good (e.g., house prices) to estimate the value of attributes of the house or neighborhood
- **Travel cost:** Use the travel costs people are willing to incur to get to/access something to estimate the value they place on the thing they're accessing

Contingent Valuation Example

How much in additional property tax would you be willing to pay annually to double the level of *food justice* in your community?

Key challenge with quantifying social impacts

Social impacts are abstract

- What does food justice *look like*? If the food system in your community was just, *how would you know*?
- Can food justice be scaled (e.g., doubled, halved)?

Can social impacts be “concretized”?

- Most common way to do this is proxy indicators for social impacts
- Possible to do a collective visioning exercise for this?

Examples of “concretizing”

Biodiversity occurs from a landscape to genome level

We can proxy with a combination of:

- Landscape Dominance
- Species Evenness
- Species Richness
- Genetic Diversity

Human agency also occurs at many scales

- **Example:** A community might gain local agency, but due to present structures in the community, women and girls experience decreased agency

Potential challenges and criticisms

Ethical values

Using money as the common metric risks taking unethical actions for economic gains? (McCauley, 2006)

Incommensurability

Is it reasonable to compare the value of food justice with consumer surplus? (Isacs et al., 2022; Khaw et al., 2015)

Indigenous worldviews

Potentially inconsistent with many Indigenous worldviews or stewardship-based worldviews (Manero et al., 2022)

Systems change

Social and Ecological Systems are complicated, and cannot be easily halved or doubled like some goods (Parks & Gowdy, 2013)

Potential challenges and criticisms

Income Inequality

Willingness to pay is derived from values and budget constraint (Byrne & Just, 2023; Parks & Gowdy, 2013; Howarth & Wilson, 2006)

Public Accessibility

Quantitative methods can be technocratic

Discounting

How much we diminish the present value of a future payoff--always subjective!

Unstable Stated Preferences

“How much do you value this good you haven't thought much about?” Possibility of an unstable response!

(Ainscough et al., 2024)

Moving beyond conventional nonmarket valuation methods

Is there a better way to value social impacts?

Deliberative valuation methods

Two types with similar design but different motives

- Deliberative Preferences (DP)
- Deliberative Democratic Monetary Valuation (DDMV)

Principles

- Democratic
- Use representative sample of stakeholders
- Participants deliberate about how to value a policy
- Collective Choice Agreement

Deliberation: DP vs DDMV

Deliberative Preferences

- Learn from experts
- Deliberate
- Individually state willingness to pay

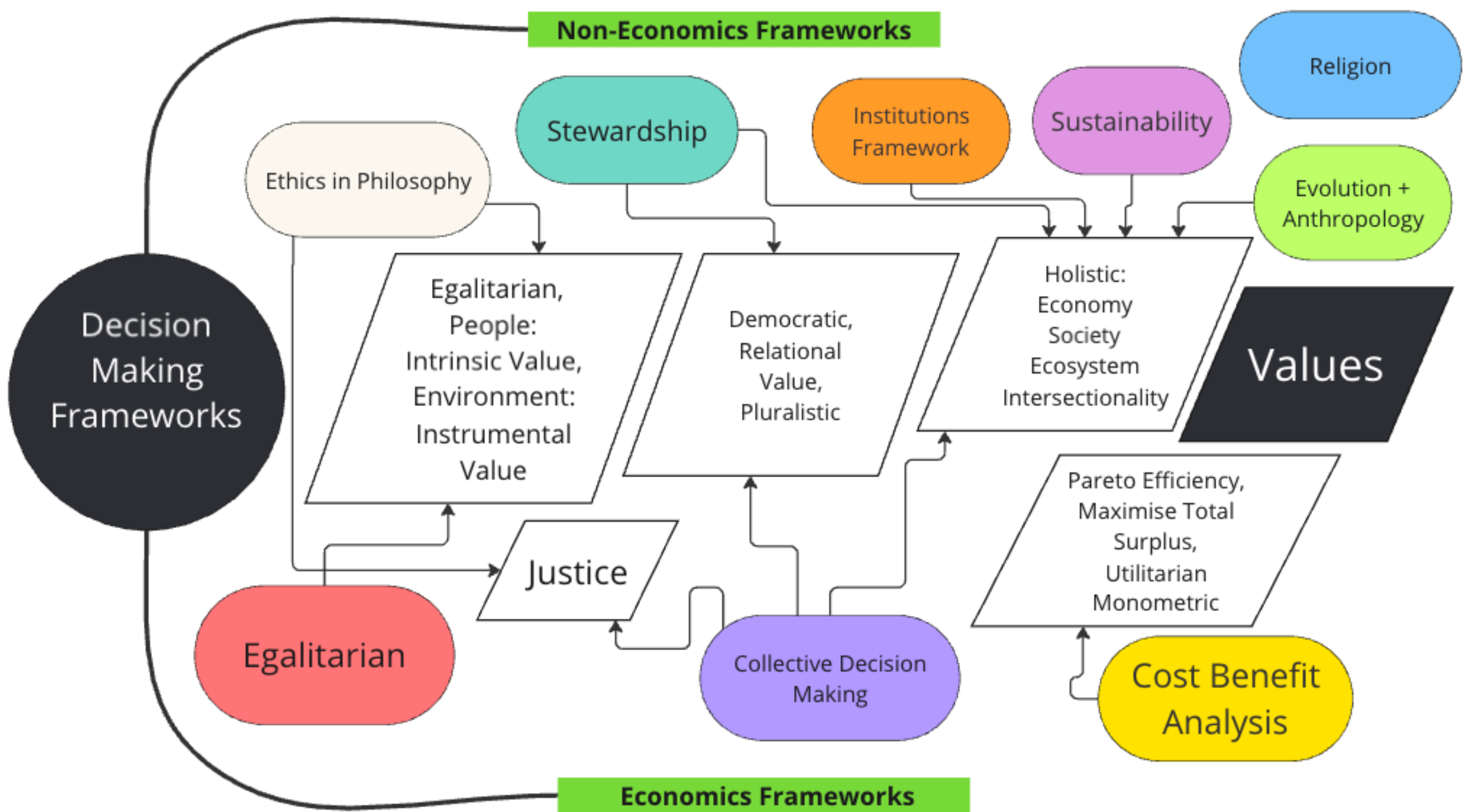
Deliberative Democratic Monetary Valuation

- Learn from experts
- Deliberate
- Come to a consensus
- Consensus follows Nash cooperative bargaining solution (Howarth & Wilson, 2006; Rachmilevitch, 2023)

Other quantitative indicators of “success”

Example: Life satisfaction Approach

- Used by United Nations
- Survey people about their wellbeing
- Works best with panel data
- Correlate with changing food systems
- Identify most impactful actions



Conclusions

Conventional nonmarket valuation methods are useful, BUT...

- Many challenges exist to valuing abstract goods
- Methods are subject to many legitimate criticisms

Deliberative valuation methods have potential as an alternative

- Address some criticisms of conventional methods
- It may still be necessary to “concretize” abstract goods for deliberation

Still unclear whether quantitative methods are optimal here

- These ideas are predicated on the pessimistic assumption that there is quantitative bias in decision making—could novel presentations of qualitative information be just as effective in persuading decision makers?

Questions for our audience

1. Which of these approaches resonate with you, if any?
2. What other quantitative approaches to measuring the social impacts of food systems do you think it would be good for us to consider?
3. Could you see a use for adapted conventional nonmarket valuation methods or deliberative valuation methods in any projects or initiatives you're studying or working on?