Morals in multi-unit markets

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Introduction: Do markets erode morals?

Old debate in social sciences: Do markets erode morals?

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Sandel (2012): "But what are at stake are the attitudes and norms that are appropriate, ..., the danger that money, that cash incentives, can crowd out nonmarket values worth caring about."

Experimental evidence on the effect of market on morals by Falk & Szech (2013):

- *Morality:* Concern that people forget about their morals when they trade in a market with negative externalities;
- *Method:* Laboratory experiment where participants can kill a mouse in exchange for 10 Euro, either in individual decision-making or in *single-unit* markets.
- *Finding:* Single-unit markets partially erode morals compared to individual decision-making.

Introduction: Do markets erode morals?

Falk and Szech's paper inspired a follow-up literature:

- Some **market structures may preserve moral behavior** (e.g., Bartling, Weber & Yao, 2015).

More recently, **Falk and Szech's finding was contested**:

- Prices decline due to imbalanced proportion of sellers and buyers (Sutter, Huber, Kirchler, Stefan & Walzl, 2020).
- Repetition is responsible for erosion, not the market institution (Bartling, Fehr & Özdemir, 2022).

Introduction: Do markets erode morals?

Our paper:

- **Premise**: Single-unit markets may be a poor approximation of erosive markets (e.g., market for weapons, opioids or air travel).

- **Approach**: We study *multi-unit markets* that (i) are more common; and (ii) may trigger the forces that erode morals most strongly.

Introduction: Do markets erode morals?

Why might multi-unit markets lead to more moral erosion?

(1) Market selection:
- Price and quantity set by the least moral trader.

(2) Replacement logic:
- Trade is justified with the belief that, if I don't trade, others will take advantage of the opportunity.

Is moral erosion due to an erosion of norms or of norm compliance?

In contrast to the previous literature, we elicit an independent measure of people's norms.

Experimental design

Experimental setup: Negative externality

Trading leads to a negative externality.

- Each unit traded cancels a donation to UNICEF for measles vaccine (Sutter et al. 2020);
- One unit of donation = 4 **doses** of vaccine (good for 2 children);
- Donation costs €1.5.

Experimental timeline:

```
        IDM      IDM or markets    IDM  Beliefs Norms
                ⎴‾‾‾‾‾‾‾‾‾‾‾⎴
      ├───┼───┼───┼───┼───┼───┼───┤
      1   2   3   4   5   6   7   8
```

- Valuations reported for 1, 2, 3, 5, 7, 10 and 15 units.
- Donation value of € 1.5 per unit.

Experimental setup: Morals in markets

We compare **three market treatments** with 5 buyers & 5 sellers:

1. **SINGLE**: Single-unit market. Market size is 5 units. Each participant can trade up to **1** unit.

2. **MULTI**: Multi-unit market with trading quota. Market size 15 units. Each participant can trade **3** units.

3. **FULL**: Multi-unit market without trading quota. Market size 15 units. Each participant can trade **15** units (the full market size). [*FULL activates both market selection and replacement logic*]

Experimental setup: Morals in markets

- Fixed groups and roles (5 sellers & 5 buyers).
- Induced costs and values with a common schedule. SINGLE (left panel); MULTI and FULL (right panel):
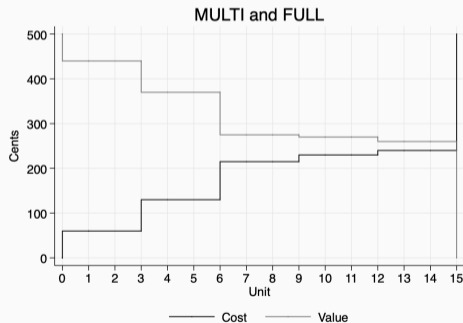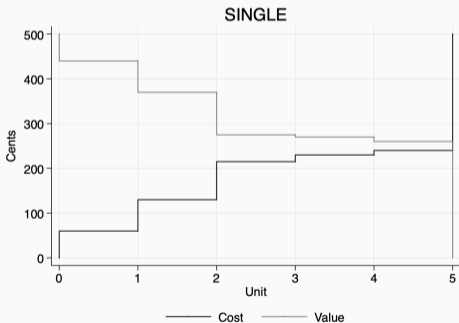
Results

Results: Morals in individual decision-making

There is quite some variation in our traders' preferences for the charity.
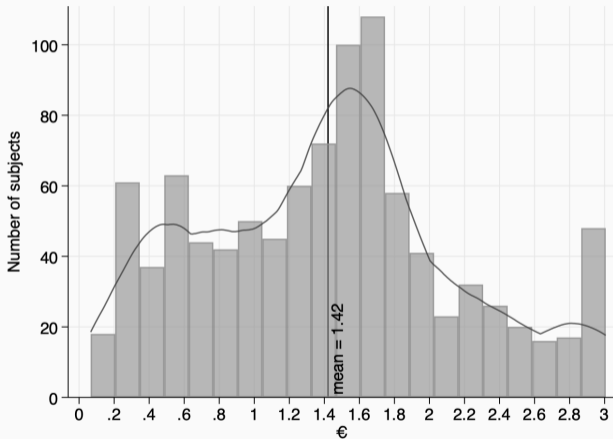
Results: Erosion in single-unit markets

How do people trade-off money for themselves and money to UNICEF in MPL versus single-unit markets? Fraction of people who:

- In MPL, value a donation less than its monetary value ($\in 1.5$).
- In SINGLE, conclude a trade for profit $\leq \in 1.5$.

Results: Market quantities and morals in markets

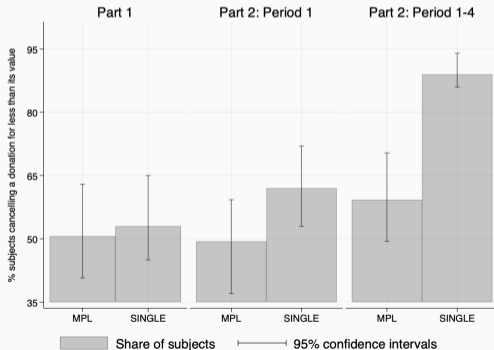
Figure: Bar chart showing % of selfish CE for SINGLE, MULTI, and FULL conditions, with 95% confidence intervals. Legend: Observed trade; 95% confidence intervals.
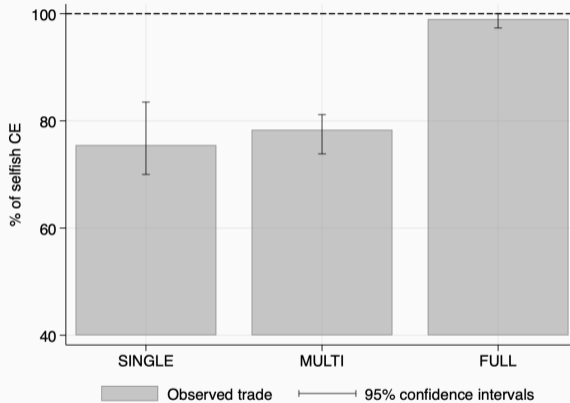
Key result

Partial erosion in SINGLE and MULTI, full erosion of morals in FULL.

Results: Are different things socially acceptable?

Social norms (Krupka & Weber, 2013): Is it socially appropriate to cancel a donation of €1.5 when paid €1 in a market/IDM?
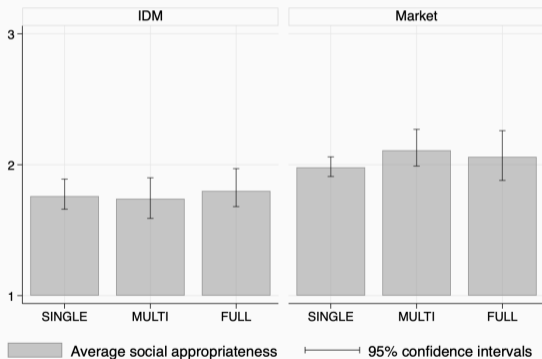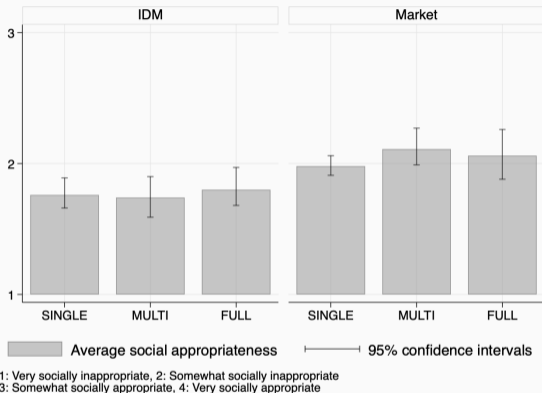

1: Very socially inappropriate, 2: Somewhat socially inappropriate
3: Somewhat socially appropriate, 4: Very socially appropriate

Results: Are different things socially acceptable?

1: Very socially inappropriate, 2: Somewhat socially inappropriate
3: Somewhat socially appropriate, 4: Very socially appropriate

Erosion and norms
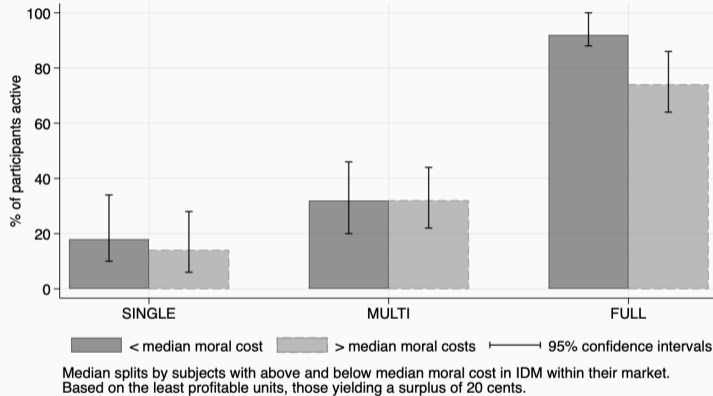
Markets partially erode norms. No norm erosion between MULTI and FULL. Instead, norm compliance deteriorates!

% of participants active (y-axis, 0 to 100)

Legend: < median moral cost | > median moral costs | ⊢———⊣ 95% confidence intervals

Median splits by subjects with above and below median moral cost in IDM within their market.
Based on the least profitable units, those yielding a surplus of 20 cents.

In FULL, 83% of traders are active at the last units. This is consistent with the
replacement logic, but not with market selection.

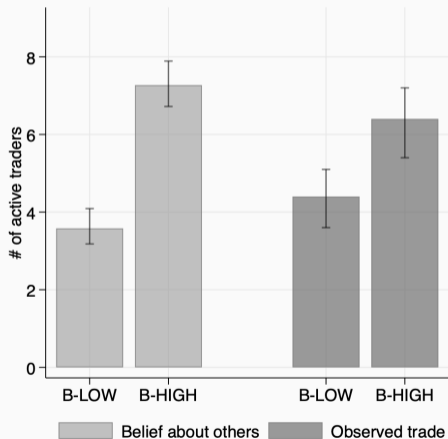Additional treatments I: Eliciting beliefs about participants' replaceability.
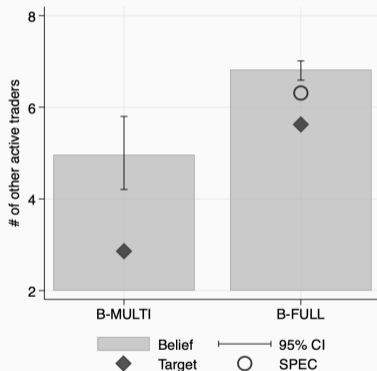
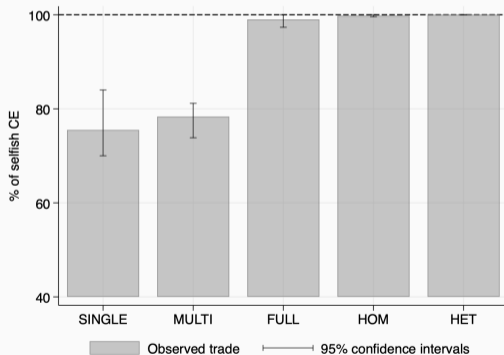In addition, beliefs and trading behavior are positively correlated.

Additional treatments II: Exogenous manipulation of participants' beliefs, to study the causal effect of beliefs on behavior.

Results: Replacement logic vs. market selection (Evidence 4)

Additional treatments III: Forming homogeneous (HOM) and heterogeneous (HET) groups, based on individual decision-making moral costs. In HOM, market selection is not active.

Key force driving complete erosion in FULL

The *replacement logic* justifies trading in multi-unit markets:

- Most participants are active, irrespective of their moral costs;
- Beliefs are consistent with replacement logic reasoning;
- Market selection does not affect market outcomes.

Conclusion

Conclusion

Unrestricted multi-unit markets make moral people act immorally

1. **Aggregate market outcomes are fully selfish**:
   - Units yielding a surplus of 20 cents are almost always traded, at a cost of €1.50 to UNICEF.
   - The **same individuals** who act morally in individual decision-making forget about their morals in these markets.
2. Markets partially erode norms; **unrestricted markets completely erode norm compliance.**
3. Key force driving erosion: The **replacement logic**!

"The level of selfishness displayed on market 2 has almost made me cry during the experiment. Today, my faith in humanity has taken a giant blow."