ETHICS AND MARKETS

14.271, October 19, 2022

Jean Tirole

Massachusetts Institute of Technology
Toulouse School of Economics

I. INTRODUCTION

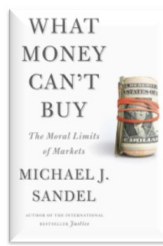
- The market economy has become the dominant, not to say exclusive, model for our societies
- But the market has won neither hearts nor minds
- Has the pursuit of the common good been sacrificed on the altar of the new economic order?

Two indictments laid against the market.

REPUGNANT MARKETS

Civil society, religious leaders, politicians, philosophers

object to a number
of markets, viewed as repugnant,
with rather different viewpoints, from



to

(also: Elizabeth Anderson, Michael Walzer)

Sandel: What's wrong with markets?
A wide range of goods and services, including babies for adoption, surrogate motherhood, sexuality, drugs, military service, votes, and organs for transplantation, are not to be commoditized through markets, no more than friendship, admissions to elite universities or Nobel Prizes are to be bought, or genes and other life forms to be patented.

An economist's view on repugnant markets

Economists' Weltanschauung "Markets and incentives are key."

Effective, when properly applied. Have worked on a number of caveats:

- *Low-powered incentives* desirable when noisy performance measurement (including teams), collusion with monitors (capture), repeated interactions, multitasking, asymmetric information...
- *Crowding out of intrinsic motivation* may happen: (a) conveyed information, (b) money sullies meaning of the prosocial act (does he do it because of his intrinsic motivation or for the money?)

Nonetheless, premise remains that incentives work/can be made to work in most circumstances.

Same for markets. Economists' work focuses on market failures. "Markets often fail, but, properly regulated, they are key to economic organization."

- ***Psychologists, sociologists***: Material incentives
  - may not work well,
  - "undermine intrinsic motivation", "sully the meaning of actions", "crowd out valuable social norms"...
- ***Legal scholars***: Law is not just a set of incentives/sanctions. It also is "expressive" (reflects and conveys society's values)
- ***Philosophers' bone of contention***: Distrust of markets and more generally of incentives

Is economics a moral and philosophical science?

a) Number of repugnant markets can be analyzed in terms of

- Externalities (babies for adoption to highest bidder). Image ext.: dwarf-tossing, prostitution
- Internalities (voluntary slavery, organ sales, OxyContin)
- Asymmetric information (commodification of friendship, admission in universities, scientific prizes, love) Etc

Limits to market & government failures compass >

b) Moral postures are a warning signal, but an unreliable source of ethical inspiration (miscegenation laws, anti-gays).
More broadly, proper policy response requires understanding why we feel indignant.

HOW ARE OUR SOCIETIES ORGANIZED?

The shareholder value oddity

Dominant form of production: shareholders (debtholders in case of distress) have control

- Rationale: secures return on investment and thus attracts funding
- Yet, other stakeholders are affected: workers, suppliers, customers, local communities, potential pollutees...

$\Rightarrow$ basic decision externalities

But then why did Milton Friedman (1970) argue that the only social responsability of business is to maximize profit?

To protect stakeholders, two approaches: contracts and regulation

Contracts: insulate stakeholders from managerial decisions

- fixed nominal claims (wages and severance pay, fixed debt repayment combined with priority and collateral...)
- exit options associated with general training, flexible labour markets and short-term debt maturities

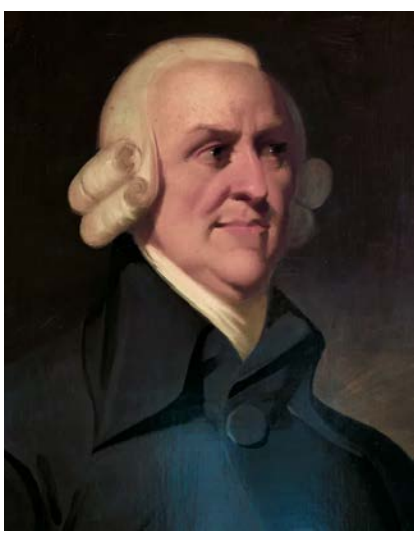
Yet there is only so much that contracts can achieve...

- imperfect contracts
- collective-action problems (environment, competition, privacy...)
- other failures of Coase's doctrine (incentive to build a nuisance entity...)

Our societies: Smith + Pigou

Shareholder-value approach to how society should be organized has traditionally rested on two pillars

- The invisible hand of the market harnesses consumers' and corporations' pursuit of self-interest to the pursuit of efficiency
- The state corrects market failures whenever externalities, internalities or asymmetric information stand in the way of efficiency, and redistributes income and wealth (the income and wealth distribution generated by markets has no reason to fit society's moral standards)



Adam Smith

AC Pigou

Then, why do firms and their stakeholders have a social responsibility?

Government itself fails. Government failures have 4 origins:

a. Capture by lobbies and other interest groups. [Governments may fail to correct externalities as Pigovian principles would recommend, or bend to wealthy constituents' opposition to redistributive policies]
b. Pandering to electorate's prejudices/misunderstandings
c. Territoriality of jurisdiction
   - cannot rule against child labour in a distant, sovereign country, and an outright import ban may be infeasible due to international trade agreements or other policy constraints
   - consumer boycotts and investor activism become the outlet through which citizens can express their opposition to such practices.
d. High enforcement cost (litter, lack of respect): social norms.

Example of twin failure: environmental regulation

First best: carbon price (done properly: (1) no exemptions- including fossil fuel subsidies, absence of border adjustment; (2) compensation; (3) forward guidance; (4) much more R&D, etc)

Second best: government passes the buck to actors without the capability or legitimacy to regulate environment

- Central bank
- Public procurement (France, Greece)

Third best: inactivity, fossil fuel subsidies

BROADER CONDEMNATION OF MARKETS

a) **Social value of activities differs from private gain**: economist's bread & butter [public's confusion between liberalism (holds economic actors accountable) and free-market economy (no garantee of accountability)]

b) **"Market frames ethical choices" : Managers cannot express their social responsibility in marketplace**

Best exemplified by the "replacement logic":

"If I don't do it, someone else will anyway"

- selling weapons to dictators
- bribing officials
- being lax on opioids
- whitewashing product's shortcomings
- taking illicit performance-enhancing drugs (athlete)...

Why is the critique important?

- Implications for competition policy, promotion of open platform ecosystems (DMA, etc), competitive procurement, trade...
- Corporate status: Not-for-profit, B-corporation
  - mandatory for elderly homes, hospitals, prisons?
  - subsidized?

WHAT IS MORAL?

One conception of morality: “Do no harm”. Morality is then about prosocial behavior / the avoidance of harm (negative externalities: pollution, crime...) (most common view among economists)

- Most universal (similar across cultures) and stable (across time)
- Restrictive view, will nonetheless be the focus of this lecture

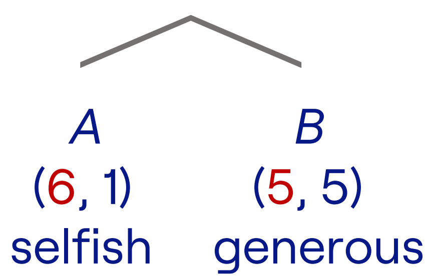
Two caveats

(a) Fragility of moral behavior (highly context-dependant)

Large literatures on moral wiggle room and narratives

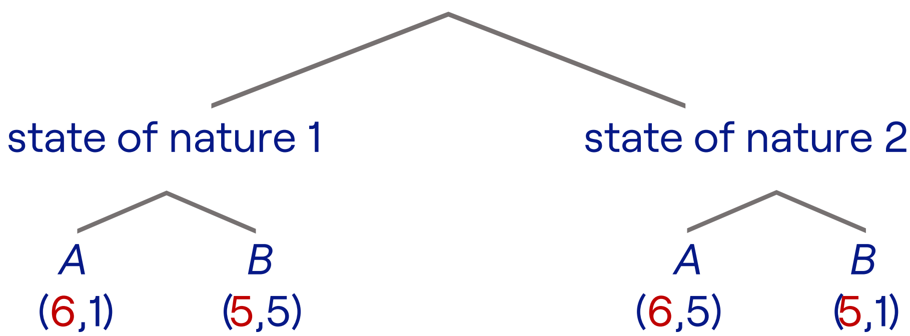
Moral wiggle room: the role of flimsy, situational excuses [Dana-Weber-Kuang 2007 and numerous articles since]

Standard "dictator game": basic ethical dilemma. Individual ("dictator") anonymously chooses between two options (first payoff= dictator's, second payoff= receiver's)

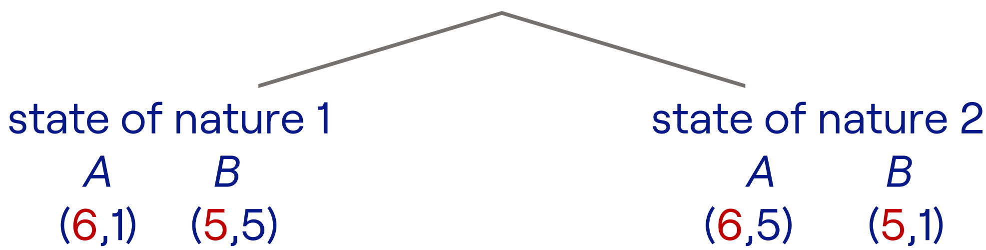


Typical experiment: 3/4 choose B.

Modified dictator game: 2 equally likely states of nature



Do you want to (costlessly) learn the state of nature before choosing between A and B?″



- About half choose not to know; all of these choose A. In the end, much larger fraction chooses A. *Bad excuses can be effective!*
- *Applications*
  - Delegation to a third party taking the tough decisions
  - Avoiding the ask (changing sidewalk, away from home)
  - Firing squad and the blank bullet*

*Other treatment: two dictators. Back to known payoffs (A is selfish for sure). Each dictator can enforce (5,5) outcome by himself (i.e., (6,1) requires both dictators to choose A). But only 35% choose B. “Misperception” of lack of pivotality

b) Morality broader than pro-social behavior

(Haidt, Durkheim): avoidance of offensive behaviors

- that involve “no harm” to anyone,
- but violate conventions/taboos, generate disgust, feeling of disrespect for one’s values, etc

Keywords here may be: duty, authority, loyalty to in-group (family, workplace, country, religion, platoon)... Fluctuates more across time, cultures. . . (life insurance, gay marriage)

Unsolved question: what is meant by “harm”? Everything- including disagreement- becomes mental harm...

II. MORALITY OF MARKETS

Joint work with Mathias Dewatripont

Introduction

We revisit a nagging question: does the market weaken our moral compass?

- Public opinion, politicians, religious leaders, philosophers… warn against the religion of the marketplace
- Some recent experimental evidence on the "replacement excuse": "If I don't do it, someone else will". Echoing widespread narratives (selling weapons, toxic financial products, opioids; bribing; athletes taking illicit drugs…). Do, under intense competition, such behaviors lose their moral overtones and become mere "costs of doing business"?

How does the nature of competition affect the market's "morality"?

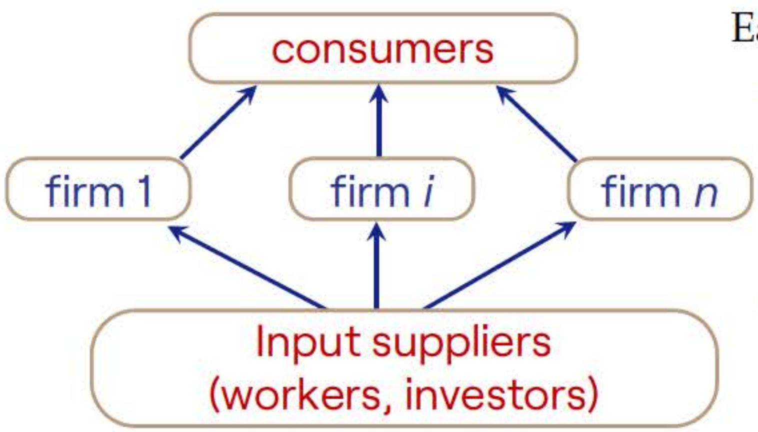
Description of competition goes beyond

- market structure (number of firms & substitutability)

It also covers overall ecosystem:

- whether prices are flexible or fixed
  - fixed prices: professions (taxis, doctors, notaries...); apps & franchising environments;
- whether cutting ethical corners lowers cost or boosts demand
  - cost reduction: pollution, child labor
- social responsibility of stakeholders
- rivals' ethics (preferences, corporate status)
  - Do less ethical suppliers drive out of the market ethical ones?
  - When should we expect non-profits to behave like for-profits?

Framework: firms compete for consumers of a good or service



Each firm sets

- price, except if prices are regulated (taxis, doctors, notaries, apps, franchising environments...)
- morality of supply
  Firm is run by manager with social preferences.

<u>Key question is whether unethical behavior raises or lowers demand</u>.
Stakeholders may be socially responsible as well.

II. MODEL

- Oligopoly of n competing firms serving unit-demand consumers
- Firm i chooses
  - a price p_i
  - a moral action a_i 0 with associated per-client social welfare $W_i(a_i)$ increasing in a_i (choice of morality). $a_i \in [0, \bar{a}_i]$ where $\bar{a}_i \leq +\infty$
  - welfare impact $W_i(a_i)$ satisfies $W_i'(0) = +\infty$, $W_i' > 0$, $W_i'' < 0$.

- Moral action may affect unit cost: $c_i(a_i)$ with c_i'' 0.
  - $c_i' > 0$: child labor, fossil fuel use
  - $c_i' < 0$: socially responsible investors or workers (input suppliers).

Demand

- Net price $\hat{p}_i = p_i + \phi_i(a_i)$ increasing or decreasing in morality of action
- Outside option $\{\hat{p}_0, a_0\}$
- Vector of net prices $\hat{\mathbf{p}} = (\hat{p}_1, \ldots, \hat{p}_n)$, of moral choices $\boldsymbol{a} = (a_1, \ldots, a_n)$
- Demand function $D_i(\hat{p}_i, \hat{\mathbf{p}}_{\ \ i})$

  net/perceived prices set by other firms

- Consumer h buys from supplier i if $\varepsilon_{hi} \quad \hat{p}_i > \max_{\substack{j \neq i \\ j \ \ 0}} \{\varepsilon_{hj} \quad \hat{p}_j\}$ where $\{\varepsilon_{hi}\}_{i \ \ 0}$ drawn from a smooth joint distribution.

- Elasticity of demand D_i depends on number of firms, substitutability among products:

$$\eta_i(\hat{\mathbf{p}}, \boldsymbol{a}; \sigma) \equiv - \frac{\partial D_i / \partial p_i}{D_i / p_i}$$

- Standard assumption

$$\frac{\partial \eta_i}{\partial \hat{p}_j} < 0$$

(same as SC if optimal p_i).

Net prices

- Willing to pay more for an ethically produced good: "socially responsible"
- Unethical action (bribe, over-prescription, willingness to sell weapon, product misrepresentation) increases demand: "socially irresponsible"

Socially irresponsible consumers:	$\phi_i'(a_i) < 0$
Socially responsible consumers:	$\phi_i'(a_i) > 0$ (say $\hat{p}_i = p_i \quad \alpha_C W_i(a_i)$)
Socially neutral consumers:	$\hat{p}_i = p_i$

Cost side impact of ethical behavior ("input stakeholders")

Say, 1 unit of output requires 1 unit of capital and 1 unit of labor

- Investors (I) willing to forgo $\alpha_I W_i(a_i)$ in return
- Workers (W) willing to forgo $\alpha_W W_i(a_i)$ in wage.

Then, e.g.

moral action increases cost of doing business (child labor, pollution)

$$c_i'(a_i) = \gamma_i'(a_i) - \underbrace{(\alpha_I + \alpha_W) W_i'(a_i)}_{\text{moral action reduces cost of doing business}}$$

Demand impact of supplier's moral choice

Irresponsible consumers: Three foundations for demand-side benefits of cutting ethical corners:

- Externality (weapons sold to dictators, bribe, performance enhancing drugs)
- Internality (opioids)
- Shrouded attributes (toxic financial products, unperceived fat or sugar content, short-termism/income manipulations)

Responsible consumers: Fair trade; boycotts of unethical firms.

Firm i's objective function (CSR)

$$V_i = \underbrace{[p_i - c_i(a_i)]D_i(\hat{\mathbf{p}})}_{\text{monetary profit}} + \alpha_i \underbrace{\mathcal{W}_i(\hat{\mathbf{p}}, \boldsymbol{a})}$$

social preference parameter

i's perception of "welfare"

where

$$\mathcal{W}_i(\hat{\mathbf{p}}, \boldsymbol{a}) \equiv \Sigma_{j=0}^{n} W_j(a_j) D_j(\hat{\mathbf{p}}).$$

(total pollution, total quantity of opioids…)

▸ More general consequentialist preferences

Key assumptions

Assumption 1 (consequentialism)

All players (suppliers, consumers, workers, investors)' perception of the social impact of their trade is proportional to the size of this trade.

(applies also to multiple-unit consumptions)

Assumption 2 (flexible prices)

Prices are (locally) flexible at equilibrium price configuration $\hat{\boldsymbol{p}}$. Namely, for equilibrium choices $(p_j, a_j)_{j=1,\dots,n}$, any change in ethical behavior δa_i can be offset by a price change $\delta p_i = \quad \phi_i'(a_i)\delta a_i$ so as to keep supplier i 's net price and therefore demand constant.

Two counterexamples:

(a) Regulated prices

(b) Limited liability $(p_i \quad c_i(a_i))$ or not-for-profit.

Assumption 3 (constant returns to scale)

A supplier's cost (or gain) from raising the morality of its production is proportional to her output (her cost function can be written as $C_i(q_i, a_i) = c_i(a_i)q_i + d_i(q_i)$).

Strategic complementarity in ethical choices

Proposition (sufficient conditions for strategic complementarity)

For given prices, ethical choices are strategic complements if (i) consumers are irresponsible, or (ii) equilibrium is symmetric, or else (iii) suppliers do not internalize the social impact of their ethical choices too much.

FOC

$$\frac{\alpha_i W_i'(a_i) \quad c_i'(a_i)}{\phi_i'(a_i)} = \eta_i L_i,$$

where L_i is the generalized Lerner index

$$L_i = \frac{p_i \quad (c_i \quad \alpha_i S_i)}{p_i}$$

and S_i is the social responsibility index:

$$S_i \equiv \Sigma_{\substack{j\neq i \\ j \quad 0}} \sigma_{ij}(w_i \quad w_j).$$

Bottom line: for given prices, often multiple ethical norms.

Not so under flexible prices (next).

COMPETITION AND MORAL BEHAVIOR

Does an increase in the elasticity of demand (entry, increase in substitutability, or weaker collusion) result in less moral behavior?

Irrelevance of competitive pressure (moral choices are independent of demand function, or of collusive behavior from differentiated Bertrand competition to perfect cartel) if prices are flexible.

$$\alpha_i W_i'(a_i^\dagger) = c_i'(a_i^\dagger) + \phi_i'(a_i^\dagger)$$

Intuition:

(1) *Flexible prices*. Demand-side benefits of cutting ethical corners, say
Increase the elasticity of demand

- cutting ethical corners leads to a higher increase in market share
- lower markup $\Rightarrow$ lower stake in gaining market share

Two effects perfectly offset each other

(2) Cost minimization: Per-unit cost =

$$c_i(a_i) + \phi_i(a_i) \quad \alpha_i \Sigma_{\substack{j \neq i \\ j \quad 0}} \sigma_{ij}(\hat{\mathbf{p}})[W_i(a_i) \quad W_j(a_j)] = [c_i(a_i) + \phi_i(a_i) \quad \alpha_i W_i(a_i)] \quad K(\hat{\mathbf{p}}, \boldsymbol{a}_{\;\mathbf{i}})$$

Robustness. Irrelevance also holds for

- Other models of competition (Cournot, search)
- Imperfect consumer information (experience or credence goods)
- Different internalizations (as long as consequentialists: proportional to consequences (quantites))
- Non-linear pricing $(v(q, \theta) \quad T(q) \quad \phi(a)q)$
- Non-constant returns to scale if demand-side relevance of ethics or if covered market.

WHEN DOES COMPETITIVE PRESSURE MATTER?

(1) *Fixed prices*: No "reduced-markup effect" of intense competition

- *Irresponsible consumers. More competition impedes moral behavior.* Vindicates "If I don't do it, someone else will".

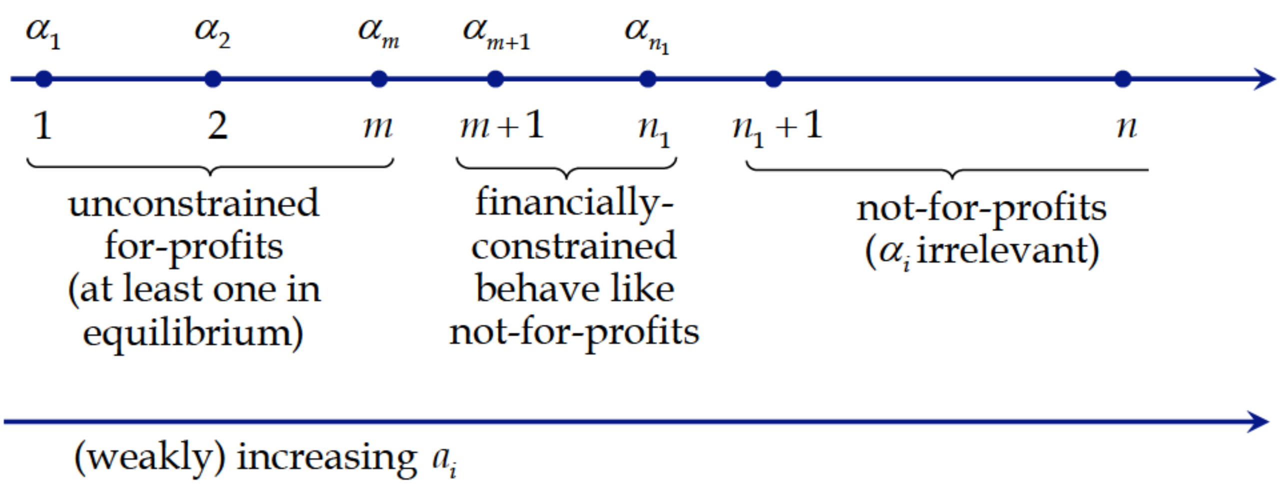
  Strategic complementarity of moral choices, for several reasons

  - *elasticity effect*: rivals behaving immorally intensifies competitive pressure, raises firm's elasticity of demand (always)
  - *social responsibility effect*: becomes socially more important to take market share away from unethical rivals.

- *Responsible consumers: More competition fosters moral behavior* (consumers have more choice)

(2) *Suppliers with different ethics (different α_i) and/or different corporate forms (for-profit, not-for-profit)*:

In either case, prices are endogenous but akin to fixed prices (non-negative-profit constraint) for either most ethical suppliers or for not-for-profits.



$\sigma =$ coefficient of substitutability between firms (firms are symmetrical except for social preferences/corporate charter). Perfect substitutes when $\sigma \to +\infty$.

Proposition

The behaviors of all suppliers converge when competition (as indexed by σ) is intense: The for-profits mimic the not-for-profits' low price ($p_i \to c(a_i)$ for all i as $\sigma \to +\infty$), while the latter behave no more ethically than for-profits. There is a race to the ethical bottom: $a_i \to a_1^\dagger$ for all i as $\sigma \to +\infty$.

(1) Protect not-for-profits from the competition of for-profits if close substitutes

(2) "Ethical bottom" not that low if

- either socially responsible consumers
- or socially irresponsible consumers, but little competition or diversified mutual funds controlling competitors.

Arbitrary intensity of competition: Gresham's law of ethical behavior?

Proposition (ethics heterogeneity and market shares)

Consider a symmetric oligopoly, in which suppliers differ only in their social preferences. Whether cutting ethical corners increases demand or lowers cost:

(i) Under a fixed price $(p > c)$, less ethical firms command a higher market share:

$$\alpha_1 \leq \alpha_2 \;\Rightarrow\; D_1 \quad\quad D_2.$$

The equilibrium exhibits the race-to-the-ethical-bottom property.

Proposition (ethics heterogeneity and market shares)

(ii) Under flexible prices,

- Fixing n, there exists n_1^* such that a high-ethics firm commands a higher market share than a low-ethics one $(a_2 > a_1)$ if and only if the number of low-ethics firms, n_1, is large enough: $n_1 > n_1^*$. In particular, in the duopoly case, the ethical firm commands a higher market share despite its more ethical choice.
- There exists a substitutability threshold σ^* such that high-ethics suppliers (with social preferences α_2) behave like not-for-profit suppliers (that is, $p_2 = c$), if and only if $\sigma \quad \sigma^*$; the financial viability constraint is never binding for low-ethics suppliers.
- The behavior of the two groups of suppliers converges as $\sigma \to \infty$. Prices converge to marginal cost, and there is a race to the ethical bottom.

COMPETITION AND MORAL BEHAVIOR

Does an increase in the elasticity of demand (entry, increase in substitutability, or weaker collusion) result in less moral behavior?

Irrelevance of competitive pressure (moral choices are independent of demand function, or of collusive behavior from differentiated Bertrand competition to perfect cartel) if

(a) either flexible prices

(b) or fixed prices, but moral actions affects cost, and not demand (socially neutral consumers).

Contrary to Dufwenberg et al and Sobel's result that social preferences are irrelevant for strong competition: here it is competitive pressure that is irrelevant, not social preferences. [They have non-consequentialist preferences.]

IMPLICATIONS

3 contributions

(1) Theoretical foundations for replacement-logic concern (3 sources of strategic complementarity in moral choices).

(2) Strong warning nonetheless against sweeping condemnation of market as immoral:

- That is the case if prices are fixed and consumers irresponsible.
- But irrelevance result under flexible prices; and even under fixed prices, market fosters moral behavior if responsible consumers $\Rightarrow$ think twice before questioning on such grounds competition policy, anti-bottleneck regulation, and competition through trade.

(3) Heterogeneity in ethics and corporate forms: convergence of behavior when strong competition (low prices, “low” ethics -but still reflect stakeholders ethics).

Alleys for research

- Counterfactual to markets?
- Leading by example
- Testing implications
- Replacement as an excuse (moral wiggle room: bribing an official: the contractor/bidder picks bid and bribe; peddling opioids if the doctor’s fee is market-determined)
- Other forms of ethics (a start in the paper).

BONUS SLIDES

POSSIBLE COMPASS: MARKET FAILURES

1) Externalities and repugnant markets

Classic externalities: environmental externalities (e.g, carbon emissions), or underconsumption of vaccines and overconsumption of antibiotics.

Similar arguments apply to many situations in which missing party to contract:

- Babies for adoption to highest bidder; child labor; slavery
- Market for votes (seller and buyer of vote exert an externality on other citizens)

Image externalities (change people's perceptions of broader group)

- Dwarf-tossing
- Market for women's reproductive labor, prostitution

2) Imperfectly competitive markets

- Information
  - *Incomplete information*: Misinformation about LT consequences of organ sales, contract pregnancy (bonding with child), addictiveness (of OxyContin), vaccines (measles vaccine & autism)
  - *Asymmetric information*: No commodification of friendship, admission in universities, scientific prizes, love.
- Market power
  - Price gouging, contracts written under duress
  - Monopolization, abuses of dominant position

3) Internalities

- *Failure to pursue self-interest*: Self-control (argument usually invoked for drugs, alcohol, smoking, junk food)
  - Voluntary slavery
  - Organ sales
  - Opioids: free samples
- *Internalities and (image) externalities*: doping in sports.

4) Inequality

  - Behind the veil of ignorance...
  - Especially when little moral hazard: health, education, gender...

5) Privacy

Standard economic justifications as well: Too much information about us may

- makes us be discriminated against (capture of behavioural surplus) exposes us to risk/deprives us of insurance (health, labor, personal relationship markets)
- violates our right to oblivion
- affects behavior in the private sphere (expansion of our public sphere)
- for divisive issues (politics, religion, sexuality, abortion, social issues. . . .), forces us to change our behavior; or keep same behavior and change social graph & join safe spaces of like-minded individuals. Safe spaces have ancillary welfare costs
- makes us subject to political oppression (social score Tirole AER 2021).

Broader notion of consequentialist internalization: Welfare can be perceived differently; examples:

- *Ethical welfare*: $\mathcal{W}_i(\hat{\mathbf{p}}, \boldsymbol{a}) = \mathcal{E}(\hat{\mathbf{p}}, \boldsymbol{a}) = W_i(a_i)D_i(\hat{\mathbf{p}}) + \Sigma_{j \neq i} W_j(a_j)D_j(\hat{\mathbf{p}})$

  Example: total pollution or consumption of opioids
- *Full welfare*: substract cost $\mathcal{M}(\hat{\mathbf{p}})$ of misallocation of consumers to firms $(\mathcal{E}(\hat{\mathbf{p}}, \boldsymbol{a}) \quad \mathcal{M}(\hat{\mathbf{p}}))$
- *Narrow ethical welfare*: $\mathcal{W}_i(\hat{\mathbf{p}}, \boldsymbol{a}) = W_i(a_i)D_i(\hat{\mathbf{p}})$

Ethical or full welfare internalization: same symmetric equilibria if symmetric oligopoly

Assumption (consequentialism)

$$\frac{\partial \mathcal{W}_i}{\partial a_i} = \Gamma_i(a_i) D_i(\hat{\mathbf{p}}).$$

with $\Gamma_i' \leq 0$.

- Consequentialist: impact indeed proportional to demand.
- $\Gamma_i' \leq 0$: concavity assumption.
- Satisfied by three examples above (externality, internality, product misrepresentation).

return