Thesis Presentation

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Overview

Piracy

Cost side innovation

Discounting

I will be using a Popperian/Hayekian approach

Start with an observation

Describe the problem situation

Link the different elements in a causal way such that a maxmimum of new observations are predicted

The problem situation

The intellectual property claim: limiting entry $\rightarrow$ increases incentive to innovate.

The piracy claim: making piracy illegal $\rightarrow$ increases incentive to innovate.

The monopoly claim: If only one firm sells the asset $\rightarrow$ the price set will be above what is welfare maximizing.

Questions

1) Does uniform enforcement of copyright increase innovation?

2) What kind of mechanism does social value enable?

3) Who benefits from piracy?

4) Is the incentive to improve the product independent of network value?

Useful facts

When a firm violates a copyright it is an infringment (tort)

When a consumer violates a copyright it theft (criminal)

Digital goods have only fixed costs, marginal costs are zero

The subjective value of good partly arises from group consumption

Tentative answer 1

Does uniform enforcement of copyright increase innovation?
No

Causal Mechanism: Piracy can sometimes increase the payoff of projects

Tentative answer 2

What kind of mechanism does social value enable? Social value is a substitute for competition

Causal Mechanism: If the number of agents consuming a product increases its value, monopolist must try and expand its market

Tentative answer 3

Who benefits from piracy? The firm can benefit and always consumers with a lower willingness to pay

Causal Mechanism: The firm can benefit by including lower willingness to pay agents by charging higher willingness to pay agents more

Tentative answer 4

Is the incentive to improve the product independent of network value? No

Causal Mechanism: A high network value can be a substitute to innovation

Motivation

Buyouts claim: Having the option of being bought out can only increase innovation.

Industry consolidation as efficiency.

Questions

1) Does the alienability of assets have a uniform effect (increases incentives)?

2) Do existing firms always have an incentive to allow buyouts?

3) Why does successful innovation usually mean buyouts?

Tentative answer 1

Does the alienability of assets have a uniform effect (increases incentives)? No

Causal Mechanism: The entrant does more damage to the incumbent than he gains in periods of intermediate development causing the incumbent to have a higher willingness to pay for those periods

Tentative answer 2

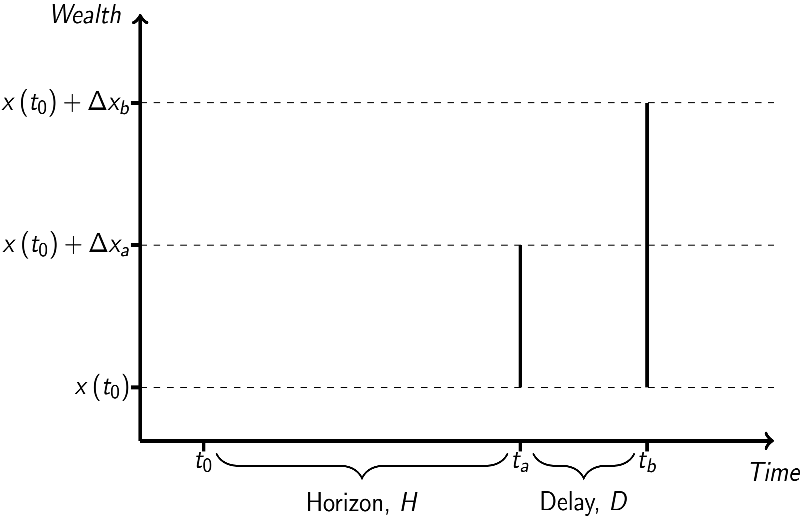
Do existing firms always have an incentive to allow buyouts?
No

Causal Mechanism: The allowing buyouts can cause blackmail and pursuing of damage maximizing projects instead of profit maximizing

Tentative answer 3

Why does successful innovation usually mean buyouts?
Because innovators purposefully choose projects with the intent of being bought out

Causal Mechanism: Entrants will prefer correlated projects


Wealth
$x\left(t_0\right)+\Delta x_b$
$x\left(t_0\right)+\Delta x_a$
$x\left(t_0\right)$
t_0
t_a
t_b
Time
Horizon, H
Delay, D

Discountng motivation

Fact 1) Experimentally, people discount payment hyperbolically

Fact 2) Experimentally, agents discount differently

Fact 3) Good reason to believe that exponential discounting gets somebody more money

Fact 4) "Preferences" is used as an explanatory tool to reconcile exponential and hyperbolic

The pros and cons of preferences

Pro: If we can characterize an agents preferences, we can predict an agents conditional behavior.

Con: We cannot explain why agent A and B have different preferences

An alternative to preferences: Adaptation

Agents in economics have preferences that are independent of their environment, strict strategy/preference dichotomy

Biological agents preferences are adaptations, if it were concious it would be a strategy.

Some additional facts that can be used:

Fact 1) Some choices can affect future choices

Fact 2) Agents wealths can grow in different ways

Fact 3) They have different wealth levels

1,2,3 $\rightarrow$ can imply that exponential discounting is not always the best way to maximize wealth

Questions

1) Why do agents have different ways of discounting?

2) How do we reconcile the normative method of discounting (exponential) and the descriptive method (hyperbolic)?

3) Can we draw out new falsifiable predictions from a unified framework?

Tentative answer 1

Why do agents have different ways of discounting? Agents discount because they maximize growth which depends on the environment

Causal Mechanism: Growth depends on the kind of process that the agents face, which means their heterogeneity can be explained by the variation in their environment

Tentative answer 2

How do we reconcile the normative method of discounting (exponential) and the descriptive method (hyperbolic)? It depends on the agents time horizon

Causal Mechanism:

Multiplicative + Fixed = Exponential Discounting

Additive + Adaptive = Hyperbolic

Tentative answer 3

Can we draw out new falsifiable predictions from a unified framework? Yes

Causal Mechanism:

Additive + Fixed = Highest payout → unconstrained capacity and unscaleable project based firms don't discount

Multiplicative + Adaptive = Hybrid → constrained capacity with projects that depends on scale discount the most

→ Wealth of agents can affect their discounting