

Theory of the Firm

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What is a firm and why care?

Most of this course concerns companies or *firms*

- Bundles of individuals, assets and technology
- Treated as a coherent, usually profit-maximizing, individual
- Thus we will rarely look inside this black box
- But so central that today we'll study them internally
- We'll ask some basic questions that help us later
 - 1 What are firms as legal entities?
 - 2 What should and do firms maximize?
 - 3 What conflicts arise within firms to inhibit maximization?
 - 4 How to govern and finance to minimize these conflicts?
 - 5 Why do firms exist at all? Why not just market?
 - 6 Theories of the role of firms
 - 7 Contractual alternatives to firms
 - 8 Does it matter if we call it a firm?

Legal types of firms

Firms come in six principle varieties (variations though)

- 1 Sole proprietorships
 - Most small business: mom and pop store, franchise
 - Just an extension of an individual, same responsibilities
- 2 Partnerships
 - Group of individuals with unlimited liability
 - Often professional groups (lawyers, accountants, etc.)
- 3 Privately-held corporations
 - More on corporations below, but these owned by few
- 4 Publicly-held corporations: trades on stock market
- 5 Non-profit/cooperative
 - Tax-exempt, cannot disperse profits, very regulated
 - Cooperative can disperse to customer or worker owners
- 6 State-owned: government run, uncommon in OECD

Basics of corporation law and finance

We will primarily focus on corporations, so a bit more depth

- Legal: what are defining features?
 - 1 Corporations have rights and responsibilities of individuals
 - 2 Chartered by states and granted *limited liability*
 - Only money *inside corporation* can be extracted
 - Owners not responsible for default, misdeed
 - 3 Must pay *corporation income tax*, unlike others
- Financial: two primary methods?
 - 1 Debt (bank or bonds): deductible interest
 - Corp. promises to pay, if doesn't default
 - Typically involves covenants, restrictions, etc.
 - 2 Equity: tax disadvantages
 - Shares receive dividends, voting rights, choose board
 - 3 Other methods: preferred shares, etc.

The corporate social responsibility debate

Most of the course will assume firms maximize profits

- But is this what they really do, or should do?
- For the moment, assume owners want them to
 - Share holders can spend these profits however they want
- Should managers try to accomplish this goal?
 - “Corporate social responsibility” (CSR) types say no
 - “Responsibility” of corporation for externalities, social goals
 - Friedman forcefully argues against this view, why?
 - 1 Managers are agents: choose means not goals
 - 2 By pursuing social goals, managers impose on shareholders
 - 3 If externalities, isn't this the role of the state?
 - 4 If shareholders, isn't this the role of voluntary action?
 - 5 Unless helps sell to consumers, effectively stealing
 - Most economists sympathetic to Friedman
 - Unless executives take pay cut, not their job to judge

Stakeholders society v. shareholder value

However, some have made more modest claims:

- “Stakeholder Society” claims other stakeholders matter
 - Not distant externalities or social goals
 - Just those “direct” stakeholders like workers, consumers
- Some “cooperatives” directly make these owners
- Stakeholder society argues all firms should act this way
- Many (most?) economists skeptical of even this claim
 - Unlike shareholders, workers/consumers can exit if abused
 - Shareholders value is sunk once they have contributed
 - Thus, w/o ethical and legal protections, will be expropriated
 - While socially valuable to redistribute, do it elsewhere
 - Corporate law/governance to ensure financing
 - If shareholders don't get their money back, will never invest

⇒ Governance should protect shareholders/profits

What do we mean by profits?

Naïve definition of profits is accounting: $P \cdot Q - C$

- In reality, things are much more complicated:
 - ① Economic profits, not accounting profits, example?
 - If proprietor works there, this is an opportunity cost
 - Profits *per current shareholder*, not just growth
 - ② Time and discounting
 - Profits later not worth as much today (discounting) but...
 - Also many things valuable in long-run hurt today
 - ③ Uncertainty
 - If uncertain, can only maximize expected profits
 - But even this isn't possible, because of risk attitudes
- Solution(?): stock market value
 - Not possible for privately held companies
 - Does the stock market reflect long-term value?
- Few of these arise in any given setting, but keep in mind

Do shareholders agree on goals?

Another problem arises from conflicts among shareholders:

- 1 Profits versus other goals
 - Some shareholders may buy into CSR (or discrimination)
 - Common response: let them spend money they get back
- 2 Different perspectives on risk: why does this matter?
 - Some may prefer riskier or safer investments
 - What is risky and safe depends on other holdings
- 3 Classes of shareholders
 - Not all shares same, and may have different interests
 - Small problem at most companies, but major at some
- 4 Large holders: why might they be a problem?
 - Dominant shareholder may harm minorities
 - Legal protections of minority shareholders

Imperfect solutions: voting, buyouts

Why firms may not maximize profits

So much for normative side, what do companies actually do?

- ① Non-profit corporations
 - Modest, but growing sector of economy
 - Even if don't maximize profits, do often care about income
- ② Cooperatives
 - May partially incorporate consumer and worker value
 - However, income may be valued more by managers (below)
- ③ State-ownership
 - Governments legendarily inefficiency, loss-making
 - Depends heavily on management (car companies, banks)
- ④ Other shareholder goals: CSR, etc.
- ⑤ Failure of managers to serve shareholders faithfully
 - Primary focus below
 - Keep in mind: managers need income to waste it

Principal-agent problems in corporate hierarchies

Managers have their own, not company's, interests

- And they employ managers who have own interests...
 - It's turtles all the way down
- This naturally leads to all sorts of sub-optimal behavior
 - More on this in a minute...
- Ideal situation is manager-owner: why?
 - Usually impossible: separation of capital and talent
 - Could make him "residual claimant" but...
 - Risk-aversion, limited liability
- In countries where institutions not developed, use family
 - Nepotism, old boy's networks not necessarily insidious
 - But lack of formal incentives obviously limits social inclusion
- *Very general* problem in economics
 - We'll return many times, good warm up
 - As a result, I will be relatively brief, informal

Taxonomy of incentive schemes

Incentives essence of management; examples? Write down

- 1 Equity, stock options and other financial instruments
- 2 Vesting and deferred, contingent compensation
 - Includes personal liability and claw backs
- 3 Direct management, instructions, monitoring
- 4 Lawsuits and audits for misbehavior
- 5 Efficiency wages and firing v. promotion
- 6 Bonuses based on hard or soft information
- 7 Reputation and external career concerns
- 8 Identity, professionalism and corporate culture
- 9 Leadership, emotions and pressure
- 10 Intrinsic motivation, freedom and mission
- 11 Reciprocity, family ties, altruism and teamwork

Economist love hard incentives, but “market” supplies all these

Classic incentive problems of managers

Here are some of the problems these solve:

- 1 Embezzlement
 - Much more common than you think
 - Primary reason for security cameras, book-keeping
 - Big problem in developing countries
- 2 Shirking
 - Blatantly not working is simplest
 - But also not focusing, not preparing outside work
- 3 Excessive (or insufficient) risk-taking
 - Huge problem at all the Wall Street banks
 - Employees may get up, but not down, side
 - Or they may be too risk-averse relative to principal
 - How ambitious should the projects be?
- 4 Similar: short-termism

Important recent incentive problems

Other, less traditional, incentive issue popular recently

- 5 Empire building
 - Many managers are glory seekers (many reasons)
 - Often try to expand business in inefficient ways
 - Many studies show mergers are a waste
 - Which incentives work well against this?
- 6 Multitasking
 - Some outcomes easier to manage than others
 - Sales made v. customer service and reputation
 - Employees need to balance these
 - Which incentives balance best?
- 7 Overstaying your welcome
 - Managers like control, jobs (even when should go)
 - May try to make themselves invaluable
 - Which incentives work best?

Incentive problems and corporate finance

When companies are financed, many of these issues arise

- The problem set will ask you to consider this
- Let's think about some of the possibilities
 - 1 Personal capital: advantages and disadvantages?
 - 2 Friends and family
 - Very common for early stage start-ups
 - Ups and downs?
 - 3 Venture capital
 - Dedicated, usually expert provide equity
 - Often replace manager, pluses and minuses?
 - 4 Bank loans: renegotiation
 - 5 Public equity: dispersed share-holders
 - 6 Public bonds
 - Very hard to avoid bankruptcy: good or bad?

Why not let the market organize all activities?

Given all these problems, why have companies at all?

- Think of a GM assembly plant
- Why does it all need to be owned by GM?
- Couldn't GM subcontract tire attachment to a company?
- Another company could do the painting, etc.
- May sound unrealistic, but think about cafeterias
 - Outsourcing increasingly common in many areas
 - Workforces, tech support, computer services, etc.
- Wouldn't it be more efficient to ship everything out?
- Within firm, things more like command-and-control
 - If we believe price system works better...
 - Why not use it for every transaction?
- These questions called "boundaries of the firm"
- Rest of lecture will critically explore their relevance

Coase's theory of the firm

First prominent theory was Coase's; what did he say?

- Transactions costs of the market?
 - 1 Negotiating terms
 - 2 Writing and enforcing contracts
 - 3 Price discovery
 - 4 People prefer to be directed or to direct
 - 5 Legally imposed costs via taxation
- Managerial costs of the firm?
 - 1 Managing so many people becomes unwieldy
 - 2 Principal-agent problems in hierarchy become too large
 - 3 Each head manager only has so much capacity
 - 4 Low investment in price determination, inaccurate allocation
- Problem is that many of these are very vague
- Later theories of the firm try (how successfully?) to clarify

Williamson's theory of the firm

Oliver Williamson won Nobel for building on Coase

- Emphasized three factors making integration attractive

1 Frequency

- Frequent interactions make contracting inconvenient
- Easier to integrate into a single firm to avoid transactions
- Contracts less important in repeated relations

2 Uncertainty

- More difficult outcomes are to predict, harder is contracting
- Sandy Grossman storry about his house
- More likely inefficient renegotiation is to be required

3 Asset specificity

- If assets can easily be used outside relationship...
- Then bargaining easy as there is well-defined market value
- When assets specific, bargaining likely to be costly

Property rights and hold-up problems

Grossman, Hart and others emphasize incentives

- Why did Google build its own social network?
- Could have made its service link better with Facebook
- The problem is that Google wanted integrated service
 - Connects up nicely Gmail, Google calendar, etc.
- If it made linkages, Facebook could have exploited (how?)
 - It could have inhibited connectivity unless Google paid
 - Google would have wasted its investment in connection
- “Property rights” theories emphasize this “hold-up” problem
 - ⇒ Assets should be owned by those making investment
 - Otherwise they cannot reap gains from investments
 - This determines functions inside and outside of firms

Other reasons for a firm

While these are interesting, other equal reasons

- 1 Physical proximity and monitoring
 - If it is important to monitor in detail, better to be together
 - Rarely are separate companies fully in same building
- 2 Corporate culture and identity; why fuse?
 - For giving some incentives, corporate culture important
 - Employees loyal to name therefore useful
- 3 Exclusivity useful to avoid distraction
 - Separate company may be serving many masters
- 4 Communication of ideas and information
 - Difficult to contract on information: can't put back into box
- 5 Unions and other external factors
 - Reason to keep separate, avoid spillovers
- 6 Control of unobservable costs in franchises

Firms that look more like markets

Yet despite these, many firms look like markets

- 1 Xerox spins off many ideas developed there
 - Thermo Electron's whole business is doing this
- 2 Various Google services extremely independent
- 3 General Motors Acceptance Corporation easy to spin off
- 4 Conglomerates with separate brands
 - PepsiCo with all its fast food chains
 - News Corp (in news): did left hand know about right hand?
- 5 State-run businesses and even agencies often privatized
- 6 Parts of investment banks sell to other parts!
- 7 Mutual funds run explicit internal markets
- 8 Visa and MasterCard, until recently, a bunch of banks
- 9 Collective administration of copyrights

Can you think of other examples?

Markets that look more like firms

At least as often, “market-mediated” relations extremely tight

- 1 Airline alliances
- 2 Dedicated restaurants at institutions
- 3 Franchises of restaurants
- 4 Dedicated, but separated, suppliers of raw materials
- 5 Consultancies and gyms to Microsoft in Redmond
- 6 MAC apartments and the University of Chicago
- 7 Labor sub-contractors in Latin American mines
- 8 Legal cartels in the second half of 20th century in Europe
- 9 Apple app developers
- 10 Barnard College and Columbia University
 - Five Amherst and Claremont colleges
- 11 Freddie Mac and Fannie Mae with US government

Can you think of others?

Formal v. functional firms and organizations

This leads us to ask whether the distinction really matters

- Sure, close relationships likely to be in firms
- But possible outside and can be avoided inside
- What is “inside the firm” driven by many factors
- And things being inside v. outside may not much matter
- Thus firm is as a *model* (convenient fiction)
 - What matters is the set of *real economic relationships*
 - It may be legally useful when several exist, to call it a firm
 - But this is at best loosely correlated with what we mean
 - 1 Sometimes useful to decompose a legal firm
 - 2 Sometimes useful to think of cluster of firms as one
- Thus do not associate our firms too tightly with law
- What we really mean is a cluster of institutions which...
 - It isn't crazy to think roughly maximizes its joint profits