

Theory of the Firm

E. Glen Weyl

University of Chicago

Lecture 2
Regular Section
Elements of Economic Analysis II
Fall 2011

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.

Legal protections of investors

Share-holders own company (dividends), but what control?

- If held by an individual, just limited liability
- Otherwise, series of legal protections
 - 1 Board of directors
 - “Chosen by” shareholders to defend their interests
 - 2 Voting rights
 - May vote to choose directors; often hard
 - Can also vote on other issues, like acquisitions
 - 3 Protections of minorities
 - Large share-holders legally prohibited from harming small
 - 4 Loyalty and legal actions against managers (lawsuits)
- Also protections of creditors (banks and bond-holders)
 - Can force into bankruptcy, take assets upon default
 - With banks loans, often covenants restrict behavior

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

The principal-agent problem

The *principal-agent problem* is ubiquitous in economics

- Simple example: going off to college
- Your parents want you to learn and you do too but...
 - ① Maybe you also want to party a bit
 - So they may want to give you some incentive to do well
 - You may try to hide from them information about grades
 - ② Maybe you want to study a different subject than they want
 - So you make them think it was too hard
 - ③ Maybe you want grad school, they want professional
 - You take classes that prepare you better if they don't know
- How can they persuade you to act in their interests?
- They need to give you freedom because you know facts
- But they also want some control so you don't go wild
- This is problem is crucial for companies as well

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 Overstaying your welcome

- Managers like control, jobs (even when should go)
- May try to make themselves invaluable
- Which incentives work best?

7 Multitasking

- Some outcomes easier to manage than others
 - Sales made v. customer service and reputation
- Employees need to balance these

A formal example: multitasking

Institutions and corporate finance

Many different ways to get funding for a company

- 1 Personal capital
 - Main source for very small companies
 - Also common for very rich individuals
- 2 Friends and family
 - Most start-ups begin with this source
- 3 Venture capital
 - Private equity investors
 - Eventually cash-out through public markets
 - Usually highly expert in relevant sector
- 4 Bank loans
- 5 Public equity
 - Usually requires intermediary to float, very costly
- 6 Corporate bonds

Incentive problems and corporate finance

Incentive benefits and costs (problem set too)

- 1 Personal capital
 - Pros: no principal-agent problem
 - Cons: large risk, small capital pool
- 2 Friends and family
 - Pros: reputation, altruism strong
 - Cons: small capital pool, large risk
- 3 Venture capital
 - Pros: Active monitoring, expertise, personal relationship
 - Cons: High risk, small capital pool (expensive)
- 4 Debt v. equity on problem set
- 5 Public bonds v. bank loans
 - Pros: More monitoring, covenants, saves from bankruptcy
 - Cons: Saving from bankruptcy dampens incentives

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

Reasons for firms

Three prominent theories are:

- 1 Coase's theory of transaction costs
 - Costs of market: negotiation, contracting, taxation
 - Costs of firm: management, P-A problems
 - Optimal firm balances these
- 2 Williamson's version
 - Frequency and uncertainty make negotiation more likely
 - Asset specificity=inability to use investments elsewhere
 - More of these make integration more attractive
- 3 Property rights
 - Don't want to do work unless you have explicit control
 - Otherwise, other person will claim it was their idea at end

Other reasons as well

- Physical proximity, communication, culture, exclusivity

Contractual solutions

Yet there is a solution to these problems without firm

1 Avoiding negotiations

- Have a long-term relationship!
- A restaurant may be less flexible than personal chef but...
- They do a lot to accommodate regulars
- Thus frequency may actually favor separation??

2 Exclusivity

- Many part suppliers only supply to one producer
- Yet they are not part of same company
- Contracts can substitute for acquisitions
- Antitrust provisions may inhibit, however

3 Company towns and physical proximity

- Microsoft has independent gym (but basically owns)
- MAC apartments and restaurants in Hyde Park

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