

# Understanding Real World Organizations

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TSE M1 – Semester 1

September 2019

Paul Seabright

Week 1: Ronald Coase and the Nature of the Firm

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“Monsieur Haneda était le supérieur de monsieur Omochi, qui était le supérieur de monsieur Saito, qui était le supérieur de mademoiselle Mori, qui était ma supérieure. Et moi, je n’étais la supérieur de personne.

On pourrait dire les choses autrement. J’étais aux ordres de mademoiselle Mori, qui était aux ordres de monsieur Saito, et ainsi de suite, avec cette précision que les ordres pouvaient, en aval, sauter les échelons hiérarchiques.

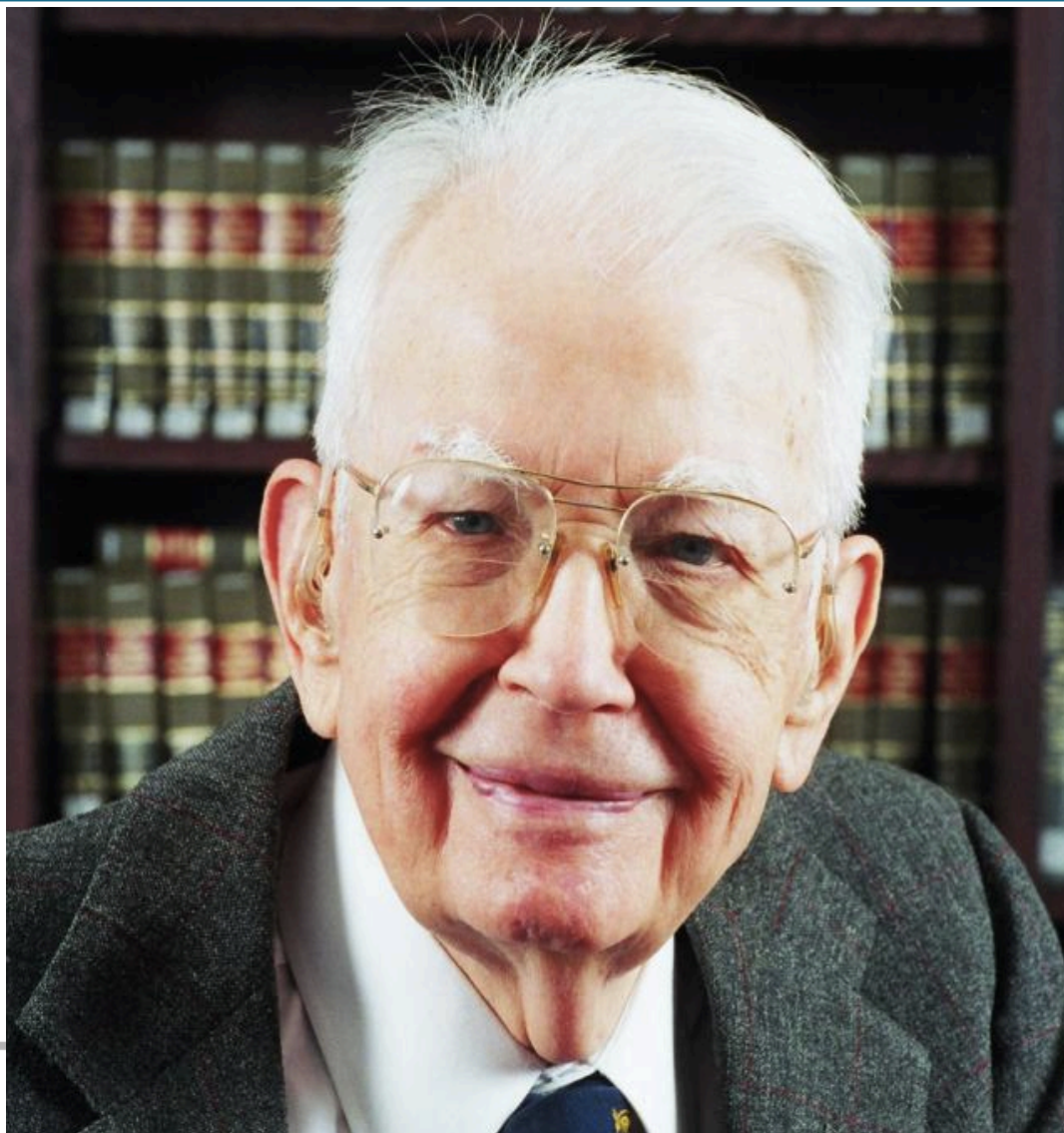
Donc, dans la compagnie Yumimoto, j’étais aux ordres de tout le monde.”

Amélie Nothomb, *Stupeur et Tremblements*

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# Ronald Coase, 1908-2013

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# Ronald Coase and the nature of the firm

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- The different forms of economic exchange can be summarized as taking place within markets or hierarchies
  - Coase asked what circumstances made one form preferable to the other
  - A well known advantage of markets is the transparency of information transmission – also a major theme in the work of Hayek
  - But the process of price creation can also entail real transactions costs
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# These questions are more pertinent than ever

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- After all, what is a firm nowadays?
- It can be defined by the legal form – but there are many of these (limited liability corporations, partnerships, single proprietorships)
- And the legal form may not capture the economic reality
- Think of some kinds of firm that are relatively new...



# What is Uber:

A firm?

A market?

A service provider?

An owner of intellectual property?

None of the above?

All of the above?

**The world's most valuable startup is leading the race to transform the future of transport**

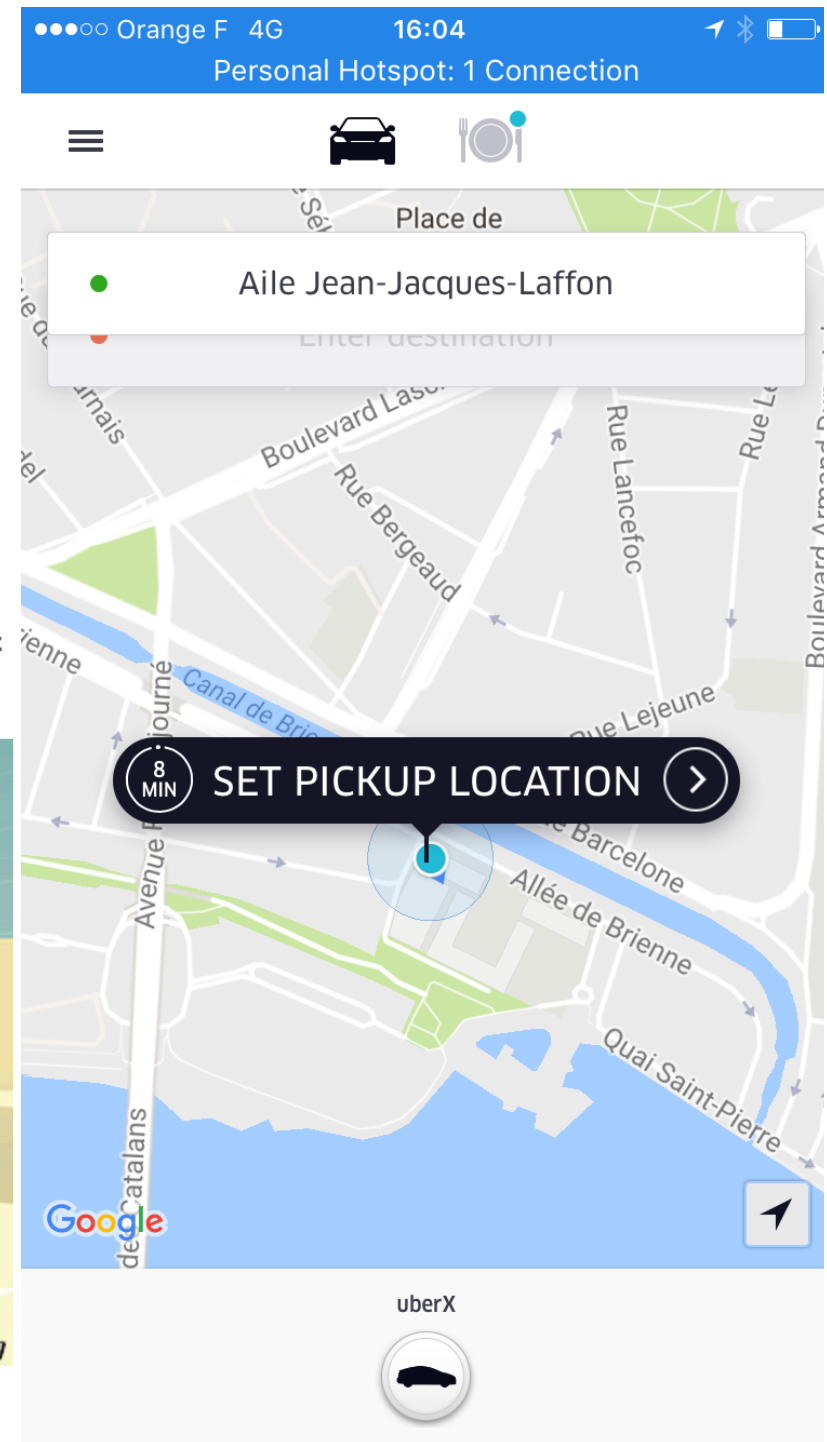
Sep 3rd 2016 | From the print edition



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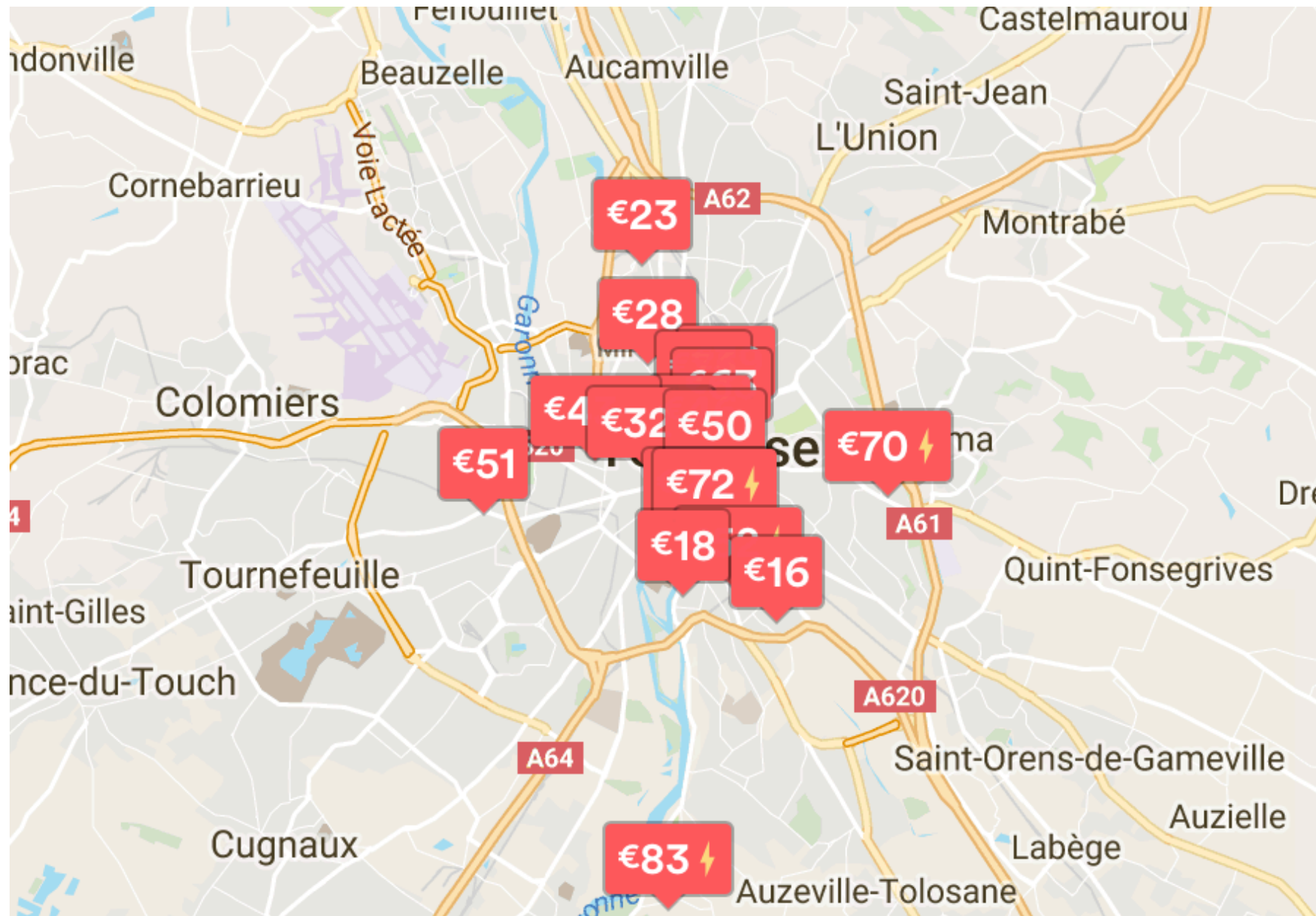


"LET'S Uber." Few companies offer something so popular that their name becomes a verb. But that is one of the many achievements of Uber, a company founded in 2009.





## And AirBnB?



And ISIS?

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FINANCIAL TIMES

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*Be first to use FT.com's new prototype site. Opt in here (you can opt out at any time).*

October 14, 2015 12:50 pm

# Isis Inc: how oil fuels the jihadi terrorists

Erika Solomon in Beirut, Guy Chazan and Sam Jones in London

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 Comments

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The jihadis run a sprawling oil operation forcing even their enemies to do business with them



# Let's distinguish different effects of digital technology on modern society (I)

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- Creation, processing and sharing of information – the scarce resource is no longer information but ATTENTION
- Creation of new goods and services, from social networks and GPS guidance to... cat videos
- New methods for making and delivering existing goods and services
  - 3D printing
  - Delivery by drone
  - Internet dating, psychotherapy over Skype
  - Distributing the design and manufacture of cars and aircraft across the world
- The idea: **tasks can be broken into components and reassembled**

# Let's distinguish different effects of digital technology on modern society (II)

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- Creation of new types of organization
  - Outsourced tasks, micro-multinationals
  - Crowd-sourced financing, information gathering
  - Platforms – intermediaries between different user groups
- Improved methods of managing existing organizations
  - Using ICT to discover and reach new markets and sources of supply
  - Using ICT to monitor & improve management practices
  - Restructuring task allocation
- The mechanism: digital technology changes the pattern of substitutability/complementarity relations between task components

# An example of unbundling and reassembling tasks: the impact of MOOCs (I)

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- Bettinger et al: “Virtual Classrooms”, *AER* September 2017, investigate performance of 230,000 students taking 750 courses in a for-profit US college, in both on-line and on-campus versions
- On-campus versions of courses had fewer women (35% compared to 55%), and age of 28 years (33 years online)
- By instrumenting with the interaction of random non-availability of online versions and distance of residence from campus, estimate that courses with physical presence increase the probability of an A-grade by 12 percentage points
- The impact is concentrated on low-performing students

## An example of unbundling and reassembling tasks: the impact of MOOCs (II)

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- Key seems to lie in motivation, which is lower online
- It's a mistake to see education as a homogeneous service demanded by students
- Students demand at least two services: *understanding* and *motivation*, and the inputs into this process are *information* and *attention* – in proportions that differ between the two services
- Physical proximity is a special kind of attention – “close” attention
- We can see organizations as allocating ***entitlement to attention***

# Organizations as allocators of entitlements to attention

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- Coase saw the main distinction as between transactions inside versus transactions outside the firm (“hierarchies” versus “markets”).
- In fact, attention entitlements are not an all-or-nothing matter: there can be more or less priority entitlements.
- An organization does not accord equal priority to everyone inside to the attention of everyone else: instead, it allocates attention according to a set of escalating entitlement priorities.
- Outside the organization attention is allocated by bilateral negotiation under the constraints of a communication technology.

# So *how* do organizations allocate entitlements to attention?

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- In practice organizations never allocate attention entitlements with perfect efficiency. Why not?
- Existing attention entitlements create veto power, which can prevent efficient reorganization when technology changes.
- An important reason organizations differ in their response to the availability of *information* technology is differences in the existing allocations of *attention*, which create different configurations of winners and losers from adopting the new technology.
- Reallocating information and reallocating attention may have quite different effects – and losers may not trust the outcome.



# Back to Coase: what shapes the boundaries of the firm?

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- If markets have informational advantages over hierarchies, what advantages can hierarchies have over markets?
  - A Fundamental Question: how big (and complex) should a firm become?
  - The advantages of size
    - Technical economies of scale or scope?
    - Resolving hold-up problems
  - The costs of size
    - Slow diffusion of information
    - Strategic behavior by those who have private information
    - Coase called these “transactions costs”
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# The advantages of size

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- Economies of scale and scope predict common operation of activities – not common ownership
  - Markets allow coordination of activities without integrating them into one firm under common ownership
  - So when is integration necessary?
  - Coase's answer: when it involves lower transaction costs
  - For example: when market relations would involve a "hold-up" problem
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# What is a “hold-up” problem?

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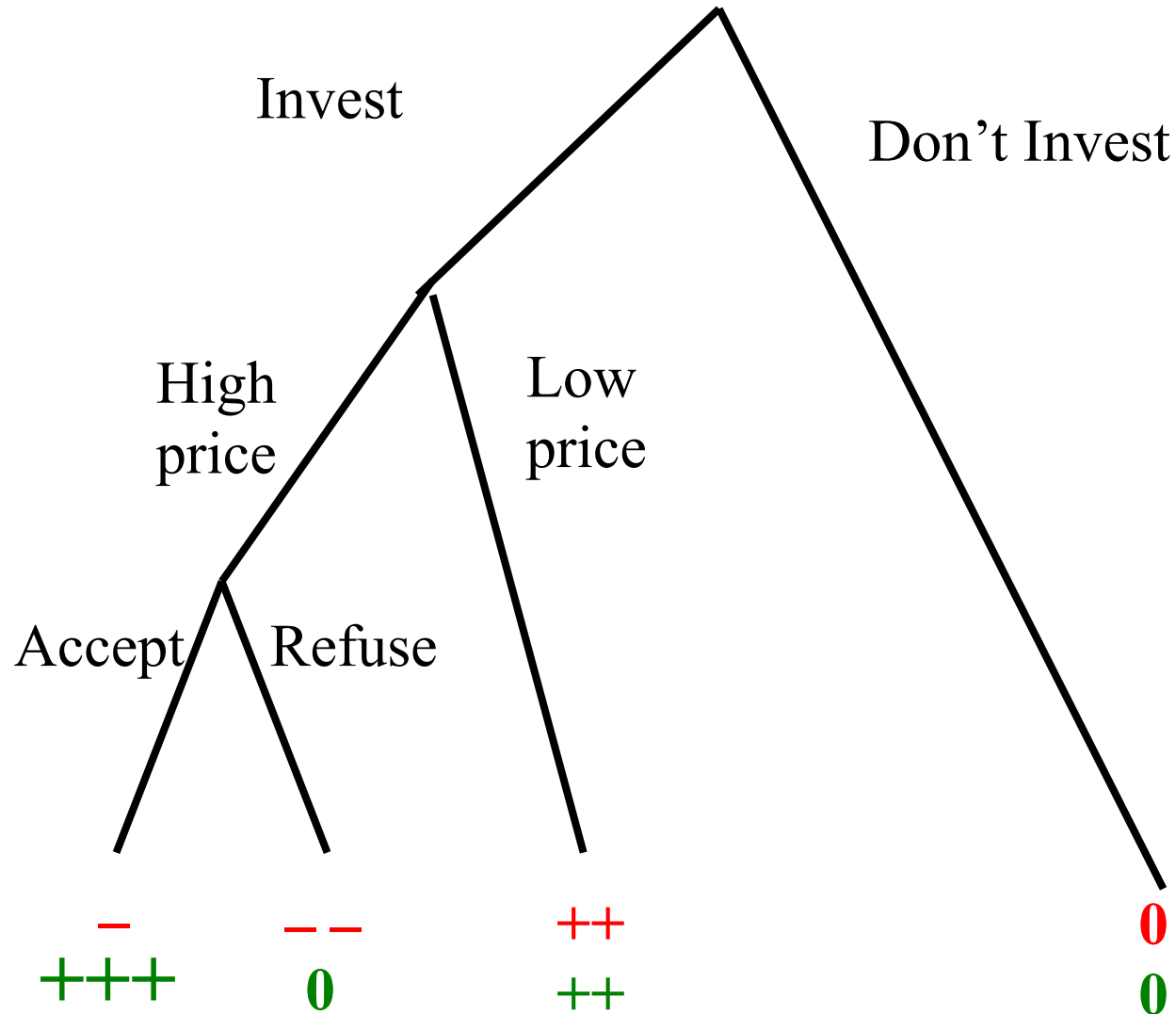
- Suppose firm A has invented a new technology for mobile telephony
  - Firm B would like to use it in its handsets, but first has to invest (infrastructure, production facilities etc.)
  - These investments are specific to the technology and would be useless for any other: how can firm B be sure of the price it will have to pay?
  - After it has invested, firm A will be tempted to demand a high price, knowing firm B cannot easily walk away from the deal
  - Two solutions:
    - A contract in advance – but sometimes such contracts are hard to write since they depend on factors that are hard to foresee
    - Vertical integration – then firm A and firm B have the same interests
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# The hold-up problem

**Firm B**

**Firm A**

**Firm B**

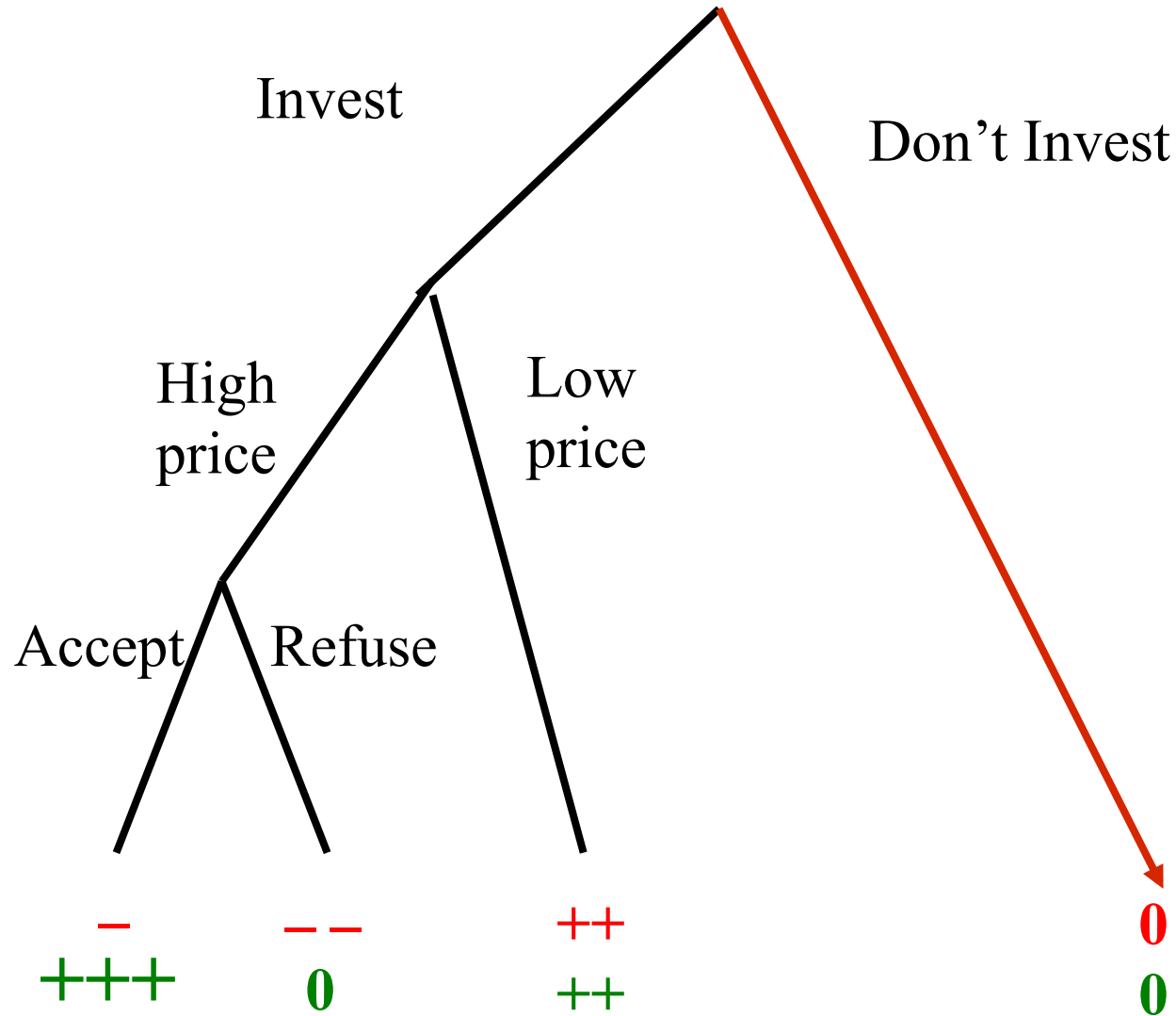


# The hold-up problem

**Firm B**

**Firm A**

**Firm B**



Firm B's only rational strategy is not to invest!

# The costs of size

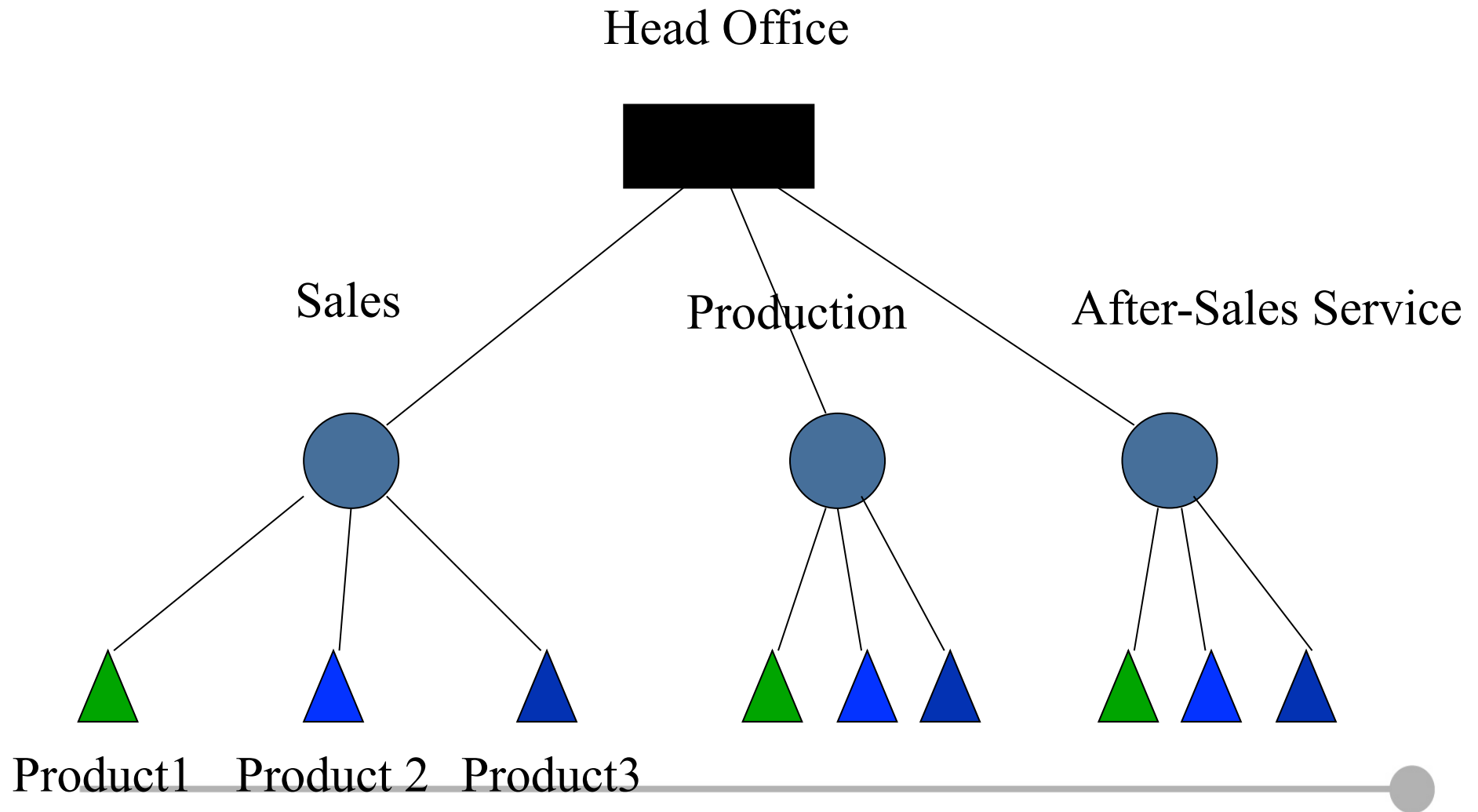
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- Information transmitted within hierarchies is sometimes slow to diffuse
  - Organizational design can reduce these costs by grouping together the activities whose information sharing is most urgent for the firm
  - An example: Du Pont and the move from the U-form to the M-form company in the early 20<sup>th</sup> century
  - M-form was also key to combining scale with product differentiation (compare Ford & General Motors in 1920s)
  - Sometimes information is used within hierarchies to exploit strategic advantages (eg to work less hard)
  - Just-in-time production methods are designed to make this more difficult – what gave Toyota its advantage over GM
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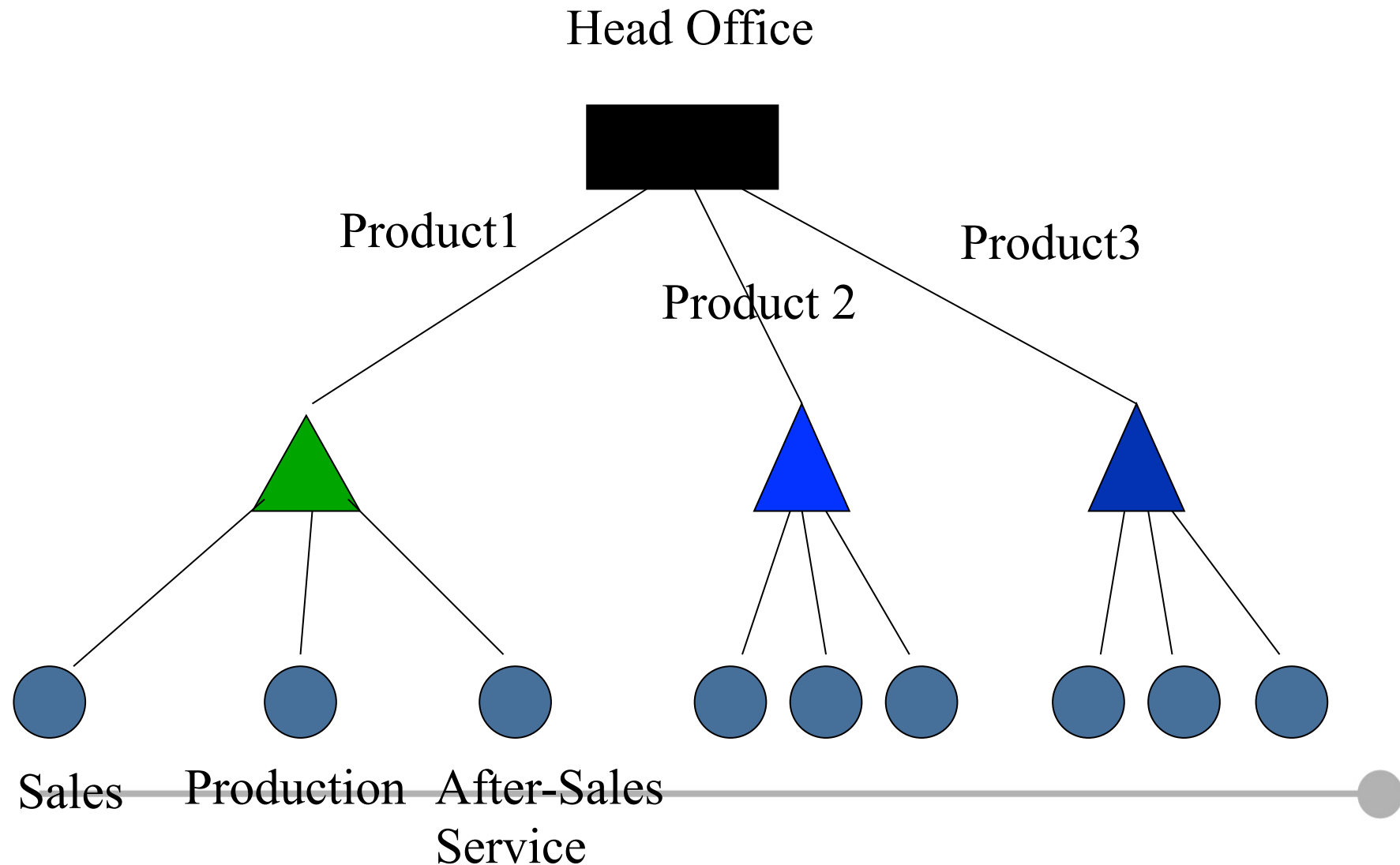
# The Unitary (U-form) firm

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# The Multidivisional (M-form) firm

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