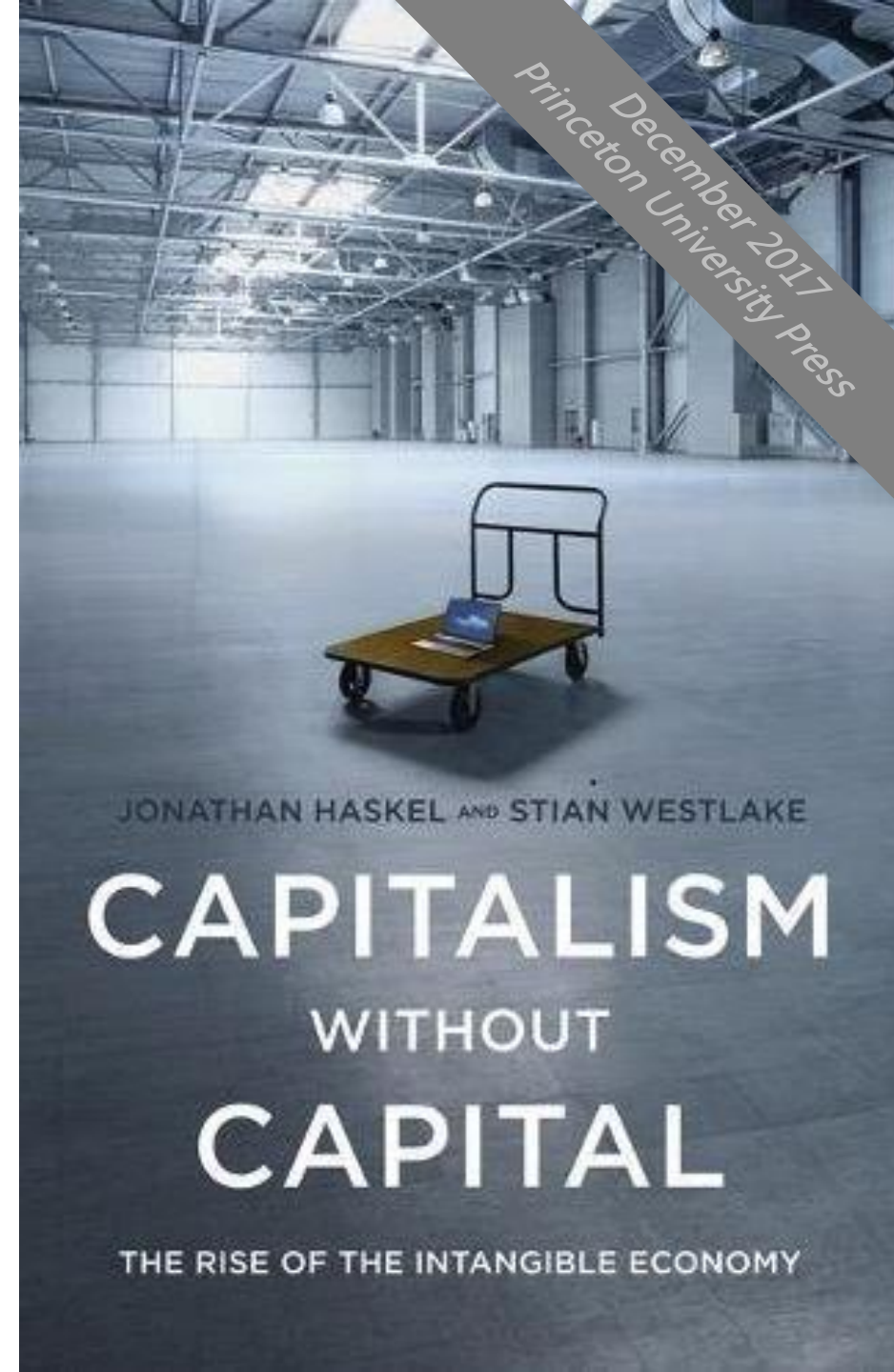


Capitalism Without Capital

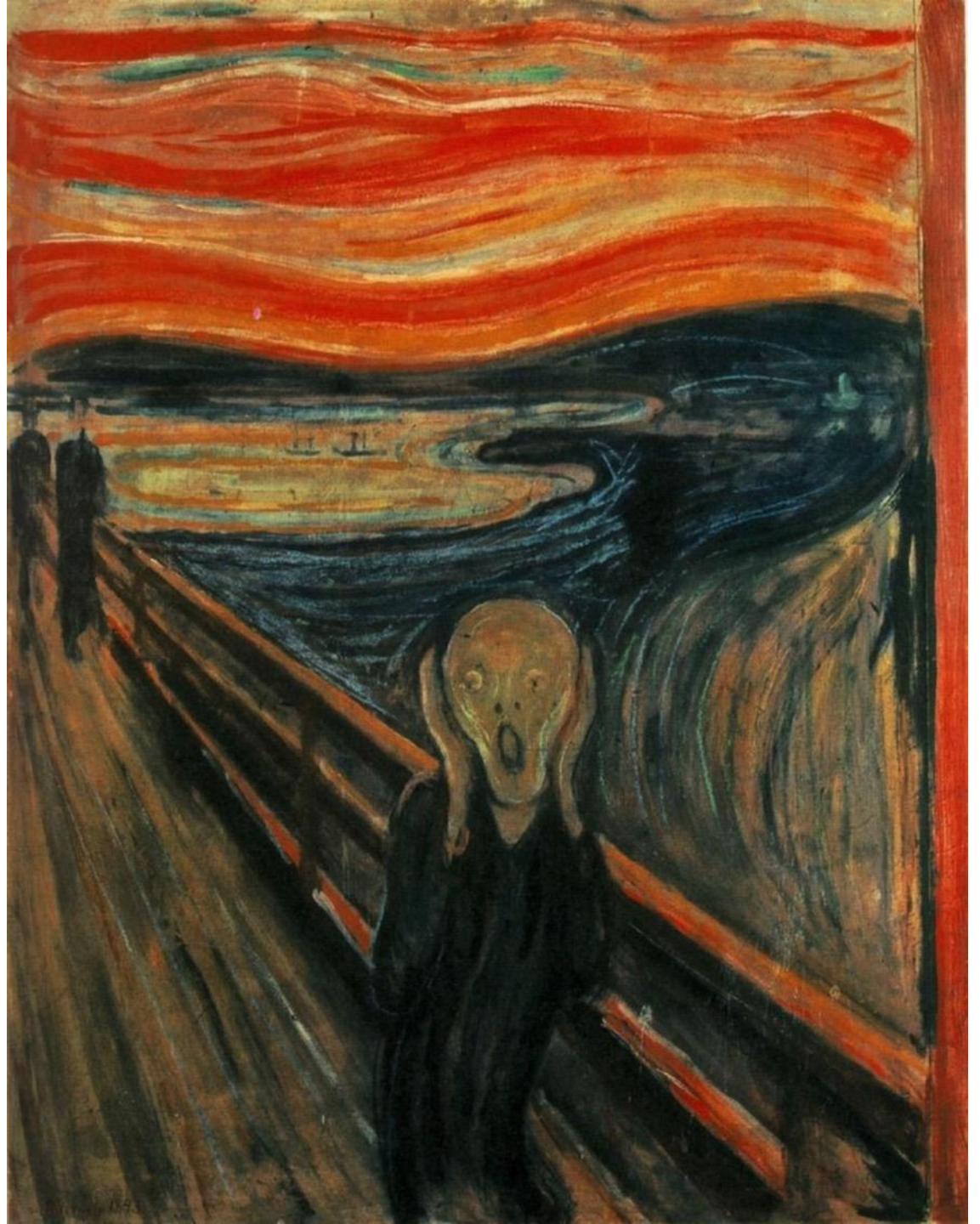
The rise of the intangible economy

Jonathan Haskel
Imperial College
@haskeleco

Stian Westlake
Nesta & BEIS
@stianwestlake



There are a host
of social and
economic
problems in the
world today...



Secular stagnatio



Why is
productivity and
investment low,
even though
profits are high
and technology is
abundant?

Inequality



Why has the gap between the rich and the poor grown so much?

Dysfunctional financial system



Why is the
financial
system
doing such
a bad job at
backing the
“real”
economy?



Populism

Why is there
a growing
gulf between
“liberal
citadels” and
“left-behind”
places?

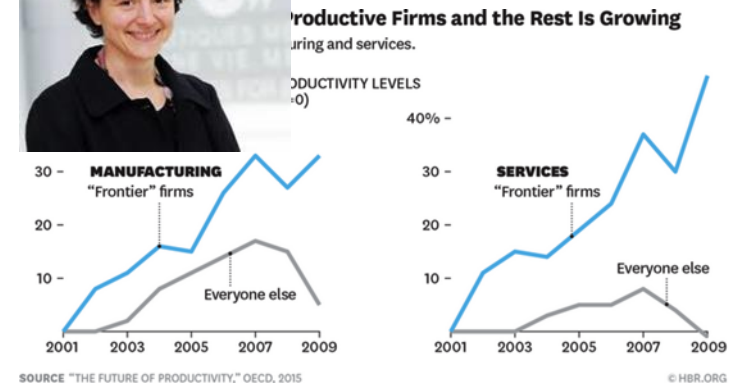
Some people blame capitalism in general...



...but maybe it's because capitalism is changing



...and our book tries to bring together work trying to diagnose these changes...



1. The rise of the intangible economy

2. Why is intangible capital different?

3. What does this mean for business and the economy?

The nature of investment and capital assets is changing

Tangible investments

Buildings



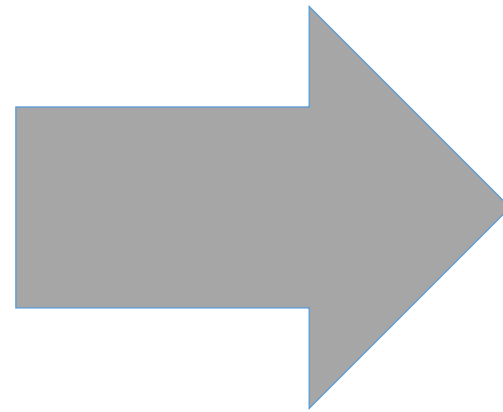
Computers



Plant & machinery



Vehicles



Intangible investments

R&D



Training



Design



Org
development



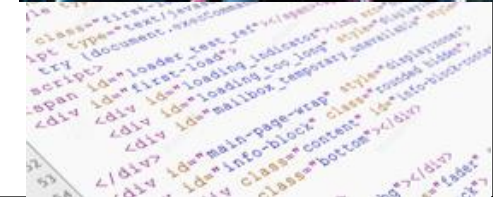
Brands &
marketing



Artistic
originals



Software &
data



But this change is hidden...

GDP still doesn't include most intangibles

Tangibles: in GDP since 1940s



Some intangibles added

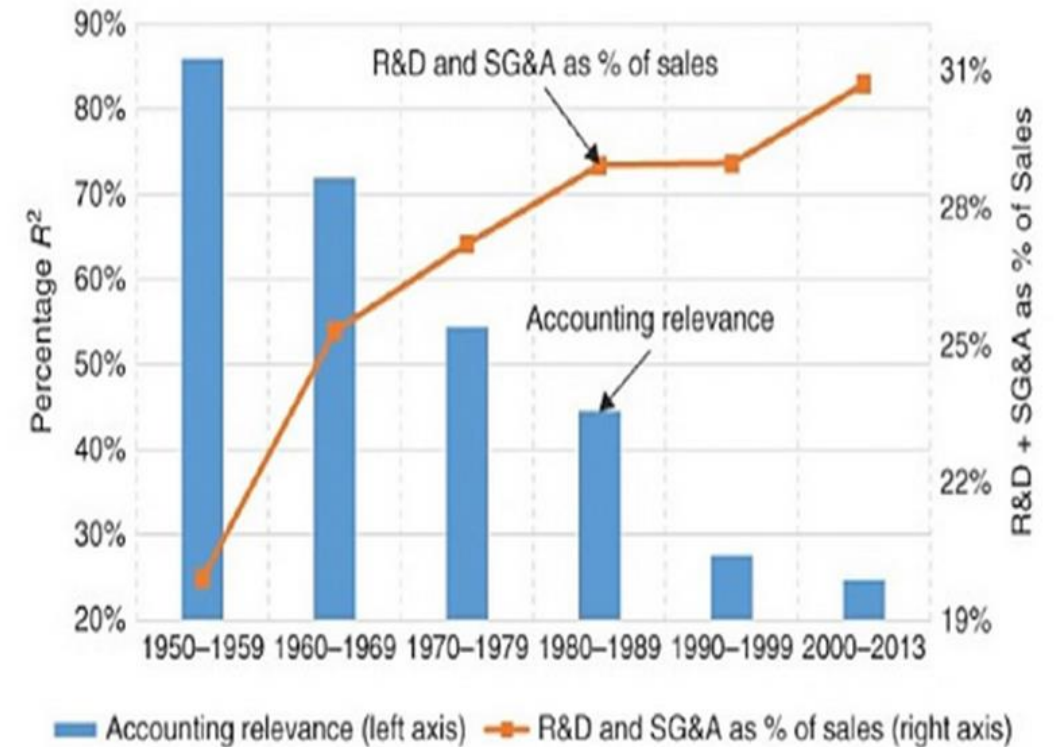


Most intangibles still missing



...neither do company accounts

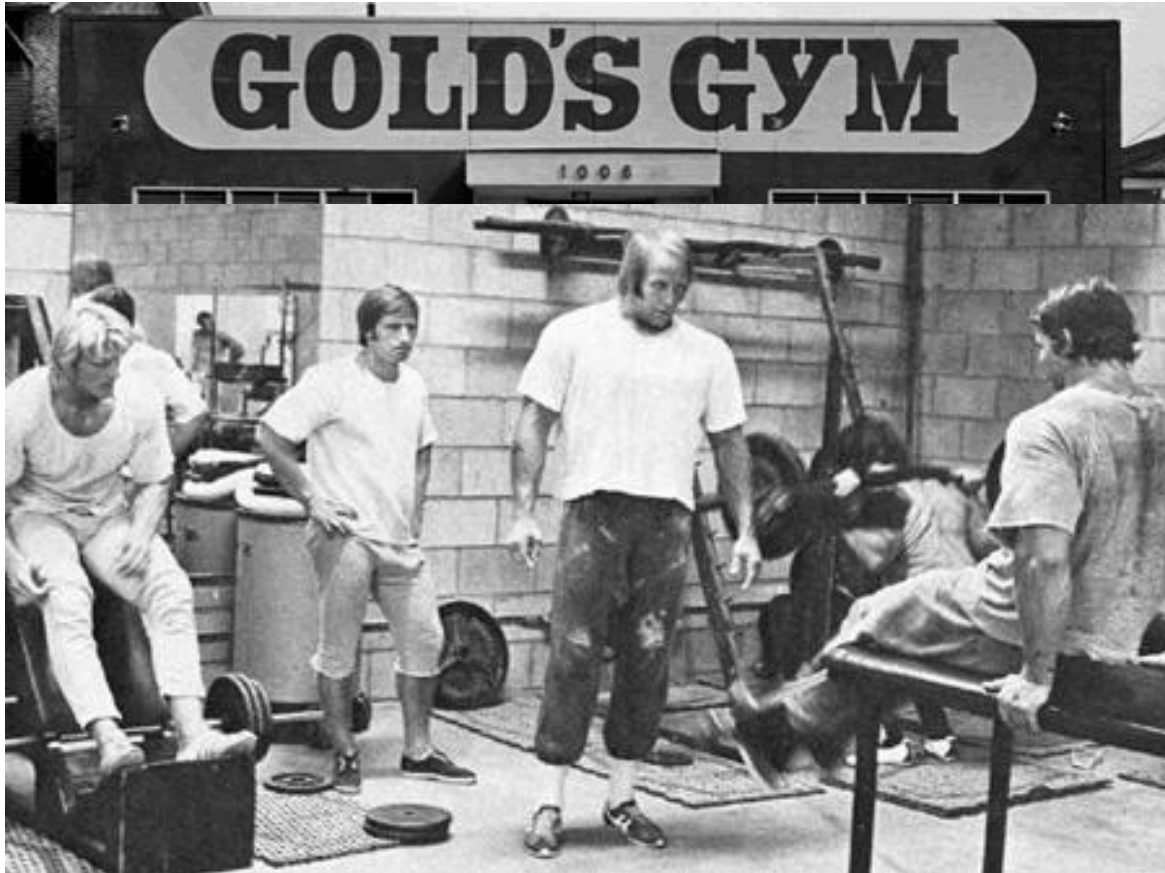
R^2 s of market values regressed on earnings and book values of companies entering the public market in successive decades, 1950–2013



Source: Lev and Gu (2016)

Intangibles are everywhere!

1977



201

8

Plus: a pure intangible business



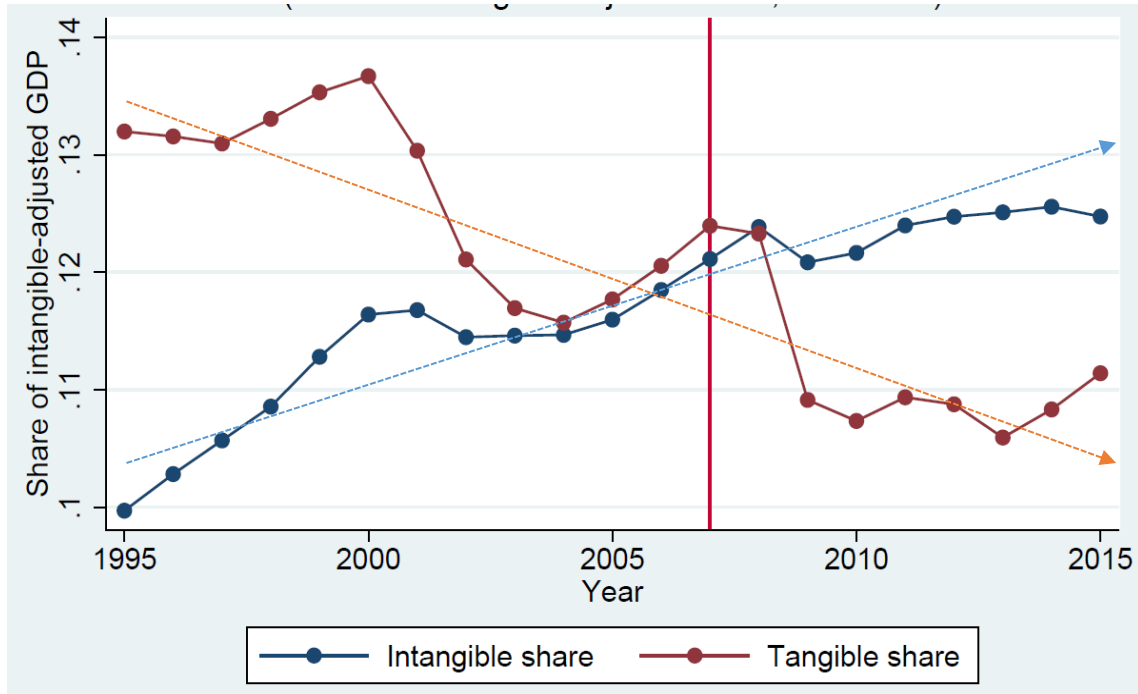
Software

Training & processes

Branding & marketing

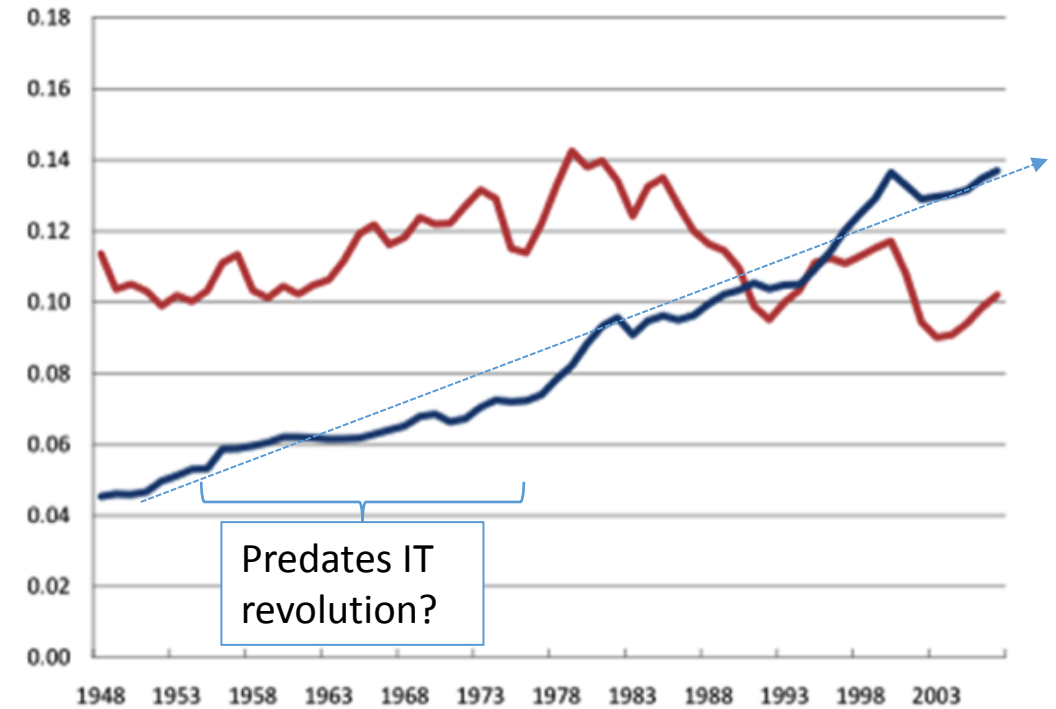
The rise of intangible investment is a long-term trend

Tangible and intangible investment share, US+EU11



From SPINTAN database

Tangible and intangible investment share, US



From Carol Corrado

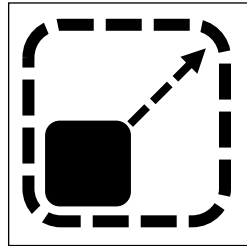
Intangible capital is the capital of the 21st Century

1. The rise of the intangible economy
2. Why is intangible capital different?
3. What does this mean for business and the economy?

Four economic properties of intangibles

Scalable

Intangible assets can often be used over & over, in multiple places, with little or no reinvestment.

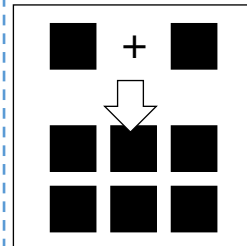
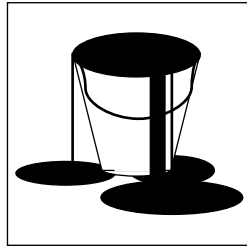


Sunk

Once a firm makes an intangible investment, hard to sell it or recover its value.

Spillovers

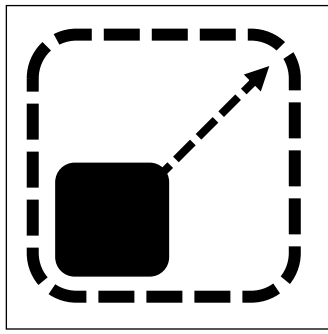
A firm making an intangible investment will not receive all (or perhaps any) of the returns.



Synergies

Intangible assets are often especially valuable when combined with other intangibles and human capital

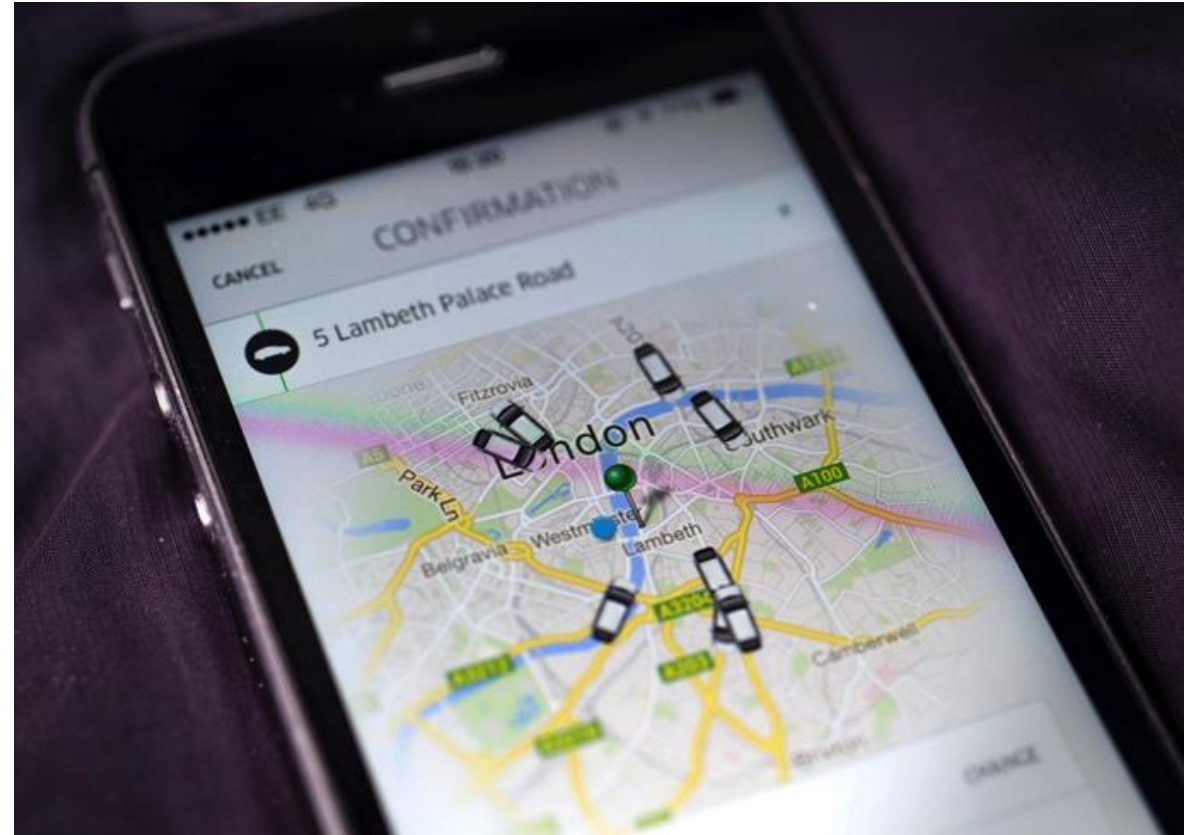
Property of intangibles 1: SCALABILITY



Minicabs: not scalable

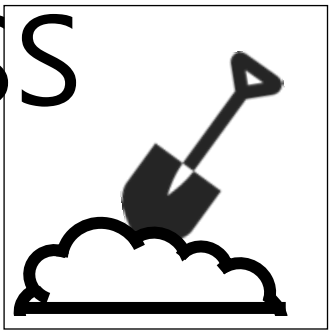


Uber algorithm: highly scalable



Intangible assets can often be used over & over, in multiple places, with little or no reinvestment

Property of intangibles 2: SUNKENNESS



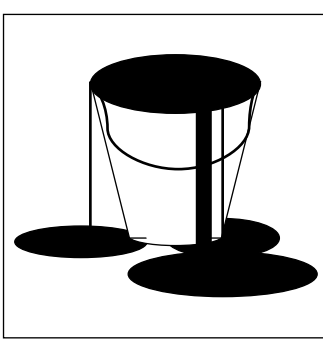
Phone company goes bust? Sell your HQ. But intangibles are harder to sell off.



Windows Mobile 6.1 Today Screen

Once a firm makes an intangible investment, it tends to be hard to sell it or recover its

Property of intangibles 3: SPILLOVERS



Tangible assets: easy to protect



Designs and software:
hard to protect



iPhone (2007)



HTC Hero
(2009)



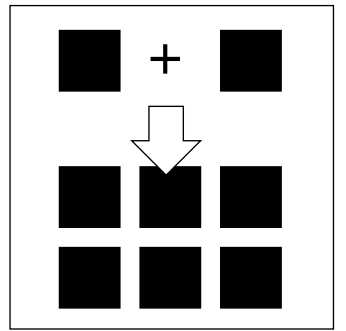
Samsung
i8000
(2009)



Android
OS (2008)

Often, a firm making an intangible investment will not receive all (or perhaps any) of the

Property of intangibles 4: SYNERGIES



Intangible assets are often especially valuable when combined with other intangibles.

1. The rise of the intangible economy

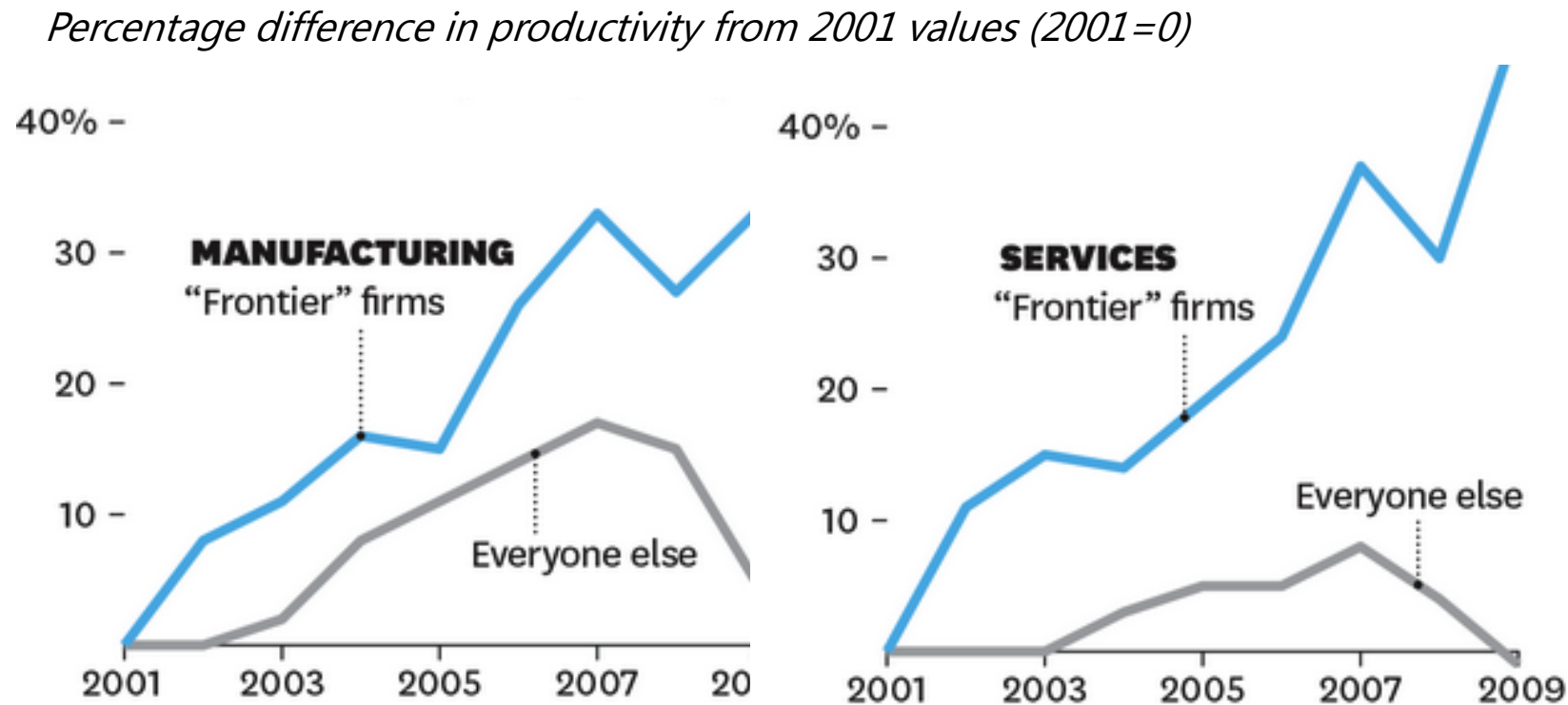
2. Why is intangible capital different?

3. What does this mean for business and the economy?

- a) Leaders, laggards and secular stagnation
- b) Who wins and who loses?
- c) Financing an intangible economy
- d) What should governments do?

Winners and losers in the business world

A driver of income inequality (Song & Bloom 2016)

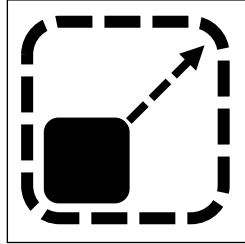


“The Future of Productivity”, OECD, 2015, via HBR

Why is this happening? Poor tech diffusion? Poor competition policy?

The growth of intangibles increases the leader-laggard gap

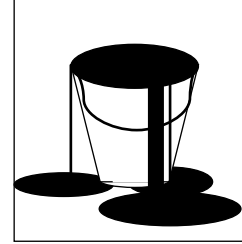
Scalability



Scalable assets like Uber's software or Starbucks' brands are especially valuable for large firms.

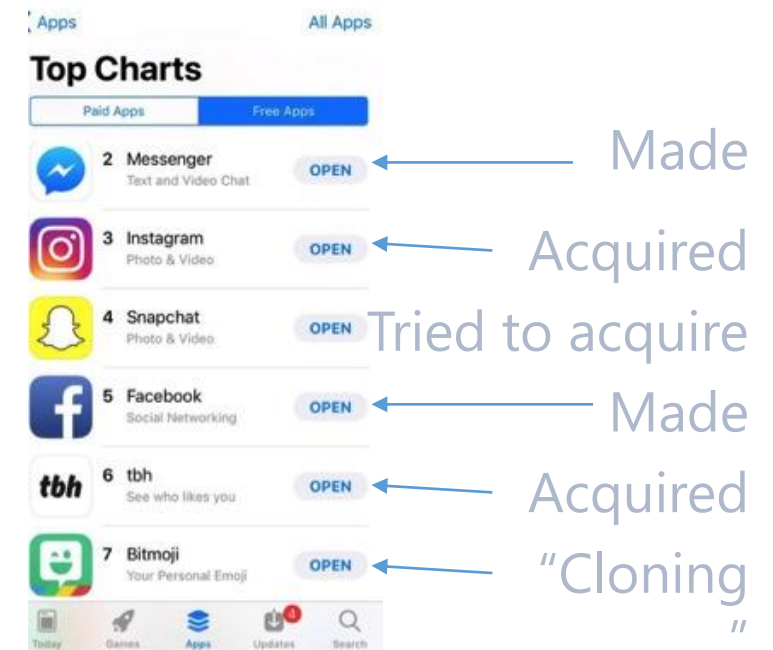
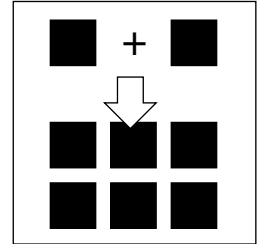


Spillovers



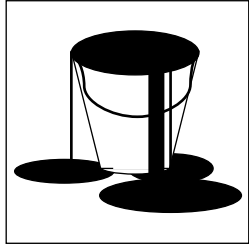
The ability to capture spillovers is not evenly distributed.

Synergies

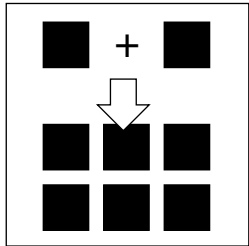


Firms that already have valuable intangibles get greater benefits from other intangibles.

Cities become more important...



Spillovers

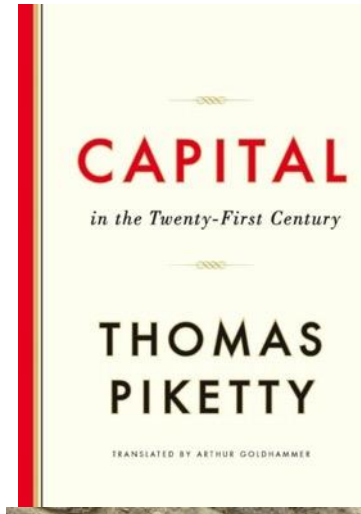


Synergies



Planning restrictions
become a costlier luxury

This appears to be a major
driver of inequality

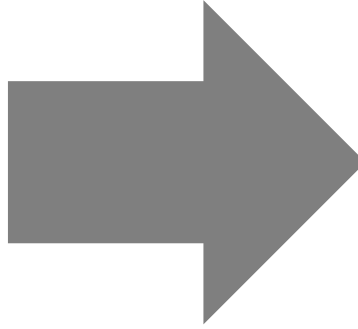


Rognlie (and others):
housing wealth the
majority of the rise in
wealth of the richest

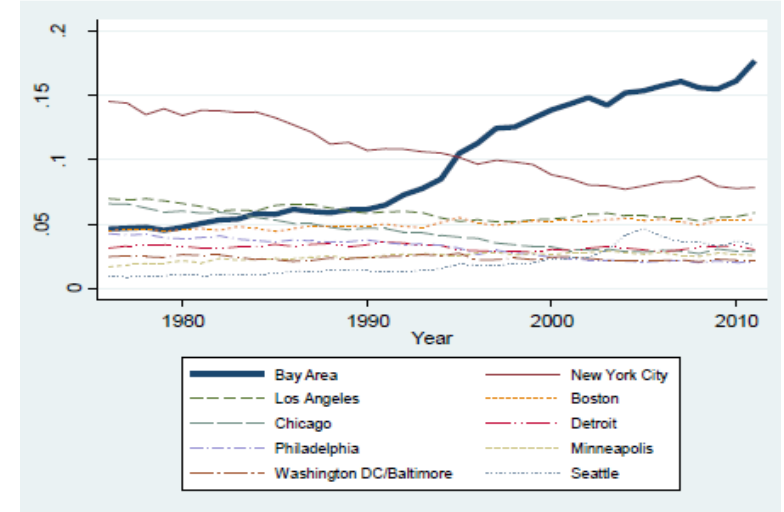
...and more sectorally diverse...



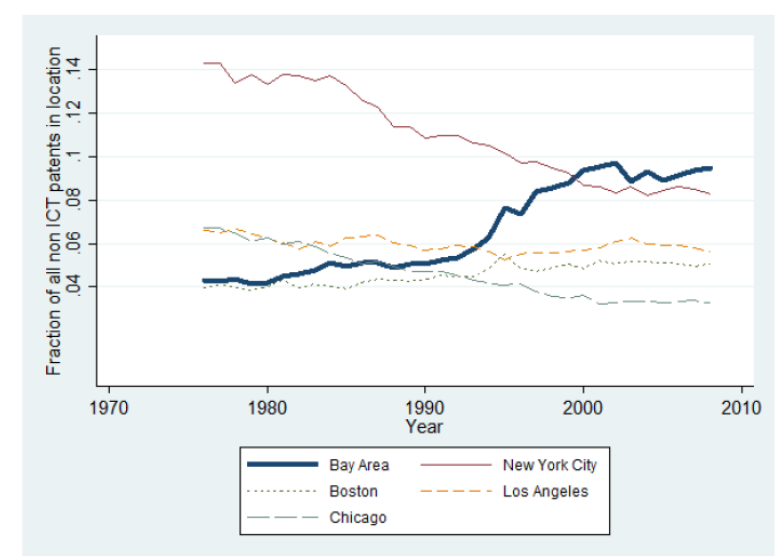
Youngstown, Ohio (1910)



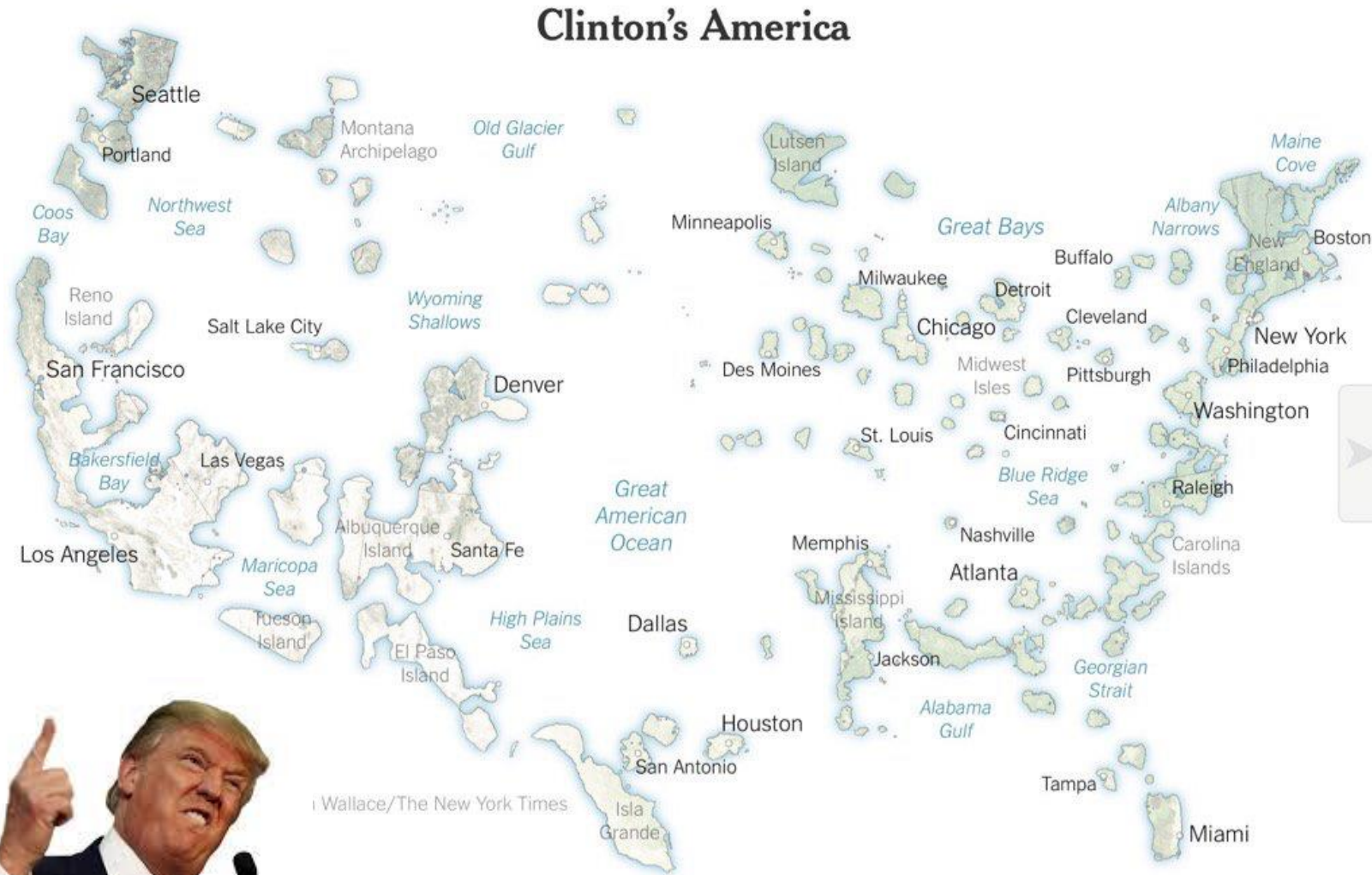
Share of US patenting by city



Share of US Non-ICT patenting by city



...but the rise of “liberal citadels” creates tensions



Economic divisions
between thriving
cities and the rest...

...are underpinned
by related cultural
differences
(openness to
experience)



...all contributes to rising inequality

Relevant fact

Link to intangibles

Wealth
inequality

Significantly driven
by property prices
(Bonnet et al 2014, Rognlie
2014)

Global cities are
attractive because of
intangibles

Income
inequality

Driven by gaps
between firms (Song &
Bloom 2016)

Leaders and laggards
driven by intangibles

Status
inequality

Are the causes
cultural or
economic?

In an intangible
economy, the two
are related

The difficulty of financing intangible investment: sunk

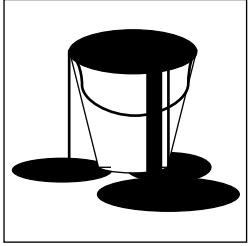


Sunkenness

- Sunk costs of intangible investment makes debt finance harder – fewer assets to salvage in case of default
- Most businesses rely on debt finance

- Some scope to expand IP-based lending (MCAM, UK Intellectual Property Office and Singapore Patent Office experiments)
- But a shift to more equity finance seems necessary. This would require:
 - tax changes
 - significant institution-building

The difficulty of financing intangible investment: spillovers



Spillovers

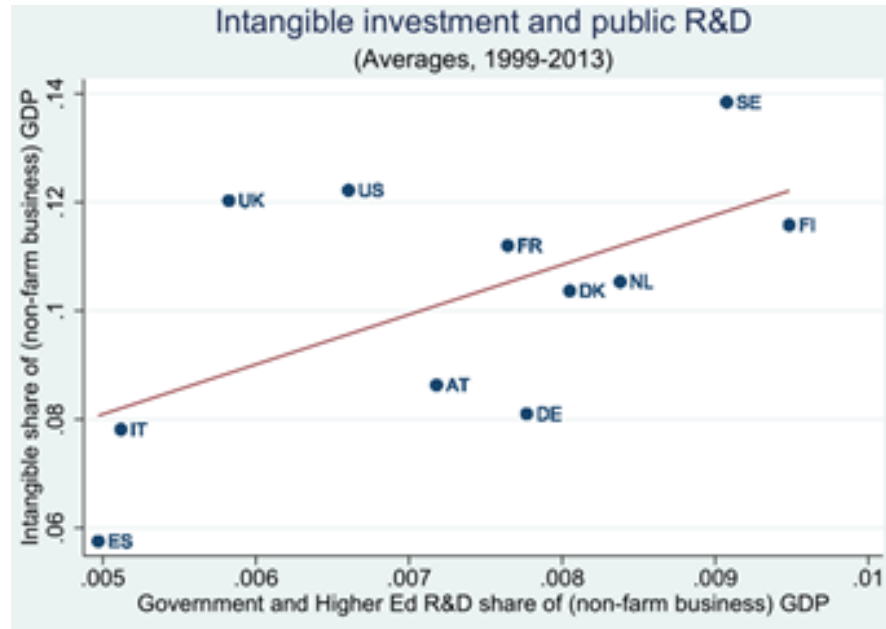


The CT scanner: an example of the curse of intangible spillovers

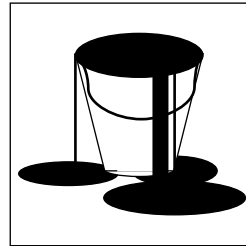
- Spillovers increase the benefits of diversification – well diversified shareholders can capture the benefits of (eg) R&D even if they spillover
- But some evidence that concentrated ownership (=better info) encourages business investment in intangibles (Edmans)
- Better reporting may help (Lev & Gu) – but it's a dilemma
- VC can help – but hard to grow

A stronger case for public investment – but how?

Intangible investment share and public R&D, US+EU11



From SPINTAN database



- Spillovers of intangibles increases the case for public investment:
 - Publicly funded research and training
 - Other publicly funded intangibles (procurement, public-run firms)
- But far from clear we know how to do this well...
- ...and is it politically sustainable, given the cultural divides?

And much more...

- The Beatles, Brexit, President Trump, The Domesday book, microwave ovens...
- Intangibles and inequality
- The pros and cons of IP
- Managing intangible businesses
- Five dilemmas for policymakers

One of the best books of 2017 according to:

