



# Collective Value Creation: sharing both risks and rewards

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# exciting context

## Sustainable Development Goals

### Directed growth

- Smart** growth (better innovation)
- Sustainable** growth (more green)
- Inclusive** growth (less inequality)

Industrial policies to rebalance economy

# but...boring view of State

(ugh)

Set rules of the game and 'level' the playing field

De-risk, enable, incentivise, 'facilitate' private sector

Solve market and system 'failures'

or....something more interesting?

# boring/wrong theory of state leads to:

- Less innovation
- More hoarding & financialisation
- More inequality

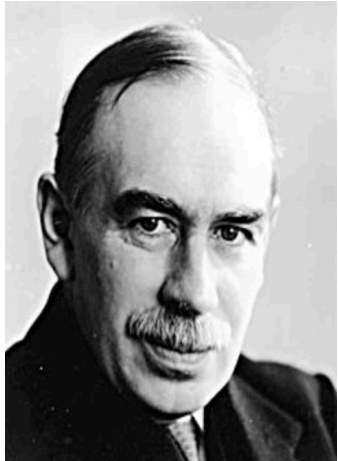
# markets are *outcomes*

(market shaping/making)



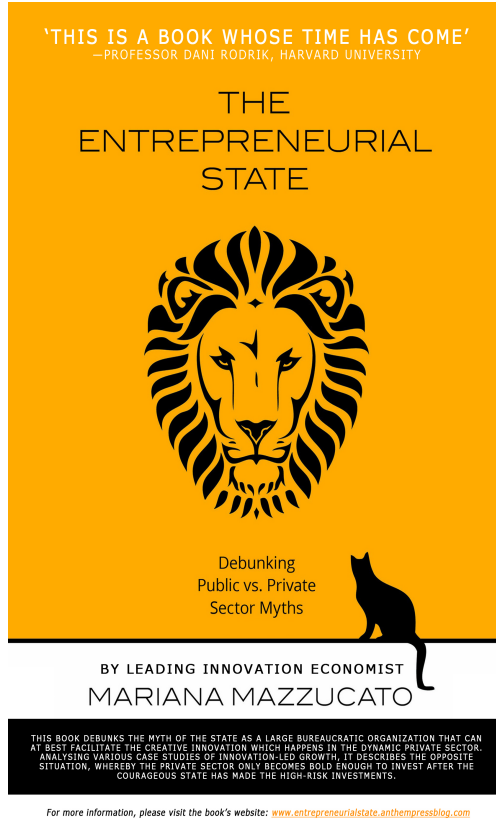
“The road to free markets was opened and kept open by an enormous increase in continuous, centrally organized and controlled interventionism... **Administrators had to be constantly on the watch to ensure the free working of the system.**”

**Karl Polanyi**, *The Great Transformation*, 1944

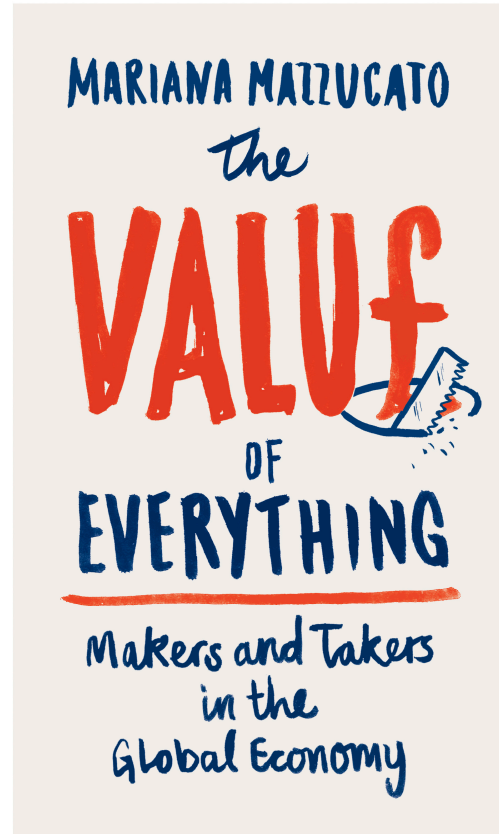


“The important thing for Government is not to do things which individuals are doing already, and to do them a little better or a little worse; but to **do those things which at present are not done at all.**” **John M. Keynes**, *The End of Laissez Faire*, 1926

# investor of first resort



# value extraction vs. value creation



forthcoming: April 2018

# ROAR

**ROUTES & DIRECTIONS.** How to use policy to set direction of change and enable bottom up experimentation?

**ORGANIZATIONS.** How to build explorative public sector organizations that learn-by-doing and welcome trial and error?

**ASSESSMENT.** How to evaluate public sector market creating investments (pushing market frontiers beyond 'crowding in')?

**RISKS AND REWARDS.** How to form new deals between the public and private sectors, socializing both risks and rewards?

## **Mission Oriented Innovation Policy: challenges and opportunities**

(Mazzucato, 2017) <https://www.ucl.ac.uk/bartlett/public-purpose/publications/2017/sep/mission-oriented-innovation-policy-challenges-and-opportunities>



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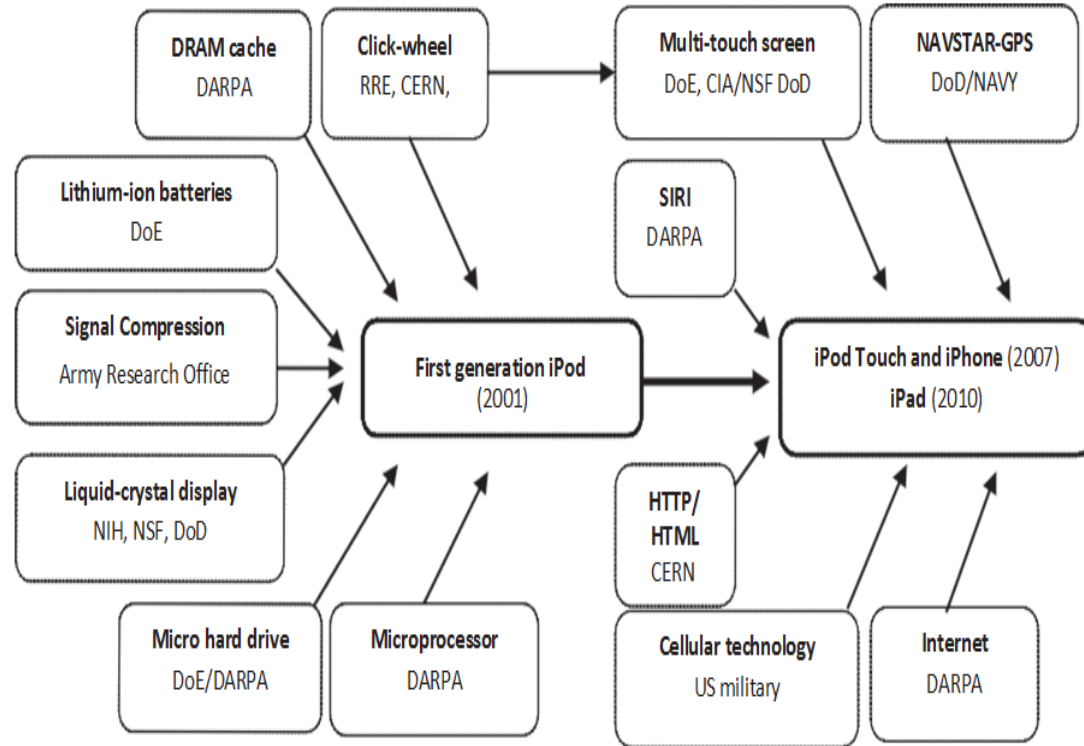
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# market failure policies don't explain GPTs

- 'mass production' system
- aviation technologies
- space technologies
- IT
- internet
- nuclear power
- nanotechnology
- green technology

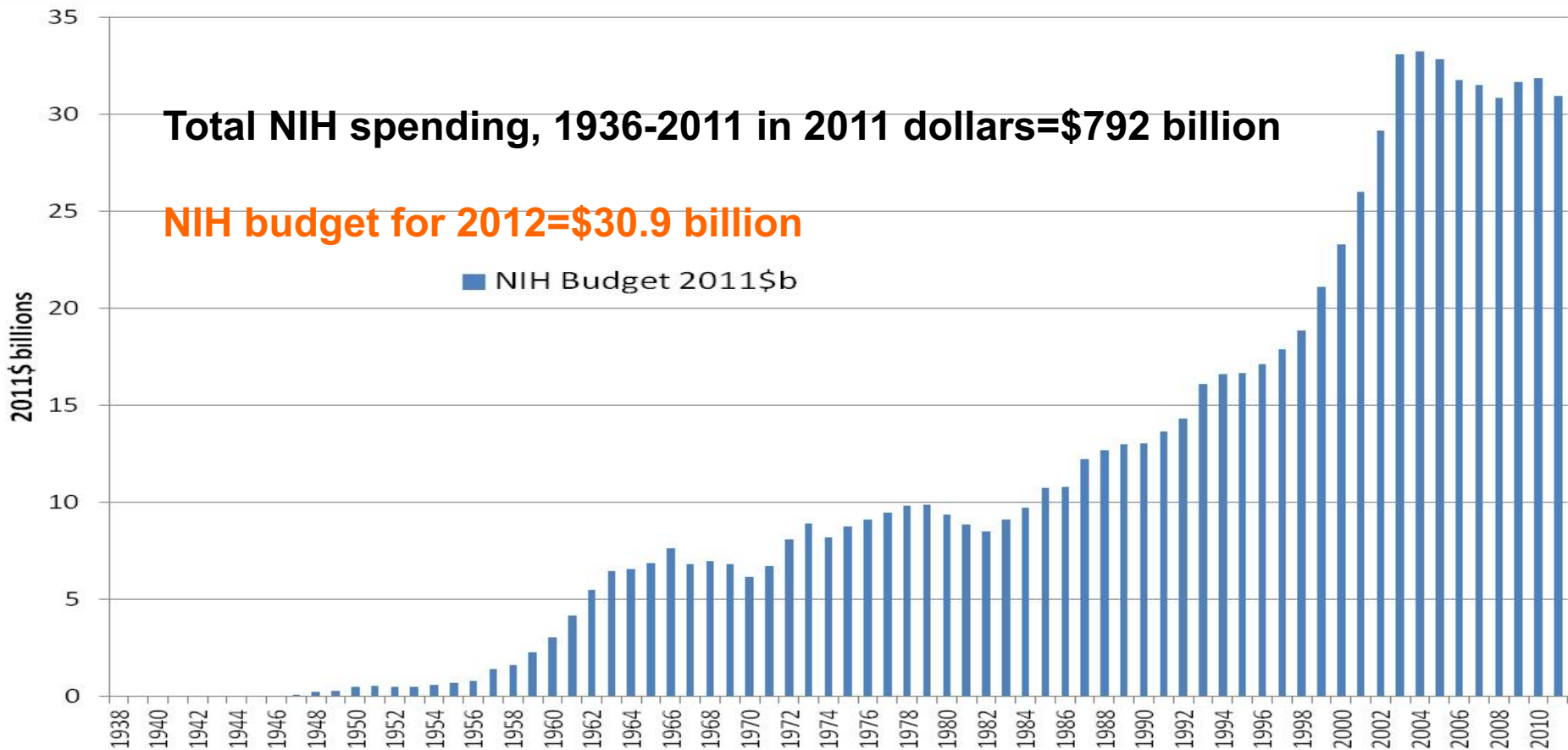
# what makes the iPhone so 'smart'?



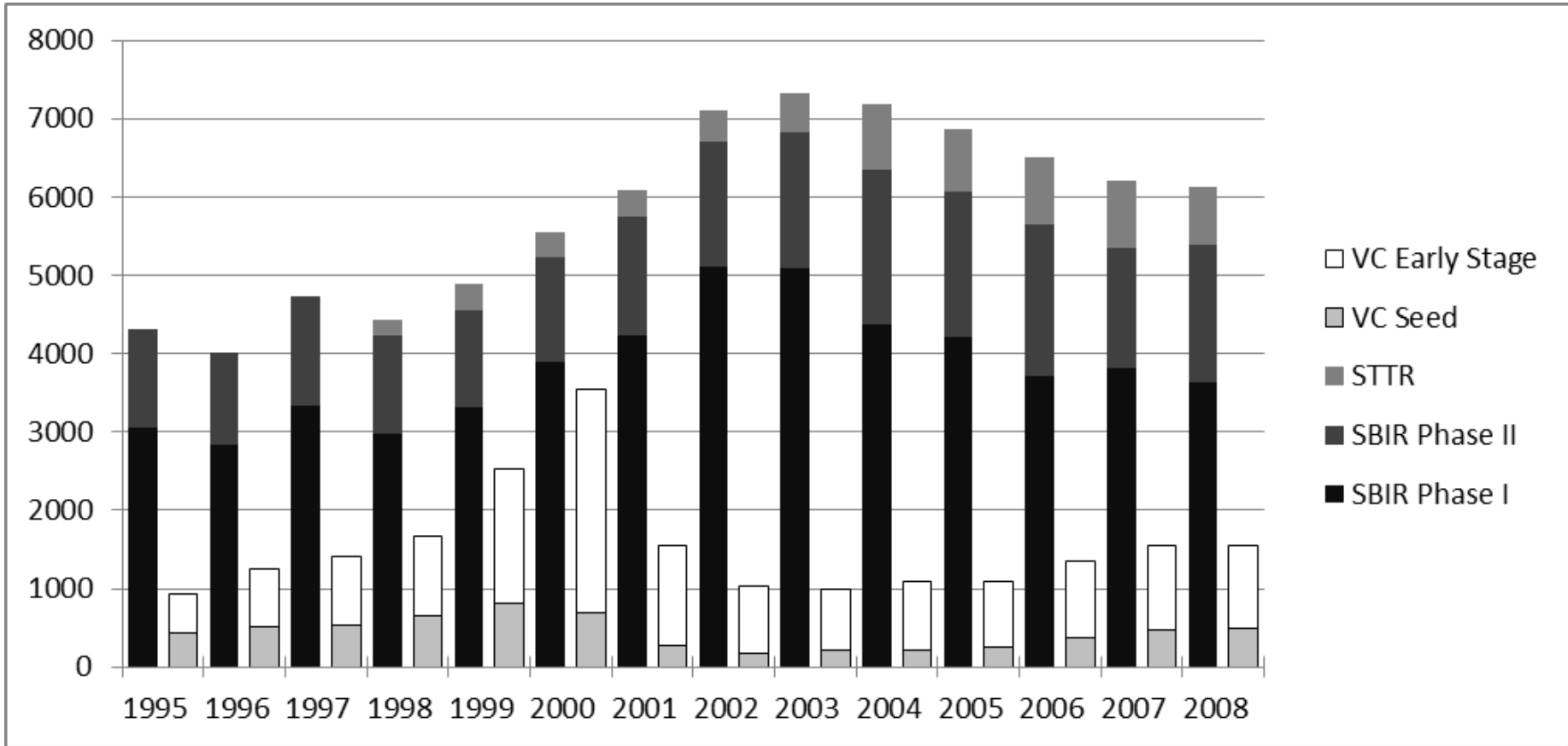
# National Institutes of Health budgets 1936-2011

**Total NIH spending, 1936-2011 in 2011 dollars=\$792 billion**

**NIH budget for 2012=\$30.9 billion**



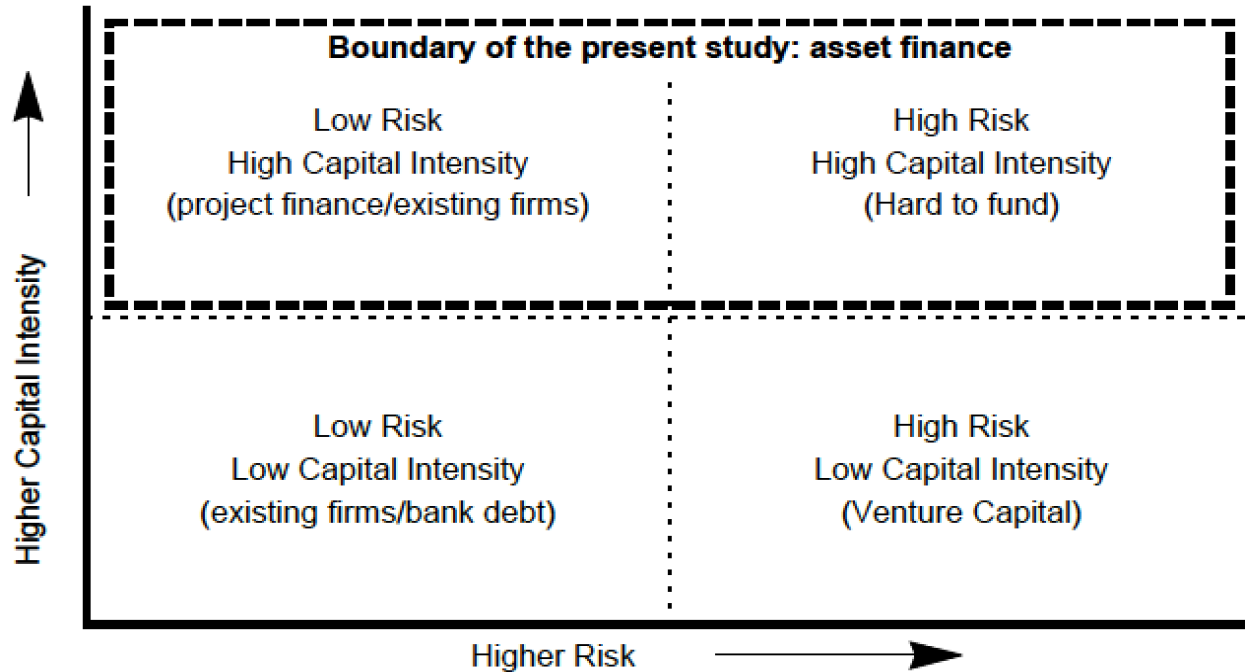
# Private and Public (SBIR) Venture Capital



Source: Block and Keller, 2012

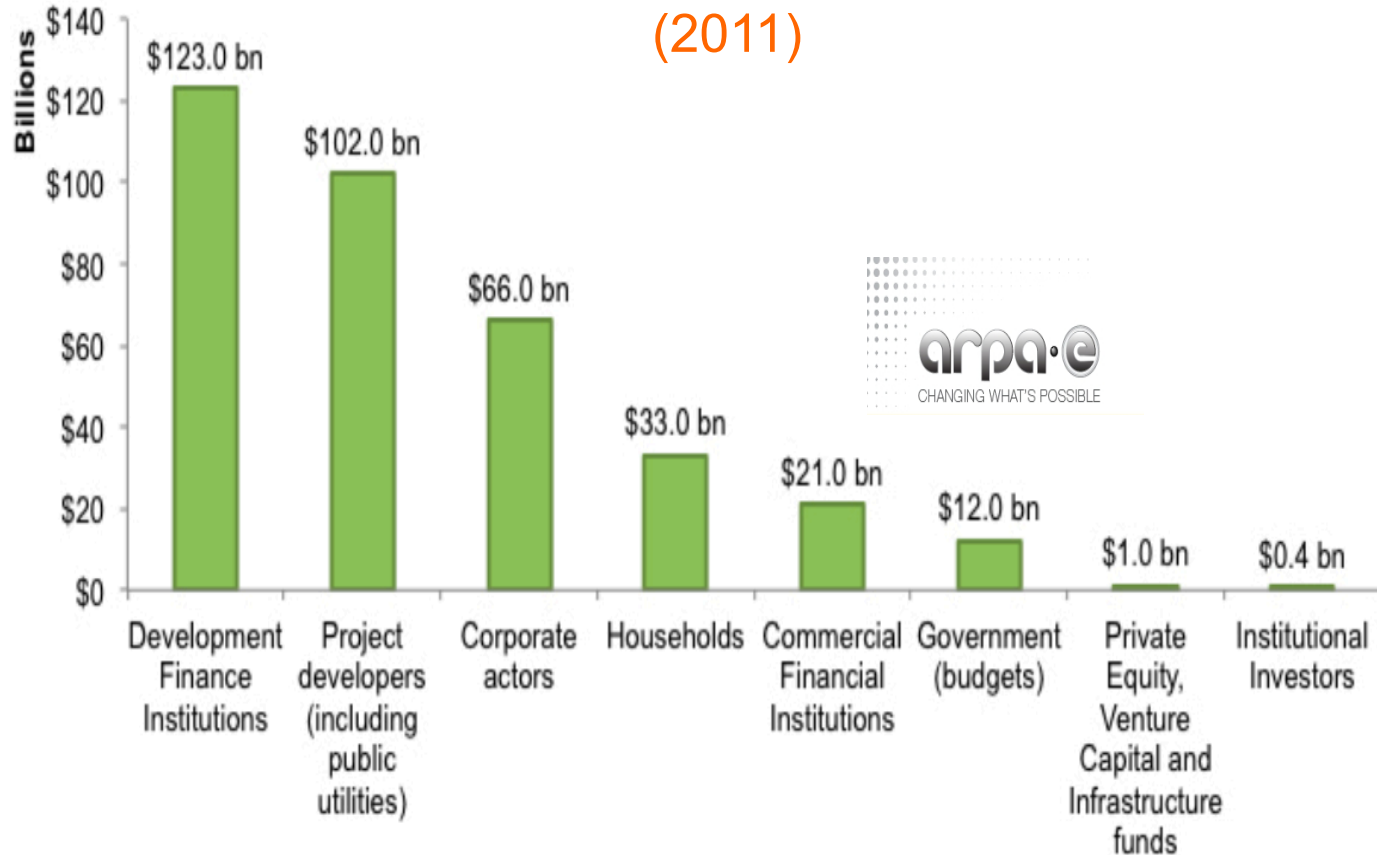
# Green tech: state leads government follows

Figure 4: Risk-capital intensity classification of RE finance



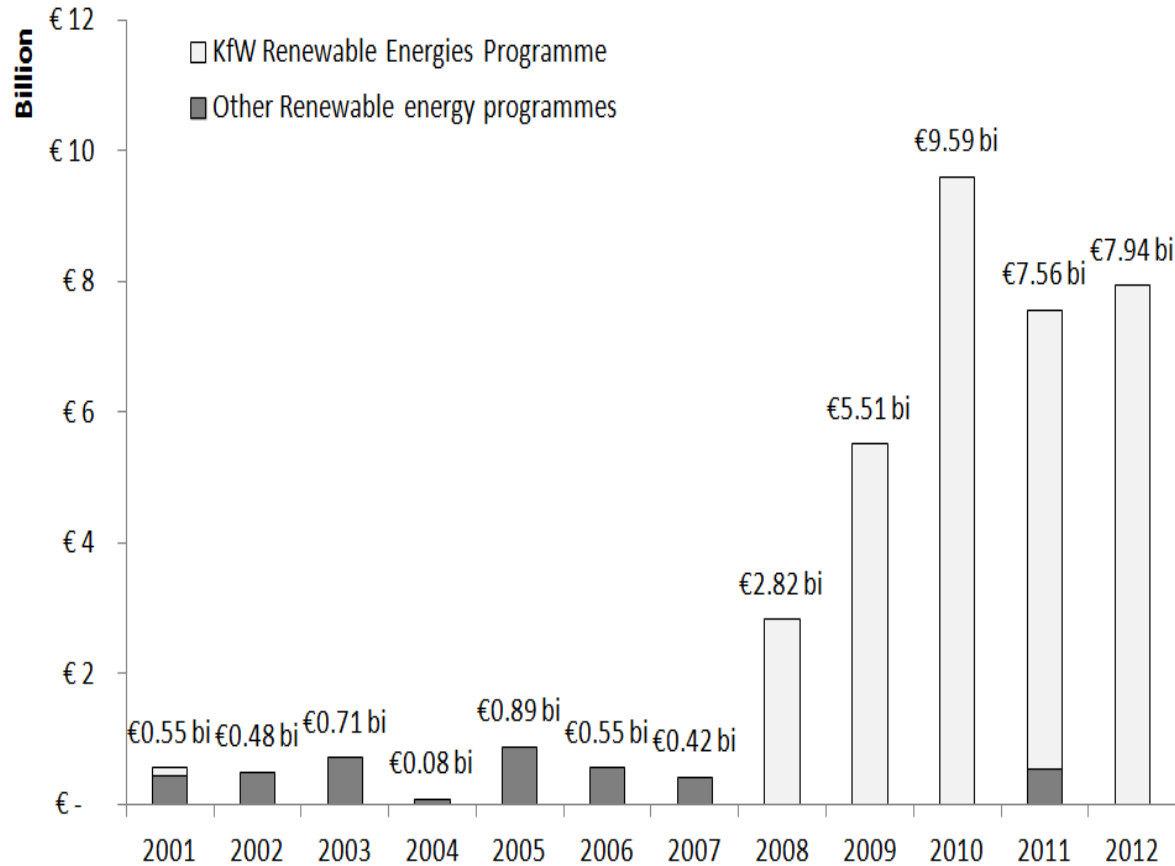
# green tech public & private investments

(2011)



Source: 2011 Climate Finance Initiative

# KfW funding for industrial environmental and climate protection projects in Germany 2001-2012





# China Development Bank

CDB founded **CDB Capital**, a 'public equity' fund with **\$US 5.76 bn to finance innovative start-ups** from the energy and telecom sectors.

*Yingli Green Energy* received **\$1.7 bn** from 2008 through 2012 with a **\$5.3 bn line of credit** opened for it. **LDK Solar** (**\$9.1 bn**); **Sinovel Wind** (**\$6.5 bn**); **Suntech Power** (**\$7.6 bn**); and Trina Solar (**\$4.6 bn**),

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# creating missions not fixing markets

**NASA's mission** is to “*Drive advances in science, technology, aeronautics, and space exploration to enhance knowledge, education, innovation, economic vitality, and stewardship of Earth.*” NASA 2014 Strategic Plan

“*Creating breakthrough technologies for national security is the mission of the Defense Advanced Research Projects Agency (DARPA).*”

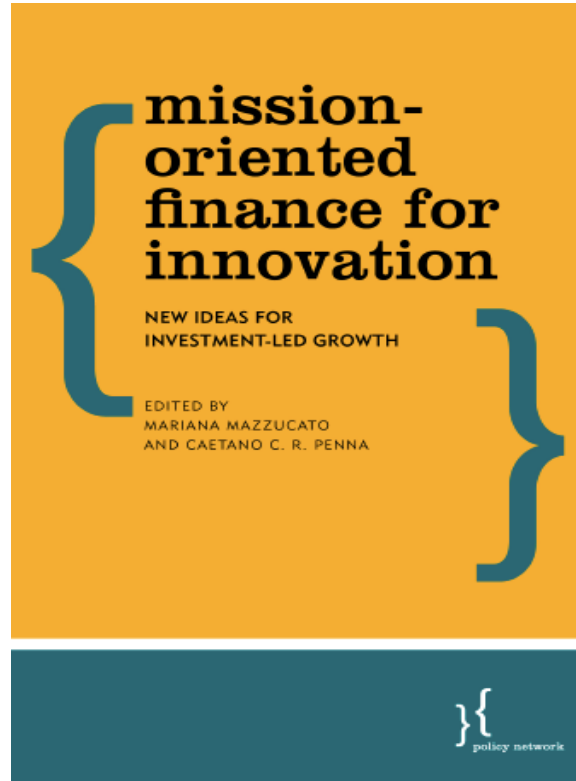
“The **ARPA-E mission** is to *catalyze* the development of transformational, high-impact energy technologies.”

“**NIH's mission** is to seek fundamental knowledge about the nature and behavior of living systems and the *application* of that knowledge to enhance health, lengthen life, and reduce illness and disability.”

“The **mission** of the **KfW Group** is to support change and encourage *forward-looking ideas* – in Germany, Europe and throughout the world.”

*We measure success by how many risks we have been willing to take (with inevitable failures) and whether the successes actually matter.*

**Cheryl Martin**, ex-Director ARPA-E



# from Government FAILURE to Government LEARNING (from trial & error)

## Organizational Experimentation

“The design of a good policy is, to a considerable extent, the design of an organizational structure capable of learning and of adjusting behavior in response to what is learned”

**Dick Nelson and Sydney Winter, 1982**

## Policy as Process

“shift from total confidence in the existence of a fundamental solution for social and economic problems to a more questioning, pragmatic attitude –from ideological certainty to more open-ended, eclectic, skeptical inquiry”

**Albert Hirschman, 1987**

## The Hiding Hand (Serendipity)

history’s generous tricks, silver linings and “felicitous and surprising escapes from disaster”

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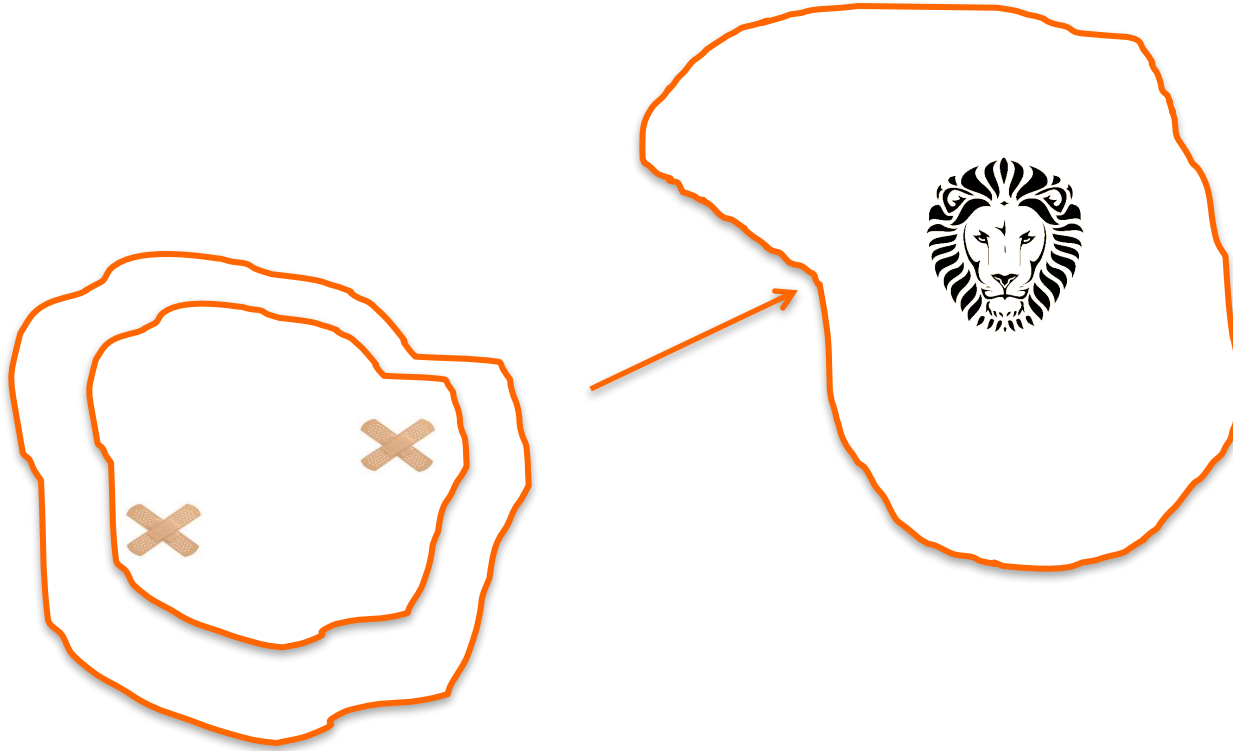
# creating animal spirits



Businessmen have a different set of delusions from politicians, and need, therefore, different handling. They are, however, much milder than politicians, at the same time allured and terrified by the glare of publicity, easily persuaded to be ‘patriots’, perplexed, bemused, indeed terrified, yet only too anxious to take a cheerful view, vain perhaps but very unsure of themselves, pathetically responsive to a kind word. You could do anything you liked with them, if you would treat them (even the big ones), **not as wolves or tigers, but as domestic animals** by nature, even though they have been badly brought up and not trained as you would wish....

**John M. Keynes’s** private letter to **Franklin D. Roosevelt**, 1938

# Measuring the *dynamising* in process

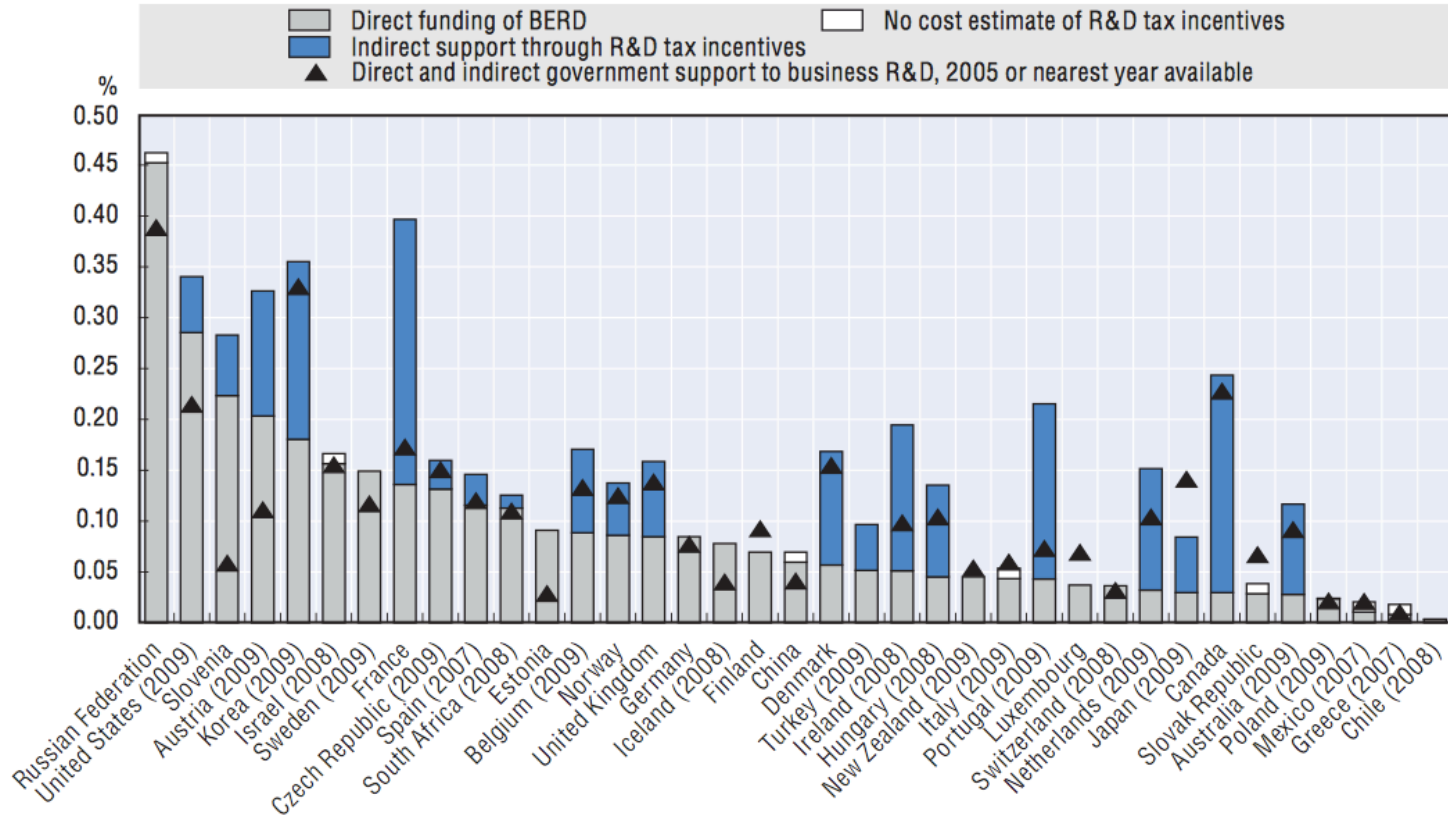




- **BBC** Charter Review: why not soap operas?
- Do **public banks** crowd out private ones?
- **Health**: why many drugs and so little life-style?

# Direct government funding of business R&D and tax incentives for R&D, 2010

As a percentage of GDP



# From public goods to public values?

*Public values are those providing normative consensus about (1) the rights, benefits, and prerogatives to which citizens should (and should not) be entitled; (2) the obligations of citizens to society, the state, and one another; (3) and the principles on which governments and policies should be based” (Barry Bozeman, 2007, 13).*

From new public management’s **fear of government failure**, to enabling experimentation and capturing its effects.





**IIPP**

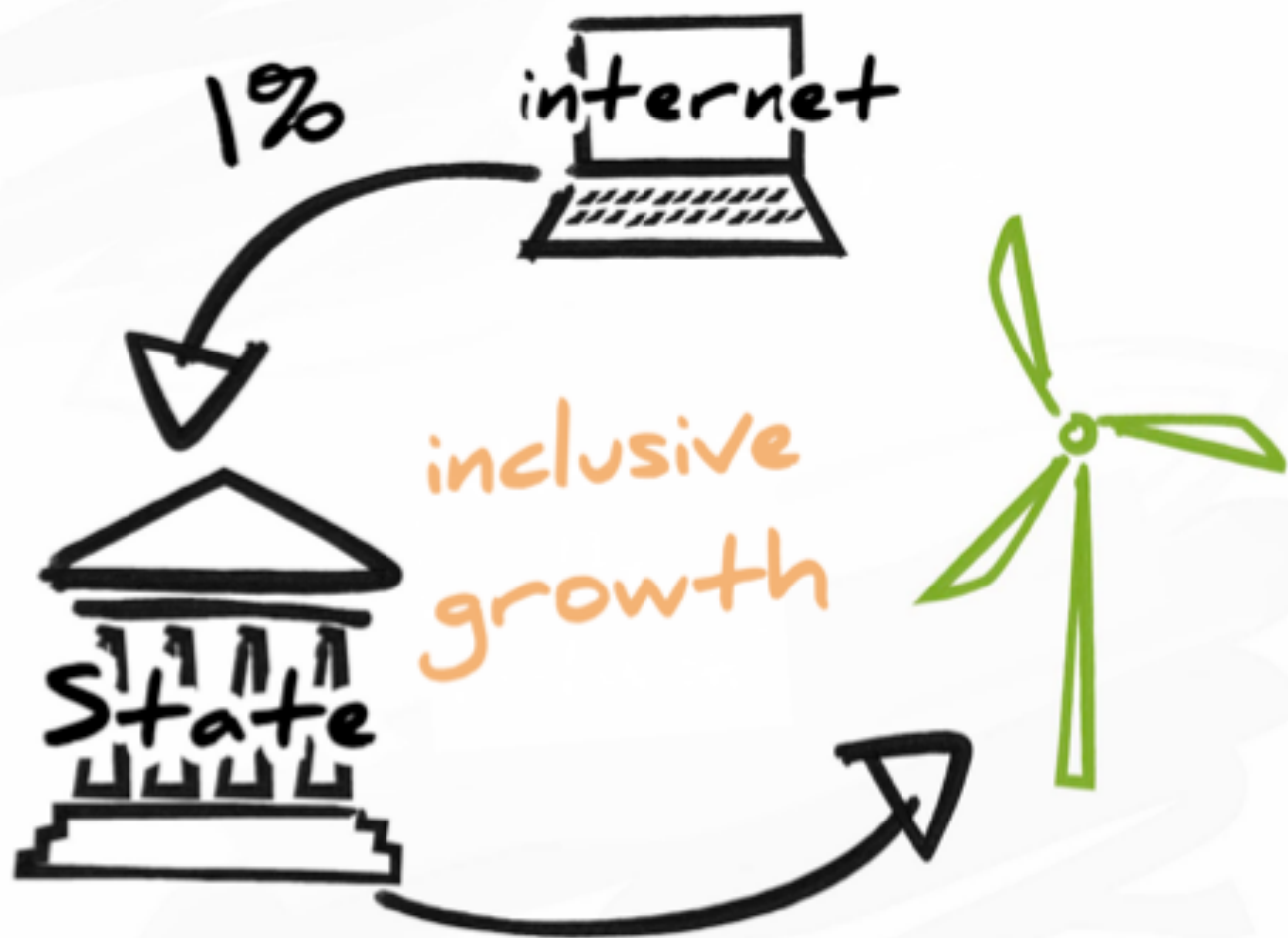
 **UCL**

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## Herb Simon (2000)

If we are very generous with ourselves, I suppose that we might claim that we “earned” as much as one fifth of [our income]. The rest is the patrimony associated with **being a member of an enormously productive social system**, which has accumulated a vast store of physical capital, and an even larger store of intellectual capital—including knowledge, skills, and organizational know-how held by all of us.

Simon speech to the American Political Science Association, in 2000

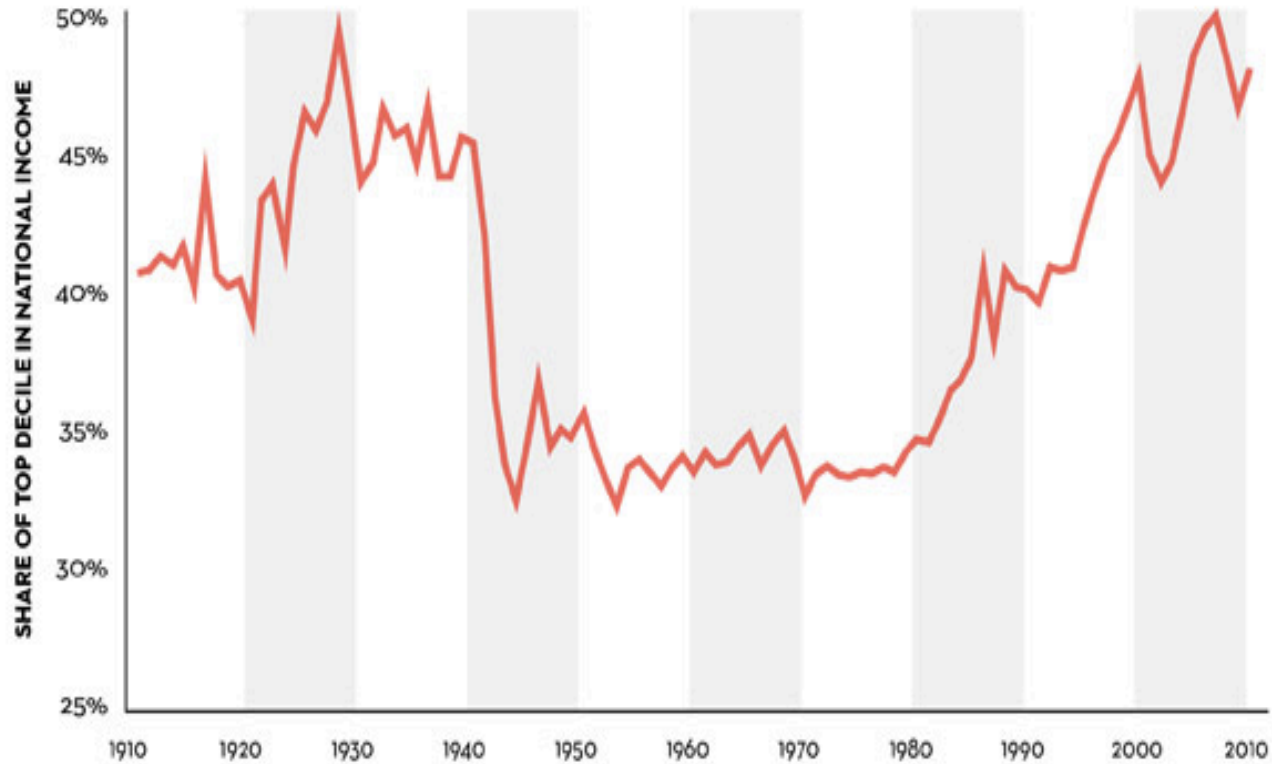
# Collective value creation

“Success is a product of having been born in this country, a place where education and research are subsidized, where there is an orderly market, where the private sector reaps enormous benefits from public investment.” **Bill Gates**

“Society is responsible for a very significant percentage of what I've earned.” **Warren Buffett**



## INCOME INEQUALITY IN THE UNITED STATES, 1910-2010



Source: Piketty, 2013

# Warren Buffet

“I have worked with investors for 60 years and I have yet to see anyone — not even when capital gains rates were 39.9 percent in 1976-77 — shy away from a sensible investment because of the tax rate on the potential gain. People invest to make money, and potential taxes have never scared them off. And to those who argue that higher rates hurt job creation, I would note that a net of nearly 40 million jobs were added between 1980 and 2000. You know what’s happened since then: lower tax rates and far lower job creation.”

And....why did capital gains fall in 1976?

*“I expect to see the State...taking an ever greater responsibility for directly organizing investment’ and ‘I conceive, therefore, that a somewhat comprehensive **socialization of investment** will prove the only means of securing an approximation to full employment”*

**JM Keynes, 1936**

# Better 'deal' between public & private

- reinvesting profits (and limiting share buybacks)
- retaining golden share of IPR
- capping prices (Bayh Dole act allows it)
- negotiating conditions (generics)
- income contingent loans
- retain some equity (Tesla & Solyndra lesson)
- % payback into an 'innovation fund'
- State investment banks

(discussed in Mazzucato, 2015; 2016)

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From Market Fixing to Market-Creating: A new framework for innovation policy (2016) *Industry and Innovation*, Vol. 23 (2), M. Mazzucato

Beyond market failures: the market creating and shaping roles of state investment banks (2016), *Journal of Economic Policy Reform*, M. Mazzucato and C. Penna

The risk-reward nexus in the innovation-inequality relationship: Who takes the risks? Who gets the rewards? (2013), *Industrial and Corporate Change*, 22:4:1093-1128, W. Lazonick & M. Mazzucato.

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