

CCT490: Week 4

1. Software and Culture
2. Economics of Innovation

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Schedule

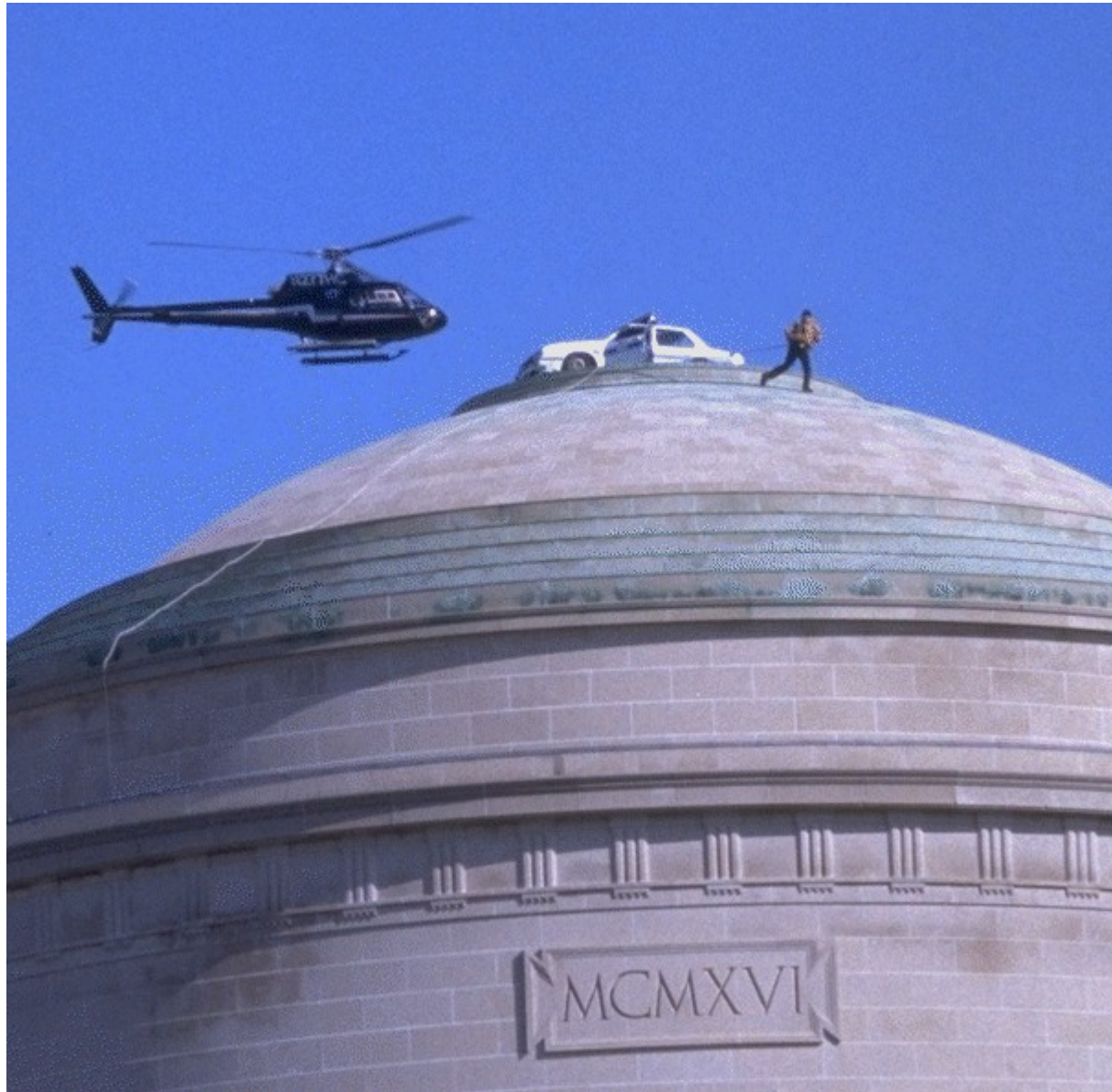


Intro	Innovation	Linux	Econ
History	IP	Production	Politics
Culture	GNU	Econ	Etc.



**reading and assignment
schedule is unchanged**

“Hackers”



<http://hacks.mit.edu/>

“Hackerdom”

“Hacker culture”

“Networked tribe”

“the technical and folkloric levels”

In those who come to assume the professional attitude the occupation is presented both as a culture and a technique. The technique is developed with reference to certain objects or activities. The technique of the physician is in relation to the human body, which must be for him a different sort of object from what it is for the layman. To the layman it is a sacred thing, and an object of sentiment. [...] In relation to its technique and the interests of those who use that technique, the occupational group tends to build up a set of collective representations, more or less peculiar to the occupation and more or less incomprehensible to the community.

Hughes (1957) *Men and Their Work*

Jargon

“Hacker Ethic”

The relationship between the
object and oneself

Groups

A local community

A “networked tribe”

“Imagined communities”

To this end, we define an occupational community as a group of people who consider themselves to be engaged in the same sort of work; whose identity is drawn from the work; who share with one another a set of values, norms and perspectives that apply to but extend beyond work related matters; and whose social relationships meld work and leisure.

Van Maanen & Barley (1984) “Occupational Communities: Culture and Control in Organizations”

A community of practice is a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice. A community of practice is an intrinsic condition for the existence of knowledge, not least because it provides the interpretive support necessary for making sense of its heritage. Thus, participation in the cultural practice in which any knowledge exists is an epistemological principle of learning.

Lave & Wenger (1991) *Situated Knowledge:
Legitimate Peripheral Participation*

Culture

v

Labor

“A Tribe”

“communities of practice”

vs.

“networks of practice”

shared tools / objects

Imagined Communities

... will never know most of their fellow-members, meet them, or even hear of them, yet in the minds of each lives the image of their communion.

Anderson (1991) *Imagined Communities*

Software and Counterculture

Questions?

Economics of Innovation

“Investing in Knowledge”

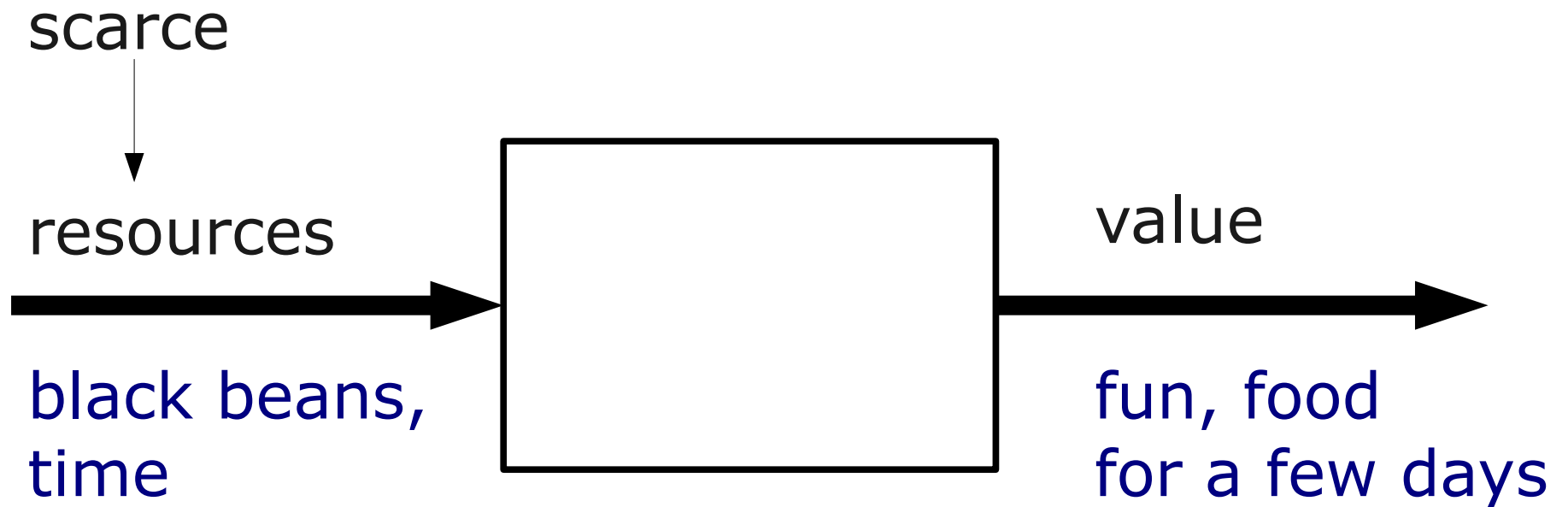
Investment

“optimal level of investment”

VS

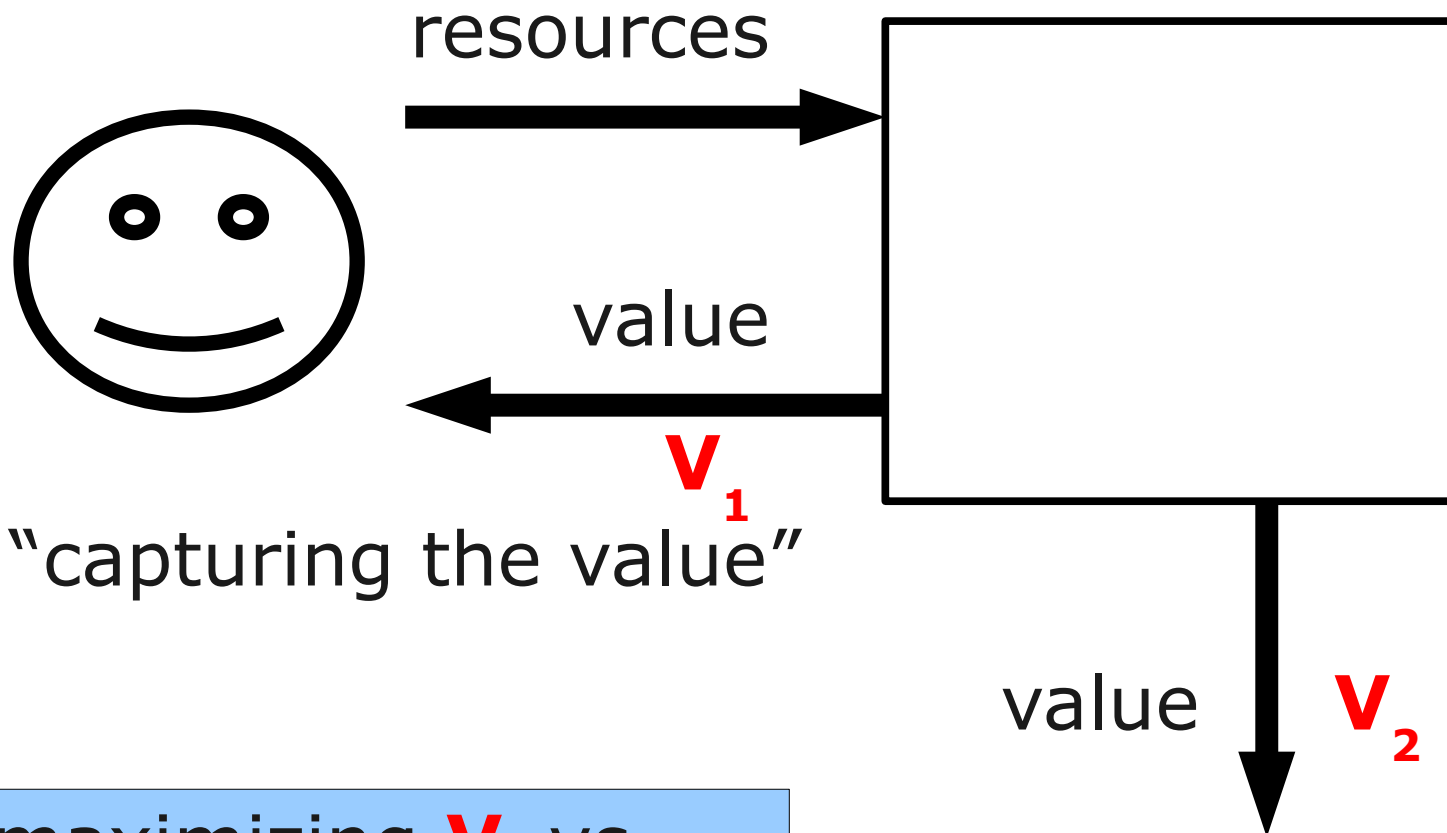
“under-investment”

Investment



“a decision to invest”

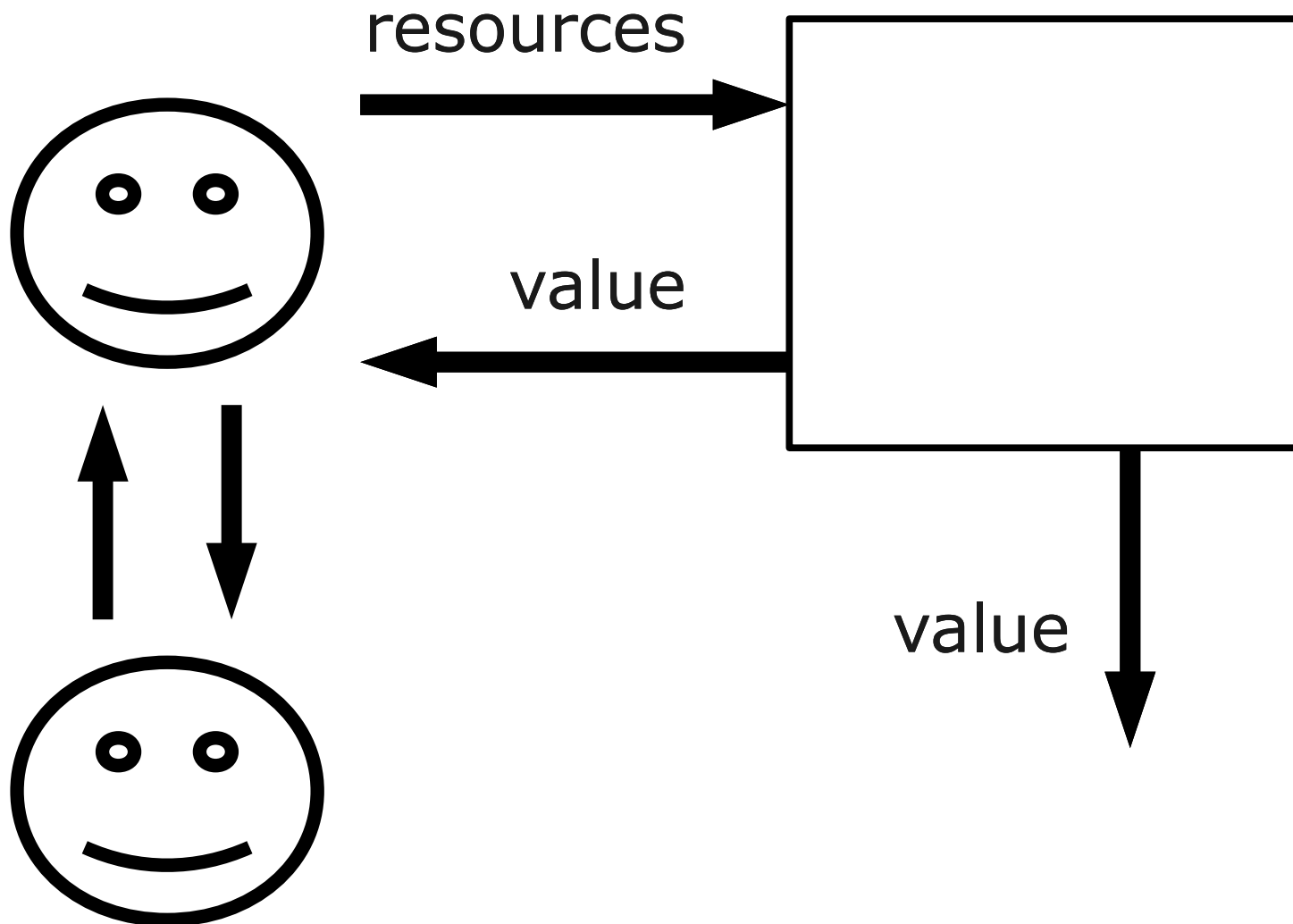
Externalities



maximizing V_1 vs
maximizing $V_1 + V_2$

(positive) externalities

Poor Actors



“Ex Post” vs “Ex Ante” Analysis

“public goods in the
technical sense”

rival, excludable



“private”

“public”



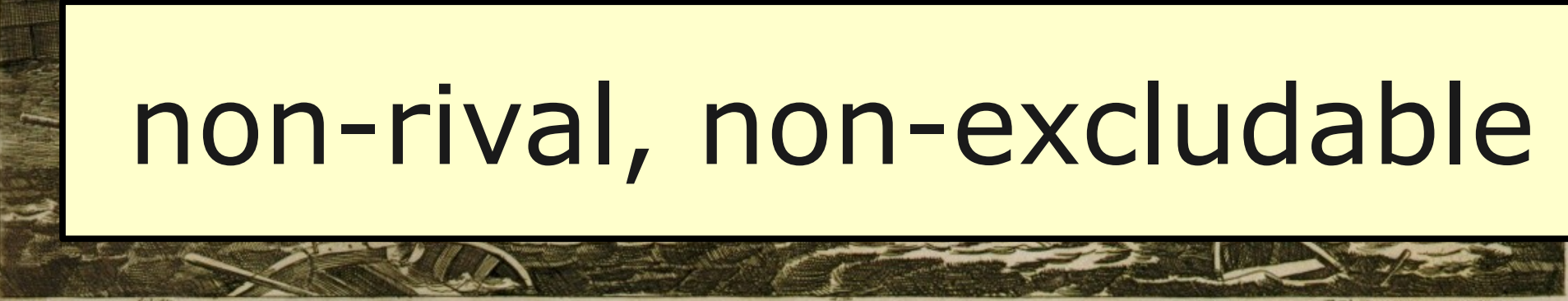
“the free-rider problem”



“under-investment”



non-rival, non-excludable



A. Gen. Ross and the British Army. B. Cannon taken from the Americans. C. The City of Washington. D. The American Fleet destroyed. E. The Dock Yard and Arsenal burnt. F. The Signal Works. G. The River Fortification. H. The Great Bridge destroyed. I. The War Office. K. The Executive Palace on fire. L. The Senate House. M. The Treasury.

THE CITY OF WASHINGTON THE CAPITAL OF THE UNITED STATES OF AMERICA WAS TAKEN BY THE BRITISH FORCES UNDER MAJOR GEN. ROSS' On Aug. 24 1814 when we burnt and destroyed their Dock Yard with a Frigate and a Sloop of War Rope-walk Arsenal Senate House President's Palace War Office Treasury and the Great Bridge

Solutions

- the government
- other large actors
- secrecy

Public Solutions

- ~~compel~~
- hire / support
- reward
- help capture the value

Prizes

- can encourage secrecy
- centralized
- not for poor inventors

Helping Capture the Value

- patents
- copyright

**both are legal
monopolies**

Patents

- ideas
- require registration

Copyright

- expression
- automatic (now)

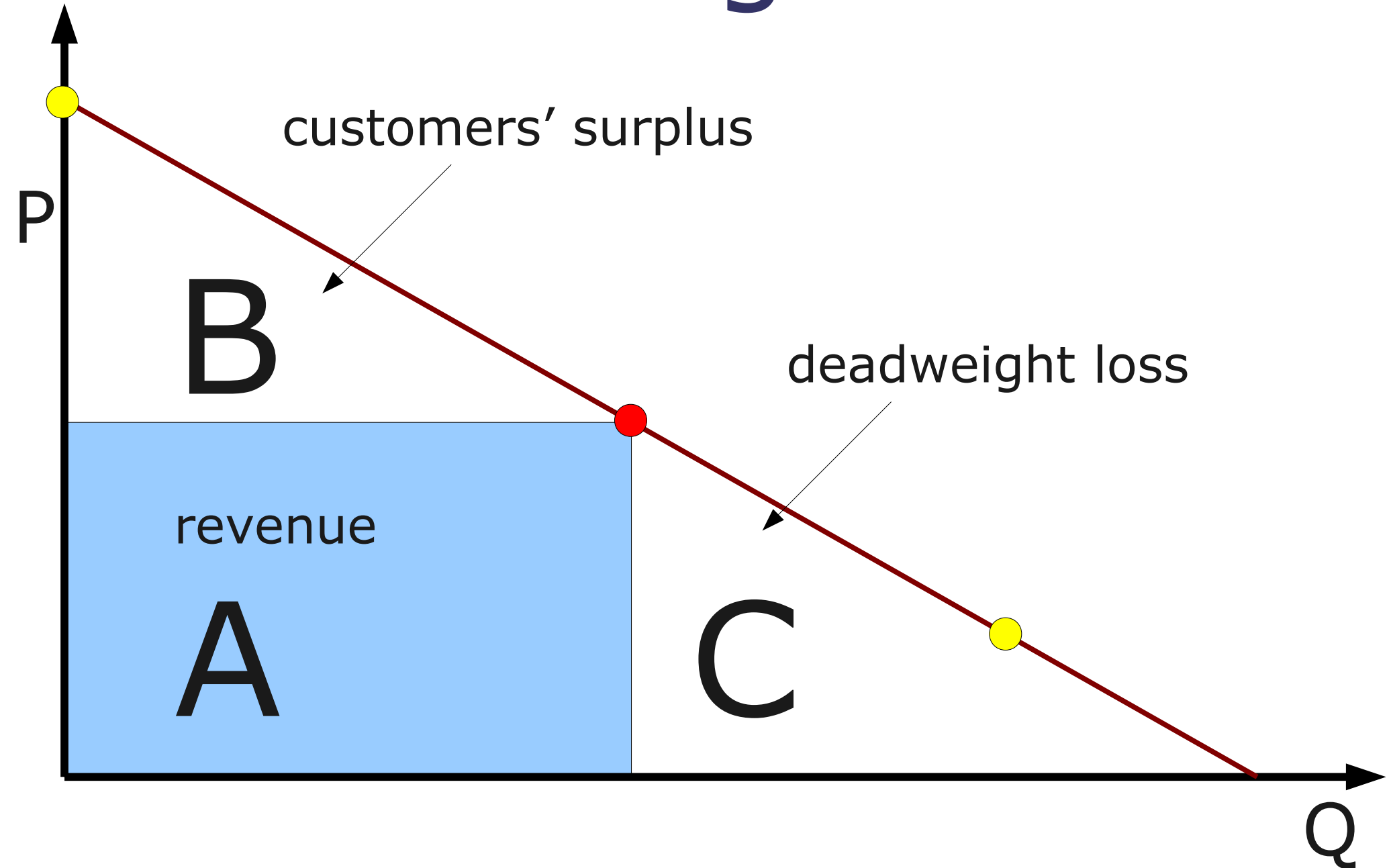
Hiring, prizes

- centralized 😞
- can cost too much 😞
- costs shared by all 😞

Patents, ©

- de-centralized 😊
- can cost too much 😞
- costs born by users 😊
- deadweight loss 😞

Deadweight Loss



“Costs Too Much”

- overpaying
- duplication of effort
- overhead

**consider the risk of
under-investment!**

What Is the Best
Approach?