

Introduction to Intellectual Property

Econ 1101

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Additional notes: intro to intellectual property

ECON 1101 Intro to IP

Why do we study patents?

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We would like to know:

- How do patents and intellectual property protections affect the profitability and actions of firms in the market?
- What is the impact of different patent regimes on firms' incentives to innovate and develop new products?
- If the market fails to offer a profit motive for product development, what alternatives can push research forward?

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Application to the pharmaceutical industry

Application: the pharmaceutical industry

As we saw in class, when the cost structure of the industry is such that there are large fixed costs (big economies of scale), we might end up with:

- a single firm in the market (natural monopoly)
- or no production at all

A distinctive feature of the pharmaceutical industry is that drug research (a fixed cost) is extremely expensive

- Industry claims to invest over \$40 billion a year
- By some estimates, \$800 million to produce a new drug

Application: the pharmaceutical industry

Patents are used as incentive for these firms to make the research for new drugs

- Patents offer monopoly rights for certain period of time and allow the firm to charge a higher price (monopoly price)
- Higher price (actual profits) may allow it to overcome the high FC

When patents run out, original drugs are quickly replaced by cheaper “generics”

Effect of patent expiration



Lipitor:

- Best selling drug of all time, \$10 billion a year to Pfizer
- Expired in 2011, has also lost huge fraction of sales

The pharmaceutical industry

The US makes up a disproportionate source of the revenue for drug companies

- In 2005 the value of Zocor sold worldwide was \$4.4 billion
- \$3.1 billion of the \$4.4 billion was in the US
- Other estimates have U.S. at around half of the market even though we have only 5% of people and 25% of income
- Compare this with Canada – where there are price regulations