The Economics of Ideas

- Key implication of the Solow model: Economic growth results from technological progress.

- Shortcoming of the model: Technological progress not explained, but taken as given (exogenous).

- Goal for remainder of course: Endogenize technological progress.

- Key source of technological progress: The generation of new ideas.

In the basic model we will examine, technological progress will be modeled as resulting from the development of new ideas, which are purposely generated by firms seeking to maximize profits by investing some of their resources in R&D activities.
Examples of important ideas that fueled technological progress:

- Book’s example: invention of the chronometer, important for determining longitude, and thus facilitating ocean travel.

Key features of ideas: nonrivalrous, nonexcludability.

*Rivalry*: to what extent does my use of a good limit yours?

*Excludability*: How hard is it for the owner of a good to prevent others from benefiting from it?
To encourage the pursuit of new ideas, incentives must exist that make their pursuit worthwhile (e.g., fame and fortune).

Nonrivalry and nonexcludability make the preservation of incentives difficult to maintain in the absence of regulations.

Examples of important regulations, or sources of incentives:
Perfect competition: necessary ingredients

- Rivalry and excludability in consumption
- The absence of externalities
- Constant-returns-to-scale production technology

Key implications:

- Efficient allocation of resources without government intervention (results instead from self-interested behavior).
- Efficiency implies that productive inputs are paid the value of their marginal products; and,
- Zero profits

Remaining goals:

- Establish links between production functions and cost functions.
- Examine the behavior of Total, Average and Marginal costs under various production specifications.