

### **Optional Assignment: Why isn't Innovation concentrated during recessions?**

Innovation refers to the effort firms make to create new ideas or new products. Every period, firms have to allocate their resources between production, which returns short-run profit, and innovation, which makes future production more profitable. It has been proposed by many macroeconomists that firms should concentrate innovation during recessions when the return to production is low so that the opportunity cost of innovation is low.

For example, Bananarepublic hires people to make clothes and design clothes. As its sales go down during recessions, Bananarepublic fires some of its employees that make clothes or sell clothes; instead, it keeps (or even hires more) all of the designing employees to concentrate on creating new and attractive styles to further boost its sales when the market recovers.

However, data does not support this idea. In the U.S. and in many other countries, aggregate innovation input, measured as Research and Development spending, is higher during expansions and lower during recessions.

This is one of the macroeconomic puzzles. If you have any insight, please provide a short essay explaining why firms choose not to concentrate innovation during recessions although it is optimal to do so.