Highlights from ATP's Economic Studies

Economic Assessment Office

ATP Award Addresses Capital Market Inefficiencies for Developing Early Stage Technologies[1]

Markets for allocating risk capital to early stage technology ventures are inefficient for two main reasons:

1. Private investors in early stage technology development do not fully capture the benefits of such technologies, creating a disincentive to make this investment.

2. Serious inadequacies exist in the information available to both entrepreneurs and investors.
   - Early stage technology development involves both high quantifiable risks and large uncertainties.
   - When the uncertainties are mainly technical, potential investors are poorly equipped to quantify them.
   - When the new technology is a breakthrough technology, creating new products and new markets, market uncertainties are also difficult to quantify.
   - With technologies and markets becoming increasingly complex, the "due diligence" required by investors not only increases, but is also more difficult to perform.

Technology entrepreneurs face a shortage of funding for early stage technologies. The innovators alone cannot capture the full benefits of early stage technologies. This funding gap is a disincentive for the private sector to go it alone, providing motivation for government involvement.

ATP helps diminish impacts of imperfect information between investors and innovators

- ATP's competitive review process is a form of due diligence that provides information on technology projects worthy of investors' attention. An ATP award signals to investors that a project developing early stage technologies has the potential to lead to new products and services, delivering significant benefits to the innovators.
- ATP plays an important role in filling the efficiency gaps in the capital market for early stage technology development. In addition, the ATP funds projects that deliver significant benefits to society as a whole.

[1] These findings are from Branscomb and Auerswald's 2002 report, *Between Invention and Innovation: An Analysis of the Funding for Early Stage Technology Development.*