Description

What Constitutes Basic Research?

Basic research (also described as fundamental or pure research) categorizes any study with the objective of deeper understanding of the fundamental aspects of a phenomenon, thereby contributing to the broader knowledge of the topic.

By comparison, applied research takes an empirical approach to applying the basic research findings in order to solve a problem by developing a new treatment method or piece of hardware or software.

These definitions should not be considered as being mutually exclusive, since many basic research programs have succeeded in delivering remarkable scientific innovations in the 20th century, including, for example, lasers, transistors, integrated circuits, computers, the internet, and the GPS system.

The Problem of Risk

Since applied research builds upon existing research data, it is now considered less of an investment risk than the broader approach of basic research.

Many of the scientific innovations listed above originated in corporate labs that were, at the time, given a lot more leeway in how they approached the selection of research topics.

Unfortunately, the corporate research budgets of today would not have allowed Thomas Edison to make 10,000 attempts at the discovery of the incandescent light bulb. Since he funded Menlo Park with revenue from other inventions, Edison wasn't answerable to budget overseers who would probably have cut his funding after 1000 attempts and redirected resources elsewhere.

The Gradual Rise of Shareholder Value

Legal corporations first came into existence as a form of risk management and legal protection.

The primacy of shareholder value was never a feature of such legal entities, at least until savvy CEO's figured out that unpopular decisions – layoffs, closures, sending production overseas – could be justified under the axiom of maximizing the return on shareholder investments.

Surveys have often shown that shareholders actually prefer stable growth based on sound investment rather than maximization of profits in the short-term. However, the increased dominance of Wall Street hedge funds has overridden that preference in favor of the greatest gains in the shortest time frame.

Increase Federal Funding, Save Basic Research!

The pressure to produce a return on investment on corporate dollars devoted to research is unlikely to change any time soon. So, the only hope for the survival of basic research has to be the return of

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federal funding based on longer-term horizons that will support pure research projects.

Unfortunately, the prospects for this outcome are equally grim. At the American Association for Advancement of Science (AAAS) conference in May 2104, the theme was the "*innovation deficit*" facing the USA if federal spending continues to decline.

With spending on science as a percentage of the total government budget falling from over 10% in 1964 to less than 6% today, basic research projects are being left to corporations who have no apparent interest in underwriting new research.

Unless there is a high confidence level in the delivery of a marketable product or service at the end of it!

Category

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Date Created
2015/07/07
Author
editor

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