

On difference between fundamental science search and applicational technology research: a perspective from a Chinese doctor

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I like this sentence: “scientific research begins where it’s nearest to productivity”. Therefore, I think there is no need for policymakers to use stimulus measures to promote fundamental research in China.

Scientific research, technology advancement and productivity enhancement can be likened as a pyramid. Scientific research locates at the top, technology advancement, at the middle, and productivity enhancement, at the base. Fundamental scientific research should be the game played by the very few geniuses. The great discoveries in fundamental sciences might have their own intrinsic laws, and it may take several hundreds of years and also by chance for those few exceptional geniuses to appear who are able to make fundamental contributions to science. The phenomenon to produce scientific giants is extremely unpredictable, even irrelevant to the resources and manpower invested. Therefore, a decent amount of money, but not a lot of money, can be allotted to those very few geniuses in elite universities so that they live a comfortable life.

On the other hand, a large amount of money should be allotted to those engaged in technology and engineering development. Technology and engineering should be

promoted actively by policymakers particularly for those based on sound scientific evidence. Atomic weapon development and rocket launching project deserve the resources and manpower invested. With these measures we can gain concrete benefits such as national security and national confidence in the foreseeable future. Further, one particular scientific finding may lead to a variety of technology and engineering advancements, which will require money, manpower and resources. The advancement of technology and engineering will in turn translate to enhance productivity and to provide a better life for humankind, which require much more money and resources invested than those spent on both scientific research and technology advancement.

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Footnote

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