

New Business Models for Space Exploration (14)
Poster Session (P)

Author: Dr. Alexander Bolonkin
NYCU, United States, abolonkin@juno.com

Dr. Shmuel Neuwmann
Israel, domemountain@gmail.com

PROBLEMS OF SCIENCE RESEARCH AND TECHNICAL PROGRESS

Abstract

At the present time the USA's Federal Government spends enormous sums of taxpayer money for Scientific Research and Development (RD). How to best organize this vast governmental activity, how to best estimate its ultimate utility and profitability (real and potential), how to best increase efficiency of innovation and production, how to best estimate the worth of new discoveries and innovations, how to properly fund RD of new concepts and innovations, and how to correctly estimate their results are all complex and pressing questions that require answers for further industrial progress and scientific improvements. These are critical macro-problems which because of its scope have evolved into new macro-systems that require a new approach for successful planning of scientific research. The authors consider these major-system problems and offer many remarkable innovations in organization, estimation, suggestions for entirely new research efficiency criteria, development, new methods for assessments of new ideas, innovations in science and industry, and new methods in patenting technology. These suggestions are based largely on the personal experiences of one of the authors, A.A. Bolonkin who worked for many years within the USA's Federal Government entities (scientific laboratories of NASA, Air Force), and USSR and USA universities and industry.

Keywords: Organizing scientific research, planning of research, funding research, funding new ideas (concepts), funding inventions and innovations, estimating research cost, assessment of research results, research efficiency criteria, innovation in organizing of scientific RD.