

A Comparative Analysis of Research and Technology Funding Systems

Seyed Reza Mirnezami¹, Ali Maleki¹, Ahmad Keykha^{1,*}

Funding for research and technology is a critical driver of scientific and economic advancement in nations. This study employs a systematic review approach to conduct a comparative analysis of research and technology funding systems across five selected countries: The United States, the United Kingdom, Germany, Australia, and China. Through an in-depth examination of policies, mechanisms, and trends in resource allocation, the study proposes actionable strategies to enhance Iran's research funding framework. Data collection and analysis were guided by a conceptual framework comprising nine key dimensions: policymaking, resource allocation mechanisms, allocation behavior, financing, accessibility, evaluation, support and incentives, regional engagement, and science and technology diplomacy. The findings reveal that these countries employ a diverse mix of public and private funding models, emphasizing competitive, metrics-based, and long-term approaches to financial allocation. Moreover, developed nations have charted a sustainable path for scientific progress by focusing on research commercialization, offering financial incentives, ensuring transparency in data access, and fostering international collaborations. The study concludes with a set of recommendations to improve Iran's research funding system. These include establishing competitive allocation systems, developing blended financing models, prioritizing applied research, creating specialized funding agencies, enhancing transparency, and supporting high-risk, long-term research initiatives.

Keywords: Comparative Study, Financial Resource Allocation, Research and Technology Funding, Science and Technology Policy

* Corresponding Author. Postdoctoral Researcher. Tel:(+98) 912 958 3889, Email: ahmad.keykha72@sharif.edu

¹ The Research Institute for Science, Technology, and Industrial Policy (RISTIP) Sharif University of Technology, Tehran, Iran