2.0.1 Introduction

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First Published August 28, 2018   Final Updated April 25, 2019

Abstract

This paper describes the governance aspects of science, technology and innovation policy.

Keywords

Science, Technology and Innovation Policy, Governance, Process, Assessment,

Main Text

In respect to the subject and scope of science, technology and innovation policy, and as discussed in Chapter 0, science, technology, and innovation were originally separate concepts, but are now beginning to be recognized as a unified policy area called "science, technology, and innovation policy." Moreover, each country has various science, technology and innovation policy systems.

This paper addresses science, technology and innovation policy from a policy governance perspective. Science, technology and innovation policy has various social implications and involves the allocation of resources to various actors. Therefore, it is necessary to design social decision-making functions, mechanisms, and institutions—that is, "governance"—while keeping in mind the horizontal relationship between organizations that include not only government in a conventional sense, but a wide range of actors outside of the government (Shiroyama Hideaki, 2007).

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In this respect, SciREX aims to co-evolve the "science of policy" and the "policy formation process." It is important to analyze the effects of science, technology and innovation policy, as well as the entire process of its planning, implementation, and evaluation from a governance perspective in order to put the results of policy research into practice in the policy formation field.

The CRDS policy proposal, which served as the basis for the concept of the SciREX program, "(Strategic Proposal) Towards Realization of Evidence-Based Policy Formation: Development of Science of Science, Technology and Innovation Policy" (CRDS-FY2010SP-13, CRDS, 2011), also specifies the "design and embodiment of a strategic policy formation framework" as one of the research areas.
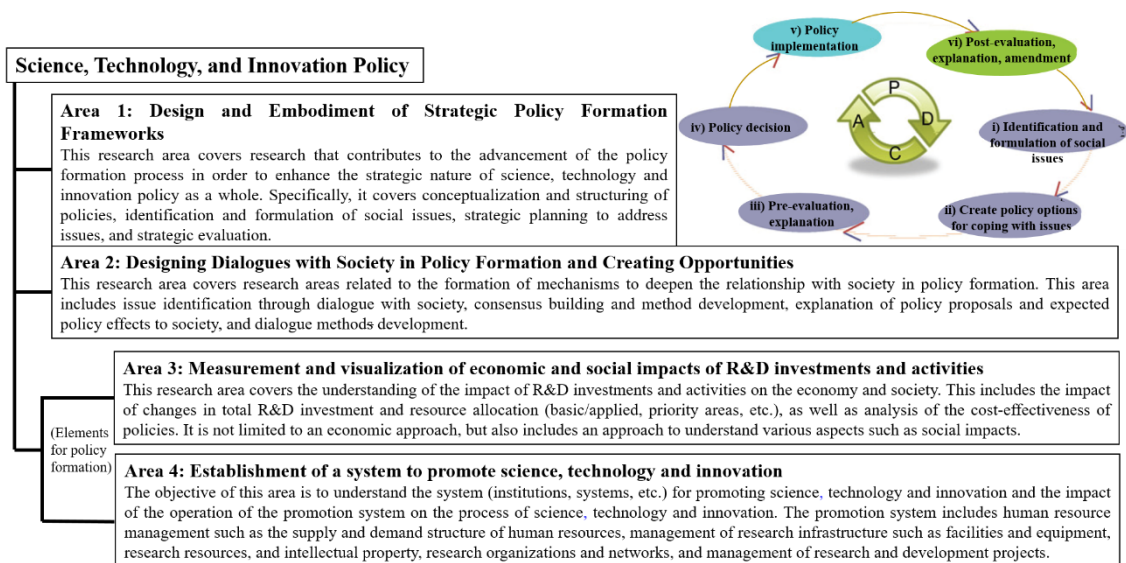

Figure 1: Towards Realization of Evidence-Based Policy Formation: Development of Science of Science, Technology and Innovation Policy" (CRDS-FY2010SP-13, CRDS, 2011),

Shiroyama Hideaki (2013) summarizes the issues involved in analyzing science, technology and innovation policy from a political science perspective. As a viewpoint from which to analyze governance, Shiroyama points out that "as a political science perspective, it is also important to empirically clarify where discretionary decisions involving political judgment are embedded and the causes for the use of such policy mechanisms and institutions." Indeed, Spolsky and Taylor (2010) take the position that there are both beneficiaries and victims of innovation in society, and that government has a role to play in coordinating between various stakeholders and must consider the impact of its policies in the course of their design, course, and implementation.

This paper first summarizes the justification for STI policy and the need for science and technology governance, and then outlines the STI policy instruments, complex STI governance structures, processes, and tools at each stage of science and technology governance, as well as inter-actor relationship governance in policy enforcement and governance and organizational innovation.

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