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## THEORETICAL STUDY ON COMPARATIVE STUDY OF SPACE DEVELOPMENT INNOVATION SYSTEM

## Abstract

It is important to grasp the factors that bring about technological innovation of industrial sectors in a technological innovation policy. Technology innovation policy should be formulated in the more specifically individual sectors, not all sectors. This research is to intend to make the model of space development innovation system through drawing the characters of the constitution elements of three low levels of the sectoral innovation system of space development and four impact factors from the perspective of sectoral innovation system.

Analysis framework as the results of this research can be utilized as the means for inter-country comparative research on differences and similarities of individual features of three elements such as governance of the sectoral innovation system of space development (the main agent and cooperation relationship of which the center is the research institute supported by government), resources(financial resources and man power), and the diffusion of research result.

The factors impacting space development innovation system are such as ) technological character of complex product system, ) technological gap which is called technological catchup or independent development, ) idea such as militarism, exploration ethos and commercialism, ) international science technology environment.

Major countries in space development innovation system is expected to show the government-initiated features. It is due to space development's own features which are ) RD intensive industry, ) government-controlled industry due to high risk investment and, ) basic industry of public goods impacting all industries.

This research lacks the framework that acutely detects companies which is the main agent of innovation system. However, in spite of the limit of this research, the achievements of this research are as below.

First, this research analyzes its own factors that bring about the sectoral innovation system of space development from the perspective of sectoral innovation system.

Second, this research clarify the main reasons such as the action of the subject, the input of resources, and the utilization / the diffusion of research achievement in innovation system.

Third, differentiated features of the framework of this research clarify diverse impact factors(such as technological product character, technological gap, idea, and international science technology environment etc.) which can influence on space development innovation system..

Key words: Space Development, Sectoral Innovation System, Satellite, Space Launch Vehicle, Governance, Resource, Diffusion, Complex Product System, Technology Gap, Idea, International Science Technology Environment.