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## **A STUDY ON THE STATUS AND SUPPORTING STRATEGY OF NATIONAL R&D PROGRAMS RELATED TO THE CONVERGENCE TECHNOLOGY IN KOREA**

### **Abstract:**

The Korean government is promoting convergence technology to create new industries. The Korean government has established the First Industrial Convergence Development Basic Plan. Implemented by the government every five years pursuant to the Industrial Convergence Promotion Act effective as of October 16, 2011. The purpose of this study is to analyze the investment status of the government funded convergence technology researches with network analysis. This study would like to present a strategy for promoting research on conversion technology in synthesizing the analysis results.

The Korean government's investment in conversion technology research was increasing every year. The investment had doubled in 2015(3,141 million dollars) compared to 2010(1,665 million dollars). But the proportion of investment in convergence technology research had stagnated for the past three years. A network diagram of the convergence of the convergence technology in 2010 was the 5373 research projects and 34 technologies were involved in network diagram. Especially, 'Biology' and 'Agriculture, Forestry and Fisheries' were strongly connected.

The meanings of the analysis results are as follows. The fact that the growth rate of convergence research in Korea is stagnant at 19.6% is something that needs improvement. As the importance of convergence technology grows in the era of the 4th Industrial Revolution, investment in Korean convergence research needs to be increased. When we look at the investment status of the convergence research, it can be confirmed that the Korean government's directions of policy were reflected. The convergence research of the ET field was steadily increasing until 2013, but it was decreasing from 2014. The Korean government had promoted Green Growth as a key policy by 2012, and had adopted the Creation Economy as its key policy since 2013. As the interest in Green Growth was reduced, ET-based convergence researches were declining. On the other hand, the convergence research of IT based on the creation economy was increasing. It is necessary to pursue continuous policy that is not changed by each regime. As BT and IT convergence researches were invested so great, technologies in the field of biotechnology and information and communication had played a central role in the network map.

### **Keywords:**

Convergence Technology, Network Analysis, Data Mining

**JEL Classification:** O32, O33, O38