

## BUSINESS INNOVATION SYMPOSIUM (E6)

New space at the national, international, and overall industry levels: innovation, entrepreneurship & investment at the macroscopic level of analysis (3)

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## DETERMINANT FACTORS OF INNOVATION IN THE SPACE SECTOR

**Abstract**

The space sector in the high tech industry is generally considered as a major driver of growth and provides solutions to a number of socioeconomic challenges. This paper focuses on the role of national innovation systems on a country's capacity to innovate in the space sector. The paper analyzes the national innovation system through two dimensions: a) the innovation infrastructure; and b) the cluster environment. Longitudinal data is gathered to cover eleven countries in the space sector for nine time periods. To our knowledge, this paper is among the very first which provides evidence to showcase the dynamic relationship of national innovation systems and innovation capacity in the space sector, as it involves two dimensions simultaneously: a cross-sectional dimension and a time series dimension. Based on studying the number of space-related publications in Web of Science, our research results show that the number of individual researchers has a significant positive effect on a country's innovative performance. In contrast, no significant relationship between highly skilled workforce and innovative performance is found. These results indicate that research funds and policies of national governments directly targeting upstream scientific activities are more beneficial to improve innovative performances than a focus on downstream activities.