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Industrial Policies as Drivers of the Space Economy (3)

Author: Mr. Madis Võõras  
Estonian Business Innovation Agency, Estonia

Mr. Tõnis Eerme  
Invent Baltics OÜ, Estonia  
Prof. Partick Cohendet  
HEC Montreal, Canada  
Prof. Jüri Sepp  
University of Tartu, Estonia  
Mr. Oliver Lillestik  
Invent Baltics OÜ, Estonia

EX ANTE ASSESMENT OF ECONOMIC AND SOCIETAL AFFECTS INDUCED BY SPACE  
INVESTMENTS IN A SMALL EMERGING SPACE COUNTRY

**Abstract**

During recent years, an increasing number of countries and organisations have paid attention to the space sector's contributions to national economies. Although the impact may vary widely from country to country, OECD has estimated that revenues generated by institutional investments in space over a decade have led to a multiplier effect of between 4.5 and 6.2 when considering the value chain and indirect effects only, and between 8.5 and 9.7 including the societal effects. Also, several smaller ESA (European Space Agency) Member States (Norway, Denmark, Ireland, Portugal) have lately performed ex post evaluations to study the returns from space investments. These studies mainly consider the value chain and indirect effects of space investments with the respective calculated multiplier effects indicating that space investments contribute to growth, employment and competitiveness in many sectors of the economy. Since 2009, a number of very small countries with relatively limited tradition of space activities – Estonia (1.3 million inhabitants), Slovenia (2,0 million), Latvia (2,0 million), Lithuania (3,0 million), etc – have embarked on a path to join ESA. Concomitant financial contributions to ESA budget shall put additional stress to the public finances of the acceding countries that are currently implementing austerity measures. There is a need for tools for ex ante assessment of the potential benefits of joining ESA in order to provide rationale for public investments in space activities. A methodology designed for very small emerging space countries for studying potential aggregate economic and societal impacts of space investments is elaborated. It is evident that from the viewpoint of such countries, the positive indirect effects from joining ESA would very strongly depend on single success stories, attributable, for example, to FDI inflows to an emerging space industry, break-through of a start-up (spin-off) company, integration of a company to global aerospace industry's value chains, or other similar effects that can be linked with consolidation of dispersed human resources for the purpose of the implementation of ESA contracts. We argue that multiplier effect representing the minimum estimate of the volume of direct and indirect effects to private sector would exceed 1 in the acceding countries making space investments desirable considering accompanying societal effects. For countries with ambition to join ESA it gives suggestions how to justify space investments for government and society in general. The results of this paper are valuable to (space)policy makers, especially in small countries throughout the world.