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The space economy: what are the socio-economic impacts? (3)

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EVALUATING THE SOCIO-ECONOMIC BENEFITS OF SPACE ENGAGEMENT AMONG
EMERGING SPACE-PARTICIPANT NATIONS

Abstract

Measuring the socio-economic benefits of space participation—whether in particular sectors, countries, or across national boundaries—is a frequent challenge for policymakers, academics, and the space community as a whole. Yet this measurement is key to any detailed discussion of competing space objectives: without it, questions of the relative return on investment of space engagement remain largely matters of subjective opinion.

This paper will propose a quantitative framework for measuring the socio-economic benefits of space participation. Importantly, the main focus of this framework will not be on space activity, but rather on space *participation*. Space activity is an expensive undertaking requiring alignment of large budgetary and technological resources, including access to space, which is often a cost-prohibitive barrier to entry for many nations. However, this paper will examine how countries that cannot themselves reach space can still participate in space – and will then seek to compare and contrast how those nations can maximize the socioeconomic benefits they derive from that space usage and participation.

Socio-economic benefits will be compared and contrasted using a specialized quantitative framework. The socio-economic benefits of specific space applications, such as human capacity building, natural disaster management, and other factors, will be aggregated and compared. As case studies, the countries evaluated via this framework will depart from leading space-faring nations. Instead, the paper will focus on a group of emerging space actors, including Australia, South Africa, and other countries making their first investments in space.