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Economics

SPACE SPORTS - POTENTIAL BOOSTER FOR SPACE ECONOMY AND SPACE TRAVEL

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ABSTRACT

The space economy has been steadily developing over the past few decades, gradually encompassing various aspects of space travel. When reviewing key elements in the private sector, telecommunications and satellite services lead the list, followed by transportation to Low Earth Orbit (LEO). The future prospects of the space economy, under current focus, include space manufacturing, space tourism, and space mining. Space sports, however, seem to be overlooked in this process. Despite this, space sports could contribute more to the growth of the space economy than some of the areas currently receiving more attention, as they could help reduce risks and accelerate return on investment (ROI).

This study assesses possible space sports that could be the first in space based on the available technology. The readiness, cost and benefits, requirements, and human involvement are analyzed. Space sports, leveraging past space missions and requiring fewer participants, involve lower risk and can be achieved more rapidly compared to other types. The reduced risk is due to employing tested endeavors with small steps without complications. This allows for taking advantage of the technology heritage and reduced initial obstacles. A table of cislunar activities for upcoming 50 years is derived from the analysis. The study showed that the limited number of people traveling to the Moon is one of the restrictions in the first decade, and the possibilities of involving robotics in lunar sports and lunar races are also assessed. While it is not clear how many fans space travel could attract compared to popular Earth-bound sports, the number of space travel fans remains a baseline reference.

Lunar sports offer scientific and economic benefits, including (a) feasible short missions, (b) increased commercial investment, (c) broader industry involvement, (d) in-situ research advancement, (e) space robotics development, (f) speeding up lunar mining, and (g) novel innovations with Earthly application. Space sports could expedite the growth of space tourism, contribute to scientific discoveries, and aid in the development of a lunar base. In addition to directly boosting the space economy, space sports will contribute to an increase in the number of space missions. This rise in missions is a key factor in advancing the space travel agenda and expanding travel from the Moon to interplanetary destinations.