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Author: Dr. John Tysseling
United States

SPACEPORT DEVELOPMENT: ECONOMIC IMPACTS & PERSPECTIVES ON FINANCING

Abstract

Development of space launch facilities are actively being pursued in numerous locations, particularly as the demands of commercial enterprises become central to innovation and investment in space-related activities. Spaceport America is the world's first purpose built commercial spaceport. The paper summarizes recent investigations of the economic impacts from the Spaceport's development and operations, including five- and ten-year projections of anticipated growth in facility development and utilization. The New Mexico state government's investment has been essential to the current opportunities, and the research demonstrates a positive return on the investment through the substantial regional economic and fiscal impacts obtained since completion of the principal facilities. Operations are expanding rapidly, as Virgin Galactic is expected to bring commercial space tourism operations in 2020. Other commercial commitments promise further investment in Spaceport America and its unique operational environment with various near-term growth opportunities. Reported region economic benefits focus on measurement of quantitative impacts; but non-quantitative economic and social benefits (e.g., education) are also explicitly considered. Issues relating to development of industrial base capacity to support robust spaceport facilities development are explored, and the role of a spaceport enterprise is set in the context of regional economic diversification. Physical attributes, including benefits of restricted airspace, high desert environment, low population density, and the inland location of the spaceport are considered. These attributes are contrasted with the eleven other spaceports (currently) holding FAA-licensed in the United States. Return on capital investment in spaceport facilities is analyzed, and the role of public sector investment returns in such commercial facilities are explored. Forecasts are based on first-hand interviews with space-related commercial developers, allowing credible specification of a baseline five- and ten-year development scenario based on empirical compilation of "best available information." Alternative optimistic and pessimistic scenarios are also specified, and specific issues related to forecasting uncertainty are addressed. The political environment in which Spaceport America's has developed is discussed from a historical perspective the current commercial environment for space launch activities is literally decades in the making. Economic development incentives are explored, including the role of government as the principal early-stage developer. Rigorous economic analysis methods are employed, and extensive documentation of sources and findings are provided.