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KEY POLICIES TO SUCCESS OF NASA'S COMMERCIAL CREW PROGRAM: CONSIDERING
LESSONS LEARNED FROM PAST PUBLIC TO PRIVATE FUNCTION TRANSFERS

Abstract

The National Aeronautics and Space Administration's (NASA's) goal for commercial human spaceflight to low Earth orbit (LEO) is to stimulate a robust, vibrant, and profit-making commercial enterprise with many providers and a wide range of private and public users. A successful human space transportation system will strengthen the International Space Station (ISS) program, enable NASA to focus on exploration beyond LEO, potentially reduce the cost of transporting cargo and crew to and from LEO, and contribute to the U.S. economy. NASA's Commercial Crew Program (CCP) is a significant step toward realizing this goal. This paper considers a number of policies, as identified in an ISS LEO Commercialization workshop held at NASA Headquarters in December 2014. The authors prioritize these policies based on how well they are able to develop and promote commercial spaceflight to and from LEO. Further, this paper selects two top policies. The first would extend the ISS Intergovernmental Agreements (IGAs), Implementing Arrangements, and Memorandums of Understandings (MOUs) beyond 2020. The second would create a roadmap to help forecast NASA needs for LEO as it transitions from a supply- to a demand-side supporter. This paper relies on lessons from history to shape policy guidance. A number of case studies in which the U.S. government attempted to develop private capacity for a particular service were analyzed and compared to NASA CCP: (1) Privatization of the United States Airmail, (2) Tennessee Valley Authority (TVA), (3) Atomic Energy Commission's (AEC's) Power Reactor Demonstration Program (PRDP), (4) Federal Aviation Administration's (FAA's) Supersonic Transport (SST) program, and (5) Privatization of the United States Enrichment Corporation (USEC). While each case study has its own unique issues and context, the importance of perceived market demand is prevalent. Moreover, the longer the government supports demand within a market, the more likely the market fails to become self-sustaining. However, if government support is withdrawn too soon before new commercial firms mature, private demand may not be sufficient to sustain the market.