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STRATEGIC EVALUATION OF COMMERCIAL CREW TO ORBIT TRANSPORTATION INDUSTRY
STRUCTURE AND STATUS

Abstract

As the United States retires the Space Shuttle and begins to look to the commercial sector for transportation of both cargo and crew to Low Earth Orbit the market for commercial companies to leverage in addition to government customers is beginning to show signs of emergence. Along with this potential market development, the prominence and independent capabilities of commercial companies is increasing substantially and commercial space companies are in the early stages of developing commercially available and economically viable commercial crew to orbit capabilities using both private and public funding sources. As these capabilities continue to develop, business and economic obstacles will undoubtedly emerge as significant problems. In some cases these market driven business issues will rival the technical difficulties involved with accelerating humans from the surface of the Earth into orbit. Specifically to address these market driven business issues, numerous theories have been developed in an effort to better understand the dynamics of business markets. One such theory, pioneered by Michael Porter, will be used to conduct an industry structural analysis of the commercial capability of delivering human crew to orbit. This work will build on previously presented efforts to identify what market forces existed in this industry. With recent developments driving a need for continuous re-evaluation and improvement, a study of the competitive market forces from a perspective of both business implications and technical realities is very timely. Additionally, this work will investigate the state of industry development based on Porter's definition of an emerging market. Analysis of differing strategy theories will also be discussed to enrich the applicability of the study. As the commercial space industry continues to grow, information from an industry structural analysis will provide insight to not only companies, but also government entities. The information provided by an analysis such as this can be used as a tool by government while making policy decisions. It can also provide insight into effective acquisition strategies to encourage, facilitate, and promote safe and sustainable commercial space activities. As this sector of the commercial space industry is gaining increased attention, the combination of astute business questions and complex technical challenges must be addressed.