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DEFINITION AND ANALYSIS OF THE COMMERCIAL SPACEFLIGHT INDUSTRY, 2006-2011

**Abstract**

This paper summarizes a 2012 update of a study of annual economic, technical, and regulatory metrics characterizing the commercial spaceflight industry. In particular, the paper provides quantitative measures of the overall size of the industry by revenue and investment; the relative percentage of investment sources; facility space devoted to these activities; and, overall industry employment. The paper builds upon baseline data from 2006 - 2008, to include data from the years 2009 through 2011, obtained directly from industry members.

While most of the economic activity in commercial spaceflight is occurring in the United States, the industry is increasingly international. Several vehicles are in early states of development in Europe, and there has been interest, feasibility assessments, and small amounts of investment in spaceports in, among other places, Spain, Holland, Sweden, Scotland, Curacao, Singapore, and Dubai. This paper will highlight non-US economic activity, and provide a qualitative assessment of the international connections in the industry.

The study that this paper summarizes was conducted with the cooperation of the Commercial Spaceflight Federation, and its member companies.

The purpose of the study is to provide an accurate picture of the commercial spaceflight industry that is useful to investors, entrepreneurs, regulators, media, and industry analysts. The methodology of the study included:

- Collecting primary source data obtained through interviews with commercial spaceflight companies, augmented with open-source research.
- Characterization by appropriate industry metrics such as traditional financial metrics (revenue, investment), as well as specialized metrics that yield insight on a small, emerging industry (facility space, sources of funding).
- Aggregating company-level data and analyzing industry-level results.

The cooperation of the Commercial Spaceflight Federation, and The Tauri Group's protection of individual organization data through aggregation and other measures, make this measurement of the industry uniquely accurate. Results show cumulative investment levels committed to the industry through 2012; revenue and deposits for spaceflight services in 2011, and additional revenue to commercial spaceflight companies for hardware, hardware development, and support services.

This paper will present figures from 2008 through 2011, and provide insights and analysis of how these numbers reflect the maturing of this industry, and the role of commercial spaceflight in the larger context of global space activities.