The Need for Research in Suborbital Spaceflight Industry Emergence

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Abstract

This presentation introduces the field of industry emergence research (IER), how it was performed within the suborbital spaceflight context, and how the results can be used by individuals, CEOs of firms, and government officials for purposes of data gathering, strategy development, and policy development. There is empirical support for the assertion that understanding the history of an industry is an important part of strategy development for any company. It permits a better understand of the "external environment," and better diagnosis of solutions to possible threats, problems, and opportunities as they arise.

What is Industry Emergence Research?

Industry emergence research (IER) identifies the causes (the question of why) and results (the question of what) of change over a long period of time for a set of companies and organizations within an identified industry context. In the 1980s, the Minnesota Innovation Research Project (MIRP) pioneered a rigorous IER methodology that adopts the "history-as-fact" model. Notable examples of this type of research includes the cochlear implant industry and the nanotechnology industry. Results of IER typically include a tabular listing and a graphic depiction of significant industry events for different categories of ecosystem resources.

Status of Suborbital Spaceflight IER

Research of the suborbital spaceflight industry began in 2011 with multiple reports and analyses, some presented at past NSRC events. Between 2015-2018, Davidian performed IER for the suborbital spaceflight industry segment using the MIRP methodology. The results of this research are freely available and need updating.

Uses of Suborbital Spaceflight IER

The results of IER can be used in multiple ways. First, specific questions of when significant suborbital spaceflight events occurred, and what events immediately preceded or followed, can be easily found from the IER tabular or graphical results. Second, IER results provide strategic planners in a company or organization a validated, objective, and comprehensive history of their industry environment. The perspective of an individual or small group of individuals cannot possess an environmental awareness as comprehensive as that provided by the IER. Finally, organizational change and innovation researchers can use the data, especially if it is based on a rigorous and common methodology, for new or complementary research questions responding to the questions of how organizational change and innovation happens.

Conclusions

Rigorous industry emergence research has been performed for the suborbital spaceflight context to identify what changed in the industry and why. Individuals, CEOs, and government leaders can use the results for purposes of information gathering, strategic planning, or policy decision-making. Ultimately, further IER for suborbital and other space industries can be performed to help answer the question of how these changes occur.