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2025 ECONOMIC STATUS OF CHINA'S LAUNCH VEHICLE INDUSTRY: A SCENARIO ANALYSIS

Abstract

Aim: To forecast the economic status of China's launch vehicle industry in 2025, and provide useful prospects and data to managers and investors for decision making. Methods: An explorative scenario analysis of the next decade was performed. The contemporary situation of the industry was reviewed in several aspects. Twenty industrial economics and management experts including some stakeholders took part in the study. The driving forces were identified by STEEP and PEST analyses. The Delphi method was used to select the driving factors and economic indicators, and to review the results. The intuitive logics method was used to develop the scenarios. AHP was used to establish an index system of the launch vehicle industry. The index system was used to improve the detail of scenarios, and evaluate the industry's competitiveness. Results: Eighteen driving factors were identified, of which 3 were selected as the most critical and uncertainty factors: (1) China's international environment and its relationship with the developed world; (2) China's domestic economic growth rate; and (3) the state's space industry policy toward private enterprises. Accordingly, 8 primary scenarios were generated, of which 4 were deduced as rational ones whose storylines were elaborated. Scenario I "an ambitious way" is the optimistic scenario characterized by low intensity antagonism, high growth and enlightened policy. Scenario II "traditional competition" is the benchmark scenario characterized by medium antagonism, high growth and conservative policy. Scenario III "seclusive development" is the pessimistic scenario characterized by medium antagonism, stagnation and conservative policy. Scenario IV "reality and pragmatism" is the abnormal scenario characterized by cooperation, stagnation and enlightened policy. A 3-tier index system was developed to describe the industrial status of each scenario. The main indicators (first tier) include industrial governance, investment, launch market capacity, labor force, entry barriers, industrial concentration, industrial organizations (type, number and size), correlation and impact of other industries, technology adoption and product spectrum. In each scenario the indicators are qualitatively and/or quantitatively discussed. Conclusion: There are various possibilities for the future of China's launch vehicle industry. However, there are more challenges than opportunities. In most scenarios the industry is sensitive to its upstream industries, while the pushing effect to its downstream industries is insufficient. Civil-military integration and the quality of its labor force play important roles in the industry's survival. Unless enlightened state policy is adopted, the industry will not flourish.