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ANALYSIS OF THE SPACE INDUSTRY ECOSYSTEM BASED ON THE ACTIVITIES AND
TRANSACTION RELATIONSHIPS OF SPACE FIRMS: FOCUSING ON THE CASE OF SOUTH
KOREA**Abstract**

This paper examines the case of South Korea, which has recently ramped up investments in space development—including the internalization of launch vehicle technology and the establishment of a national space agency. We aim to provide objective policy insights that can help developing countries foster a sustainable space industry. Specifically, this research explores whether South Korean space firms operate exclusively within the space sector or diversify across multiple industries while concurrently engaging in space technology development. Additionally, we investigate the key characteristics of transactional networks within the industry. By analyzing space firms' activities beyond the space sector and applying network analysis to actual transaction data, this study offers critical insights for policymakers in prioritizing policy interventions. To achieve these objectives, we constructed a comprehensive database on the activities of South Korean space firms using publicly available data sources. First, given the absence of a distinct industrial classification for the space sector, we identified the actual business domains of space firms by analyzing their primary industry distribution and business objectives. Space-related activities were categorized based on the space value chain, allowing for an assessment of the areas in which firms are most concentrated. Second, financial statement analysis was conducted to evaluate the growth potential, profitability, and financial stability of these enterprises. Lastly, a network analysis of transactional relationships was performed to characterize key players in the industry and explore strategies for expanding the market. The analysis revealed that while South Korean space firms are primarily concentrated in industries with high R&D intensity, their revenue from space-related activities remains relatively small, except for a few large corporations. Most companies operate in multiple sectors, with space-related activities largely focused on the upstream segment of the space industry value chain. Network analysis of corporate transactions showed that a few large firms and government-funded research institutes account for a significant share of transaction volume. Beyond these key players, the transactional network was found to be sparse and decentralized. These findings suggest that South Korea's space industry consists of small clusters of SMEs that primarily supply components to a limited number of large firms. This finding aligns with the reality that the space industry remains dependent on the demand from a few large corporations and the public sector due to the underdeveloped private market.