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IAF SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)
Launch Services, Missions, Operations, and Facilities (2)

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PRICE ELASTICITY OF LAUNCH SERVICES

Abstract

Launch services are one of the highest costs for a space mission, whether commercial or government. The cost of launch services on large launch vehicles has decreased as much as one-third over the last decade, with the introduction of reusability and of new, small launch vehicles. Rather than a predominance of large vehicles launching satellites of 500 kg to 10,000 kg or more, the launch market is now split among these legacy large launches, new entrants providing launches for small- and medium-sized satellites, multi-manifest missions for a variety of satellites, and dedicated launches of large constellations and domestic systems across the globe. While the price of launch services, whether per vehicle or per kg, has decreased, the demand for launch services on large launch vehicles, other than for dedicated, non-competitive launches, has remained stable or even decreased. Will this trend continue? Is there evidence of pent-up launch demand? How have multi-manifest missions generated new demand for launch services? In a detailed analysis of historical launch activity and projections of future launch supply and demand, we examine the elasticity of pricing for launch services. We address the development of launch demand as prices have decreased and examine the internal, non-competitive market for dedicated launch services, whether at the national or enterprise level. We then review the market for commercial launch services – those launches for which launch providers can be expected to be able to compete – and examine whether new, smaller launch vehicles have impacted market demand and the availability of launch services. Finally, we show that demand for launch of large satellites appears to be largely inelastic to price in many cases.