

Public-Private Model for Lunar Settlement

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Since the beginnings of the space age, mission concepts and plans directed at lunar base development have been proposed. With the exception of Apollo, which was driven by cold war geopolitics, these concepts and plans have remained either on the political agenda or as proposed ideas for the commercial sector. This paper examines why this has been the case; why has there not been political formulation and implementation of lunar base missions or implementation of commercial development of the Moon? This paper assesses the issues facing those in both the public and private sectors who view lunar development as a desirable goal and offers suggestions as to how to make that goal a reality.

There are several issues identified for discussion that have entrapped lunar development ideas on the agenda. First, governmental leaders require the requisite political rationales, such as national security or economic development, to support new, revolutionary large-scale programs. The lunar development advocates have not been persuasive in this regard. Further political rationales for lunar base development are constrained due to the weak public support for space in general and to reduced budgets and downsizing in government support for research and development. Second, public policy evolves on an incremental basis. Thus, past policies and practices change slowly and usually in response to a particular crisis or focusing event that warrants public attention. Third, albeit lunar commerce enjoys a prestige status in the private sector, as numerous companies in various stages of development have plans to carry out commercially viable robotic ventures on the Moon, plausible business plans for lunar settlement, catering to scientific, mining, and tourism projects, remain elusive and in the more distant future. The business plans that have been proposed for lunar settlement lack a realistic payout and return on investment to make the venture attractive to investors and the private capital markets. Fourth, further compounding the prospects for commercial sector interest in lunar development is an environment of uncertain policy, regulatory, and legal regimes.

It is suggested that public-private partnerships are essential to deal with these issues and to enable prospects for lunar development. This implies the existence of political support and government funding as well as aspects in the lunar development that would attract investor interest and private capital. At issue, is how to fashion a synergistic relationship whereby the public sector undertakes the risk for technological development while providing for the appropriate policy and legal regimes that foster commercial interest in lunar development, and the private sector ascertains that future returns allow for private capital investment. To this end, a number of ideas are put forward and discussed. These ideas range from the development of lunar bases on the basis of dual-use technologies that have applicability to both the public and commercial sectors, development of private sector business ventures for lunar settlements that will produce realistic return on investments and similar benefits for the public sector, to the establishment of new policy and legal regimes that would serve as a model for public-private lunar development.