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AN ANALYSIS OF THE SPACE TOURISM MARKET IN THE UNITED ARAB EMIRATES AND
THE KINGDOM OF SAUDI ARABIA AND ITS POTENTIAL FOR DEVELOPMENT OF ZERO
GRAVITY AND SUB-ORBITAL COMMERCIAL SPACEFLIGHTS

Abstract

(Introduction) Both the United Arab Emirates and the Kingdom of Saudi Arabia have established national space agencies in the last few years. In fact, before doing so, Saudi Arabia had sent its first and to date only astronaut to space in 1985 aboard the US Space Shuttle whilst the United Arab Emirates sent its inaugural astronaut to the International Space Station as recently as September 2019. Both countries have nascent but ambitious plans for the development of a local but internationally collaborative space eco-system with STEM, innovation and commercial enterprise as pillars. To support this eco-system, this paper analyses the regional space tourism market offerings and characteristics and estimates potential demands for segments in this specific middle east location.

(Methods) This is achieved by a targeted questionnaire-based survey of space tourism attitudes, behaviors, desires, willingness to pay and stated preferences from a range of socio-economic and demographic respondent profiles. The results of the surveys in 2020 are compared with identical surveys carried out by the author in 2012. Therefore, key trends in customer behaviors and preferences for space tourism are evaluated, especially in light of the recent interest in space and space tourism generated by the mission of the UAE astronaut to the ISS. Both the 2020 and 2012 sets of surveys are directly comparable to previous surveys by other organizations such as the Futron surveys and corresponding comparisons are presented.

(Discussions and Conclusions) As a result of the surveys, the paper concludes that there are stated preferences by respondents for three space tourism segments; high speed-high altitude jet fighter flights, commercial jet flights creating weightlessness (zero-gravity) and micro-gravity by flying parabolic flight profiles, and sub-orbital commercial spaceflight. In particular, there is sufficient local and regional demand for a zero-gravity jet flight commercial venture in this region to be financially sustainable with positive Net Present Value and attractive Internal Rate of Return. Such a venture would also create opportunity for locally based scientific research in micro-gravity instead of having to travel to other countries. Furthermore, it is argued, that the establishment of a local space port for sub orbital and eventual point to point sub-orbital travel has potential for longer term economic value addition to the country economy.