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DEVELOPING AN ECONOMIC MODEL TO ASSESS AND PROVIDE COMPARATIVE TOOLS FOR THE ECONOMIC READINESS OF A DEVELOPING NATION TO ADOPT OR EXPAND A SUSTAINABLE SPACE PROGRAM AND TO WHAT EXTENT IS VIABLE

Abstract

African developing nations are faced with the decision by their governments to enter the space arena, should they invest in space as a public good or not. From the perspective of government deciding whether or not to invest within its already existing or a new national space program, there is not much comparable data available nor an economic model ideal for this arena. This paper investigates further the need for and development of such a model. The development of such an economic model is beyond the scope of this paper but this paper does seek to discuss the parameters for such a model and equally to provide an equation combining these parameters to deduce space economic readiness. This would provide a method to assess the economic readiness of a country to sustain a space program and to what extent that program should be developed. Equally a basis could be set up to develop comparative figures for quantitative analysis and comparisons. This model should be applicable to developed as well as developing nations and tested as such against economies whereby data is already available. The programs, at a high level, could be grouped by users of space technology, collaborative programs or fully independent programs. Across the globe there are many varied motivations for developing a space program and in Africa the predominant of these are the need for national prestige, the development of a knowledge economy, security and as a driver towards improved sustainable economic development. As such, by developing a useful and practical economic model for this purpose we can provide a tool for practical application.