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Cost and Procurement impacts on Space Programmes linked to high inflation and world-wide scarcity of components and materials (6)

Author: Mr. Chironjeet Das Joy
BRAC University, Bangladesh

Mr. Tayab Uddin Wara
BRAC University, Bangladesh
Ms. Prapty Majumder Golpa
BRAC University, Bangladesh

Mr. JAHIR UDDIN
University of Nebraska-Lincoln, United States

Ms. Raihana Shams Islam Antara
BRAC University, Bangladesh

Mr. Abdulla Hil Kafi
BRAC University, Bangladesh

NAVIGATING THE CHALLENGES OF INFLATION AND MATERIAL SCARCITY IN SPACE PROGRAMMES

Abstract

The price of goods and services in an economy often rises due to inflation, a decline in the buying power of money. According to estimates, global inflation had increased from 4.7 percent in 2021 to 8.8 percent in 2022 due to the rise of fuel and food prices. Around the beginning of 2022, prices for many consumer items were already trending upward because of the continuing effects of COVID-19 on supply chains. The invasion of Ukraine by Russia in February caused much more havoc. The cost of raw materials is still increasing for around nine out of ten electronic manufacturers. Even they struggle with ongoing supply chain restrictions, long lead times, expensive commodities, a lack of parts, and trouble finding qualified employees. These problems have had a significant impact on both the ongoing electronic initiatives and space missions. It has been quite challenging to locate simple hand-made antenna materials such as the main conductive materials, the connectors or the cables in the local marketplaces. The modules, which are crucial for tracking satellites, were being sold for astronomically high and unaffordable rates. Additionally, microchips and microcontrollers, which are essential components for satellites and other embedded system projects, are hard to find. It was difficult for industrialized and developing nations to achieve their demands on time and with the proper ratio of components. Whether the global inflation wave will stop raising market prices or the shortage of goods is currently unknown. European, Asian, and American central banks are all trying to decrease the rate of inflation by hiking interest rates. It is doubtful that the trend will reverse or halt soon, though, due to the complicated geo-political variables at play. Notwithstanding the low visibility of the global electrical components sector, there are hints that things may soon improve.