



# Commerce can kickstart India-Taiwan Space Relations

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Very rarely do analysts view India-Taiwan relations discounting the pink dragon in the room, the People's Republic of China. The deficiency of formal diplomatic ties with Taiwan has been the main impediment towards making new overtures towards Taiwan. But the winds of change blowing across global geo- and techno political realms, owing to the Fourth Industrial Age, can potentially open more unique avenues for India-Taiwan co-operation, including the vast panorama of outer space.

India and Taiwan find themselves standing on a similar pedestal when it comes to commercializing their respective space sectors. In May 2020, Prime Minister Narendra Modi's administration initiated space sector reforms pledging support for the private sector to participate on an equal plinth with the space agency, ISRO, and its sister-concern government-run companies. Secondly, the Indian government has established a new nodal agency, Indian National Space Promotion and Authorization Center (IN-SPACE). IN-SPACE has begun to assist the private sector by offering them access to capital-intensive space testing, assembly, integration, launch, testing, and evaluation infrastructure built over the years with the government's budgetary allocations. India's private space innovation

and industrial ecosystem is teeming with large turnkey manufacturers, medium-scale high-technology companies, and small innovation scale-ups and start-ups. They have responded exhilaratingly to the reforms and are raring to form international partnerships. Taiwan has carried out similar reforms.

In her February 2020 inaugural address, President Tsai Ing-wen introduced a national policy to transform Taiwan into a hub for high-end manufacturing, advanced semiconductor manufacturing, high-technology research and development, and green energy. The Taiwanese government is investing efforts to accord its domestic industries the status of reliable partners in global supply chains to boost the national economic growth. To that end, the Executive Yuan (EY) of Taiwan has identified Six-Core Strategic Industries. These are cybersecurity, information and digital technology, medical technology and precision health, green and renewable energy, national defense and strategic industries, and strategic stockpile industries.

In February 2021, the EY Cabinet approved a bill by the Ministry of Science and Technology for new legislation to develop the space industry. This bill identifies the space industry as one of the six core strategic industries. The approved bill further consolidates Taiwan's efforts to innovate and manufacture satellites, sounding rockets and small satellite launch vehicles rockets, and commercial space-based services. Taiwan is also investing nearly US\$ 882 million to support its space industry. Taiwan's newly approved bill will also establish a new agency, perhaps similar to IN-SPACE in its role, dedicated to the domestic private space industry's hand-holding. Like India's Aatmanirbhar Bharat vision, Taiwan is looking towards greater economic self-reliance, and for that indigenous space capabilities are essential.

India and Taiwan maintain significant exchanges in the space science domain. India's Department of Space and Department of Science and Technology and their constituents funded laboratories and university departments collaborate with the National Cheng Kung University, Academia Sinica, National Taiwan University, and National Synchrotron Radiation Research Center in Taiwan. The bilateral space science collaborations are in satellite-based oceanography,

magnetosphere sciences, astrophysics, precision physics, and optical sciences. However, over the past few years, the space sector collaborations were not flourishing as they should have.

Taiwan's space agency National Space Organization (NSPO), has had obvious intimate links with the U.S. space program, followed by its next closest partner Japan. The first four of the FORMOSAT satellites were built and launched in co-operation with the U.S. And only in 2015; the fifth FORMOSAT was made indigenously in Taiwan. Taiwan is yet to develop a small satellite launch capacity. Its space launch company, TiSPACE, established in 2016, has developed Hapith suborbital rocket. However, due to the inability to launch sun-synchronous satellites from Taiwan's island, the company is looking to avail services from launch sites in Scandinavia, Alaska, or Australia. Some of the scheduled Taiwanese satellites, the meteorological satellite Triton (launch scheduled in 2022), remote sensing FORMOSAT-8 series (one every year from 2023 and 2028), and low-orbit communication satellite Beyond 5G (2025), are expected to be launched through U.S. space launch companies.

Had India not undertaken space reforms, India-Taiwan space relations would have stayed confined to the science domain. However, with the two countries setting up commercial arms for their respective space sectors, there is scope for track two and track 1.5 space diplomacy entirely within the ambits of the de facto diplomatic relations.

Taiwan's space commercialization pursuits are concomitant with similar objectives undertaken in India. There is an immense potential for interactions between Indian and Taiwanese space start-ups and companies on collaborations, joint ventures, investment and funding opportunities, sharing of technologies and infrastructure. These activities can be pursued under civilian partnership mode and could be made possible via Taiwan External Trade Development Council (TAITRA) or Taipei Economic and Cultural Center. Moreover, Indian space launch companies can offer Taiwanese satellites affordable and reliable services. The strengthening of India-Taiwan relations depends on how well they use the enormous bandwidth of trade and collaborations possible under the de facto

realms. Space partnership under the commercial ambits can aid the existing academic collaborations and help greater people-to-people connection between the two countries.

**Editor's Note:** the views expressed in *Asia Insights* are those of the authors and do not necessarily reflect the policy or the position of their institutions.

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