



**Chad Anderson, *The Space Economy: Capitalise on the Greatest Business Opportunity of Our Lifetime* (Hoboken, New Jersey: John Wiley & Sons, Inc., 2023).**

*Reviewed by Zahra Niazi*

The *Space Economy*, written by venture capitalist Chad Anderson, is a multi-purpose resource that explores the tremendous potential of the space sector while providing actionable takeaways for entrepreneurs, investors, and aspiring professionals to embrace the vast array of opportunities within it.

Writing from his experience as the founder of the space venture capital fund, Space Capital, the author sends a central message that is clear: 'The space economy is on track to becoming the dominant source of growth across the global economy.' Defining space economy as 'any technological product or service that depends on orbital access in some way,' the author writes that over 90% of its value is driven by the satellite sector, including the Global Navigation Satellite System (GNSS), Global Positioning System (GPS), Geospatial Intelligence (GEOINT), and Satellite Communications (SatCom) (pp. 1-48). While GNSS and GPS are used for navigation and positioning and GEOINT for analysing and interpreting geospatial data, SatCom involves transferring data between various points on Earth. Within each of these stacks are companies focussed on one or more of the major competencies, including building, launching, and operating space-based assets; receiving, processing, storing, and delivering the data from those assets; and using the data to deliver products and services to customers. The author also devotes an entire section to featuring

the major companies and startups within the space industry, from Planet Labs, which provides high-resolution imagery of the Earth, and SkyWatch, which aims to make Earth-observation data accessible to the world to Arbol and dClimate, which have been making it possible for the agricultural industry to address the growing risks of climate change (pp. 49-72).

On the question of 'how and why to start a business in the space economy,' the author states that to venture into the space industry, one needs the skills, expertise, and experience to start a company, but the background doesn't have to align perfectly with domains such as aerospace, technology, or the like (p. 74). He then dives into the areas that are currently in demand within the space economy, including Next-generation Earth Observation (EO) applications, Augmented Reality (AR) applications, 3D data and development tools, GPS alternatives, ocean observation, and weather micro-forecasting (pp. 77-80).

The author further offers insightful guidance on the essentials of a successful venture in the space industry (pp. 91-107). He does this by combining his own insights and observations with accounts of experienced professionals in the field. The essentials for entrepreneurs include building a well-equipped founding team, identifying the right market and first customers, setting up the business in the right place, and pitching investors strategically. On the importance of government support to space businesses, he states that 'the very first dollars most new companies that launch in the space economy use to conduct early research and build their first prototypes come not from private investors but from public agencies' (p. 100). Even today, several major players within the space industry rely on or work closely with government agencies in one form or another. The author, however, also asserts that governments ought to give more reign to market forces to allow commercial space efforts to progress (p. 132). Offering motivation to aspiring professionals, he suggests that a wide array of roles is in demand within the space economy, for 'just as space increasingly touches on every part of

business, nearly every type of career touches the space economy' (p. 146).

Moreover, the author notes that although GPS, GEOINT, and SatCom dominate the market at present, four emerging industries are gathering momentum, including stations, lunar, logistics, and industrials (p. 180). As for 'stations,' hundreds of millions of dollars have already been invested in the idea of commercial space habitats. Activities in the lunar industry, including commercial efforts on and around the moon, are also gaining momentum. Additionally, the demand for the logistics industry, comprising space traffic management, on-orbit servicing, and debris mitigation, is growing fast. As for 'industrials,' pharmaceutical companies are already conducting Research and Development (R&D) abroad at the International Space Station (ISS), and ultra-high-quality fibre-optic cable is being manufactured there for specialised purposes. Given these developments, Anderson talks about an urgent imperative for intelligent policies, laws, and treaties that reflect the reality of today's space economy to ensure a profitable and peaceful use of space and its resources by every country (p. 192).

Anderson's passion for the space economy is visible in his writing throughout the book, making it both compelling and persuasive. He assures the readers with convincing arguments that there is room within the space economy for any entrepreneur or professional passionate about forward-looking industries. Hence, as a reader, one can confidently say that the book has the potential to convince at least some motivated investors, entrepreneurs, and aspiring professionals to consider exploring the plethora of opportunities within the space economy. With well-structured and easy-to-follow content and ample examples integrated into the main text, the book is engaging as well as a helpful self-study guide for newcomers to the field of space economy.

The discussion on the future of the space economy could, however, have been enriched if the author had also explored the potential risks to it, such as the ones highlighted by the World Economic Forum

(WEF). These include a potentially diminished demand for space-based solutions, constraining regulations, or maligned satellite activity that could limit the expansion of the space economy. Reduced demand for space-based solutions, for instance, could occur due to technological advancements on Earth, offering better alternatives to space-based solutions. Evidently, the book is written from the perspective of an author who has a stake in seeing a thriving space sector going forward.

Overall, the book is a useful read because it helps readers understand the current state of the space economy and its verticals, how to participate in them, and why they matter. The book should be integrated into the curricula not just for aerospace specialisations but also for other disciplines such as business administration, computer science, data science, and environmental studies, to name a few.

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