

Should We Allow the Privatisation of Space.

Question:

"As the commercialisation of Space grows at an ever-faster pace and companies such as Virgin Galactic, Blue Origin and Space X now regularly launching commercial astronauts, has the time come to limit access to space to protect the space environment for future generations? Or should we welcome private companies' engagement in the space environment, removing the barriers of national agencies such as NASA, ESA and Roscosmos, allowing everyone on Earth access to Space and its potential?" - Dr Simon Foster

Space travel is one of the fastest advancing and growing sectors in the world. From the likes of Musk's SpaceX to the novel Virgin Galactic more people than ever before will be able to access space and more importantly they can pay to access it. Space is in a similar position to the aerospace industry 80 years ago with the government supporting private start-ups with large contracts from government agencies like NASA; if we can support them correctly, encouraging more independent investments we can help it grow to the size of the aerospace industry today, a major player in the world's economy. Now one of the major questions for space travel is if we should keep the venerable national space agencies or let the private sector completely take over removing the potential barrier of national agencies.

If we were to let the complete privatisation of space happen, we could lose the current scientific nature of space exploration and replace it with a profit driven industry simply looking to make money out of space rather than wanting to advance humanity's knowledge. This could potentially lead to a technological stagnation in the development of space travel as the technology to explore space becomes as good as it needs to be to achieve immediate goals and market stakeholders become more established. A perfect example of what nationalised space agencies can achieve in the pursuit of knowledge is the Hubble Space Telescope. The Hubble Telescope was a deep space telescope launched in 1990 and to this day has contributed to over 21,000 discoveries and counting. This is something which would never happen in a commercialised space industry as it is a project driven by the pursuit of knowledge, not profit. Therefore, if we had a commercialised space industry from the start, we would have missed out on thousands of ground-breaking discoveries like pictures of Cosmic Microwave Background Radiation allowing us to look billions of years back in time and 3d maps of Dark Matter dispersal. This sums up one of the major flaws of commercialised space exploration, it is not in humanity's best interests, it is in the shareholder's.

Whatever you may say is the motivation of privately owned space companies one thing is certain. Their efficiency and reliability are second to none. This is further aided by their approach to R&D which takes big risks for big rewards advancing their technology faster than any national space agency. A great example of the is Musk's SpaceX. In the short time they

have been active they have developed fully reusable boosters, the first of their kind, had impeccable launch records with a 99.4% success rate compared to the 50% of NASA. This superior technology has given them contracts with both NASA and private companies such as Boeing and VIASAT. They have also been able to conduct the first human launches from Florida since the last Space Shuttle launch in 2011. On the space tourism side of space travel Blue Origin have also seen major success with a complete launch success record, bar one failure. This impressive record shows a major advantage of commercial companies which is as they are always trying to lower costs, they will always develop more efficient ways of launching satellites into space. This means that at least to a certain extent the technology will always advance allowing us to access space much more easily. This in turn may help us in the future as we launch more and more into space. Therefore, private companies may offer us more scope for the future.

However, completely commercializing space could mean that while the technology that private companies provide is more reliable, the companies themselves may not be. Every private company is at the whim of the stock markets and its CEO and if we get rid of more reliable government options a country's ability to launch items into space may vanish overnight with its respective private company. Something such as this has happened before in the airline industry when the engine manufacturer Rolls-Royce went bankrupt in the 1980s leaving it to the British Government to bail them out, something they are still paying debts on. This story serves as a cautionary tale as what may happen if we completely privatise space travel. This problem may then be further exacerbated by the lack of international regulation around the space industry. Therefore, private companies may be much less reliable in the long-term leading to large problems in the future.

My second point for the privatisation of space is that private companies have access to more funds than national space agencies. This allows them to take more risks and to advance faster again developing more advanced technology. A great comparison for this is SpaceX's philosophy vs that of NASA. For example, in the development of SLS vs that of Starship. In the development of SLS, NASA has been very careful and taken their time to make the rocket as reliable as possible, therefore wasting as little money as possible which is important due to their limited budget. On the other hand, Starship has been developed very quickly using the test and failure method with two launches failing so far. SpaceX can do this as they have an almost unlimited budget which allows them to do much more, much quicker. This shows how a private company's greater budget gives it major advantages over its government rivals. This may mean that we can advance space travel at an even faster rate.

In conclusion we need private companies to help us advance space travel, especially on the hardware side, however, we should leave the overview and purpose of space exploration to the scientists at the government agencies. Therefore, by using the more advanced technology of the private sector and keeping the scientific nature of space exploration we can advance more rapidly than ever while preserving the space environment for future generations.

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