



ECOFIN

The Development of the Privatised Space Sector





Committee: ECOFIN

Topic: The Question of the Development of the Privatised Space Sector

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Summary

The privatised space sector is the part of space that is now being owned by private space companies like SpaceX, Blue Origin and Virgin Galactic, when space activities used to be controlled by government owned **space agencies** like NASA and ESA.

Developments have turned space from a scientific area into a competitive market, which has major implications for global trade, investment, and regulation.

In the late 20th century, Governments controlled Satellites, rockets, and missions. Private companies only acted as **contractors**. During this time, space was used for science and exploration, to map distant stars and galaxies. Planets were explored by Robots, and Humans were sent to space. Satellites and space stations were also used for communication, weather forecast and GPS navigation.

During the 21st Century, space is still used for science, exploration and practical uses, but these operations began to be replaced with satellites and space infrastructure that was owned by private space companies. Space is now also used for harvesting valuable metals from asteroids and space-based energy production. Private companies began to have more control over space operations, moving from building the satellites and rockets then selling it to governments, to keeping ownership of the satellites, and managing the launch and their operation. Governments pay for this to happen, but the companies control it. This allows companies to attract investors and expand globally.

Military and political power

Satellites can also be used during wars to observe military bases, troop movements and borders. Governments can then pay the companies for the images to use for intelligence purposes. Satellite internet can also provide secure communication for militaries in remote areas. GPS services provide accurate information for positioning of military operations.



Countries relying on services from the private space companies during wars often are under the leverage of the company. They can restrict their access to data and hold political control over governments.

Examples of companies

Private launch companies exist to make profit. They launch satellites for communications and earth observation, as well as providing transport for space stations. An example is SpaceX.

Satellite network companies provide internet and data to remote areas. This is done with orbiting satellites. An example is Starlink.

Earth observation companies collect data about Earth's atmosphere in order to look at natural disasters, weather patterns and climate change. This is done with satellites that have optical sensors, radars and altimeters. An example is Planet Labs.

Government agencies have similar purposes to the other companies, but they are now buying services from the companies above, instead of operating them. An example is NASA, which can choose to collaborate with another company in the USA. The other companies in the USA often rely on NASA to buy their services.

Private companies are allowed to carry out private operations, but government agencies sometimes buy their services to aid government missions.

International treaties and agreements

1967 Outer Space Treaty

All countries are responsible for all national activities in outer space, including operations carried out by private companies. This means that private space companies are not fully independent from their countries.

1972 Liability Convention

Governments are financially **liable** to damage caused by space objects that are launched from their territory or from their companies, and the government is required to pay compensation for any damage caused.

1976 Registration Convention.

Countries must register everything they launch, including space objects launched by private companies.



1984 Moon Agreement

Countries and companies are not allowed to profit from resources that are gathered from the moon or other planets. Countries with large space operations such as the USA, China and Russia did not sign the agreement. As a result, the Moon Agreement has little effect.

Disadvantages and possible Solutions

Access to satellite services in low-income countries

Space infrastructure is very expensive, which means low-income countries do not have access to as much space infrastructure. This creates more divides between countries because access to space technology is not equal.

Some of these issues could be helped with Low Earth Orbit satellites. They are more convenient to provide high speed, low latency internet connections. Programs can also be put in place to help people utilize space data more efficiently.

Market concentration

In the space sector there are few companies, but the companies are large which reduces competition and allows them to raise the prices. This creates an **Oligopoly** market where businesses are given economic and political power over the governments and businesses that depend on their services.

Debris

Discarded rocket parts and old satellites from private companies orbit the earth. If these collide with active satellites, then the satellites could be damaged or destroyed. The increasing amount of **debris** in space is increasing the risk of collision.

Solutions include tracking larger objects and trying to remove them and de-orbiting old satellites after use.

Definitions of Key Terms

Contractors - A person or firm that has a contract to provide materials or labour to perform a service or do a job.

Debris - parts of broken satellites and rockets that now orbit the earth



Earth Observation - collecting data about the earth's weather and climate looking from satellites

LEO - low earth orbit satellites from 160–2,000 km that are used for internet and communications

Oligopoly - When a group of very large companies controls the entire supply of a product, so they can set their own prices and restrict access.

Space agency - A government organization, like NASA or ESA, responsible for national space programs.

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