

THE SPACE LAW
REVIEW

THIRD EDITION

Editor
Joanne Wheeler MBE

THE LAWREVIEWS

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This article was first published in December 2021
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Published in the United Kingdom

by Law Business Research Ltd, London

Meridian House, 34–35 Farringdon Street, London, EC4A 4HL, UK

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Enquiries concerning editorial content should be directed
to the Publisher – clare.bolton@lbresearch.com

ISBN 978-1-83862-829-1

Printed in Great Britain by

Encompass Print Solutions, Derbyshire

Tel: 0844 2480 112

ACKNOWLEDGEMENTS

The publisher acknowledges and thanks the following for their assistance throughout the preparation of this book:

ALDEN LEGAL LIMITED

ARENDT & MEDERNACH

BIRD & BIRD

FASKEN MARTINEAU DUMOULIN LLP

FORMICHELLA & SRITAWAT ATTORNEYS AT LAW CO, LTD

GVW GRAF VON WESTPHALEN

HUDSON GAVIN MARTIN

INTERNATIONAL INSTITUTE OF AIR AND SPACE LAW, LEIDEN UNIVERSITY

LICHTENBERGER PARTNER ATTORNEYS-AT-LAW

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PREFACE

Over the past year, we have increasingly looked upwards – to consider the ‘mega-constellations’ being launched to bring us internet broadband in the remotest places; to reflect on the increasing issue of space debris; and to opine on news reports describing new space technology observing Earth, climate change and human activities, down to a couple of centimetres. Perhaps we are also seeking to track the International Space Station and other objects in space as more humans explore this final frontier. Whatever the reason, outer space is increasingly on our minds and in our conversations and news stories, and is used by us on Earth in more sophisticated ways – usually without us even realising.

During the continuing covid-19 pandemic, and stimulated by the growing concerns related to climate change on Earth, we have relied on satellite technology for communications, healthcare (including assistance for first responders), education, information and simple social interaction. The relevance of the space and satellite industry to our lives has rarely been greater.

The importance of *The Space Law Review* and its content written by experts across the world is growing each year as the value of the space domain and applications from space activities are understood to an enhanced level. New applications of satellite technology are brought into use and the commercial revenues from the industry are more widely recognised.

New and innovative technologies increasingly derive from private commercial activities rather than more traditional government-funded missions. States are liable and responsible for national activities in outer space and, therefore, seek to supervise and authorise such activities through national legislation and licensing mechanisms, which we see more of across the globe. New and more diverse space players are entering the market, including more state players.

New technology – such as constellations of several thousands of satellites (even hundreds of thousands), very high-resolution Earth observation data and new small-launcher technology – is testing regulatory and insurance frameworks. This, combined with greater risks from debris, in-orbit servicing, active debris removal and robotic missions, presents challenges to regulators that must work closely with industry to govern such activities, ideally by using anticipatory and outcome-focused regulation.

The dynamics of space are also changing with aspiring space nations joining the international space community, along with new categories of non-state actors, such as large industrial players, start-ups and universities. Space is mainstream now and part of everyone’s lives.

Lawyers, such as the excellent contributors to this book, are not only required to understand the international treaties and how they are enforced and applied in national law,

but are also being asked to look at the application of such laws, regulations and policies in innovative and challenging ways and at new applications, technologies (civil and military) and new business models.

Space law is not simply one practice area – it consists of layers of interrelated disciplines and dimensions that lawyers must apply and be alert to, such as: telecommunications; Earth observation; navigation; security and defence; data management; international relations; radio frequency spectrum; technology; national, regional and international laws and regulations; export controls; environmental laws; and corporate, finance and taxation. It requires bright, flexible, problem-solving and solutions-driven minds.

This year I am very pleased to say that *The Space Law Review* has expanded to include contributions from Lichtenberger Partner Attorneys-at-Law in Austria, Fasken Martineau DuMoulin LLP in Canada, Bird & Bird in France, the International Institute of Air and Space Law in the Netherlands and Formichella & Sritawat Attorneys at Law in Thailand. It has been a pleasure to engage with these new contributors, who have all shared their expertise and knowledge in this book.

My thanks go to all the authors, who have contributed their time, expertise and enthusiasm to this edition. Their practical knowledge of the legal and regulatory frameworks, and the related challenges and solutions, makes this book unique.

The contributors' expertise will grow in importance as the economic benefits from the space sector are increasingly recognised by states. The global space economy is expected to be worth £40 billion by 2030.

Effective national regulation, enabling innovation and investment, is an increasingly important source of competitive advantage globally. We are witnessing increasing regulatory forum shopping in the space industry. The importance of effective national regulation as an enabler for new and innovative satellite technology and the ability to raise finance is increasingly recognised. This is especially the case when such national regulation embraces sustainability goals in relation to the mitigation of space debris and the protection of the outer space environment.

Thank you again to the contributors of *The Space Law Review*. I wish them success in the year ahead. I hope that readers find this edition valuable and recognise the benefit that the international space industry can bring us, especially during challenging times.

Joanne Wheeler MBE

Alden Legal Limited

London

November 2021

TAXATION

Tom Gilliver¹

I INTRODUCTION

For companies in the space industry, tax is an important factor in determining where to base themselves. This chapter surveys the basic conceptual framework relevant to the direct taxation of space companies, focusing particularly on the operation of satellites. While United Kingdom corporate taxation is the author's area of practice, this chapter does not focus on any particular jurisdiction; rather, it highlights concepts and issues that are common to many jurisdictions.

II CORPORATE TAXATION

i Foundational concepts

Tax laws, both domestic and international, typically identify taxable persons or transactions by reference to a physical presence in, or connection with, a particular territory. Thus, extraterrestrial commercial activities do not always fit naturally within the current conceptual framework. Nevertheless, it has been suggested that the laws that apply to the high seas could be used as a starting point for future related legislation.²

Direct taxes are levied on a person's income, profits or gains, whereas indirect taxes are imposed on transactions involving the production, consumption, sale, transfer or registration of assets, goods or services. As regards direct taxation, commercial space businesses are generally carried on through corporate vehicles, and they may, therefore, be subject to corporate income tax or corporation tax.

As a matter of domestic law, residence for corporate tax purposes is typically determined by a test relating to the place in which the company is incorporated or the place from which it is managed or controlled, or both. The detailed mechanics of the tax code then determine where a particular corporate tax system lies on the spectrum between worldwide taxation (i.e., taxing resident companies on their global profits, whether generated in that country or abroad) and territorial taxation (i.e., taxing companies only on their profits generated within that country). Non-resident companies, on the other hand, are generally taxed only on profits generated in the taxing state, whether through a permanent establishment or (in some cases) otherwise.

1 Tom Gilliver is an associate at Slaughter and May. The author gratefully acknowledges the assistance of Carmelo Franceschino in researching this chapter.

2 Timothy G Nelson and James Anderson, 'Can Space Activities be Taxed?', *Financier Worldwide*, November 2019.

Double taxation can arise if two countries seek to tax the same profits of a company. This might be the case, for example, if a company were to be treated as resident in two countries under their respective domestic laws. Domestic relief may be given for double taxation. Tax treaties are also bilaterally negotiated to allocate taxing rights between the signatory states and thereby minimise double taxation. Such treaties are often based on a historic version of the Model Tax Convention on Income and on Capital published, and periodically updated, by the Organisation for Economic Co-operation and Development (OECD).

ii Application to commercial space activities

The border between airspace and outer space is not defined in international law. This is pertinent because, while states generally claim rights in respect of the airspace above their territories, the international community has rejected the notion of sovereignty in respect of outer space.³ For example, the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, one of the foundational texts of international space law, provides that outer space is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means.⁴

While various practical and unilateral definitions of space exist, such as the Kármán line,⁵ there are no international legal definitions of 'airspace' and 'outer space'. This has left the door open for attempts to assert sovereignty over outer space in certain respects. For instance, in 1976, seven equatorial countries made the Bogotá Declaration, asserting their sovereignty over the segments of the geostationary satellite orbit directly above their respective territories.⁶ The signatories contended that the geostationary orbit is not part of outer space, but is a 'physical fact' resulting from Earth's gravity, therefore constituting a scarce natural resource that they were entitled to control.⁷ Such attempts have occasionally related not just to direct taxes, but also to property taxes, such as California state property taxes.⁸ This background informs the question of whether a satellite in orbit above a particular country generates a taxable presence in that country for its operator. The Commentary on the 2017 OECD Model Tax Convention observes that a permanent establishment may only be considered to be situated in a contracting state if the relevant place of business is situated in the territory of that state.⁹ Accordingly, whether a satellite in geostationary orbit could constitute a taxable permanent establishment for the satellite operator depends upon how far the territory of a state extends into space. However, the Commentary states that no OECD Member Country would agree that the location of geostationary satellites can be part of the territory of a contracting state under the applicable rules of international law. It adds that the area over which a satellite's signals may be received (the satellite's 'footprint') cannot be considered to

3 Article I of the 1944 Chicago Convention on International Civil Aviation (the Chicago Convention); cf. Article II of the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the Outer Space Treaty).

4 Article II of the Outer Space Treaty.

5 The Kármán line is an imaginary boundary 100 kilometres above mean sea level.

6 1976 Declaration of the First Meeting of Equatorial Countries, signed by Colombia, the Republic of Congo, Ecuador, Indonesia, Kenya, Uganda, Zaire and Brazil (as an observer).

7 Paragraph 1 of the Bogotá Declaration.

8 Cal. Code Regs. tit. 18 § 206; Nancy Vogel, 'Satellite Tax Idea Is Back to Earth', *Los Angeles Times*, 11 July 2011.

9 Paragraph 27 of the Commentary on Article 5 of the 2017 Model Tax Convention.

be at the disposal of the operator of the satellite so as to make that area a place of business of the operator. At present, therefore, the position of the satellite itself and the area that it serves are not usually significant factors from a direct tax perspective: the crucial factor is the tax residence of the satellite operator. In effect, the same is true of manned activities in space, such as astronauts working on the International Space Station: while it may increasingly be possible for individuals to remain in outer space for sufficiently long periods of time to cease to be tax resident anywhere, ordinary principles of tax residence apply.

III OUTLOOK

While national governments and international organisations continue to devote considerable attention and resources to the burgeoning commercial space industry, rather less attention has been given to ensuring that tax systems keep pace. However, if the industry continues to grow rapidly over the coming years and decades, it seems likely that space tax will increasingly come to the fore as a topic for debate.

Parallels may be drawn with the way in which the taxation of digital services has recently become a political battlefield. Arguably, cross-border digital services have exposed the shortcomings of tax systems that are predicated upon physical presence. In response, the OECD, under the aegis of its wide-ranging Base Erosion and Profit Shifting Project, is leading efforts to reshape the international tax landscape in fundamental ways, so as to give due weight to the location of multinational businesses' customers when allocating taxing rights between different jurisdictions. Space tax could eventually go down a similar path; the risk, though, is that (as in the digital taxation arena) individual countries will adopt unilateral measures, resulting in a tax landscape for space companies that is ever-shifting and difficult to navigate.

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Tom Gilliver is an associate at Slaughter and May. His practice covers direct taxes, stamp duties and value added tax, with a strong focus on corporation tax. In addition to advising on corporate transactions (including joint ventures, acquisitions and group reorganisations), Tom has experience of advising on transfer pricing and diverted profits tax disputes with HMRC.

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ISBN 978-1-83862-829-1