

PORTUGAL IN CHINA'S DIGITAL AND SPACE SILK ROADS

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ABSTRACT: This article examines Portugal's engagement with China's Digital Silk Road (DSR) and Space Silk Road (SSR). It operates on the premise that both, the DSR and the SSR, despite their rhetoric of cooperation, function within the logic of digital *realpolitik*—serving Beijing's national interest and raising risks of technological dependency and control. Drawing on the theoretical framework of the Small State Theory, the study explores how Portugal navigates its involvement with the DSR and SSR while balancing its Euro-Atlantic commitments within a dynamic landscape shaped by China's rise. Through a qualitative methodology, the article reveals that, although Portugal has not formally joined the DSR or SSR, Chinese digital and space investments have increasingly infiltrated the national landscape. Several factors have prompted Portugal to adopt a cautious, balanced approach. The conclusions underscore the dual nature of this involvement, highlighting the broader implications for small States engaged in the global digital competition.

Keywords: Chinese investments; small States; Belt and Road Initiative (BRS); Digital Silk Road (DSR); Space Silk Road (SSR).

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INTRODUCTION

The Belt and Road Initiative (BRI) was announced by Chinese President Xi Jinping in 2013, during his visit to Kazakhstan, where he proposed the creation of the Silk Road Economic Belt (SREB) between China and Central Asian countries, and later in Indonesia, where he proposed the establishment of the 21st Century Maritime Silk Road (MSR) between China and ASEAN countries.¹ In 2015, the action plan for the Belt and Road Initiative was launched, setting the objective “to promote the connectivity of Asian, European and African continents and their adjacent seas”.² Subsequently, the initiative was expanded to new geographical regions, such as Latin America, and included new corridors, notably the Digital Silk Road (DSR) and the Space Silk Road (SSR).

The dynamics surrounding the BRI have led to numerous studies, which have mainly focused on the SREB³ and on the MSR.⁴ The study of the DSR and the SSR, on the other hand, and perhaps because these are more recent projects, is not yet as developed. Exceptions include the works of Assef,⁵ Shen,⁶ Cabestan,⁷ and Chung.⁸ Regarding Portugal specifically, the impact of the SREB and MSR in Portuguese territory has attracted the attention of several scholars.⁹ However, the implications of the DSR and SSR remain largely unexplored.

¹ “Xi Proposes ...” 2013. “Xi in Call...” 2013.

² National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce 2015.

³ Makarov & Sokolova 2016. Tracy, Schvarts, Simonov & Babenko 2017. Dave & Kobayashi 2018.

⁴ Chang 2018. Zhu, Zhang, Li & Zhou 2019.

⁵ Assef 2018.

⁶ Shen 2018.

⁷ Cabestan 2020.

⁸ Chung 2023.

⁹ Duarte 2017. Duarte 2020. Silva, Duarte & Pereira 2023.

Given this gap in the literature, this article aims to examine Portugal's engagement with the BRI through the DSR and SSR. Specifically, this research seeks to explore how Portugal has balanced its cooperation with China in the digital and space domains alongside its Euro-Atlantic commitments. Furthermore, we will also explore the opportunities, risks and challenges that involvement in DSR and SSR can bring to Portugal.

In the context of growing geopolitical competition between China and the United States, which extends to both the digital and outer space domains, understanding how a small State like Portugal—an ally of the United States and a BRI member since 2018—navigates and balances its commitments and interests is more relevant than ever. Therefore, this research will also provide insights into how small States can manage their participation in the BRI, balancing opportunities, challenges, and obstacles while maintaining their relationships with China and upholding their Euro-Atlantic commitments. The investigation will be framed around the following research question: How does Portugal, as a small State, navigate at the same time its economic cooperation with China's Digital and Space Silk Roads and its Euro-Atlantic commitments?

This study operates under the premise that, despite their narrative of international cooperation, both the DSR and the SSR ultimately serve China's national interests. Consequently, both initiatives are best understood as manoeuvres in statecraft and *realpolitik*, or more specifically, *digital realpolitik*. In this framework, the logic of the international system is one of competition among States to fulfil their national interests, with digital means, including the Internet, used as tools to achieve these goals at any cost.¹⁰ *Digitalpolitik* relies on the development of information and communication technologies, State support for the internationalization of domestic tech companies, active promotion of digital in-

¹⁰ Atkinson 2021.

novation, limiting the technological progress of rival States, and cooperation with allied States.¹¹ From this perspective, the development of digital infrastructure is prioritized, creating mechanisms that enable surveillance, control, and coercion.

The analysis of Portugal's engagement with the DSR and the SSR will therefore be conducted on the assumption that these initiatives serve China's broader strategic goals. Additionally, we will employ the theory of small States to examine and interpret how Portugal engages with both projects, balancing its participation in the BRI with its commitments to the United States, NATO, and the European Union.

At the methodological level, this research adopts a predominantly qualitative approach, using an exploratory procedure that draws on both primary and secondary sources. Primary sources include news articles from agencies such as Xinhua, China Daily, and Lusa, official documents, and press releases from the governments of Portugal and the People's Republic of China. Secondary sources consist of academic articles and reference works, as well as reports from institutions like the Atlantic Centre of the National Defence Institute of Portugal and the Centre for Aerospace & Security Studies in Islamabad.

The article is structured as follows: The first section presents the theoretical framework underpinning our analysis, with a focus on the theory of small States. The next section describes the positioning of the DSR and the SSR within the BRI, along with the dynamics associated with both. The following sections examine Portugal's participation in these initiatives. The conclusion synthesizes the main findings from the previous sections.

¹¹ Atkinson 2021.

SOME ELEMENTS FOR THE ANALYSIS OF SMALL STATES BEHAVIOUR

The aim of this section is to establish a theoretical framework for analysing the phenomenon under study, enabling the identification of key actions, trends, and patterns. Accordingly, this subsection seeks to introduce elements from various perspectives associated with the Small State Theory, in order to support the understanding of Portugal's behaviour, as a small State, in relation to the DSR and the SSR.

The behaviour and capabilities of small States in international politics have long been the subject of academic inquiry. These studies are commonly referred to as the "Small States Theory", even though there is no unified theory in the strict scientific sense of the term, but rather a range of different perspectives. In this study, we draw on the core assumptions of the Theory of Shelter. This theoretical perspective contends that small States face multiple vulnerabilities and, in seeking to mitigate them, they pursue political, economic, and social shelter through alliances with larger States, participation in international organizations, and support for international norms.¹²

Due to their economic vulnerabilities and small populations, small States possess limited military capabilities and hold reduced international influence.¹³ To counterbalance these inconveniences, small States seek political shelter through alliances with larger powers,¹⁴ which materializes by forging political ties that imply diplomatic and military support, cooperation, and protection mechanisms. Through such arrangements, small States are able to reduce power asymmetries, avoid coercion by third States, and benefit from the capabilities of other States and

¹² Thorhallsson & Steinsson 2018. Thorhallsson, Steinsson & Kristinsson 2018.

¹³ Thorhallsson, Steinsson & Kristinsson 2018.

¹⁴ Thorhallsson, Steinsson & Kristinsson 2018.

international organizations to compensate for their own limitations.¹⁵

In addition, due to the small size of their domestic markets, small States are more dependent on international trade, which makes them particularly vulnerable to global economic fluctuations and trade restrictions.¹⁶ To address these vulnerabilities, small States aim to establish trade and financial relations with larger powers and seek membership in international organizations.¹⁷

Finally, as a result of their size, small States also face vulnerabilities related to culture, education, and scientific and technological development.¹⁸ Consequently, they need to remain connected to their neighbours, particularly to larger States, with whom they seek relationships that help them avoid isolation and foster development.¹⁹

In sum, small States are not simply “functionally undifferentiated units” facing the same challenges as large States, whose foreign policies are driven solely by external structures and security concerns, as the realist theory suggests.²⁰ Nor is their behaviour limited to the pursuit of economic gains, as liberal perspectives contemplate.²¹ Moreover, they do not merely seek social and cultural relations, as constructivists might argue. Rather, small States strive to develop strategies that enable them to survive and thrive. To this end, they seek various forms of relationships with great powers, through which they obtain shelter in a complex international system.²²

Having now introduced the theoretical framework that will underpin our investigation, we may proceed to the analy-

¹⁵ Thorhallsson & Steinsson 2018.

¹⁶ Thorhallsson, Steinsson & Kristinsson 2018.

¹⁷ Thorhallsson, Steinsson & Kristinsson 2018.

¹⁸ Thorhallsson & Steinsson 2018.

¹⁹ Thorhallsson, Steinsson & Kristinsson 2018.

²⁰ Radoman 2018. Thorhallsson, Steinsson & Kristinsson 2019.

²¹ Thorhallsson, Steinsson & Kristinsson 2018.

²² Thorhallsson, Steinsson & Kristinsson 2018.

sis of the dynamics of the DSR and SSR in Portugal. Drawing on the elements of Theory of Shelter, we will thus be able to interpret how Portugal has engaged with both initiatives and how it has navigated its participation in the BRI alongside its commitments to the West.

BRI'S NEW CORRIDORS: THE DIGITAL AND SPACE SILK ROADS

In this section, we will introduce the DSR and SSR within the broader context of the BRI. The aim is to understand the motivations, objectives, and underlying dynamics of each of these corridors, so that we may subsequently examine their presence in Portugal.

If the underlying premise of the BRI is connectivity between peoples, transforming the world into a true “global village” through the trade of goods and services, the DSR serves a similar purpose. As a digital corridor, the DSR aims to ensure global connectivity by developing digital infrastructures along the economic corridors of the BRI. The SSR, in turn, is intrinsically linked to the DSR, as both rely on digital technologies. However, it focuses on the development of space communication infrastructures and satellite navigation systems.

The first reference to a digital corridor within the BRI emerged in 2015, when the BRI action plan called for the creation of an “Information Silk Road”.²³ That same year, in July, at the China-EU Digital Cooperation Forum, the term “Digital Silk Road” was officially introduced.²⁴ Finally, in 2017, Xi Jinping advocated for the establishment of a “21st Century Digital Silk Road” intended to enhance digital co-operation along the BRI economic corridors.²⁵ Alongside

²³ National Development and Reform Commission, Ministry of Foreign Affairs, and Ministry of Commerce 2015.

²⁴ “Digital Silk Road...” 2015.

²⁵ “Full Text of...” 2017.

the DSR, and closely related to it, the BRI also includes a space corridor known as the SSR, or “Belt and Road Space Information Corridor”.²⁶ The first mention of the SSR actually pre-dates the DSR. In 2014, the Chinese organisation International Alliance of Satellite Application Service proposed creating a “space-based Silk Road” along the Belt and Road to enhance satellite cooperation.²⁷ Later, in 2016, the Chinese government released a white paper on the country’s space strategy, emphasising its interest in transforming China into a space power to boost economic development.²⁸ The following year, China declared its aim to become a global leader in space technology by 2045, ensuring full space exploration capabilities by then.²⁹

The DSR focuses on the development of global communication and connectivity technologies through terrestrial and maritime infrastructures.³⁰ In contrast, the SSR centres on space-based communication and geolocation infrastructures.³¹ A major pillar of the SSR are space information systems, aiming to create a “Space Information Corridor” through Earth observation, communication, navigation and geolocation, and satellite development.³² In this context, Beijing has been developing the BeiDou satellite navigation system with plans to expanding it along the SREB and the MSR, thus offering an alternative to the US GPS.³³ This system, moreover, allows China to enhance its military capabilities and increase its influence over other States and regions as the system spreads, enabling the creation of dependency networks, particularly in critical areas.³⁴ In addition to being

²⁶ Assef 2021.

²⁷ Jie 2015.

²⁸ “China’s Space...” 2016.

²⁹ “China Aims...” 2017.

³⁰ Chung 2023.

³¹ Assef 2018.

³² Assef 2018. Mujtaba & Chohan 2021.

³³ “China’s Space...” 2016. Assef 2018.

³⁴ Cheney 2019. Ghiasy & Krishnamurthy 2020.

a cornerstone of the SSR, BeiDou is also a key component of the DSR, being linked to technological development, digital connectivity, and information and communication technologies.³⁵ BeiDou was completed in 2020, through the establishment of a satellite constellation that provides China with new capabilities not only in geolocation but also in areas such as the Internet of Things,³⁶ remote sensing, financial markets, commercial services, and communication, particularly via broadband, among others.³⁷

In addition, the DSR also encompasses other elements, such as 5G networks, quantum computing, artificial intelligence, big data, cloud computing, nanotechnology, e-commerce, financial transactions and digital payments, and digital currencies.³⁸ In this context, Beijing's primary focus regarding the DSR has been establishing extensive digital infrastructures, such as data centres and fibre optic cables, as well as telecommunications infrastructure, and expanding e-commerce services, digital payment systems, and surveillance and security systems.³⁹

In the implementation of the DSR, Chinese companies play a crucial role by actively supporting and advancing Beijing's interests both domestically and internationally, enabling China to compete with European and American technology firms in both hardware and software sectors, as well as in exporting its digital revolution and standards.⁴⁰ For example, Alibaba has sought to compete with Amazon in e-commerce, as well as in other sectors including cloud

³⁵ Ahmed & Lambert 2022.

³⁶ "Internet of Things" refers to an extension of the internet that enables everyday objects—from household items like refrigerators to industrial devices like sensors and robots—to have computing capabilities and operate intelligently.

³⁷ Ahmed & Lambert 2022. Vandamme, Struye de Swielande & Kimberly Orinx 2023.

³⁸ Chung 2023. Hussain, Hussain, Khan & Imran 2024.

³⁹ Ly 2020. Arsentyeva 2024.

⁴⁰ Ahmed & Lambert 2022.

computing, data centres, and digital payment tools.⁴¹ Companies such as Dahua and Hikvision, as well as Huawei and ZTE, have contributed to the creation of so-called “safe cities” through the development of surveillance and facial recognition systems, which are now installed not only in China but also in Central Asia and Latin America.⁴² Regarding digital currency, the internationalization of the renminbi is a priority for Beijing, aiming initially to challenge the dominance of the dollar through trade and digital payments, and in the long term, through investment and reserves.⁴³ In this context, the DSR is essential for facilitating the global circulation of the renminbi. A key aspect of this is the development of the Cross-border Interbank Payment System as an alternative to SWIFT, which promises to enhance transactions conducted using the renminbi.⁴⁴

Outlined in parallel with the BRI economic corridors, the DSR aims to enhance the expansion of Chinese industrial companies by providing them with both physical and digital infrastructures that support their international business ventures. Through the development and installation of communication backbone infrastructures by Huawei and ZTE, data storage provided by Huawei and Alibaba through their data centres, surveillance systems developed by Dahua and Hikvision, and the implementation of alternative digital financial systems, Beijing secures access to sensitive information, enhances the international influence of its companies, and promotes the export of its model and the establishment of new global standards.⁴⁵

The DSR, as well as the SSR, present both benefits and opportunities for the countries involved, but also entail significant risks. While these initiatives can foster the development

⁴¹ Chung 2023. Hussain, Hussain, Khan & Imran 2024.

⁴² Chung 2023.

⁴³ Aysan, & Kayani 2022.

⁴⁴ Shen 2018.

⁴⁵ Hemmings 2020. Chung 2023. Hussain, Hussain, Khan & Imran 2024.

of digital infrastructure, boost e-commerce, and enhance innovation and competitiveness, investments under the DSR and SSR also carry dangers such as the export of China's authoritarian governance model and its potential access to—and even control over—sensitive data from other governments.⁴⁶ These concerns are heightened by the fact that Chinese companies, which play a central role in both initiatives, are legally obliged to cooperate with the Chinese government on matters of national security.⁴⁷ Moreover, projects such as BeiDou not only possess the capacity to rival the American GPS, but may also serve China's strategic interests by enabling Beijing to monitor other States and access third-party information.⁴⁸

PORTUGAL IN THE BELT AND ROAD: FROM THE BRI TO THE DSR

The aim of this section is to understand Portugal's participation in the DSR. To achieve this, we will first analyze Portugal's involvement in the BRI and subsequently describe and examine the dynamics and status of the DSR within Portuguese territory. Through this, we aim to gather sufficient data to interpret how Portugal navigates the initiative and balances its participation with its Western commitments.

The relationship between Portugal and China dates back to the 16th century, specifically to 1513, when the Portuguese landed in Tammao. From then on, a lasting and fruitful connection was established, consistently grounded in trade and, for a long period, centered around Macau. Contemporary diplomatic relations, however, date back to the 1970s when Portugal formally recognized the People's Republic of China, followed by the establishment of diplomatic relations.⁴⁹

⁴⁶ Hussain, Hussain, Khan & Imran 2024. Shahbaz 2022.

⁴⁷ Hemmings 2020. Ma 2022. Chung 2023.

⁴⁸ USCC 2019. Sewall, Vandenberg & Malden 2023.

⁴⁹ Portal Diplomático s.f.

Over more than four decades of diplomatic relations, Portugal and China have seen their relationship develop primarily, but not exclusively, in the areas of trade and foreign investment.⁵⁰ Portugal's need and willingness to engage with China, which it views as an important partner, coupled with Beijing's interest in expanding its influence into Europe, led to Portugal's joining the Belt and Road Initiative in 2018 through signing a Memorandum of Understanding.⁵¹

Despite Portugal's accession to the Belt and Road Initiative on December 5, 2018, the Portuguese government did not sign the Memorandum of Understanding related to digital economy and digital connectivity, and thus Portugal is not officially part of the Digital Silk Road. Nonetheless, Chinese investment and Luso-Chinese cooperation in the digital field are quite evident. In 2016, when Portugal's participation in the Belt and Road Initiative was merely a future aspiration, the Portuguese and Chinese governments signed several cooperation agreements across various domains.⁵² Notably, there was an agreement between Huawei and Portugal Telecom for the development of a technological infrastructure network, and an agreement between Huawei and the University of Trás-os-Montes and Alto Douro, the University of Évora, and the Institute of Employment and Vocational Training for scientific research in the technological field.⁵³ Subsequently, following the signing of the Memorandum of Understanding on BRI, new cooperation agreements were established, including an agreement between Millennium BCP and UnionPay for issuing bank cards with this payment technology, and a memorandum of understanding between MEO and Huawei on the development of 5G technology.⁵⁴ Additionally, a memorandum was signed to establish a

⁵⁰ Lourido 2024.

⁵¹ República Portuguesa & República Popular da China 2018.

⁵² Portal do Governo 2016.

⁵³ Portal do Governo 2016.

⁵⁴ Portal do Governo 2018.

research laboratory in the fields of ocean and space (STAR-Lab), a joint initiative between TAKEVER and CEiiA (Centre for Engineering and Development) and the Chinese Academy of Sciences, as well as a memorandum on the implementation of the Portugal-China 2030 Partnership, aimed at scientific and technological cooperation in the areas of space, climate, computing, and nanoscience.⁵⁵

In 2017, Huawei Marine Networks and China Unicom announced plans to develop a submarine fiber-optic cable connecting Brazil to Portugal via Cape Verde.⁵⁶ However, the project did not proceed with Huawei, and instead, the Irish company EllaLink developed it, until the first submarine fiber-optic cable to connect Latin America to Europe was finalized.⁵⁷ Portugal also serves as a landing point for the West Africa Cable System, which connects South Africa to the United Kingdom and was upgraded in 2015 by Huawei Marine Networks using Huawei's own technology.⁵⁸ In 2024, the 2Africa submarine cable, aiming to connect various States in the Indian Ocean, Middle East, Mediterranean, West Africa, and the United Kingdom, and operated by a consortium including Meta and China Mobile International Limited, reached Carcavelos, Portugal.⁵⁹

The year 2019, it should be noted, was marked by increased assertiveness from the United States of America and the European Union towards China. In this regard, the US, through Secretary of State, Mike Pompeo, even advised the Portuguese government against cooperating with Huawei for the installation of 5G networks.⁶⁰ The European Parliament and the European Commission adopted a similar stance, warning about the security risks that could arise

⁵⁵ Portal do Governo 2018.

⁵⁶ Malena 2021.

⁵⁷ "Entenda Como..." 2021.

⁵⁸ Huawei 2015.

⁵⁹ "Cabo 2Africa..." 2024.

⁶⁰ "Pompeo Adverte..." 2019c.

from Chinese investment in critical infrastructure.⁶¹ Portugal's position must, therefore, be analysed within this context. Although initially the Portuguese government rejected a protectionist stance, in 2020 the main Portuguese operators (MEO, NOS, and VODAFONE) ultimately decided not to use Huawei's 5G network technology.⁶² Later, in 2023, the Portuguese government confirmed this decision, with the Superior Council for Cyberspace Security deciding to exclude non-European companies from the installation of 5G networks, namely Huawei and other Chinese companies.⁶³

The security concerns regarding Chinese 5G network technology did not, however, prevent the continued expansion of Chinese digital products and services in Portugal. In 2021, Huawei, in collaboration with University of Aveiro and the Institute of Telecommunications, established a laboratory focused on 5G and Artificial Intelligence (5GAIner), with the aim of "supporting the industry in creating reliable solutions for different sectors to ensure a successful transition to a digital society in Portugal".⁶⁴ Despite security concerns regarding Chinese 5G technology, digital products and services from Chinese companies continue to be available and are growing in Portugal. AliExpress, the international arm of Alibaba, has increasingly established its presence in the Portuguese market, even forming partnerships with CTT for the distribution of orders placed on Singles' Day, China's equivalent of Black Friday, which saw a 40% increase in 2019 compared to the previous year.⁶⁵

Alipay, on the other hand, has been registered with the Bank of Portugal as an electronic money institution since 2019, with its entry into the country announced in 2018 through a partnership with Millennium BCP.⁶⁶ By the end of

⁶¹ EC 2019.

⁶² "Costa Recusa..." 2019b. Freitas Moreira y Malta 2020.

⁶³ Alves & Simões 2023.

⁶⁴ "UA, Huawei e..." 2021.

⁶⁵ "CTT Entregam..." 2019.

⁶⁶ "Alipay Chega..." 2018.

2019, China reported a 64-fold increase in transactions using Alipay in Portugal during the first week of October of that year.⁶⁷ Meanwhile, Hikvision already provides surveillance solutions in the Portuguese market but has yet to establish any partnerships or projects for implementing public surveillance systems in Portugal. Alibaba Cloud, a subsidiary of Alibaba focused on cloud computing, inaugurated a service and support center in Porto, Portugal, in 2022, in partnership with Teleperformance, the first of its kind in Europe.⁶⁸ Although not strictly an investment by Alibaba in Portugal, this represents the Chinese company's awareness of the potential for future investment in Portuguese territory. Huawei Cloud, on the other hand, also does not have any data center investments in Portugal. However, it is present in the market, having protocols with several cloud service providers such as Claranet, which owns a data center, and V-Valley.⁶⁹

Advances in the relationship between Portugal and China, particularly in the digital sector, reflect Portugal's need to develop its digital infrastructure and stimulate economic growth. Given the constraints associated with its status as a small State—especially in the economic and commercial domains—Portugal views China as a partner capable of helping to address its internal vulnerabilities. Nevertheless, as a favoured partner of the United States and reliant on Washington as its main political, security and economic shelter, Portugal must carefully navigate its relationship with both major powers. This delicate balancing act is reflected in the country's growing caution towards Chinese investment, even as it continues to engage with China to pursue its economic objectives.

Simultaneously, concerns from the European Union and the United States about the risks tied to cooperation within the DSR have prompted a more cautious stance. This is

⁶⁷ "Portugal Multiplica..." 2019.

⁶⁸ "Porto é Porta..." 2022.

⁶⁹ "Claranet é o Primeiro..." 2024. "V-Valley e..." 2024.

evidenced by a noticeable slowdown—though not a complete cessation—of Chinese investment in recent months. However, joint initiatives between Huawei and Portuguese companies and academic institutions, such as 5GAIner and STARLab, remain active. These projects illustrate Portugal's effort to manage its strategic alliance with the United States while maintaining economically beneficial ties with China.

PORTUGAL, THE SPACE SECTOR, AND THE SPACE SILK ROAD

The aim of this section is to examine and understand Portugal's involvement with the SSR. To do so, we will describe and analyze the dynamics associated with the SSR observed within Portuguese territory, as well as the existing projects and their current status. The data gathered will be used to interpret how Portugal navigates the SSR and balances its participation with its Western commitments.

The first significant steps towards cooperation between Portugal and China within the framework of the SSR emerged in late 2018. In November of that year, during Xi Jinping's visit to Portugal, in addition to the agreements and memoranda mentioned, a Memorandum of Understanding was signed between the Portuguese companies TEKEVER and CEiiA (Centre for Engineering and Development) and the Microsatellite Institute of the Chinese Academy of Sciences with the aim of establishing STARLab, a research laboratory focused on maritime and space domains.⁷⁰ Located in Matosinhos and Peniche, this project aims to develop technologies and engineering systems for the management and exploration of the sea and space.⁷¹ In the same year, Portugal issued a Request for Interest for the construction of a spaceport in Santa Maria, Azores, which generated significant expressions of interest from various companies and resulted in the estab-

⁷⁰ Portal do Governo 2018.

⁷¹ Azevedo 2018a.

lishment of the Azores International Satellite Launch Programme (Azores ISLP).⁷²

The strategic position of the Azores and Portugal's interest in more actively engaging in space exploration led to the establishment of the Portuguese Space Agency (Portugal Space) in 2019.⁷³ In its 2020-2030 strategy, Portugal Space relied on the Azores Space Launch Program (ISLP) as a cornerstone, prioritizing the development of a small satellite launch base on Santa Maria Island, along with other related space projects such as the creation of a satellite communication station (teleport), operational since 2020, and the development of test facilities for microrocket engines and new support facilities for future spacecraft.⁷⁴

We therefore observe that, given the strategic importance of the Azores within the Portuguese Space Strategy, the construction of a spaceport on Santa Maria Island has become one of the country's key priorities in the space sector. This initiative aims to capitalise the Azores' advantages to enhance cooperation with other States and entities, thereby contributing to national development and reinforcing the country's international stature.⁷⁵ In 2017, through the Resolution of the Government Council No. 5/2017 of January 30, the Azores Space Mission Structure (Space Azores) was established with the purpose of "managing, administering, and coordinating all aerospace scientific and technical activities to be developed in the Autonomous Region of the Azores".⁷⁶ In 2022, the Regional Government of the Azores decided to extend the mandate of Space Azores to develop a regional space strategy.⁷⁷ This strategy, known as the "Azores Space Strategy", was approved that same year and highlights the spatial advantages of the archipelago's strategic position

⁷² Portugal Space 2024.

⁷³ "Constituição Da Agência..." 2019a.

⁷⁴ Portugal Space 2020.

⁷⁵ Costa 2020.

⁷⁶ Conselho do Governo 2017.

⁷⁷ Conselho do Governo 2022b.

for the space sector, as well as its contribution to regional and national development.⁷⁸

One of the objectives outlined in this strategy is the construction of a spaceport on Santa Maria Island for the launch and landing of small launch vehicles.⁷⁹ According to data provided by Space Azores, there are currently several space-related projects in the archipelago, including the European Space Agency's tracking and monitoring station, the Galileo Sensor Station connected to the European Galileo navigation system, the EUMETSAT EPS-SG ground antenna, and the Portuguese Space Agency's satellite control and command antenna, all located at the Santa Maria Teleport.⁸⁰ Santa Maria Island also hosts the Atlantic Network of Geodetic and Space Stations and the optical space surveillance sensor for the European Space Surveillance and Tracking Programme.⁸¹

The advantages of the Azores' strategic location in space-related terms have not gone unnoticed by major powers. In 2014, Xi Jinping made a strategic stop in the Azores while travelling from Chile to China, which was interpreted as a demonstration of interest in the archipelago, particularly in Lajes Air Base.⁸² In September 2016, the Chinese Premier made a "technical stop" in the Azores, similar to Xi's visit, at a time when the US was reducing its presence at Lajes Air Base.⁸³ In June of the same year, it was announced that Portugal and the United States were exploring the creation of a spaceport at Lajes International Airport for the launch of microsatellites.⁸⁴ In 2018, Portugal's Minister of Science, Technology, and Higher Education expressed interest in forming partnerships with India and China within the scope

⁷⁸ Conselho do Governo 2022a.

⁷⁹ Conselho do Governo 2022a.

⁸⁰ Space Azores 2024.

⁸¹ Conselho do Governo 2022a.

⁸² Meireles 2014.

⁸³ "Primeiro-Ministro..." 2016.

⁸⁴ Azevedo 2016.

of the Portuguese space programme.⁸⁵ Later that year, it was announced that Portugal and China had reached an agreement to establish a research centre for the manufacturing of microsatellites, named STARLab.⁸⁶

In 2018, the Government of Portugal and the Regional Government of the Azores, through the Foundation for Science and Technology (FCT) and Space Azores, respectively, launched the Azores ISLP initiative, starting the first phase of the international competition. This phase called for expressions of interest from national companies and research centres for the planning, installation, and operation of a spaceport on Santa Maria Island.⁸⁷ In 2019, the second phase of the competition was launched, requiring candidates to submit a proposal demonstrating the financial viability of the project and outlining the development of two small microsatellite launchers.⁸⁸ A total of 14 consortia showed interest in the first phase, though none were of Chinese origin.⁸⁹ The contract signing was planned for 2019, with the first launches scheduled for 2021.⁹⁰ However, in 2021, all candidates were excluded from the competition, and in 2022, the Regional Government of the Azores announced a second competition, only to reverse this decision later, promising that the project would proceed in 2023, which did not happen.⁹¹ In February 2024, the President of the Portuguese Space Agency stated that the spaceport should begin operations that same year, though the first launches are expected to occur in 2025, with hopes that the spaceport will be selected for the launch of the European Space Agency's "Space Rider".⁹²

⁸⁵ "Ministro Da Ciência..." 2018.

⁸⁶ De la Jara 2018.

⁸⁷ Azevedo 2018b. FCT & EMA-Space 2018.

⁸⁸ Azevedo 2019. Governo Regional dos Açores 2019.

⁸⁹ FCT 2018.

⁹⁰ "Excluídos Todos Os..." 2021.

⁹¹ "Excluídos Todos Os..." 2021. "Empresa Excluída..." 2024.

⁹² "Santa Maria Poderá..." 2024.

As with Portugal's participation in the DSR, the country's involvement in the SSR is primarily driven by economic and commercial interests. Through this initiative, Portugal seeks to secure Chinese funding to develop infrastructure with economic and innovation potential. At the same time, it aims to leverage these infrastructures to enhance its international standing. Once again, the relationship with China is utilised as a form of shelter, enabling Portugal to mitigate the constraints associated with its status as a small State. In this sense, participation in the SSR represents an opportunity to bolster Portugal's international credibility—not only by strengthening its capacity for innovation, but also by positioning the country as a relevant actor in space exploration and the global governance of outer space.

However, as previously noted, Portugal's engagement with the SSR may also entail certain risks, which have not yet been clearly defined, likely due to the embryonic nature of SSR-related projects in Portugal. Although initiatives such as STARLab remain active and Chinese interest in the Azores persists, no significant developments have been observed in recent months. This apparent stagnation may be attributed to pressure from Western allies—mirroring concerns surrounding digital investments—, a heightened perception of risk on the part of the Portuguese government, or simply a combination of factors that have deprioritized the issue on the national political agenda, including the short duration of successive governments in recent years.

CONCLUSION

This article explored the dynamics of the DSR and the SSR and Portugal's engagement with these two BRI corridors, which are intrinsically linked to the development of digital connectivity infrastructure. We began with the premise that both the DSR and SSR are key components of China's statecraft. By adopting the tenets of *digital realpolitik*, we demon-

strated how the DSR and SSR aligned with China's national interests, functioning as tools to enhance Beijing's international standing. Through the creation of new networks of technological and digital dependency, China stood to benefit from greater control over critical infrastructure and access to sensitive data. At the same time, by promoting new technological standards, services, and alternative norms to those of the West, China aimed to advance a global governance model centred around itself.

This framework also allowed us to identify the potential risks for Portugal in engaging with the DSR and SSR. However, to understand how Portugal positioned itself within both initiatives, we applied a theoretical framework based on the theory of small States, specifically the Theory of Shelter.

From our analysis, we reached four key findings. First, despite Portugal not formally being part of the DSR or SSR—due to the absence of any signed Memorandum of Understanding specific to either initiative—there are clear dynamics indicating the gradual expansion of both projects into the country. Second, Portugal's involvement in the DSR and SSR is primarily driven by economic and commercial considerations. In this regard, the partnership with China serves as a means of overcoming the limitations imposed by Portugal's status as a small State; simultaneously, participation in both initiatives allows Portugal to enhance its international relevance. By leveraging China's technological expertise and investments, Portugal is able to stay at the forefront of global technological advancements and innovation. This positions the country as an active participant in emerging international political dynamics, with the potential to play a significant role in global digital governance, space exploration, and related areas.

Our third finding pertains to the risks associated with the expansion of the DSR and SSR into Portugal. While the country has not yet faced significant security threats from its involvement in either project, investments from Chinese tech companies, particularly Huawei, pose potential risks to

Portugal's security and digital sovereignty. These concerns are supported by both the EU and US, as well as by the Portuguese Superior Council for Cyberspace Security. However, such risks have not yet materialized, suggesting that China currently views Portugal more as a strategic asset in its broader global strategy to counterbalance American hegemony—due to Portugal's status as a US ally—rather than as a direct target for exploitation.

The fourth finding is closely related to the potential geopolitical and diplomatic tensions that could arise from Portugal's involvement in the DSR and SSR. While Portugal aims to strengthen its partnership with China, it must also carefully manage its relationship with the United States and uphold its Euro-Atlantic commitments. This balancing act is essential for avoiding friction with its primary ally, the United States. As demonstrated, Portugal seems to be navigating its engagement with China with caution, carefully balancing its partnership with Beijing alongside its relationship with the US.

Considering these findings, we argue that policymakers must remain vigilant, ensuring that robust mechanisms are in place to prevent Chinese access to sensitive data and control over critical infrastructures, as this could provide Beijing with leverage for coercion or manipulation. At the same time, it is essential to continue weighing the benefits and risks of cooperation with China—not only from an economic and commercial standpoint but also from a geopolitical and diplomatic perspective.

In conclusion, despite Portugal not formally being part of the DSR or SSR, both initiatives are gradually making their way into the country. Within this scope, there is both a Portuguese interest in deepening cooperation with the People's Republic of China and a Chinese interest in exploiting Portugal's strategic position to advance the digital and space corridors of the BRI. This relationship may present significant opportunities for Portugal, particularly in the fields of technological development and space exploration. However,

it also brings security risks, such as potential threats to critical infrastructure and sensitive data, alongside geopolitical and diplomatic challenges. How Portugal manages these dynamics will be pivotal in shaping its future role in global governance and the international digital order.

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