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The Role of Country and Regional Branding in Shaping the Future of Orbital Space Tourism

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Abstract:
As an emerging sector in the space tourism industry, orbital space tourism offers new opportunities for countries and regions to enhance their global branding. Therefore, this article aims to explore concepts of country and regional branding applied to orbital space tourism, while focusing on the fact how private companies and countries can use space tourism to improve their technological status, global influence, and sense of national identity. Countries such as the United States, through private companies like the company SpaceX, as well as the United Arab Emirates, through collaborations and space exploration programs, are reinventing their global reputation in the space industry. By boosting the nation's technological status and opening up new markets for space tourists, these ventures provide a dual branding effect. As a method this study reviews relevant literature to identify challenges that apply to country and regional branding in orbital space tourism. Nations must overcome these challenges in order to incorporate space tourism into their branding strategies. All in all, country and regional branding plays a critical role in orbital space tourism by positioning nations and regions as leaders in the space industry, showing their innovation and technology, improving their global image, and attracting investment and tourism.

Keywords: space tourism, orbital space, regional branding, country branding
JEL Codes: M31, L83, O33, L93, Z32

1. Introduction

Since commercial providers replaced the state-owned industrial space sector space tourism has experienced a boom like never before (Markard et al., 2023). The market potential of this new type of tourism is enormous and is expected to increase to 1.1 trillion US$ by 2030 (Tiburzi, 2024). With growing numbers of launches and people traveling into space the question of a passenger's security is a constant concern. In 2014 one of two test pilots died during a test flight with the VSS Unity space craft of space tourism company Virgin Galactic (Congden et al., 2024). After this major incident Virgin Galactic had to do some major rebranding to survive their brands reputation. Following the accident Virgin Galactic publicized their plan to continue test flights by announcing "Virgin Galactic goes on, with an unwavering commitment to safety and a renewed sense of purpose" (Muegge & Reid, 2018). This is one of the most important reasons why branding in space tourism is critical, especially when it comes to regional and country branding. Therefore, this article aims to apply concepts of country and regional branding to orbital space tourism, focusing on how private companies and countries can use space

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tourism to enhance their technological status (Wu et al., 2024), global influence and sense of national identity on an international level.

2. Methods

In this expository article selected literature in the field of tourism, space tourism and branding were used to describe the role of regional and country branding in space tourism. All in all, 67 articles were selected through Google Scholar and Web of science using the key words “orbital space tourism”, “lunar space tourism” and “branding”. For this article, the relevant literature on the topic of space tourism and country and regional branding was then examined. For the area of country branding and regional branding, sources specific to the topic were required.

3. Theoretical Background

In 2024 the number of people that have flown into space has reached 647 (Overbey et al., 2024). As space tourism becomes more accessible it is important that space tourism brands focus on the safety of the crew. This is why space tourism companies need to evolve their branding by including this new focus on safety. Consequently, in this article firstly a brief introduction into space tourism is given. After this the concepts of regional and country branding (Papp-Váry, 2018) are presented. Finally, both subjects will be merged to create a new outlook on the potential of country and regional branding in the space tourism sector. Lastly the results will provide a summary of the findings. In the conclusion limitations of this article are displayed.

3.1. Dimensions in Space Tourism

Space tourism can be defined as the opportunity for private individuals (tourists) to travel into space for recreational, leisure or adventure purposes (Yazici & Tiwari, 2021). In the past, space tourism has been used by the Russian space agency (Roscosmos) to finance their space program (Aliberti & Lisitsyna, 2019). The first ever space tourist Denis Tito flew into space in 2001 with the Roscosmos (Seedhouse, 2024). After that the Russians gave one of their three seats of the Soyuz capsule to paying tourists to bring them to the International Space Station and return them to Earth. These seats costed between 20 and 35 million U.S. dollars (Cole, 2015). After 2009 Roscosmos stopped selling their seats to tourists because of the need for astronauts to use every flight opportunity possible. Additionally, the US stopped their Space Shuttle program in 2011 because of several complications (Houston, 2013). One difficulty that occurred were the high costs of the Space Shuttle program (Pielke & Byerly, 2019). The second setback was that during the Space Shuttle program there were two catastrophic accidents which were the Challenger accident in 1986 and the Columbia accident in 2003 (Tucker & Alewine, 2024). Because of the end of the Space Shuttle program American astronauts needed a space craft to be able to reach space and the International Space Station (ISS). This is why the Russian space agency did not continue to sell their seats for private individuals because the NASA bought tickets for the tourist seats so their astronauts could fly to the ISS with the Russians (Li, 2022).

Nowadays different kinds of space tourism emerge. It is essential to differentiate between space activities that can be done on Earth which are called earth-bound space tourism activities and suborbital, orbital, lunar and multiplanetary activities. Earth-bound space tourism includes touristic activities like visiting space centres and space museums (Holt, 2023) or attending space camp, which is especially common for children and teenagers in the USA (Fields, 2009). Additionally, suborbital space tourism marks a subcategory of space tourism. Suborbital space tourism brings the paying passenger to the edge of the atmosphere, which is at the Kármán line in 100 kilometres height (McDowell, 2018). The passenger or tourist is then able to experience weightlessness and have a look on the Earth from above (Weibel, 2020). After a few minutes the suborbital spacecraft will then return to Earth. Especially the phenomenon of the overview

effect (Yaden et al., 2016) is critical to space tourism as it describes the new perspective that humans gain by looking at the Earth from above and realizing its fragility within the universe. Major companies providing suborbital space tourism include Blue Origin and Virgin Galactic with flight prizes starting at 250.000 US$ (Giachino et al., 2023; Sirieys et al., 2022).

Furthermore, orbital space tourism has gained popularity in recent years (Forganni, 2017). Orbital space tourism refers to tourists which are reaching an orbit and it is usually located within the Low Earth Orbit (LEO) (Chang, 2015). To be able to accomplish orbital space tourism, the thrust must be so high that the tourists will reach an orbit, which is achieved by using rocket boosters. This is also why orbital space tourism is more expensive than suborbital space tourism because of the high launch costs (Fox, 2024). Nowadays, orbital space tourists pay approximately 20 to 200 million U.S. dollars per ticket (Atrey, 2012).

Another variety of space tourism is lunar space tourism (Webber, 2019). Lunar space tourism refers to space tourism activities on the surface of the Moon and in the Low Lunar Orbit (LLO) (Pozzi et al., 2024). Until 2024, there have not been any lunar space tourists yet (Griko et al., 2024). Future plans for lunar space tourists include trips around the Moon. Furthermore, in the future there will be multiplanetary space tourism which is referring to humans going to other planets for recreational purposes, for example, flying to Mars (Di Tullio et al., 2024).

All in all, in the past the space industry was led by government-owned space agencies (Lieberman et al., 2023). The most significant space agencies nowadays are National Aeronautics and Space Administration (NASA), the Russian Federal Space Agency (Roscosmos), the European Space Agency (ESA), the Chinese National Space Administration (CNSA), the Canadian Space Agency (CSA) and the Japan Aerospace Exploration Agency (JAXA) (Tiburzi, 2024). Also, the United Arabic States and India are emerging as space faring nations (Rubin, 2024).

In the past the US government did not allow commercial space activities, which changed in 2019 due to the NASA Authorization Act (Sherborne, 2022). Since then, it has been possible for space tourists to travel with the Americans as well as with the Russians. In 2021 the space race between private companies occurred which involved companies like Virgin Galactic, SpaceX and Blue Origin (Mukherjee & Jain, 2021). One of the discussions that was raised during this time was the height that space tourists must reach to be considered an astronaut or even space tourist (May, 2021). The International Federation of Aeronautics defines the Kármán line which lays at approximately 100 kilometres (Lamy & Saint-Martin, 2024) for measuring the height that tourists must reach to be called space tourists.

Altogether, space tourism is gaining in popularity (de Zwart & Lisk, 2024) but is still in the phase of pioneering when looking at Butler's life cycle *Figure 1* (Butler, 2006; Cole, 2015). With the rising number of launches, the possibilities for space tourists to fly into space for recreational purposes are increasing. As the number of launches rises (Olya & Han, 2023), the demand for space tourism will rise as well. Building rockets that can land back on Earth and be repaired for further missions would reduce the cost of rocket launching lowering the barrier for space travel and making it accessible to a larger group of tourists (Watson, 2024)

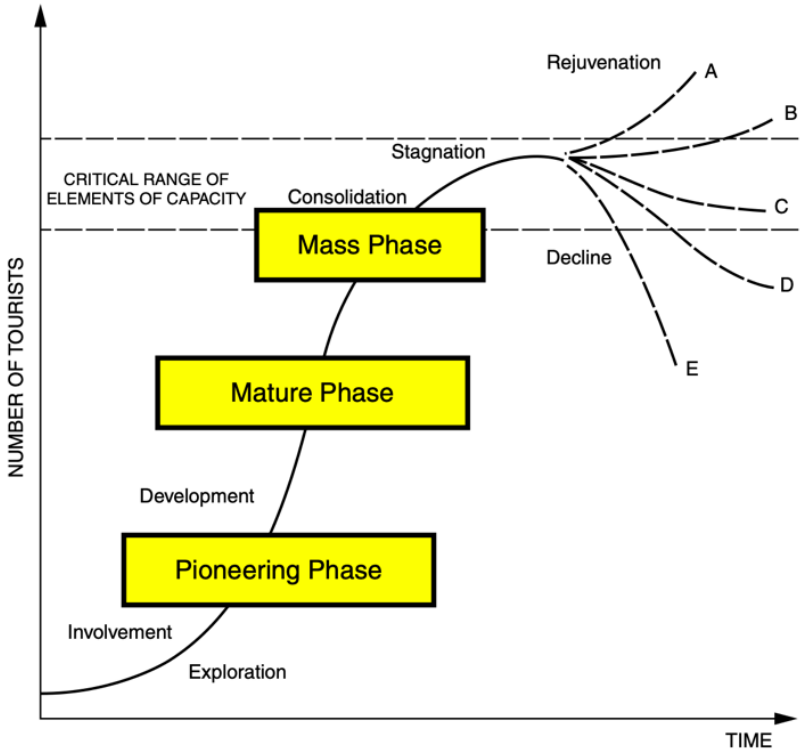

Figure 1: Space Tourism life cycle
Source: Taken out of Cole (2015)

Before the concepts of regional and country branding (Papp-Váry, 2018) can be described, it is necessary to explain the most commonly used phrases for this article. Starting with the definition of a brand: A brand is defined as any distinctive feature like a name, term, design or symbol that identifies specific goods or services (Batey, 2008). For example, the Virgin Group by Sir Richard Branson is a brand with Virgin Galactic being a sub brand of the Virgin brand (Grant, 2008). Furthermore, a brand is a "person's gut feeling about a product, service, or company" (Neumeier, 2005) and can also be a person or a group of people (Meyers, 2024).

Next the term brand marketing describes the approach used by companies to promote and establish their brand in a market by creating a unique identity, value and perceptions to differentiate their brand from competitors in the market (Andersson et al., 2019). A problem that occurs is that the term branding is often mixed up with the term marketing. Branding however means the improving of the overall image or reputation of a brand. Marketing however is described as selling the products, services, resources and attractions of a brand more efficiently (Andersson et al., 2019). The term brand image refers to the perceptions of a consumer (Nandan, 2005).

Lastly the term country branding can be used simultaneously to the term nation branding (Papp-Váry, 2019a). Country branding describes the use of branding for nations to enhance their reputation and ultimately attract more tourists and investors with the goal to enhance their cash flow and competitiveness (Papp-Váry, 2019b). Regional branding however refers to the branding of a region. An example for regional branding is the branding of different scales of regions like e.g. regions that are smaller or larger than a country. Regarding space tourism a famous branding region would be Florida as a region of the United States being popular for hosting a lot of space tourism activities. Furthermore, an example that would present regions larger than a country could e.g. be the European Unions as a collective of countries pursuing space tourism activities or the Visegrad countries, including Poland, Slovakia, Czech Republic and Hungary.

3.2. Regional and Country Branding in Space Tourism

The following two research questions supporting this article are: What can country/regional branding look like in orbital space tourism? Which nations are already practicing country branding in space tourism? Answering the first research question, regional branding in space tourism is especially visible in areas surrounding launch sides. Regarding human space flight *Table 1* gives an overview on the different launch sides which are currently used or in development for future human space flight missions.

Table 1: Regional branding launch sides in human space flight

Launch Side	Location	Launched Missions
Kennedy Space Centre (Schmalzer et al., 2001)	Merritt Island, Florida, USA	Apollo missions, Space Shuttle program, SpaceX Crew Dragon missions
Cape Canaveral Space Launch Complex (Kuba, 2024)	Cape Canaveral, Florida, USA	Boing Starliner missions
Spaceport America (Alkhaleefah & Marais, 2024)	New Mexico, USA	Suborbital human spaceflights by Virgin Galactic
Blue Origin's Launch Site One (Bezos & Isaacson, 2020)	West Texas, USA	Suborbital human spaceflights with New Shepard spacecraft
Baikonur Cosmodrome (Tiberghien et al., 2023)	Baikonur, Kazakhstan	First human space flight Yuri Gagarin, All Russian missions e.g. Soyuz
Vostochny Cosmodrome (Valeryevna et al., 2021)	Amur Oblast, Russia	For future Russian human space flight missions
Jiuquan Launch Centre (Tu, 2022)	Jiuquan, Inner Mongolia, China	Tiangong space station operations, Shenzhou crew missions
Wenchang Space Launch Site (Zhong et al., 2023)	Hainan Island, China	Crew missions
Guiana Space Centre (Bonnal et al., 2021)	Kourou, French Guiana	For future for European space flight missions
Satish Dhawan Space Centre (Radhakrishnan, 2020)	Sriharikota, Andhra Pradesh, India	For future Indian human space flight missions
Tanegashima Space Centre (Tashiro et al., 2024)	Tanegashima Island, Japan	For future Japanese human space flight missions
Australia's Arnhem Space Centre (ATF Press, 2021)	Nhulunbuy, Northern Territory, Australia	For future Australian human space flight missions
Canada's Spaceport Nova Scotia (Kerkonian, 2021)	Canso, District of Guysborough Canada	For future Canadian human space flight missions
Everdome International Spaceport (Lehmann et al., 2021)	Hatta, United Arabic Emirates	For future Arabic human space flight missions

Source: Own illustration

This list includes future facilities as well as launch locations from the past and the present. Depending on private sector participation as well as nations participation, certain launch sites are used more frequently than others (Groesbeck, 2021) and are therefore also more popular.

As the space market is expected to have a positive future regional branding within the areas of the launch sides it gains in significance. By 2030, the market is expected to reach a value of almost $1.1 trillion (Tiburzi, 2024). This offers a chance for launch sides to expand their touristic outreach and branding their region even further. An example of a famous space launch side which is already using regional branding is the Kennedy Space Centre in Florida which also provides leisure activities for tourists in their attached visitor centre..

Answering the research question "Which nations are already practicing country branding in space tourism?" the answer can be found by looking at the countries represented in the most popular human space flight conferences around the world which are the International Astronautical Conference (IAC) (IAC2024.org, 2024) and the Global Space Exploration Conference (GLEX). In 2024 all of the following selection of countries represented themselves during the International Astronautic Congress in Milan as exhibitors: the United States, the United Kingdom, Italy, France, China, India, Hungary, Austria, Japan, South Korea, Canada, Spain, Australia, the United Arabic Emirates, Israel, Bulgaria, Azerbaijan, and Germany, reflecting a total global participation from over 96 nations (IAC2024.org, 2024). Because of this it is clearly visible that countries around the world are already enhancing country branding into their space industry strategies. It is also visible that countries are already using dual branding in space tourism. In addition differentiating of their space tourism product or company by means of creating a distinctive identity and values (e.g. Blue Origins use of propulsion systems (Watson, 2024)), dual branding in space tourism also serves the twin purpose of creating emotional connections with the future tourists which in turn will promote trust in the space tourism nation or company (Ronzoni et al., 2018). Further research in this area would be desirable.

4. Results

This article gave an overview on the field of space tourism by e.g. explaining different types of tourism to be able to locate space tourism within the context of regional and country branding. Therefore, different terms have been defined like brand, branding and marketing. After that the concepts of country and regional branding have been used to answer the two research questions "What can country/regional branding look like in orbital space tourism? And Which nations are already practicing country branding in space tourism?". For that reason, a table of launch sides around the world has been provided. To answer the second research, question the exhibitors of the International Astronautical Conference IAC in Milan have been analysed. In total regional branding as well as country branding can be found to a small extend in the space tourism industry today.

5. Conclusion

In summary, it can be stated that the use of country and regional branding in orbital space tourism is already existent but to a limited extent. In the future the dual role of branding will grow in significance regarding space tourism companies and countries around the world because the number of space tourists is also rising. In 2024 earth-bound, suborbital and orbital space tourism are already established, making it obvious that there will likely be some kind of lunar or multiplanetary tourism as Elon Musk has proposed his vision of settling humans on Mars (Musk, 2017).

Limitations of this article include that is only based on secondary research. In the future a primary data collection for the topic would be desirable and helpful. Furthermore, only the platforms Google Scholar and Web of Science have been researched for this article making it necessary to expand data bases for researchers in the future. All in all, further research in this

area will be necessary regarding country and regional branding for space tourism nations as well as for space tourism companies.

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