

Space Tourism: The Future Tourism

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ABSTRACT

The discovering nature of human is the pillar of the Tourism industry, and since the world is diversified with culture and natural beauty, it is supplying the nourishment to this Industry. With the exploratory nature of the man, earth became small for the tourism. Space tourism is the new wave of tourism which provides an opportunity to humankind to experience the unknown, for which men had fascination from their childhood. Present paper not only describes the space tourism, its historical perspective but it gives focus to consumer preference and the strategies to attract new customers and make the space tourism more viable.

Space Tourism: The Future Tourism

Travel from the ancient time has held a fascination for mankind. The urge to explore new places and seek a change of environment is not new. With the rapid advancement of technology, the quest to discover something new has converted into the quest to discover something distinct. The discovering nature of human is the pillar of the Tourism industry, and since the world is diversified with culture and natural beauty, it is supplying the nourishment to this Industry. With the exploratory nature of the man, earth became small for the tourism. Space tourism is the new wave of tourism which provides an opportunity to humankind to experience the unknown, for which men had fascination from their childhood. In April of 2001, Dennis Tito has opened a new door for the space tourism by becoming the first space tourist. Recent studies by NASA and many other organizations have shown that there are sizable markets for space tourism, both suborbital and orbital, and that the markets will grow rapidly as the cost of sending a person into space drops from current levels.

A recent poll in Japan showed that 80% of the population under the age of 40 would like to take a trip into space and other studies for western societies have shown

that at least 6 out of ten people would like to have the opportunity to take a flight into space. This percentage of western civilization accounts for a huge number of people and therefore a great deal of money that could be put into the space industry if the opportunity arises. This money in turn could be used for the scientific and technical exploration, which at present is totally government funded. For example the first space tourist supplied the Russian space program with £16 million, 15% of the yearly budget for Russia's space program hence having more tourists could significantly help fund the scientific space programs.

SPACE TOURISM

Space travel is technically defined as a voyage outside of Earth's atmosphere. In the past, out-of-this-world excursions were limited to research purposes - despite 'loose budget procedures', no government will give someone 5 billion dollars for a joy ride in space.

HISTORY OF SPACE TOURISM

Human Spaceflight initially started on 12 April 1961 when Vostok1 sent the Russian Yuri Gagarin into orbit for 108 minutes in space. Project Mercury sent the first American, Alan Shepard, Jr, into space on the May 5 of the same year. Some month later on 21 July 1969 a Lunar Module camera provided live television coverage to the rest of the world of Neil Armstrong setting foot on the lunar surface. Forty-seven pounds of lunar surface material were collected, to be returned to Earth for analysis. The surface exploration was concluded in 2½ hours, when the crew reentered the lunar module. All the successes of the manned spaceflights people began to forget about dangers involved in human spaceflight and became curious for the space tourism. Although the accidents of Apollo13 and Columbia, raised serious questions about the future of any manned missions and their safety.

Against all odds, Dennis Tito became the first space tourist In April 2001, spending more than a week watching the Earth pass below him while living aboard the International Space Station. Floating in zero gravity, listening to opera. He was followed in 2002 by South African computer millionaire Mark Shuttleworth. Mark Richard

Shuttleworth is a South African entrepreneur. As an early space tourist, he was the first African national in space.

A new History was written in Space Tourism, when Fourth space tourist Anousheh Ansari entered in space and become first female space tourist. She was followed by U.S. scientist and entrepreneur Gregory Olsen. On Sept. 18, 2006 she blasted off for an eight-day expedition aboard the International Space Station. Anousheh earned a place in history as the fourth private explorer to visit space, and the first astronaut of Iranian descent.

PHASES OF SPACE TOURISM

Like any other business, as space tourism has started now it will develop progressively. It can be helpful to think of it as going through several phases. Starting with a relatively small-scale and relatively high priced "pioneering phase", the scale of activity will grow and prices will fall as it matures. Finally it will become a mass-market business, like aviation today.

Pioneering Phase

The phrase "space adventure travel" has been suggested by Gordon Woodcock of Boeing, and is a convenient one to describe the first phase. Customers will be relatively few and prices will be high, Rs. 46, 00, 000 and up; and the service will be nearer to "adventure travel" than to luxury hotel-style. Orbital accommodation will be safe. Space tourism industry is actually at this stage now.

Mature Phase

This will see demand growing from few passengers per year to thousands per year. Tickets to orbit will cost less and flights will depart from many different airports. Orbital facilities will grow from being just clusters of pre-fabricated modules to large structures constructed in orbit for hundreds of guests, permitting a range of orbital entertainments.

Mass Phase

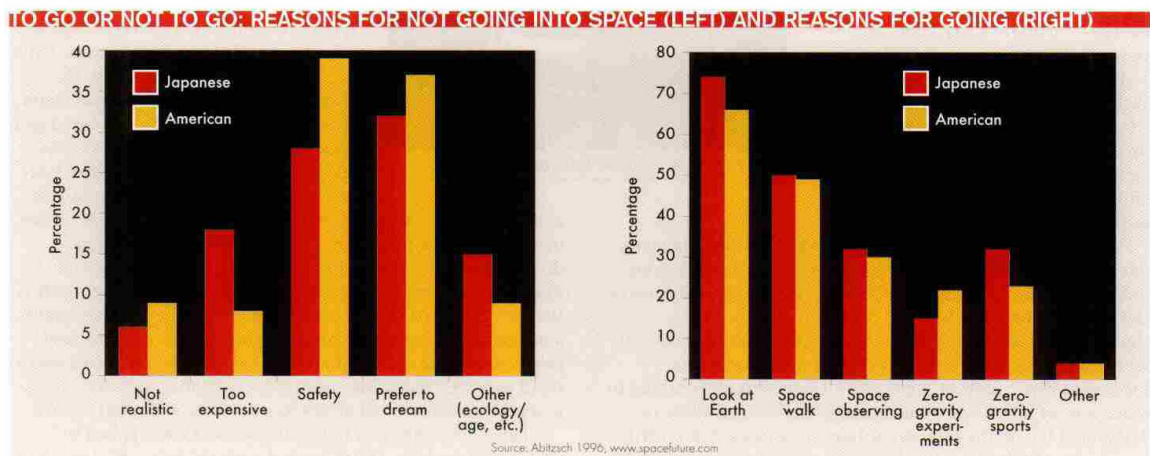
Ticket prices will fall to the equivalent of a few lakhs of rupees, and customers will range from thousands to lakhs of passengers per year. Apparently unthinkable to most people in the space industry, even 1 million passengers per year is just 8 hours of aviation. And aviation is still growing fast at today's level of 1 billion passengers per year. So there's no reason to suppose that space travel will ever stop growing. There's certainly no limit to the possible destinations. And the access to space resources that low cost launch will bring about will ensure that economic growth needn't end for a few more decades at least.

MASS VERSUS INDIVIDUAL SPACE TOURISM

Individual Space Tourism	Mass Space Tourism
<ul style="list-style-type: none"> - A few tourists per year. - Prices would stay high due to low launch frequency. - Mostly Expendable Launch Vehicles - Good advertising for space tourism 	<ul style="list-style-type: none"> - Thousands of tourists per year. - Potential for low prices due to high launch frequency. - Mostly Reusable Launch Vehicles - High program investment costs.

REASONS TO GO OR NOT TO GO TO SPACE

There was a study done to know the motivators for going or discouraging travelers to visit space in America and Japan. The comparison was as follows. If we study the reasons then we may conclude that the reason for going to space is nearly the same in the case of Japanese and American, whereas the reasons for not going to space vary. For Americans the most important reason is safety and expense is having very less consideration for them, whereas Japanese prefer to dream more and than they consider safety as an important reason, they also consider price heavily for these travels.



MARKETING MIX FOR SPACE TOURISM

The combination of sub-mixes chosen by a firm is usually called the marketing mix. The Tourist marketing mix includes different types of submixes like product, price, place promotion, people, process and physical evidence mix. The designing of sub-mixes is significant as it helps the marketer in conceiving the right ideas, particularly to raise the acceptability of the tourist product by stimulating and penetrating the demand. Framing of a proper marketing mix is significant because it helps the tourist organization in accomplishing the objective and projecting a fair image.

PRODUCT AND PRICE MIX

The product here is the space tour package which includes training program, actual space trip, accommodation during the trip and during the training program since the program's can stretch from two days to up to six months depending upon the package, and all meals during the trip and the training program. The package also includes personalized space suit which a tourist can keep for himself after the space trip, status in space club and status as an astronaut. The various products and the cost associated with it are given below.

Lunar tourism : This is an unique opportunity for an individual to travel to moon. The services is being provided by Space Adventure and Constellations services. Two tourists can be sent on modified Soyuz spacecraft. The cost will be in the range of \$100M

Orbital Tourism: Seven tourists so far have ridden Soyuz spacecraft to the International Space Station for one week stays and many more are still waiting to go. Bigelow Aerospace is building a new generation of space habitats based on light-weight, high-volume inflatable designs. They are intended to serve as both scientific stations and space tourist destinations within the next decade. The cost will be in the range of \$30M

Suborbital Tourism : As the cost of orbital tourism is extremely high, the next best option is to take a brief trip into space on a suborbital rocket vehicle. Though such rides would be relatively short, 15-30 minutes for the rocket powered segment and reentry; riders would nevertheless enjoy one of the most amazing and thrilling

experiences of their lives. The visitors would experience a few minutes of weightlessness, look down on a clear view of the curvature of the earth, and see bright stars in a black canopy above. One would also get the accelerating thrill of riding a rocket. There are three companies which are expected to begin selling rides on spaceships that will fly the X PRIZE style trajectory to 100 km or higher. Ticket prices are in the \$100k to \$200k range.

High Attitude Jet Flights : The tourist can travel in MIG 25 to 36 km. The cost is \$24 k

Weightlessness on aircraft flying parabolic trajectories. Weightless periods last for 25 - 30 seconds. The cost in the US are currently \$3750.

The space tourism service providers can come with the new products, the product can be in form of attraction, accessibility as well as facilities. In near future the visit to the Moon, the Mars and beyond can be included in tourist destination. The concept of Space Hotel can also be an area where work can be done. Space tourism can also provide an opportunity to celebrate marriages and parties.

PLACE MIX

Space tourism provides an opportunity for the traveler to visit out of the world that is the orbit of the earth. Depending upon the package the tourist is taken to the altitude of 100 Km or 400 Km. Since there is no choice of selection of place the orbit or sub- orbit is the only choice a tourist has.

In case of sub orbital space flight the tourist spends five minute in space during which he experiences weightlessness. During the trip all time he is in the jet plane only which climbs up to the maximum height of 100 km.

The experience of orbital flight is different from that of the sub orbital space flight. Here the place he visits is the International Space Station (ISS) which is a kind of achievement for a tourist. He spends entire 8 days on the ISS which is situated at the altitude of 400 km. above earth's surface.

PEOPLE MIX

Like other services Industry, Space tourism also is very much dependent on people who provide the service. The people involved here in providing these kinds of services are highly qualified, most of them having a degree in engineering or aeronautical science.

The tourist normally encounters interaction with the people of the space line at three times in the entire package. First while seeking the information on the tour and while booking the ticket a lot of interaction is done between both the parties. Second time is during the training program which last for two days or six months depending upon the package. And third time is during the flight with the pilot.

PHYSICAL EVIDENCE MIX

Tourism Product by itself is intangible in nature therefore some tangible elements are added to enhance the experience of the trip. The physical evidence in Case of a space tour include state of the art technological equipment used for training the tourist, CD/DVD's of photos and Video taken during the trip, Status in space club as astronaut, personalized space suite, personalized travel bag etc.

PROCESS MIX

The process for space tourism is complex in nature, It involves all the activities starting from the filling the application form for space tour till return from the space. It includes the activities like medical checkup, training for space tour, safety training, space tour etc.

There should be some more steps taken to make these processes easy and make the space tourism reality for mass market.

PROMOTION MIX

Anything which is done to create awareness and and direct an individual for a desired action can be included in promotion mix. Normally companies promote their products by giving advertisements in Newspaper, Television or put up hoardings. But in case of promoting space trip those methods will not be viable options as normal public cannot afford space tourism, so it is important to find out niche for space tourism and focus all

marketing strategies to those identified group only. Here the company must tie up with those companies which have rich clientele; in those rich people company must concentrate only those wealthy people who wish to spend more on adventure.

The promotion can be of any of the discussed space product depending upon the willingness, ability and desire to pay for the above mentioned services.

CONCLUSION

The future of Space Tourism is a bright and excitingly realistic one. The technology to achieve commercial space flights is mostly already in existence, although in some aspects advances will have to be made. Essentially, it is only the initial funding that is hindering the industry.

In conclusion, looking into the past we can see that man has achieved many great things in space – ranging from visiting the moon to people living in an orbital station for over a year. The future of manned spaceflight look no less exciting: members of the public will be able to take the place of highly trained specialists as the dangers of living in space are reduced, the fitness requirements for spaceflight will be lowered due to our use of new launch technologies meaning that spaceflight will no longer be the domain of fighter pilots with exemplary medical records. The increasing level of familiarity with spaceflight activities coupled with new technologies will also help lower the cost and risk of reaching orbit, perhaps to as little as \$100000 within the next decade or so. This will bring spaceflight into the reach of a much greater audience than the current millionaire target customer. As more and more people become able to venture into space the cost will continue to fall until it is well within reach of the average man here on Earth, and by that time we may even be sending the more adventurous tourists to the moon for week long vacations.

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