# A case study on strategic positioning of Vistara: Analysis and forecasting way ahead

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**ABSTRACT:** With Indian Airline industry vying for rejuvenation in terms of comprehensive inclusion of passengers, there exists strong need of full-service carrier in Indian aviation scenario in 2014. The poor show of Public sector air carrier Air India, record multimillion loss of low cost carrier Spice Jet and recent failure of premium service carrier KingFisher Airlines have demonstrated inefficiencies of operations. This calls for a better positioning of airline brand with long term strategy. This study focuses on strategic positioning of Vistara, a joint venture between Tata Sons Ltd and Singapore Airlines in light of aviation industry scenario in India in 2014 and suggesting optimum strategies for next 5 years. This case study tries to answer following problem questions

Question 1: Briefly describe the trends in the Indian airline industry.

Question 2: What is the business level strategy adopted by Vistara Airlines?

Question 3: How can Vistara Airlines achieve competitiveness and what is its USP?

Question 4: Identify the ways Vistara Airlines can sustain its competitiveness through the business level strategy that is adopted and suggest the new strategies for next 5 years

# I. INTRODUCTION

The Indian civil aviation industry is on a high growth trajectory. India has a vision of becoming the third largest aviation market by 2020 and is expected to be the largest by 2030.

The civil aviation industry in India has ushered in a new era of expansion driven by factors such as low-cost carriers (LCC), modern airports, foreign direct investments (FDI) in domestic airlines, cutting edge information technology (IT) interventions and a growing emphasis on regional connectivity. Simply going by the market size, the Indian civil aviation industry is amongst the top 10 in the world with a size of around US\$ 16 billion<sup>[1]</sup>.

In India, air traffic in terms of aircraft movement and passenger traffic has increased during the last three years. The total aircraft movements and passengers have registered a compound annual growth rate (CAGR) of 3.3 per cent and 5.6 per cent respectively during FY11 to FY14. In the April-May period of the current financial year, aircraft movements and passengers have increased by 5 per cent each over traffic handled during the corresponding period of FY14. The freight traffic during April-May, FY15, also grew by 9.9 per cent over traffic handled during the same period of the last fiscal.

The Government of India has played a key role in promoting the Indian aviation sector. The Government of India has approved the construction of five budget airports to improve regional connectivity and work on them will start from FY15. With such a promising business environment and large customer base, the aviation industry in India proposes promising environment to entrepreneurs. "Aviation has always beckoned adventurers and entrepreneurs," says G.R. Gopinath, who founded India's first low fare airline Air Deccan, which started off by selling air tickets at Rs. 1. Whereas the industry outlook seems promising, the aviation industry players have not earned remarkable profits in last decade, not only that a few industry players became defunct incurred losses and got cash trapped. Yet, the aviation GOLD rush comes at a time when the combined losses of existing airlines in India are expected to touch \$1.4 billion in the current fiscal year, according to a June report by consultancy firm Centre for Asia Pacific Aviation (Capa). Combined losses for Indian airlines were \$1.77 billion in the last fiscal year, while accumulated losses of the last seven years have reached \$10.6 billion, as per Capa report <sup>[2]</sup>.

If we look at current aviation industry players in India, they have not performed well except IndiGo. Kingfisher Airlines was grounded in October 2012 and its operating licence was suspended by the regulator following a strike by the airline's employees who hadn't been paid for months. In 2012, Paramount Airways Pvt. Ltd suspended operations after the aviation regulator cancelled its operating licence when it fell short of the minimum requirement of five aircraft that airlines need to possess. And at least six private airlines, Damania Airways, Skyline NEPC, Modiluft, East West, Gujarat Airways and Span Air that started operations after 1992 when the airline business was opened up to private companies, closed shop in the first five years of that brave

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new world <sup>[2]</sup>. This certainly calls for analysis of positioning of airlines which are about to foray in promising aviation industry of India.

## **II. TRENDS IN INDIAN AIRLINE INDUSTRY:**

India's aviation sector has been going through rough skies. The last few years had the biggest names bleeding in the airline space in India. The problem lies in luring the customers. According to a rough estimate, nearly 99.5 percent of the world's **third largest economy have** NOT seen the insides of an aircraft. Most Indian carriers therefore are facing financial ruin and are hoping for a white knight to bail them out. This indicates that the revenue source of most passenger airline companies is not expanded yet. Some recent initiatives such as allowing import of ATF are a step in the right direction, but more proactive measures are needed in order to make the industry more competitive and investor friendly. The positive implications of allowing 49% FDI in Indian airlines are slowly becoming evident. Removal of the unwritten ban on A380s will help bring down cost of travel and increase tourist arrivals. The 5/20 rule and other regulatory hurdles in approval of new airlines and import of aircrafts need to be abolished at the earliest.

There is a large untapped potential for growth in the Indian aviation industry due to the fact that access to aviation is still a dream for nearly 99.5 percent of its large population, nearly 40 percent of which is the upwardly mobile middle class. It is critical for the industry stakeholders to engage and collaborate with the policy makers to come up with efficient and rational decisions that will shape the future of Indian civil aviation industry. With the right policies and a relentless focus on quality, cost and passenger interest, India would be well placed to achieve its vision of becoming the third largest aviation market by 2020 and the largest by 2030 <sup>[3]</sup>.

#### Passenger traffic growth

In FY 13, Indian aviation industry witnessed a contraction in passenger traffic, due to combination of general slowdown in the economy and high prices of air tickets. The total passenger traffic in FY 2013 was 159 million as compared to 162 million in FY 2012. Despite the contraction in domestic air traffic, international traffic to and from India has been strong, growing at a CAGR of 9 percent between FY 2010 to FY 20137. According to MoCA, overall air traffic is expected to grow at an annual average growth rate of 10.1 percent in this decade. Domestic traffic is expected to grow at 11.4 percent and international traffic is expected to grow at 9.5 percent for the next ten years <sup>[4]</sup>.

#### Increasing share of low cost carriers in the Indian market

The airline landscape in India has transformed radically in recent years. In 2003, there were just 4 carriers – Air India, Indian Airlines, Jet Airways and Air Sahara, all operating full service models. The private carriers in those days were limited to operating domestic routes only. In 2013, there are five airlines namely – Air India, Jet Airways (including Jet Lite), IndiGo, SpiceJet and GoAir. All carriers except GoAir fly on international routes. The most significant development in the Indian domestic market is the growing dominance of the low-cost carrier model, which in FY 2013 accounted for almost 70 percent of the domestic capacity. Some full service carriers plan to shift more seats to their low cost offerings in line with market trends <sup>[4]</sup>. The market share of Indian passenger air line companies is shown in figure 1.

From the information given above, author describes long term growth in Indian aviation industry with emphasis on brand positioning of air carriers to be profitable. What is your thought?

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Figure 1: Market share of key domestic airlines (October 2013)

#### What is business level strategy adopted by Vistara Airlines? Way in for Vistara Airlines:

Vistara, a full-service airline, is a joint venture between Tata Sons Ltd. and Singapore Airlines (SIA). In Vistara, Tata Sons holds 51% stake and Singapore Airlines hold 49% stake. It is one of the new entrants in Indian aviation industry. The airline, which is offering a three seat configuration — economy, premium economy, and business class — hopes to attract passengers with its unique offerings. The airline's premium economy segment, the first of its kind in the country, offers ample of leg space, apart from an upgraded food menu (from the one offered to the economy class passengers). Its plush interiors are relaxing to the eye with dull and bright shades matching in juxtapose to give the fliers a homely atmosphere. The vibrant food menu, which changes every week, is also expected to hit a chord with passengers. The airline will also be hoping that its cabin crew's emphasis to make all passengers comfortable, irrespective of seat configuration, with every passenger being enquired by individually — a common practice among international airline <sup>[5]</sup>.

The airline offers up to seven different categories of seats, starting from economy super saver to business flexi — each with its own set of advantages. For instance, while the flexi option allows passengers to change the date of travel for up to a year, the plain vanilla economy class offers fares that are either lower than or similar to low-cost airlines. The new airline's fares compete with full service, low-cost segments <sup>[6]</sup>.

To analyze business level strategy adopted by Vistara Airlines, author referred to above information and conducted multiple disriminant analysis.

#### Need of Multiple Discriminant Analysis:

The major application of discriminate analysis technique is to be able to distinguish between two or three sets of objects or people, based on the knowledge of some of their characteristics. In this case, author wants to examine four independent variables and on basis of this want to know what is the business level strategy adopted by Vistara Airlines i.e. its brand positioning.

#### **Procedure of Discriminant Analysis:**

The form of the Discriminant function is: Y = a + k1.x1 + k2.x2 + k3.x3Where, Y is a dependent variable. It is a grouping variable, used for classifying into 2 or more groups. x1, x2 and x3 are Independent variables. These are continuous scale variables. k1, k2 and K3 are Unstandardized Discriminant function coefficients.

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Discriminant analysis helps build a discriminate model in the form of a linear equation. The co-efficient of the equation can be used to calculate the Discriminant score(Y), for any new data points that we want to classify into one of the groups. A decision rule is formulated for this process, to determine the cut off score, which is usually the midpoint of the mean Discriminant scores of the groups. Based on the decision rule, we classify a new object into one group or the other<sup>[7]</sup>.

Multiple Disriminant Analysis tries to answer what is the business level strategy i.e. positioning of carrier adopted by Vistara Airlines. The model developed gives answers to following questions.

1) Build a discriminate model to distinguish between full service carrier and low cost carrier

2) Determine the classification accuracy of this discriminant model.

3) State the statistical significance of the discriminant function.

4) Which one of the three causative variables is the best discriminator for classification between low cost carrier and full service carrier

5) Identify a discriminant criterion that would enable the the companies to position the airline into full service carrier or low cost carrier

Variables studied for Multiple Discriminant Analysis

Y= Positioning of carrier

D1= In flight services

D2= Personalized services

D3= Value for money

Variable D1 contains characteristics such as upgraded and changing food menu, ample leg space, Plush interiors and individual assistance as international flight. Variable D2 contains characteristics such as Premium economy class, Flexi options for passengers to change the date of travel up to a year, check-in baggage allowance, priority ground handling and waiver of flight change fees.

## Answer 1

| Canonical Discriminant Function Coefficients |          |  |  |  |  |
|--|----------|--|--|--|--|
|  | Function |  |  |  |  |
|  | 1        |  |  |  |  |
| D1   | .773     |  |  |  |  |
| D2   | 1.343    |  |  |  |  |
| D3   | 624      |  |  |  |  |
| (Constant)                                   | -4.792   |  |  |  |  |

Table 1: Canonical Discriminant Function Coefficients

Referring to table no. 1,

Y = 0.773 (D1) + 1.343 (D2) - 0.624 (D3) - 4.792

This is the model equation of Multiple discriminant analysis.

Answer 2

| Case       | Actu            | Highest Group              |             | þ                        | Second Highest Group |   |               | Discrimi<br>nant<br>Scores |   |                |
|------------|-----------------|----------------------------|-------------|--------------------------|----------------------|---|---------------|----------------------------|---|----------------|
| Num<br>ber | ai<br>Grou<br>P | Pred<br>icted<br>Gro<br>up | P(D):<br>G= | > <b>d</b>  <br>g)<br>df | P(G=g<br>  D=d)      | Squared<br>Mahalanobis<br>Distance to<br>Centroid | G<br>ro<br>up | P(G=<br>g  <br>D=d)        | Squared<br>Mahalanobis<br>Distance to<br>Centroid | Functio<br>n 1 |
| 1          | 1               | 1                          | .841        | 1                        | 1.000                | .040  | 2             | .000                       | 42.016  | 3.141          |
| 2          | 1               | 1                          | .410        | 1                        | 1.000                | .680  | 2             | .000                       | 34.314  | 2.517          |
| 3          | 1               | 1                          | .841        | 1                        | 1.000                | .040  | 2             | .000                       | 42.016  | 3.141          |
| 4          | 1               | 1                          | .841        | 1                        | 1.000                | .040  | 2             | .000                       | 42.016  | 3.141          |
| 5          | 1               | 1                          | .567        | 1                        | 1.000                | .328  | 2             | .000                       | 52.637  | 3.914          |
| 6          | 1               | 1                          | .672        | 1                        | 1.000                | .179  | 2             | .000                       | 50.497  | 3.765          |

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|    |   |   |      |   |       |       | _ |      |        |        |
|----|---|---|------|---|-------|-------|---|------|--------|--------|
| 7  | 1 | 1 | .295 | 1 | 1.000 | 1.098 | 2 | .000 | 59.758 | 4.389  |
| 8  | 1 | 1 | .295 | 1 | 1.000 | 1.098 | 2 | .000 | 59.758 | 4.389  |
| 9  | 1 | 1 | .069 | 1 | 1.000 | 3.316 | 2 | .000 | 72.309 | 5.162  |
| 10 | 1 | 1 | .727 | 1 | 1.000 | .122  | 2 | .000 | 40.107 | 2.992  |
| 11 | 1 | 1 | .295 | 1 | 1.000 | 1.098 | 2 | .000 | 59.758 | 4.389  |
| 12 | 1 | 1 | .841 | 1 | 1.000 | .040  | 2 | .000 | 42.016 | 3.141  |
| 13 | 1 | 1 | .672 | 1 | 1.000 | .179  | 2 | .000 | 50.497 | 3.765  |
| 14 | 1 | 1 | .069 | 1 | 1.000 | 3.316 | 2 | .000 | 72.309 | 5.162  |
| 15 | 1 | 1 | .784 | 1 | 1.000 | .075  | 2 | .000 | 48.403 | 3.616  |
| 16 | 1 | 1 | .295 | 1 | 1.000 | 1.098 | 2 | .000 | 59.758 | 4.389  |
| 17 | 1 | 1 | .123 | 1 | 1.000 | 2.381 | 2 | .000 | 26.414 | 1.798  |
| 18 | 1 | 1 | .884 | 1 | 1.000 | .021  | 2 | .000 | 42.729 | 3.195  |
| 19 | 1 | 1 | .030 | 1 | 1.000 | 4.697 | 2 | .000 | 20.387 | 1.174  |
| 20 | 1 | 1 | .768 | 1 | 1.000 | .087  | 2 | .000 | 40.804 | 3.047  |
| 21 | 1 | 1 | .358 | 1 | 1.000 | .844  | 2 | .000 | 33.219 | 2.422  |
| 22 | 1 | 1 | .441 | 1 | 1.000 | .593  | 2 | .000 | 34.958 | 2.571  |
| 23 | 1 | 1 | .091 | 1 | 1.000 | 2.863 | 2 | .000 | 24.905 | 1.649  |
| 24 | 1 | 1 | .286 | 1 | 1.000 | 1.140 | 2 | .000 | 31.524 | 2.273  |
| 25 | 1 | 1 | .295 | 1 | 1.000 | 1.098 | 2 | .000 | 59.758 | 4.389  |
| 26 | 2 | 2 | .665 | 1 | 1.000 | .187  | 1 | .000 | 39.059 | -2.908 |
| 27 | 2 | 2 | .891 | 1 | 1.000 | .019  | 1 | .000 | 46.501 | -3.478 |
| 28 | 2 | 2 | .665 | 1 | 1.000 | .187  | 1 | .000 | 39.059 | -2.908 |
| 29 | 2 | 2 | .734 | 1 | 1.000 | .116  | 1 | .000 | 49.320 | -3.682 |
| 30 | 2 | 2 | .363 | 1 | 1.000 | .828  | 1 | .000 | 57.642 | -4.251 |
| 31 | 2 | 2 | .891 | 1 | 1.000 | .019  | 1 | .000 | 46.501 | -3.478 |
| 32 | 2 | 2 | .524 | 1 | 1.000 | .405  | 1 | .000 | 36.554 | -2.705 |
| 33 | 2 | 2 | .734 | 1 | 1.000 | .116  | 1 | .000 | 49.320 | -3.682 |
| 34 | 2 | 2 | .665 | 1 | 1.000 | .187  | 1 | .000 | 39.059 | -2.908 |
| 35 | 2 | 2 | .316 | 1 | 1.000 | 1.004 | 1 | .000 | 32.266 | -2.339 |
| 36 | 2 | 2 | .819 | 1 | 1.000 | .052  | 1 | .000 | 41.646 | -3.112 |
| 37 | 2 | 2 | .014 | 1 | 1.000 | 6.032 | 1 | .000 | 83.513 | -5.797 |
| 38 | 2 | 2 | .734 | 1 | 1.000 | .116  | 1 | .000 | 49.320 | -3.682 |
| 39 | 2 | 2 | .394 | 1 | 1.000 | .728  | 1 | .000 | 33.980 | -2.488 |
| 40 | 2 | 2 | .775 | 1 | 1.000 | .082  | 1 | .000 | 48.554 | -3.627 |
| 41 | 2 | 2 | .777 | 1 | 1.000 | .081  | 1 | .000 | 40.943 | -3.057 |
| 42 | 2 | 2 | .775 | 1 | 1.000 | .082  | 1 | .000 | 48.554 | -3.627 |
| 43 | 2 | 2 | .104 | 1 | 1.000 | 2.645 | 1 | .000 | 25.564 | -1.715 |
| 44 | 2 | 2 | .290 | 1 | 1.000 | 1.121 | 1 | .000 | 59.926 | -4.400 |
| 45 | 2 | 2 | .291 | 1 | 1.000 | 1.117 | 1 | .000 | 31.646 | -2.284 |
| 46 | 2 | 2 | .394 | 1 | 1.000 | .728  | 1 | .000 | 33.980 | -2.488 |
| L  | I | I | 1    |   | -     |       | 1 | -    |        | 1      |

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| 47 | 2 | 2 | .067 | 1 | 1.000 | 3.356 | 1 | .000 | 72.494 | -5.173 |
|----|---|---|------|---|-------|-------|---|------|--------|--------|
| 48 | 2 | 2 | .290 | 1 | 1.000 | 1.121 | 1 | .000 | 59.926 | -4.400 |
| 49 | 2 | 2 | .291 | 1 | 1.000 | 1.117 | 1 | .000 | 31.646 | -2.284 |
| 50 | 2 | 2 | .777 | 1 | 1.000 | .081  | 1 | .000 | 40.943 | -3.057 |

#### **Table no. 2: Discriminant Scores**

Referring to table no. 2, we observe that there is no mismatch between actual group and predicted group. Hence, the accuracy of the model is 100%

#### Answer 3

This discriminant is dividing the model in two groups. Eigen value is used for 2 group analysis.

| Eigenvalues |            |               |              |                       |  |  |  |  |
|-------------|------------|---------------|--------------|-----------------------|--|--|--|--|
| Function    | Eigenvalue | % of Variance | Cumulative % | Canonical Correlation |  |  |  |  |
| 1           | 11.629     | 100.0         | 100.0        | .960                  |  |  |  |  |
|             |            |               |              |                       |  |  |  |  |

#### Table no. 3: Eigen Values

Referring to table no. 3, the Eigen value is 11.629>1, hence the groups are distinct. i.e. sum of squares among the groups> sum of squares within the groups

#### Wilk's Lambda

| Wilks' Lambda       |               |            |    |      |  |  |  |
|---------------------|---------------|------------|----|------|--|--|--|
| Test of Function(s) | Wilks' Lambda | Chi-square | df | Sig. |  |  |  |
| 1                   | .079          | 117.924    | 3  | .000 |  |  |  |

# Table no. 4: Wilk's Lambda

Referring to table no. 4, Lambda = 0.079 < 0.5

Therefore groups are statistically different from Eigen vale and Wilk's lambda value.

#### Answer 4

| Standardized Canonical Discriminant Function Coefficients |          |  |  |  |  |  |  |
|---|----------|--|--|--|--|--|--|
|   | Function |  |  |  |  |  |  |
|   | 1        |  |  |  |  |  |  |
| D1  | .660     |  |  |  |  |  |  |
| D2  | .854     |  |  |  |  |  |  |
| D3  | 503      |  |  |  |  |  |  |

# Table no. 5:Standardized Canonical Discriminant Function Coefficients

Referring to table no. 5, Y= 0.660 (D1) + 0.854 (D2) - 0.503 (D3)

From above equation, variable D2 i.e. personalized services is the best discriminator.

#### Answer 5

| Functions at Group Centroids |          |  |  |  |  |  |
|------------------------------|----------|--|--|--|--|--|
| ID                           | Function |  |  |  |  |  |
| ID                           | 1        |  |  |  |  |  |
| 1                            | 3.341    |  |  |  |  |  |
| 2                            | -3.341   |  |  |  |  |  |

# Table no. 6: Functions at Group Centroids

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Referring to table no. 6, we get 3.341 as full service carrier and -3.341 as low cost carrier

For future cases, discretion criterion is as follows:

If z > 0 then position the airline to group 1 (Full Service Carrier)

If z < 0 then position the airline to group 2 (Low Cost Carrier)

From above Multiple Disriminant Analysis, the author describes business level strategy adopted by Vistara Airlines is Full service carrier. What is your thought on it?

## How can Vistara Airlines achieve competitiveness and what is its USP?

To answer above question, author conducted factor analysis.

# III. NEED TO USE FACTOR ANALYSIS

To reduce four variables which represent how Vistara Airlines can achieve its competitiveness to two main variables <sup>[8]</sup>. The table given in annexure 2 shows the data pertaining to four variables depicting how Vistara Airlines can achieve its competitiveness. The author wants to reduce these four variables to two variables so that variables determining competitiveness can be properly identified based on responses provided by 120 respondents. Initial variables before factor analysis application to determine how Vistara Airlines can achieve competitiveness:

• Brand image is important while maintaining budget in range (var 1)

• Value for money is important (var 2)

• Overall experience of travelling is important without any glitch (var 3)

• Promotional offers by airline is important (var 4)

Communalities, Total variance explained, Component Matrixa and Rotated Component Matrixa tables are shown in tables 7, 8, 9 and 10 respectively.

<sup>[A]</sup> Rotation converged in 4 iterations.

#### INTERPRETATION Communalities

| Communalities |         |            |  |  |  |  |  |  |
|---------------|---------|------------|--|--|--|--|--|--|
|               | Initial | Extraction |  |  |  |  |  |  |
| var_1         | 1.000   | .998       |  |  |  |  |  |  |
| var_2         | 1.000   | .904       |  |  |  |  |  |  |
| var_3         | 1.000   | .881       |  |  |  |  |  |  |
| var_4         | 1.000   | .998       |  |  |  |  |  |  |
| Tabla N       |         |            |  |  |  |  |  |  |

 Table No. 7: Communalities

The Communalities tell us what proportion of each variable's variance is shared with the factors which have been created. In the Initial column these are based on all four factors (one per variable). Accordingly, the values in this column tell us how much variance each variable shared with all the other variables. The researcher asked SPSS to create only two factors. The communalities in the Extracted column tell us how much variance each variable has in common with the two factors that the author has kept. Item 3 has a relatively low value. If a variable does not share much variance with the other variables or with the retained factors, it is unlikely to be useful in defining a factor.

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|                           | Total Variance Explained |                  |                  |                         |                  |                                   |       |                  |                  |  |  |
|---------------------------|--------------------------|------------------|------------------|-------------------------|------------------|-----------------------------------|-------|------------------|------------------|--|--|
|                           | Total Variance Explained |                  |                  |                         |                  |                                   |       |                  |                  |  |  |
| Compo Initial Eigenvalues |                          |                  | Exti             | action Sums of Loadings | of Squared       | Rotation Sums of Squared Loadings |       |                  |                  |  |  |
| nent                      | Total                    | % of<br>Variance | Cumulativ<br>e % | Total                   | % of<br>Variance | Cumulativ<br>e %                  | Total | % of<br>Variance | Cumulativ<br>e % |  |  |
| 1                         | 3.541                    | 88.515           | 88.515           | 3.541                   | 88.515           | 88.515                            | 1.941 | 48.530           | 48.530           |  |  |
| 2                         | .239                     | 5.983            | 94.499           | 0.239                   | 5.983            | 94.499                            | 1.839 | 45.969           | 94.499           |  |  |
| 3                         | .216                     | 5.397            | 99.896           |                         |                  |                                   |       |                  |                  |  |  |
| 4                         | .004                     | .104             | 100.000          |                         |                  |                                   |       |                  |                  |  |  |

#### **Table no. 8: Total Variance Explained**

The Total Variable Explained table shows us the Eigen values for our factor analysis. SPSS started out by creating factors, each a weighted linear combination of the items. The initial Eigen values tell us, for each of those factors, how much of the variance in the 4 items was captured by that factor. A factor with an Eigen value of 1 has captured as much variance as there is in one variable. The Extraction Sums of Squared Loadings are interpreted in the same way that Eigen values are. Component 1 and 2 together represent 94.499% of variance.

#### **Component Matrix**<sup>a</sup>

| Component Matrix <sup>a</sup> |           |      |  |  |  |  |
|-------------------------------|-----------|------|--|--|--|--|
|                               | Component |      |  |  |  |  |
|                               | 1 2       |      |  |  |  |  |
| var_1                         | .976      | 211  |  |  |  |  |
| var_4                         | 964       | .260 |  |  |  |  |
| var_3                         | .911      | .225 |  |  |  |  |
| var_2                         | .910      | .277 |  |  |  |  |

 Table no. 9: Component Matrix

This table contains component loadings, which are the correlations between the variable and the component. Because these are correlations, possible values range from -1 to +1. From table 19 it can be observed that var 1, var 2 and var 3 have magnitude wise high positive correlation with component 1 compared to var 4. Same way var 2, var 3 and var 4 have magnitude wise low positive correlation with component 2 compared to var 1.

#### **Rotated Component Matrix<sup>a</sup>**

| <b>Rotated Component Matrix</b> <sup>a</sup> |           |      |  |  |  |  |  |
|--|-----------|------|--|--|--|--|--|
|  | Component |      |  |  |  |  |  |
|  | 1 2       |      |  |  |  |  |  |
| var_4  | 874       | 484  |  |  |  |  |  |
| var_1  | .848      | .528 |  |  |  |  |  |
| var_2  | .460      | .832 |  |  |  |  |  |
| var_3  | .498      | .795 |  |  |  |  |  |

#### Table no. 10: Rotated Component Matrix

The Rotated Component Matrix gives the loadings after the rotation. From table no. 20 it can be observed that component 1 is heavily loaded on var 1, var 2 and var 3. So, Creating different brand positioning by imposing image of quasi brand i.e. superior than low cost air line and cost effective than luxury air line become one of the variable in determining how Vistara Airlines can achieve competitiveness. Component 2 is

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heavily loaded on var 2 and var 3. So, Providing personalized customer service become second factor for determining competitiveness.

# IV. RESULT

After factor analysis application the final two variables author suggests are:

• Creating different brand positioning by imposing image of quasi brand i.e. superior than low cost air line and cost effective than luxury air line

Providing personalized customer service

What are your thoughts on it?

Identify the ways Vistara Airlines can sustain its competitiveness through the business level strategy that is adopted and suggest the new strategies for next 5 years

To identify the ways for sustainable competitive advantage author has conducted Multiple Regression Analysis. **Need to use Multiple Regression Analysis:** 

Multiple regression analysis is a powerful technique used for predicting the unknown value of a dependent variable from the known value of two or more independent variables- also called the predictors. Multiple regression analysis can be used to predictively measure response to Online Behavioral Advertisements.

Author wishes to estimate the regression line:  $y = b1 + b2 x^2 + b3 x^3 + b4 x^4$ 

Where responses are derived from last 10 itineraries

y= No of times PEC selection required (also includes self brand proposition)

b1= Intercept

 $x^2$  = No. of times you changed your travel date

x3= No of times you needed check-in baggage allowance

x4= No of times you desired to have priority ground handling

#### **Interpretation of Regression Statistics Table**

| <b>Regression Statistics</b> |              |  |  |  |  |
|------------------------------|--------------|--|--|--|--|
| Multiple R                   | 0.296822723  |  |  |  |  |
| R Square                     | 0.088103729  |  |  |  |  |
| Adjusted R Square            | -0.042167167 |  |  |  |  |
| Standard Error               | 1.670189844  |  |  |  |  |
| Observations                 | 25           |  |  |  |  |

**Table No. 11: Regression Statistics** 

The first indicator of generalizability is the adjusted R Square value, which is adjusted for the number of variables included in the regression equation. For the data we are analyzing,  $R^2 = 0.0881$  and the Adjusted  $R^2 = -0.0421$ . These values are very close, anticipating minimal shrinkage based on this indicator. The adjusted R square is used to estimate the expected shrinkage in  $R^2$  that would not generalize to the population because our solution is over-fitted to the data set by including too many independent variables. If the adjusted  $R^2$  value is much lower than the  $R^2$  value, it is an indication that our regression equation may be over-fitted to the sample, and of limited generalizability.  $R^2 = 0.0881$  means that 8.81% of the variation of yi around  $\tilde{Y}$  (its mean) is explained by the regressors x2i, x3i, and x4i The standard error having value of 1.67 refers to the estimated standard deviation of the error term u.

#### **Interpretation of Anova Table**

| ANOVA      |    |             |             |             |                |  |  |  |
|------------|----|-------------|-------------|-------------|----------------|--|--|--|
|            | df | SS          | MS          | F           | Significance F |  |  |  |
| Regression | 3  | 5.659783558 | 1.886594519 | 0.676311685 | 0.576218461    |  |  |  |
| Residual   | 21 | 58.58021644 | 2.789534116 |             |                |  |  |  |
| Total      | 24 | 64.24       |             |             |                |  |  |  |

## Table No. 12: Anova table

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The ANOVA (analysis of variance) table splits the sum of squares into its components. Regression MS (Mean Square) is 1.8865 and residual MS is 2.7895. Overall F test for Null hypothesis is 0.6763. The column labeled F gives the overall F-test of H0:  $\beta 2 = 0$ ,  $\beta 3=0$ , and  $\beta 4=0$  versus Ha: at least one of  $\beta 2$ ,  $\beta 3$  and  $\beta 4$  is not equal zero. The column labeled significance F has the associated P-value. Since 0.5762 > 0.05, we accept H0 at significance level 0.05.

|           | Coefficients | Standard Error | t Stat      | P-value     | Lower 95% | Upper 95%  |
|-----------|--------------|----------------|-------------|-------------|-----------|------------|
| Intercept | 4.0941712    | 2.093476936    | 1.955680134 | 0.063938314 | -0.259452 | 8.44779485 |
| x1        | 0.0973356    | 0.366294458    | 0.265730506 | 0.793038097 | -0.664415 | 0.85908663 |
| x2        | 0.0240491    | 0.242974527    | 0.09897791  | 0.922094547 | -0.481244 | 0.52934229 |
| x3        | 0.3172584    | 0.227822817    | 1.392566406 | 0.178321482 | -0.156525 | 0.79104188 |

## **Interpretation of Regression Coefficients Table**

#### Table No. 13: Regression Coefficients Table

Let  $\beta j$  denote the population coefficient of the jth regressor (intercept, x2, x3 and x4). Then

Column "Coefficient" gives the least squares estimates of βj.

• Column "Standard error" gives the standard errors (i.e.the estimated standard deviation) of the least squares estimates bj of  $\beta$ j.

• Column "t Stat" gives the computed t-statistic for H0:  $\beta j = 0$  against Ha:  $\beta j \neq 0$ .

This is the coefficient divided by the standard error. It is compared to a t with (n-k) degrees of freedom where here n = 25 and k = 4.

• Column "P-value" gives the p-value for test of H0:  $\beta j = 0$  against Ha:  $\beta j \neq 0$ ..

This equals the  $Pr{|t| > t-Stat}$  where t is a t-distributed random variable with n-k degrees of freedom and t-Stat is the computed value of the t-statistic given in the previous column.

Columns "Lower 95%" and "Upper 95%" values define a 95% confidence interval for  $\beta j$ .

A simple summary of the above output is that the fitted line is

y = 4.094 + 0.097 \* x2 + 0.024 \* x3 + 0.3172 \* x4

Author suggests that brand self brand image is the important factor in determining customer's view on choosing the air line as can be seen in above equation as residual value of almost 4. Hence, author suggests that Vistara Airlines should focus on better positioning as quasi luxury Air line offering full services. What are your thoughts on it?

#### The way ahead in light with current industry scenario:

Author suggests thatValue for money is what Indian consumers want.

Looking at the overall behavior of Indian consumers across sector, one can easily say that value for money is a key focus for them, especially in the service sector. This means that while a segment of consumers often prefer the cheapest option available, there is a huge segment of consumers which weighs what is it that they are getting out of their money. So they may want a specialized service, better seats, meals, lounge access, etc. and they might be inclined to pay premium for it. But the question is how much premium? And do they really see value out of that premium? If the Tata-SIA's Vistara can work that equation well along with the right cost structure, it can make space for itself in this cost driven airline industry<sup>[9]</sup>. What is your thought on it?

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