The Economic Feasibility of a Low Cost Startup Airline

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Introduction:

In past few decades, the most successful and profitable airlines have historically had the lowest cost structure. Recently, ultra-low cost airlines have seen unprecedented growth and expansion. Since 2003, Allegiant Air has seen its Scheduled Revenues grow 32 times, and its profits grow 66 times (compared to 3x for southwest, 3x for EasyJet, 5x for Ryanair). This study examines the economic feasibility of an ultra-low cost startup airline using Monte Carlo simulation and a financial model to determine conditions under which higher profits are generated.

Method:

To complete my research, I looked at the following:

• Evaluated flight operating and labor cost plus an aircraft lease amortization schedule.
• Prepared marginal financial revenues/costs accrued as a result of fleet expansion.
• Considered the GDP change of every state and metropolitan area to obtain the highest mean and standard deviation to model.
• Used load factors and expected revenue to simulate financial statement under different economic conditions.
• Incorporated the simulated projections to create a marginal financial statement in my model to determine the net income.

Results:

Airline load factor frequently fluctuates between 61% and 81% due to the impact of volatile economic conditions on the nature of demand.

• In a recession, the assumption is that load factors in the Monte Carlo simulation exhibit some volatility but at a lower demand level.
• In an economic boom, the assumption is that load factors in the Monte Carlo simulation exhibit volatility at demand levels.
• The periods of normal economic activity are assumed to exhibit intermediate load factors vis-à-vis boom times and recessions.

Conclusion:

• We study the effect of GDP on load factors and expected revenue and found that load factors follow cyclical during recession, normal and economic boom periods leading to a corresponding impact on sales and operating margins for the company.
• The most optimal way to increase profitability is to pick profitable routes to obtain higher load factors that are relatively unaffected by economic cycles and accurate forecast demand.
• Reducing operating/labor costs and increasing revenue from other sources also contribute to greater profitability.

Table 1: Profit/loss during economic cycles

<table>
<thead>
<tr>
<th>Economic Condition</th>
<th>Load Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recession</td>
<td>61%</td>
</tr>
<tr>
<td>Normal</td>
<td>75%</td>
</tr>
<tr>
<td>Boom</td>
<td>81%</td>
</tr>
</tbody>
</table>

Table 2: Elements of Income Statement

<table>
<thead>
<tr>
<th>Category</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>$94,886,600</td>
<td>$94,886,600</td>
<td>$94,886,600</td>
</tr>
<tr>
<td>Operating expenses</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
</tr>
<tr>
<td>Fuel expense</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
</tr>
<tr>
<td>Maintenance labor expense</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
</tr>
<tr>
<td>Total variable cost</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
</tr>
<tr>
<td>Total cost</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
<td>$2,206,300</td>
</tr>
</tbody>
</table>

Figure 1: Profit/Loss of Budget Airline

Figure 2: Load Factor and economic cycles

Figure 3: Expected Revenue

Figure 4: Expected Revenue

References:

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