Project Description

This project aims to understand the relationship between American Airlines Quality Service Index data, market share, and the competitiveness of its fares. The project analyzes these data points to identify how American Airlines can use dynamic pricing strategies to optimize revenue and increase efficiency. The project will examine how AA fares compare to those of its competitors and how these fares change in response to changes in market share. Additionally, the project will look into how we can use QSI data to refine AA's dynamic pricing strategies.

Project Charter

Project purpose

1. The purpose of this study is to determine the optimal relationship in the airline business, such as how performance and share variance amongst airlines.
2. Assessing which techniques are most helpful in enhancing American Airlines' potential future revenue performance.

Objectives:

1. How is the AA's competitiveness outperforming the other Carrie's in its quest for the lowest ticket price?
2. Analyze the connections among market share, QSI, share variation vs. QSI, and competitiveness of selling fares to ascertain how AA's share changes in relation to its selling fares in comparison to rivals.
3. Identify any additional elements that can help to explain the connection between market dominance, QSI, and selling price competitiveness.
4. Provide comments and suggestions for improving future revenue performance, including recommendations for a different course of action in various scenarios.

Project Constraints

1. As considering time factoring, working on this project overall will take around 12-14 weeks, each week we have things to learn and implement on this project.
2. Coming to the resources, we have set up weekly meetings with Nick Wong to stay up to date with the recent data.
3. The skills which we will be using is Data cleaning, data manipulation, data analysis and storytelling (with dataset) using the tools python, excel and tableau
4. We will be using the Operating System - Windows.

Project Scope

• The objective of this project is to analyze the aggregate relationship between American Airlines (AA) performance (market share), Quality Service Indices (QSI), and selling fares to determine what strategies (level of competitiveness) have been successful and unsuccessful. We will assess the data and provide suggestions for increasing future profitability.

• For instance, when is it necessary for AA to be cost-competitive, and when is there potential for higher performance utilizing an alternative approach? What alternate tactics are suggested?

Project Approach

* The plan is to examine the relationships among the variables and use statistical analysis techniques to determine if there is a correlation between AA’s market share and its QSI.
* Technical tools such as Excel, SQL, and Python can be used to manipulate and analyze large datasets. Mathematical models can be used to predict or optimize pricing strategies. Advanced statistical software packages like SAS may help conduct more sophisticated analyses.
* To start problem-solving, we are planning on examining the airline markets of Dallas and Florida (O&D city pairs).