**Documentation for Grill Test Case Study for Lodestone**

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**Prepared for Loadestone**

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**Executive Summary:**

As a part of the case study we had to find out whether Charcoal Grill is better than Propane Grill.

Business Objective:

The Business Objective was to recommend users and manufacturers which type of grill to purchase based on our finidings.

**Case Study Details:**

Sheet Names:

SheetA: GT\_Specifications

SheetB: GT\_Satisfaction\_Data

SheetC: GT\_Taste\_Test\_Data

Problem Statement:

To find out which grill type is better for what kind of grilling and which one is recommended based on the data provided.

Data Description:

grill\_type: The type of grill – Charcoal or Propane.

pre\_heat\_time: The time taken to pre-heat the grill before grilling.

fuel\_cost\_per\_meal: Cost of fuel per meal.

market\_share: The percentage market share.

easiness\_to\_use: A value defining usage of easiness.

life\_span\_year: The lifespan after which the user changed a grill

initial\_investment: The initial investment based for installing each grill.

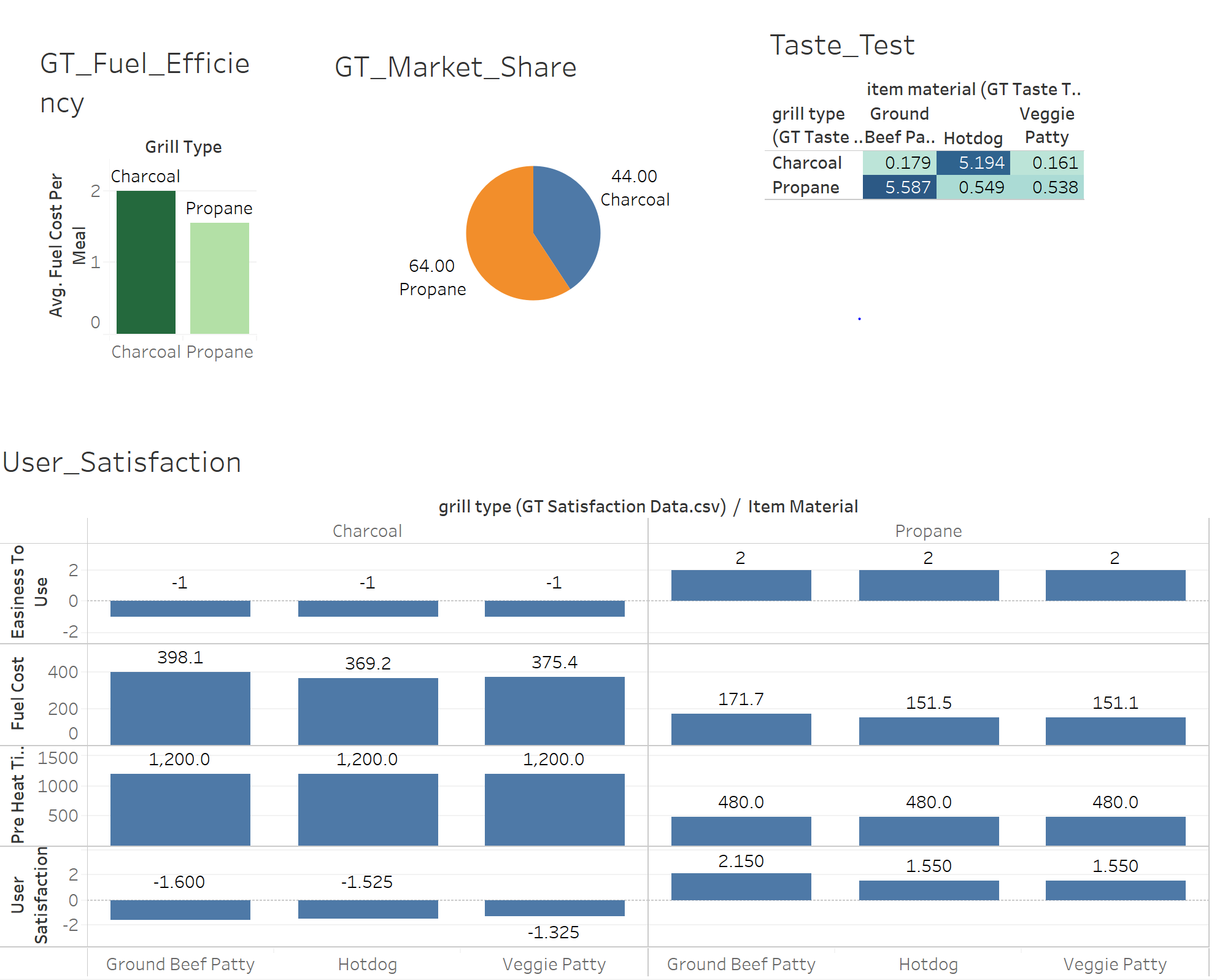
**Excel Calculations:**

Created two tables to calculate cost of fuel on a long run and Total Cost for n years with workbook name – GT\_Fuel\_Cost\_Data and GT\_Total\_Cost respectively.

The calculations give us the following visualizations.

**Tableau Dashboard:**

On tableau I created a dashboard to find all the findings:



**SQL Server Scripts:**

Used SQL Server to aggregate the Data to define conclusions:

Script:

select b.grill\_type, b.pre\_heat\_time, b.fuel\_cost\_per\_meal, b.market\_share, b.easiness\_to\_use, b.life\_span\_year, b.initial\_investment, avg(a.user\_satisfaction) as user\_satisfaction,

avg(a.fuel\_cost) as avg\_fuel\_cost, case when b.grill\_type = 'Charcoal' then b.initial\_investment + 38\*b.fuel\_cost\_per\_meal when b.grill\_type = 'Propane' then b.initial\_investment + 40\*b.fuel\_cost\_per\_meal End as Total\_cost\_for\_3\_years

from [Lodestone].[dbo].[GT\_Satisfaction\_Data] a

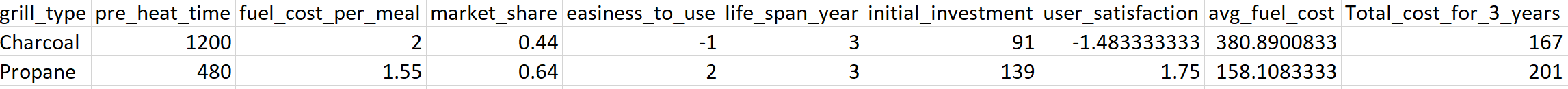
join [Lodestone].[dbo].[GT\_Total\_Cost] b

on a.grill\_type = b.grill\_type

group by b.grill\_type, b.grill\_type, b.pre\_heat\_time, b.fuel\_cost\_per\_meal, b.market\_share, b.easiness\_to\_use, b.life\_span\_year, b.initial\_investment

**Aggregated Data:**

The aggregated data looks like:



**Visualizations:**

The visualizations as in the Tableau file named: GT\_Visualizations.

**Findings:**

We found that there are various factors effecting the grill selection based on Taste, Fuel Cost, Ease of Use, Temperature Control and Pre-Heat Time.

**Conslusion:**

According to our finding we found that users would prefer propane grill than charcoal grill and hence the market share of propane 64% justifies over the 44% of Charcoal grill.