

Project: Analyzing a Market Test

Complete each section. When you are ready, save your file as a PDF document and submit it [here](#).

Step 1: Plan Your Analysis

To perform the correct analysis, you will need to prepare a data set. (500 word limit)

Answer the following questions to help you plan out your analysis:

1. What is the performance metric you'll use to evaluate the results of your test?

Sum of Gross Margin Per store per week will be used as Performance metric to evaluate if the introduction of new product will increase in profit growth

2. What is the test period?

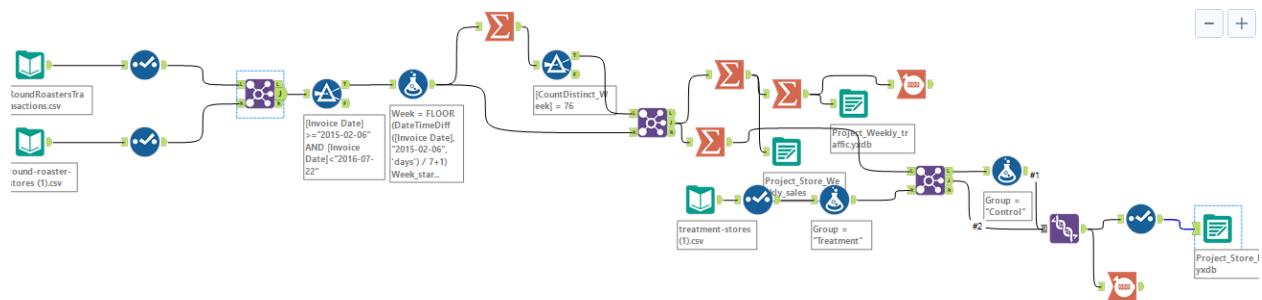
Test period will be from 29-Apr-16 till 21-Jul-16 for a period of 12 weeks

3. At what level (day, week, month, etc.) should the data be aggregated?

All the data should be aggregated to the Weekly Level

Step 2: Clean Up Your Data

- With the help of Select tool data types are corrected from RoundRoasterTransactions and Round Roaster stores file
- Both the files are joined using store id
- Records are filtered for the invoice date [Invoice Date]>="2015-02-06" AND [Invoice Date]<"2016-07-22"
- Variable Week has been calculated using FLOOR function , Week start date and Week end date has been calculated
- Stores are filtered for Distinct Week value = 76(Min 52 Weeks + 12 Weeks to calculate trend + 12 weeks of testing)
- Using Transform tool, records are grouped by Store ID , Invoice number , Invoice date , week , week start date , week end date, Sum of Gross margin ,
- Using transform tool again , records are grouped by Store ID , Invoice number , Invoice date , week , week start date , week end date, Count of Invoice, Sum of Gross margin , Sum of month sales. Store Traffic data is obtained from this.
- Treatment store file – Group field is added to identify treatment store.
- Both the files are union to get the store list.



Step 3: Match Treatment and Control Units

1. What control variables should be considered? Note: Only consider variables in the RoundRoastersStore file.

Avgmonthsales should be considered as constant variable.

2. What is the correlation between your each potential control variable and your performance metric?

From the below Pearson Correlation Analysis, AvgMonthSales has high correlation of 0.99 with the performance metric

Pearson Correlation Analysis

Full Correlation Matrix

	Sum_Sum_Gross.Margin	AvgMonthSales	Sq_Ft
Sum_Sum_Gross.Margin	1.000000	0.990978	-0.024224
AvgMonthSales	0.990978	1.000000	-0.046967
Sq_Ft	-0.024224	-0.046967	1.000000

3. What control variables will you use to match treatment and control stores?

Trend , Seasonality , AvgMonthSales will be used as control variables

4. Please fill out the table below with your treatment and control stores pairs:

Treatment Store	Control Store 1	Control Store 2
1664	7162	8112
1675	1580	1807
1696	1964	1863
1700	2014	1630
1712	8162	7434
2288	9081	2568
2293	12219	9524
2301	3102	9238

2322	2409	3235
2341	12536	2383

Step 4: Analysis and Writeup

1. What is your recommendation - Should the company roll out the updated menu to all stores?

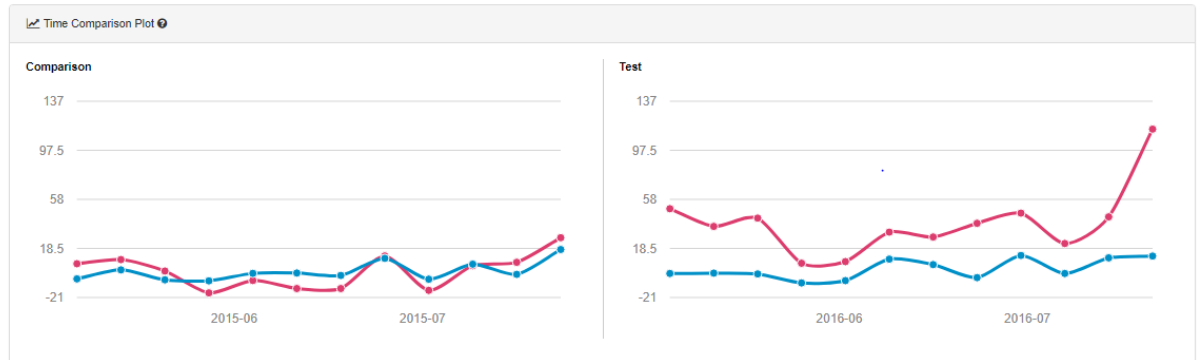
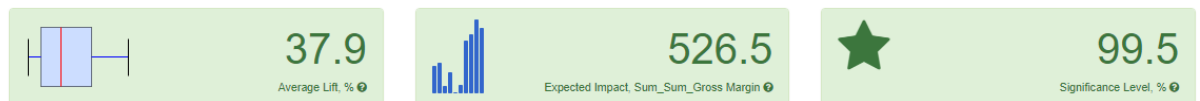
Company should roll out the updated menu as the sum of profit margin got increased more than 18%

2. What is the lift from the new menu for West and Central regions (include statistical significance)?

Lift for the West region is 37.9% and statistical Significance is 99.5%

AB Test Analysis for Sum_Sum_Gross Margin

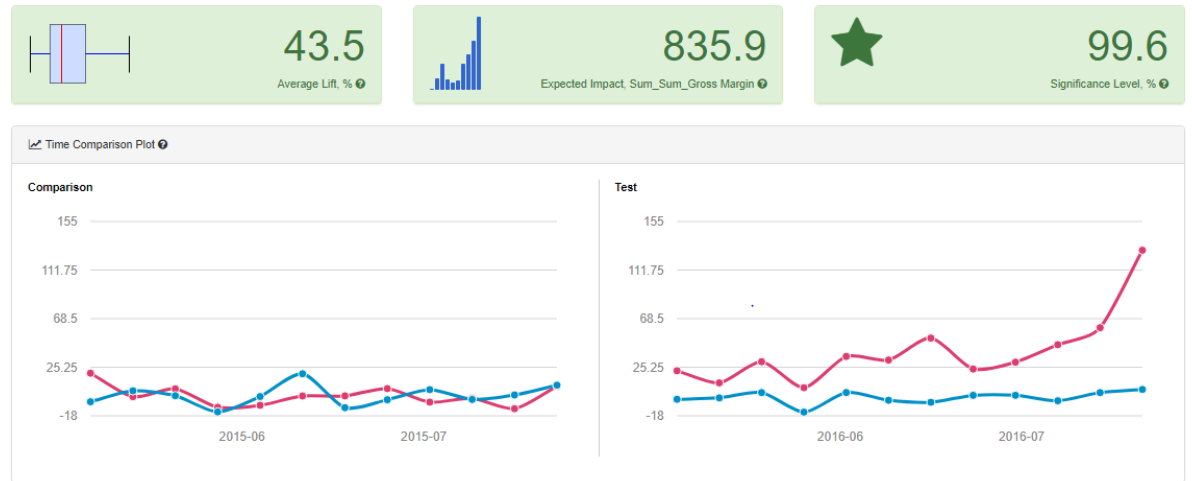
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Lift for Central region is 43.5% and Statistical Significance is 99.6%

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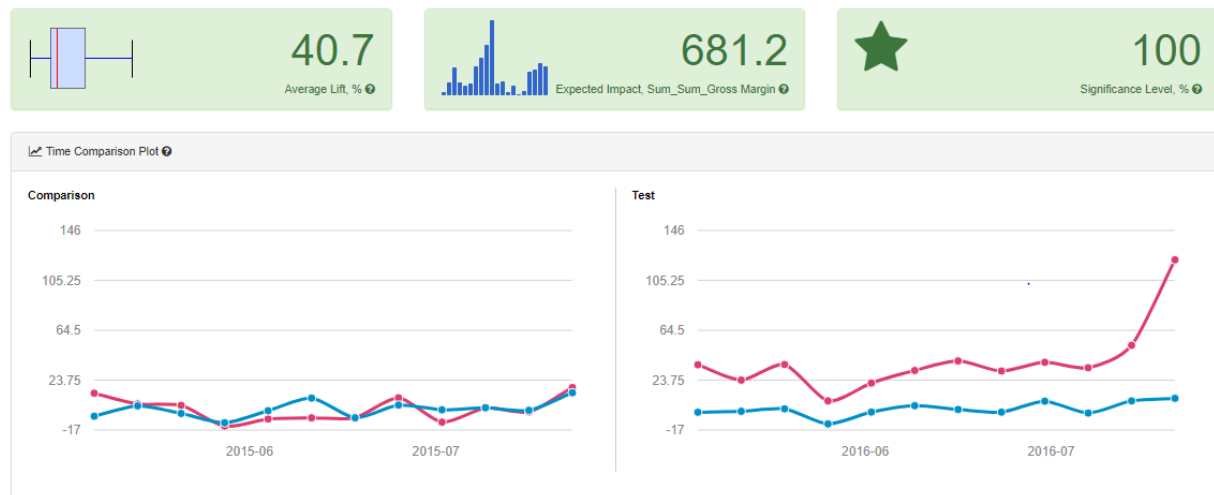


3. What is the lift from the new menu overall?

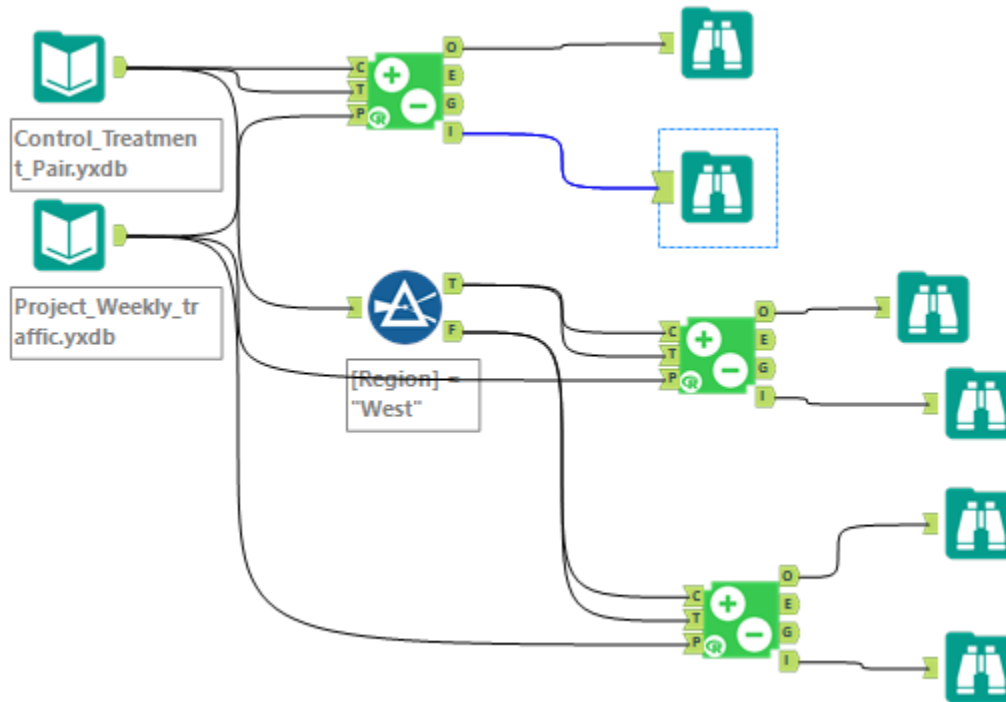
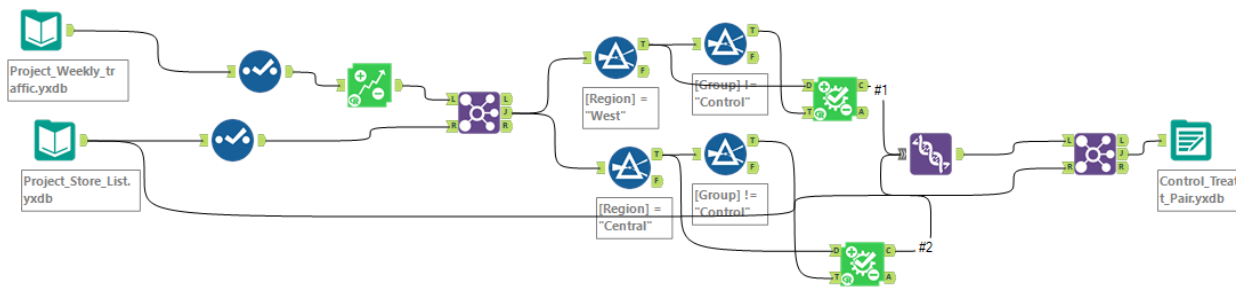
Overall Lift is 40.7% and Statistical Significance of 100%

AB Test Analysis for Sum_Sum_Gross Margin

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Alteryx Workflow



Before you Submit

Please check your answers against the requirements of the project dictated by the [rubric](#) here. Reviewers will use this rubric to grade your project.