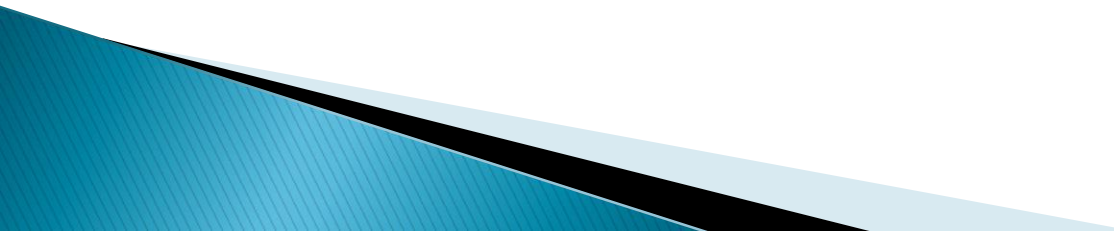


# Marketing and Retail Analytics

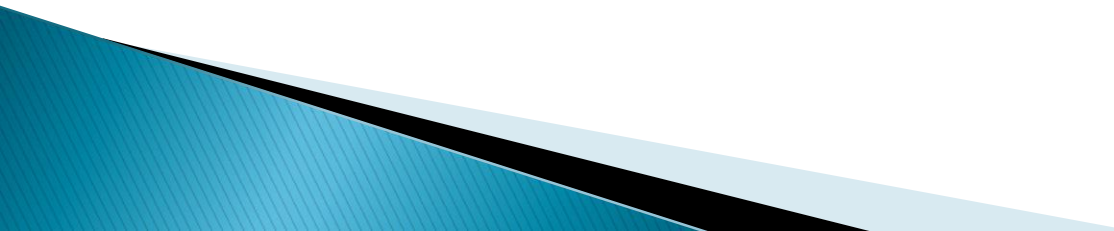
Cafe Chain analysis

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  - ❑ Executive Summary
  - ❑ Exploratory analysis
  - ❑ Menu analysis - Delisting
  - ❑ Combo offer
  - ❑ Recommendation
- 

# Project Objective

The owner of the restaurant wants to use his POS (point of sale) data to come up with a set of recommendations that can help his Café Chain increase their revenues and launch loyalty program for customers. We do not have customer level information and have only POS data for one of the chains.

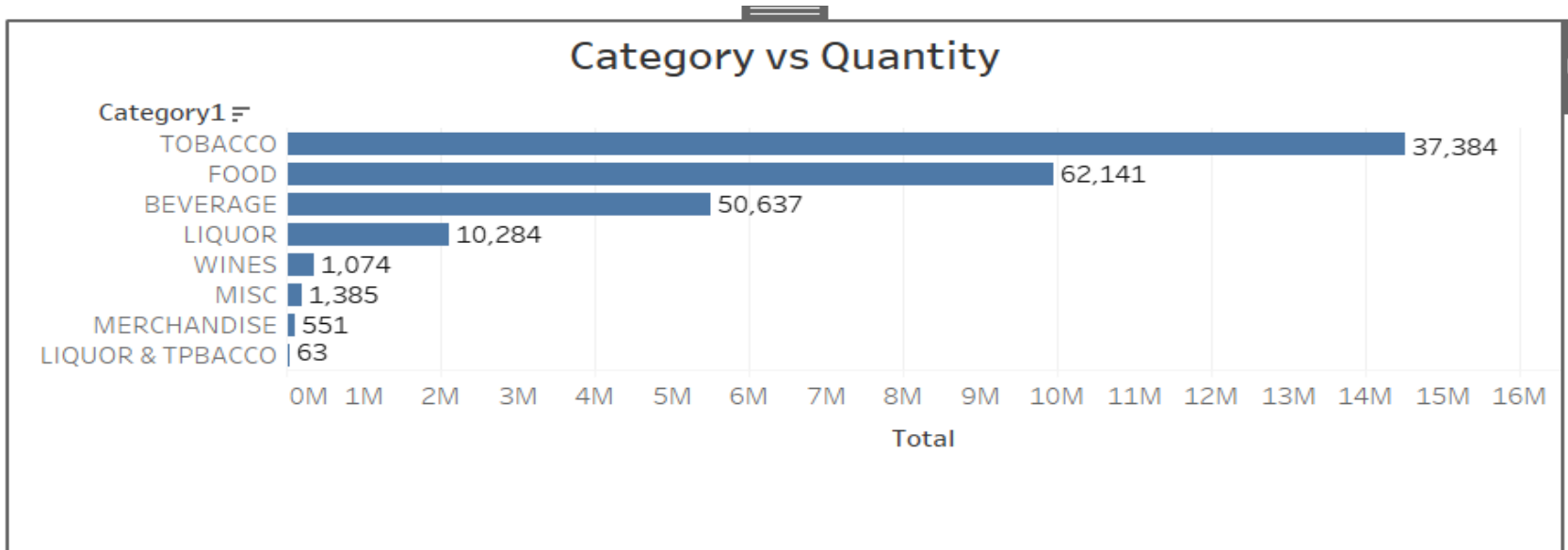


# Executive summary

- ❑ Analysis is performed on cafe shop data starting from 1stApr 2010 to 31stMar 2011 .
- ❑ There is no trend or seasonality is visible over the year.
- ❑ Most preferred items based on category and sub-category.

Category	Sub-category
TOBACCO	NIRVANA HOOKAH SINGLE
BEVERAGE	CAPPUCCINO
FOOD	GREAT LAKES SHAKE
LIQUOR	CARLSBERG
LIQUOR & TPBACCO	BEER HOOKAH
MERCHANDISE	GREAT LAKES T-SHIRTS
MISC	ADD ON S
WINES	VLN CAB SAUV (GLS)

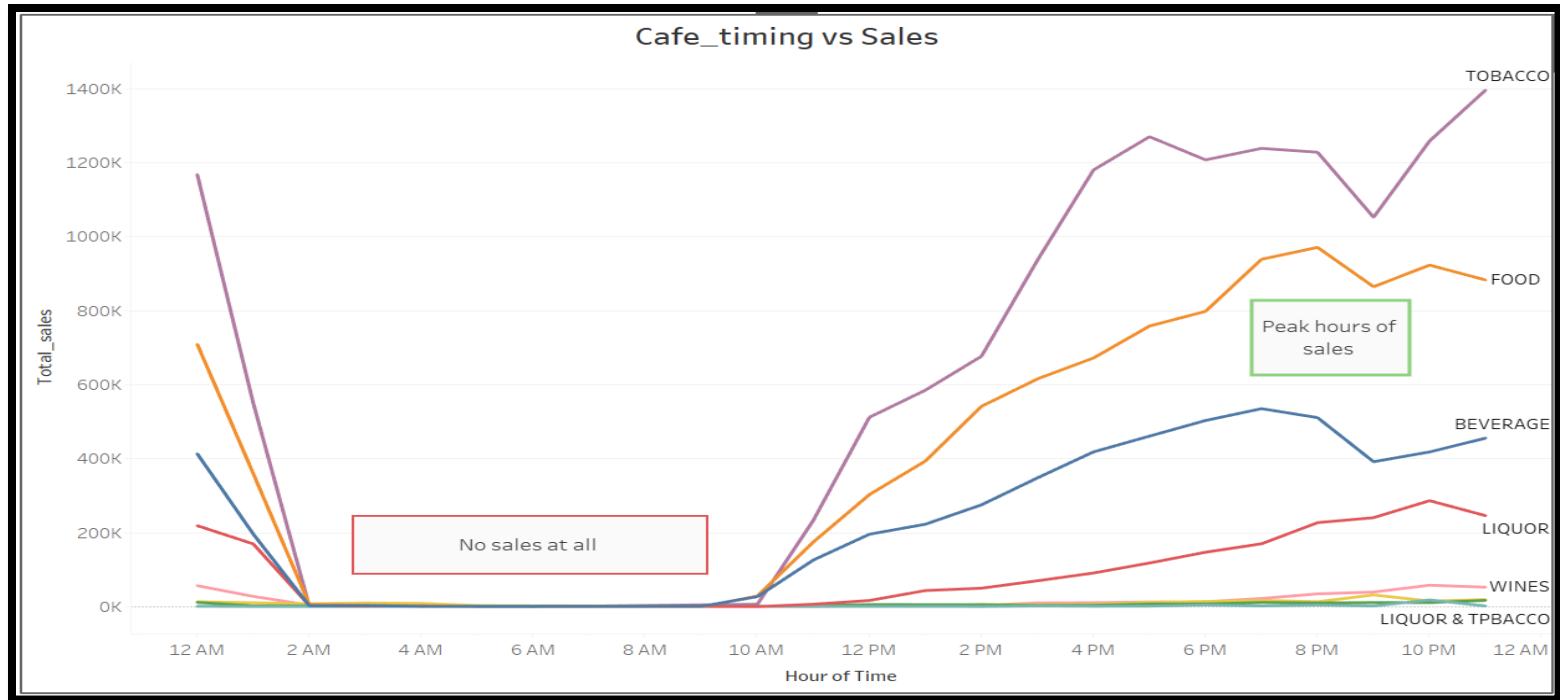
# Consumer preference



Most to least liked menu by the consumers

- ❑ Tobacco is the most sold quantity in the cafe shop.
- ❑ Almost 50% of total revenue is generated from tobacco(hookah) and liquor items.

# Cafe\_time vs sales



## Days of the hours analysis

- ❑ Café opening hours can be changed from almost 24hrs to 16-17hrs (10AM to 2AM)
- ❑ Late afternoon to midnight till 2AM sees maximum sale (85% of total revenue )

# Summary of cafe shop data

```
> summary(Market_Dataset[,-c(1,2,4)])
```

Item_Desc	Quantity	Rate	Tax
NIRVANA HOOKAH SINGLE: 8553	Min. : 1.000	Min. : 0.01	Min. : 0.00
MINT FLAVOUR SINGLE : 5817	1st Qu.: 1.000	1st Qu.: 95.00	1st Qu.: 22.56
CAPPUCCINO : 5495	Median : 1.000	Median : 125.00	Median : 32.06
GREAT LAKES SHAKE : 4895	Mean : 1.121	Mean : 161.78	Mean : 48.93
SAMBUCA : 4425	3rd Qu.: 1.000	3rd Qu.: 225.00	3rd Qu.: 72.00
POUTINE WITH FRIES : 3464	Max. : 30.000	Max. : 2100.00	Max. : 2731.25
(Other) : 113181			

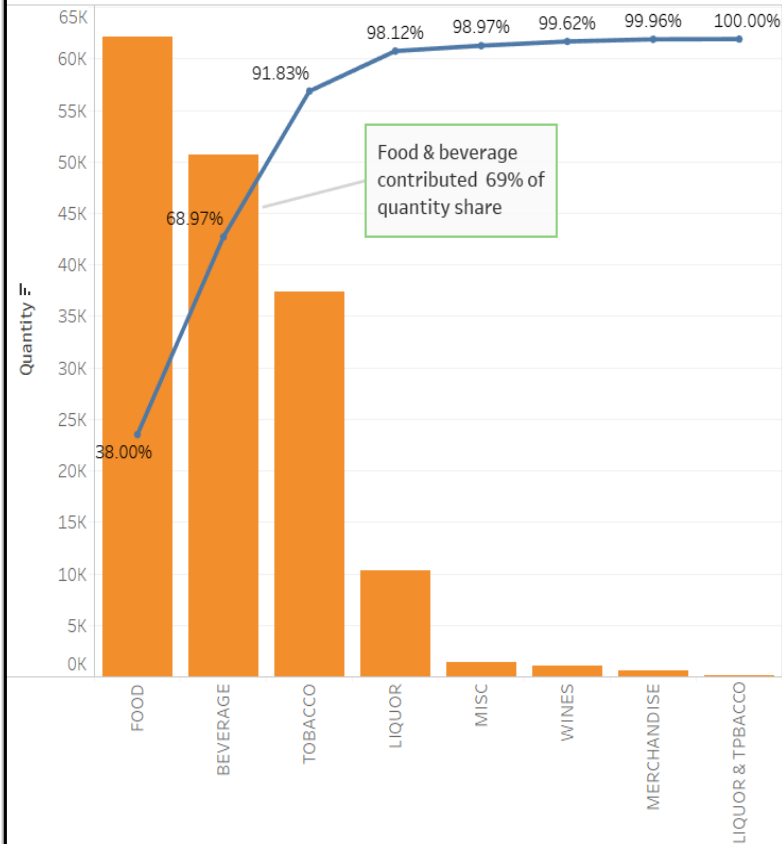
  

Discount	Total	Category
Min. : 0.0000	Min. : 0.01	FOOD : 57023
1st Qu.: 0.0000	1st Qu.: 117.56	BEVERAGE: 43573
Median : 0.0000	Median : 167.06	TOBACCO : 36496
Mean : 0.0951	Mean : 224.96	LIQUOR : 6201
3rd Qu.: 0.0000	3rd Qu.: 315.00	MISC : 1187
Max. : 825.0000	Max. : 14231.25	WINES : 809
		(Other) : 541

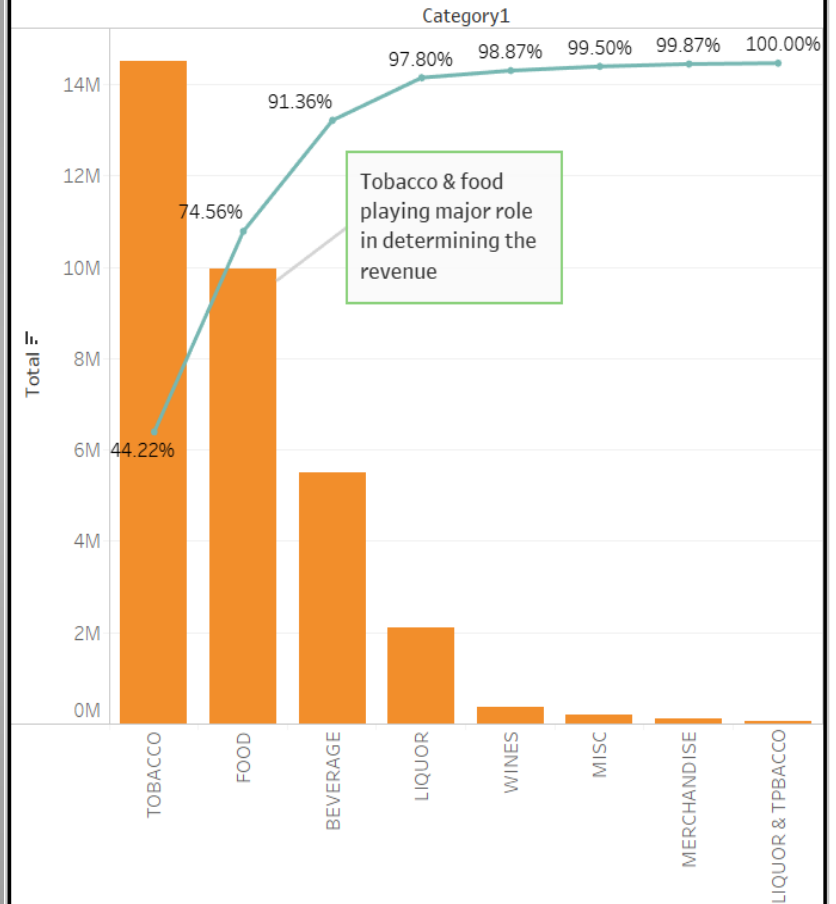
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# Exploratory analysis

## Quantity share

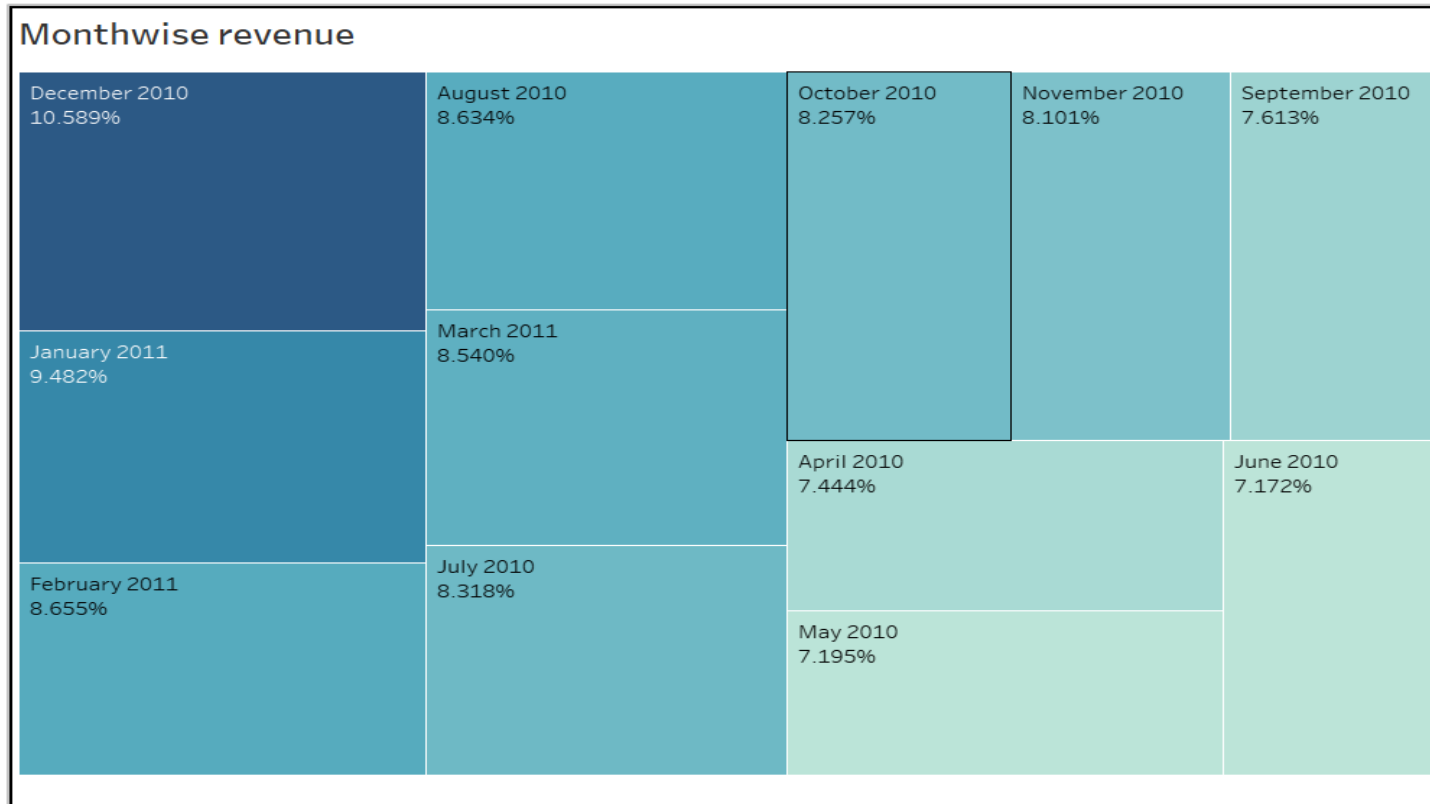


## Revenue share





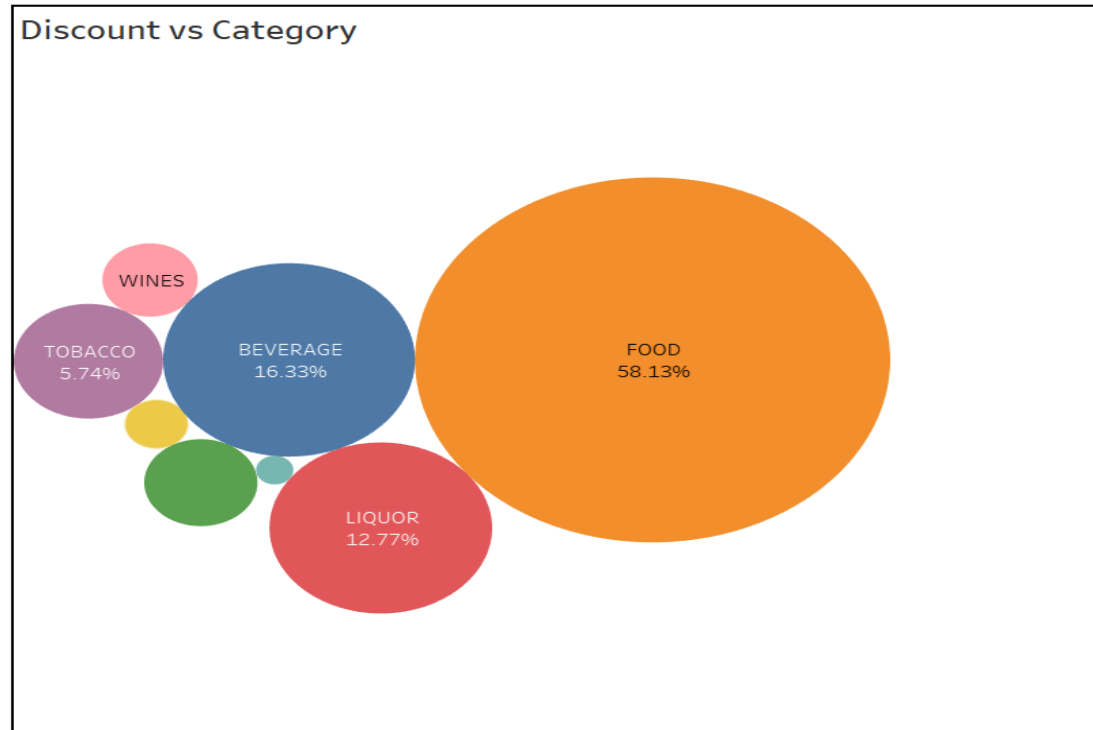
# Month-wise Revenue



Revenue of the café shop based on every month

- ❑ There is no seasonality or trend over the month.
- ❑ December month contributes 10% of total sale

# Discount vs Category



Discount given by the café shop

- ❑ Tobacco played a major role in the revenue.
- ❑ The best suggestion is to increase the discount for the tobacco item.

# Menu Analysis-Delisting

Category-Beverages	
Items	Quantity
2 AXE TWIST	1
DECAFFINATE COFFEE FRAPPE	1
MIXED FLAVOUR SINGLE	1
MOCAFE HOT CHOCOLATE(SF)	1
PEACH BULL	1
WHAT A MELON	4
BOTTLED WATER (1LITRE)	10
HOUSE BLEND DE CAFFE (AU LAIT)	10
NEW ORLEANS BLUE (AULAIT)	10
VARLHONA HOT CHOCOLATE	11
N R G HOOKAH	15
NEW ORLEANS BLUE (REG)	15

The items which are sold very less should be removed from menu analysis.

## Category-Food

Items	Quantity
ADD BUTTERED TOAST	1
CAPONATA	1
NIRVANA HOOKAH DOUBLE	2
SCHNEIDER 2+1	2
STRAWBERRY MERINGUE	2
SUNNY SIDEUP + BEVERAGE	2
2 MUFFINS + BEVERAGE	3
J.PCHENET SPARKLING ROSE (BTL)	3
WAFFLES + BEVERAGE	3
CARROT CAKE	4
VEGETABLE PASTA	4
CHEESE FINGERS	5
CHICKEN HAM	5
MOTHERS DAY SPL	5
NONVEG PASTA PESTO	5

## Category-Liquor

Items	Quantity
ZINZI WHITE (BTL)	1
WHISKEY (SM)	2
SCHNEIDER BUCKET - 6	3
BROOKLYN BUCKET - 4	4
SCHNEIDER WEISSE	4
STELLA ARTOIS	4
UNLIMITED BEER	4
STELLA 1LTR 2+1	5

## Category- TOBACCO

Items	Quantity
AL SIKANDARI HOOKAH DOUBLE	1
CLASSIC REGULAR	1
GOLD FLAKE ULTRA LIGHTS(20)	1
INDIA KINGS OCEAN BLUE	1
APPLE FLAVOUR DOUBLE	2
CLASSIC MENTHOL RUSH	2
GREAT LAKES HOOKAH SINGLE	2
ICE SPICE SHEESHA	2
BENSON & HEGDES GOLD BLUE	3
GOLD FLAKE LIGHTS-BIG	3
MINT FLAVOUR DOUBLE	3
CLASSIC MENTHOL	4
CLASSIC ULTRA MILD	4

## Category- WINES

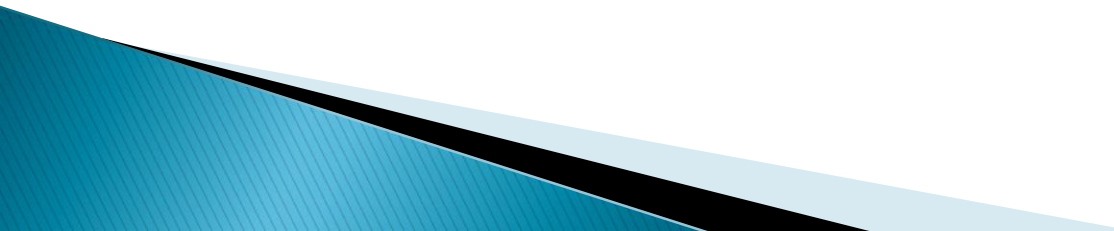
Items	Quantity
1+1 VLN CAB SAUV (BTL)	1
1+1 VLN SAUV BLANC (BTL)	1
2 OCEAN PINOTAGE (BTL)	1
4 SEASONS CLAS SYRAH(BTL)	1
B1G1 4SEASON CLAS SAUV(BTL)	1
B1G1 4SEASON CLAS SAUV(GLS)	1
GOSSIPS CHARD AUS (BTL)	1
MANDALA VALLEY CHENIN BLANC(GL	1
MATEUS ROSE PORTUGAL(BTL)	1
SULA CHENIN BLANC (BTL)	1
1+1 BTL4 SEASON WHITE	2
1+1 VLN CAB SAUV CLASIQ (BTL)	2
1+1 WINE BOTTLE	2
4 SEASONS CLAS SAUV(BTL)	2
B1G1 4SEASON CLAS SYRAH(GLS)	2
MANDALA VALLEY RED ZINFANDEL(G	2
SULA SATORI MERLOT (BTL)	2
B1G1 ZINZI RED (BTL)	3
B1G1 ZINZI WHITE (BTL)	3
MAISON PIERRE SAUV MARSAN	3
4 SEASONS CLAS SAUV(GLS	4
DIA SPARKLING WINE(BTL)	4

# Combo–Market basket analysis

## Menu Combo's

Combo items	Lift
{QUA MINERAL WATER(500ML),TOMATOLINO} => {NIRVANA HOOKAH SINGLE}	1.0000
{N R G HOOKAH} => {2 RED BULL}	1.0000
{GREAT LAKES SHAKE,PHILLYCREAM CHEESE &CHILLY PAN,RED BULL 2+1} => {SAMBUCA}	1.0000
{GREAT LAKES SHAKE,MAGGI NDL ARRABIATA,RED BULL 2+1} => {SAMBUCA}	1.0000
{GREAT LAKES SHAKE,QUA MINERAL WATER(1000ML),RED BULL 2+1} => {SAMBUCA}	0.9333
{GREAT LAKES SHAKE,MASALA CHAI CUTTING,RED BULL ENERGY DRINK} => {SAMBUCA}	0.8889
{3 RED BULL,MIAMI MELONS} => {NIRVANA HOOKAH SINGLE}	0.8750
{B.M.T. PANINI,GREAT LAKES SHAKE,RED BULL 2+1} => {SAMBUCA}	0.8571
{PHILLYCREAM CHEESE &CHILLY PAN,QUA MINERAL WATER(1000ML),RED BULL 2+1} => {SAMBUCA}	0.8000
{B.M.T. PANINI,MAGGI NDL ARRABIATA,QUA MINERAL WATER(1000ML)} => {SAMBUCA}	0.8000
{ADD VANILLA FLAVOUR} => {CAFFE LATTE}	0.8000
{B.M.T. PANINI,MAGGI NDL ARRABIATA,RED BULL ENERGY DRINK} => {SAMBUCA}	0.7857
{MAGGI NDL ARRABIATA,N R G HOOKAH,SAMBUCA} => {B.M.T. PANINI}	0.7778
{GOOEY CHOCOLATE FUDGE,GREAT LAKES SHAKE,SAMBUCA} => {QUA MINERAL WATER(1000ML)}	0.7778
{BEER HOOKAH,PASTA ALFREDO VEG} => {3 RED BULL}	0.7778
{B.M.T. PANINI,GREAT LAKES SHAKE,QUA MINERAL WATER(1000ML),RED BULL ENERGY DRINK} => {SAMBUCA}	0.7778
{B.M.T. PANINI,GREAT LAKES SHAKE,MAGGI NDL ARRABIATA,QUA MINERAL WATER(1000ML)} => {SAMBUCA}	0.7778
{ADD HAZELNUT FLAVOUR,B.M.T. PANINI} => {CAFFE LATTE}	0.7778
{POUTINE WITH FRIES,QUA MINERAL WATER(1000ML),RED BULL 2+1} => {SAMBUCA}	0.7500
{GREAT LAKES SHAKE,MAGGI NDL ARRABIATA,QUA MINERAL WATER(1000ML)} => {SAMBUCA}	0.7500
{B.M.T. PANINI,LEMON ICED TEA,RED BULL ENERGY DRINK} => {SAMBUCA}	0.7500
{MAGGI NDL ARRABIATA,POUTINE WITH FRIES,SAMBUCA} => {B.M.T. PANINI}	0.7333
{B.M.T. PANINI,QUA MINERAL WATER(1000ML),RED BULL 2+1} => {SAMBUCA}	0.7143
{2 RED BULL} => {N R G HOOKAH}	0.7143
{GREAT LAKES SHAKE,QUA MINERAL WATER(1000ML),RED BULL ENERGY DRINK} => {SAMBUCA}	0.7000
{COTTAGE CHEESE PANINI,POUTINE WITH FRIES,QUA MINERAL WATER(1000ML)} => {B.M.T. PANINI}	0.7000
{BLUEBERRY BRAIN FREEZER SHAKE,CURRENT COOLER} => {SAMBUCA}	0.7000
{ADD HERB ROAST CHICKEN,GREAT LAKES SHAKE} => {LEMON INFUSED CHAR GRILLED VEG}	0.7000
{3 RED BULL,BEER HOOKAH} => {PASTA ALFREDO VEG}	0.7000

# Cont.

- ❑ Combo items are suggested based on market basket analysis.
  - ❑ These 29 combo items are formed based support ,confidence and lift values
  - ❑ Combo offers–TOBACCO, FOOD and BEVERAGES are most selling categories for café.
  - ❑ At present, café has few combos with Liquor and Tobacco categories but none with Tobacco + Food and Food + Beverages.
- 

# Recommendation

- ❑ 39.9 % of total transaction is solo trips and mostly Tobacco which is alarming.
  - ❑ Introduction of Combo offers will be game changer to move traffic towards food and Beverage and not only tobacco.
  - ❑ There are many menu items needs to be delisted to save preparation cost and time.
  - ❑ Giving the combo items with some reasonable discounts will increase the revenue of café shop
  - ❑ As an overview the best combo will be FOOD + BEVERAGE and TOBACCO + FOOD
- 