Café Coffee Night
MRA Project

Assignment Submitted by Manika Gupta – May2020

Project Objective

- The data set provided to us is the data set of a Café Chain for one of its restaurants. We have to do a thorough analysis of the data and come up with the analysis and present it.
- The owner of the restaurant wants you to use this data to come up with a set of recommendations that can help his Café Chain increase his revenues.
- We are provided with a data set for POS (point of sale data) for one of his chains.

Steps Followed:

1 Exploratory Analysis

2 Menu Analysis

Exploratory Analysis

Identifying the trends based on

1. Item sales trend: The popular categories of the Menu

2. Item sales w.r.t time: The months of the year, day of the week, the time of the day

3. Most sold item: Most popular items on the menu

4. Least sold item: Least ordered items on the menu

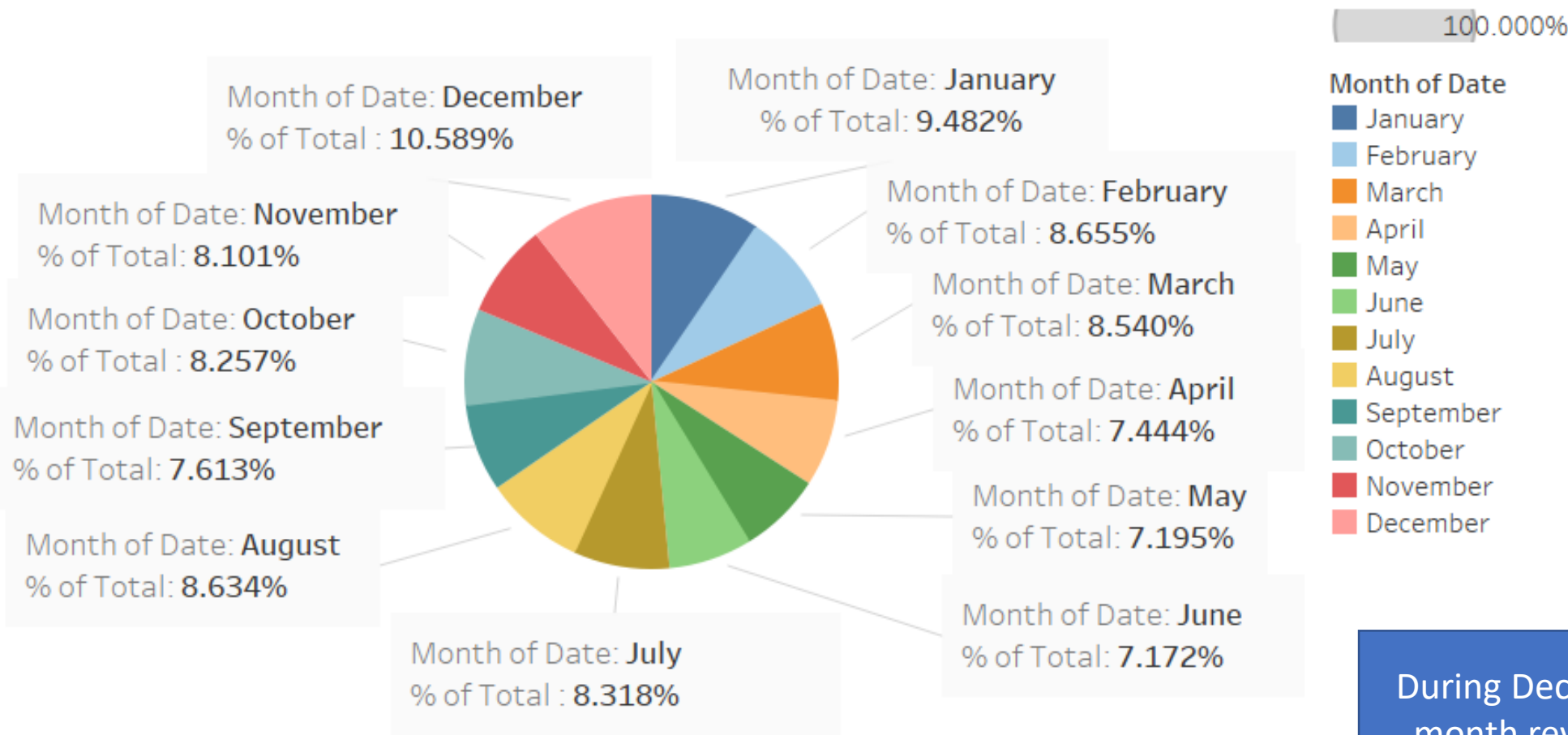5. Pricing trend over the year: Change in pricing of the items and impact it had on the revenue

Menu Analysis
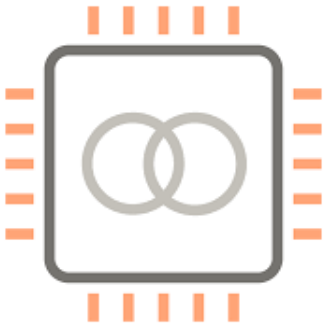
Identifying the combos using Market Basket analysis

which are most liked and will earn more revenue.
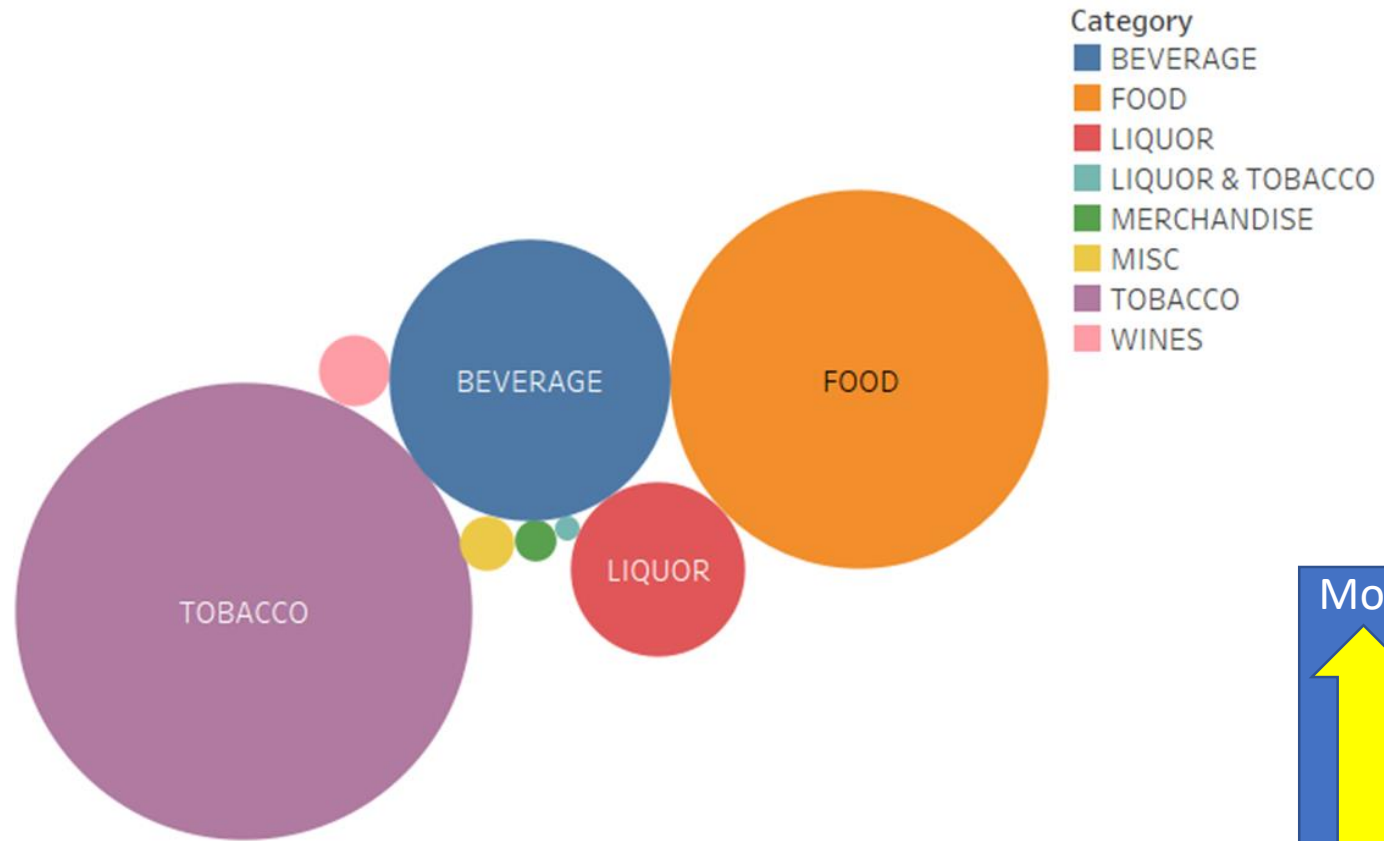
Done using KNIME

Monthwise sales

Month of Date: **December**
% of Total : **10.589%**

Month of Date: **January**
% of Total: **9.482%**

Month of Date: **November**
% of Total: **8.101%**

Month of Date: **February**
% of Total : **8.655%**

Month of Date: **October**
% of Total : **8.257%**

Month of Date: **March**
% of Total: **8.540%**

Month of Date: **September**
% of Total: **7.613%**

Month of Date: **April**
% of Total: **7.444%**

Month of Date: **August**
% of Total: **8.634%**

Month of Date: **May**
% of Total: **7.195%**

Month of Date: **July**
% of Total : **8.318%**

Month of Date: **June**
% of Total: **7.172%**

Date Month (colour) and % of Total Total (size).

100.000%

Month of Date
- January
- February
- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

During December month revenue earned was highest

Category wise revenue

Category
- ■ BEVERAGE
- ■ FOOD
- ■ LIQUOR
- ■ LIQUOR & TOBACCO
- ■ MERCHANDISE
- ■ MISC
- ■ TOBACCO
- ■ WINES

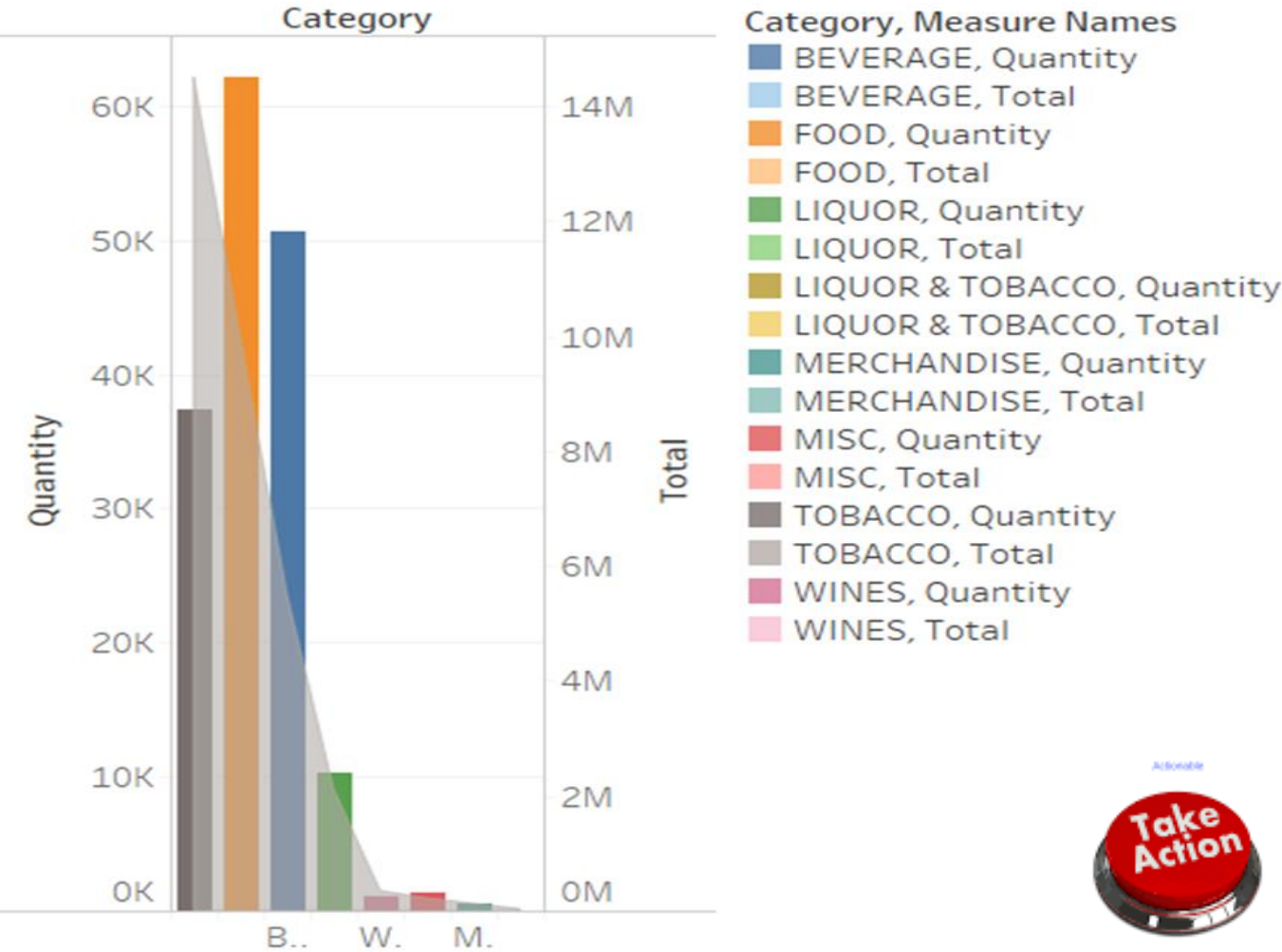BEVERAGE

FOOD

TOBACCO

LIQUOR

Most Revenue earned
- Tobacco
- Food
- Beverages
- Liquor

Category. Colour shows details about Category. Size shows sum of Total.
The marks are labelled by Category.

Category wise sales vs Quantity

Quantity and Total for each Category. Colour shows details about Category, Quantity and Total.
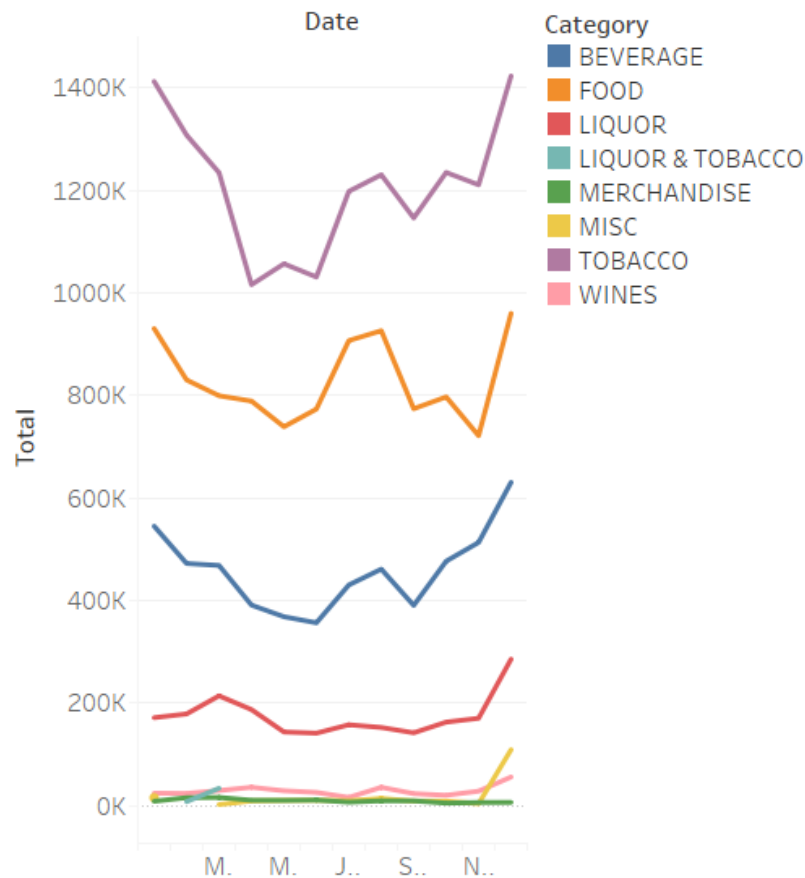
Category, Measure Names
- BEVERAGE, Quantity
- BEVERAGE, Total
- FOOD, Quantity
- FOOD, Total
- LIQUOR, Quantity
- LIQUOR, Total
- LIQUOR & TOBACCO, Quantity
- LIQUOR & TOBACCO, Total
- MERCHANDISE, Quantity
- MERCHANDISE, Total
- MISC, Quantity
- MISC, Total
- TOBACCO, Quantity
- TOBACCO, Total
- WINES, Quantity
- WINES, Total

- Quantity wise food is sold the most after beverages

- Revenue wise Tobaccos earned the most revenue after Food

Tobacco has capacity to generate high revenues hence the promotion of Tobacco can be increased to tap this trend.

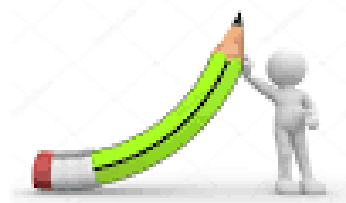# Volumes and sales analysis based on timeline
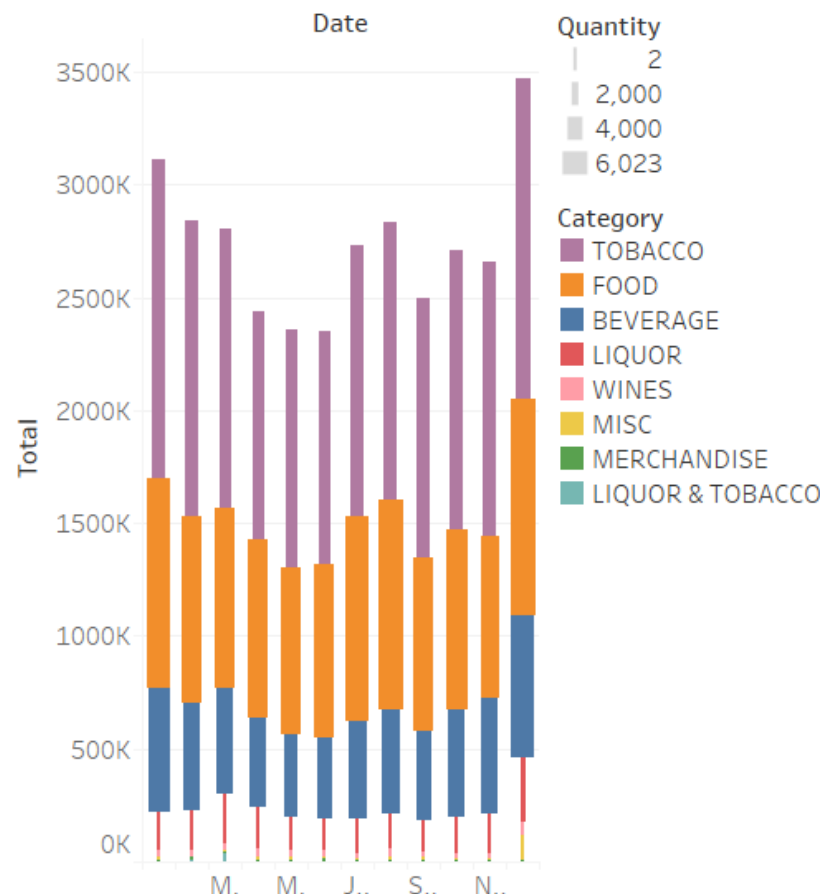
Weekly sales trend wrt revenue and quantity

Date

Quantity
- 1
- 2,000
- 4,000
- 6,000
- 8,000
- 10,000
- 11,166

Category
- BEVERAGE
- FOOD
- LIQUOR
- LIQUOR & TOBACCO
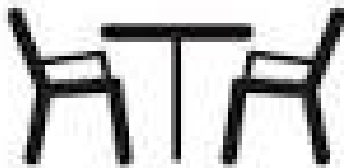- MERCHANDISE
- MISC
- TOBACCO
- WINES

Sales

7,960   8,818
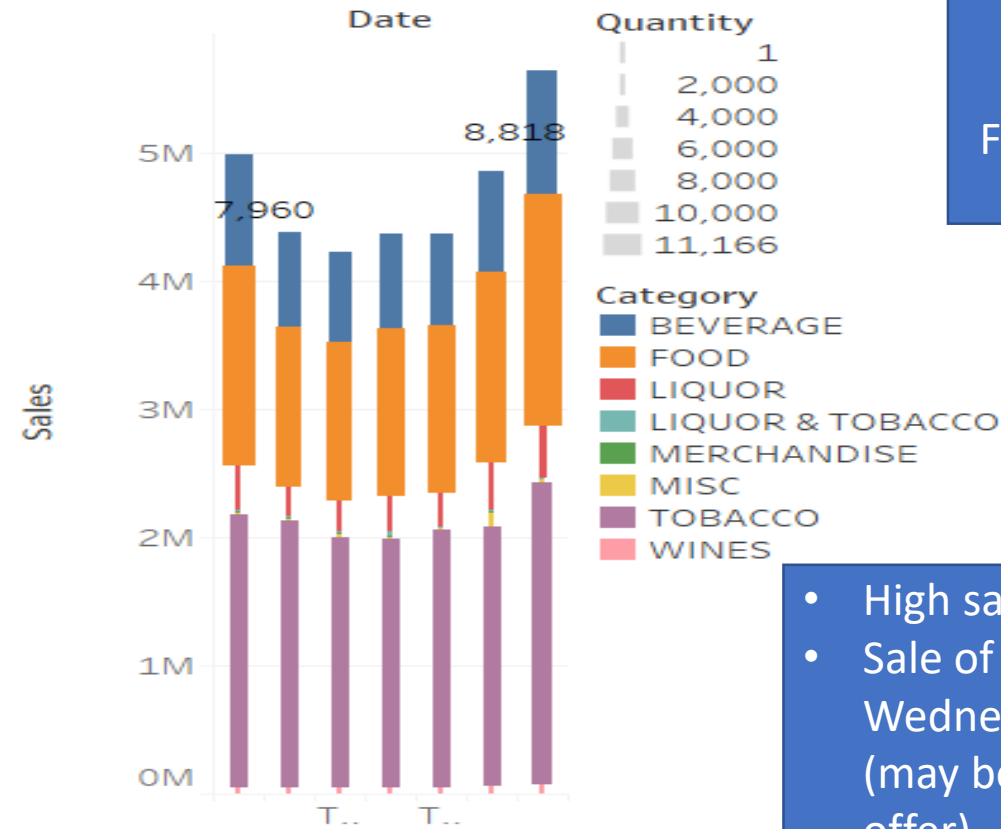
Sum of Total for each Date Weekday. Colour shows details about Category. Size shows sum of Quantity. The marks are labelled by sum of Quantity.

Hourly Sales Trend based on weedays

Date / Time

Total
- 118
- 50,000
- 100,000
- 150,000
- 224,365

Category
- BEVERAGE
- FOOD
- LIQUOR
- LIQUOR & TOBACCO
- MERCHANDISE
- MISC
- TOBACCO
- WINES

Sum of Total for each Time Hour broken down by Date Weekday. Colour shows details about Category. Size shows sum of Total. The view is filtered on Time Hour, which keeps 0.
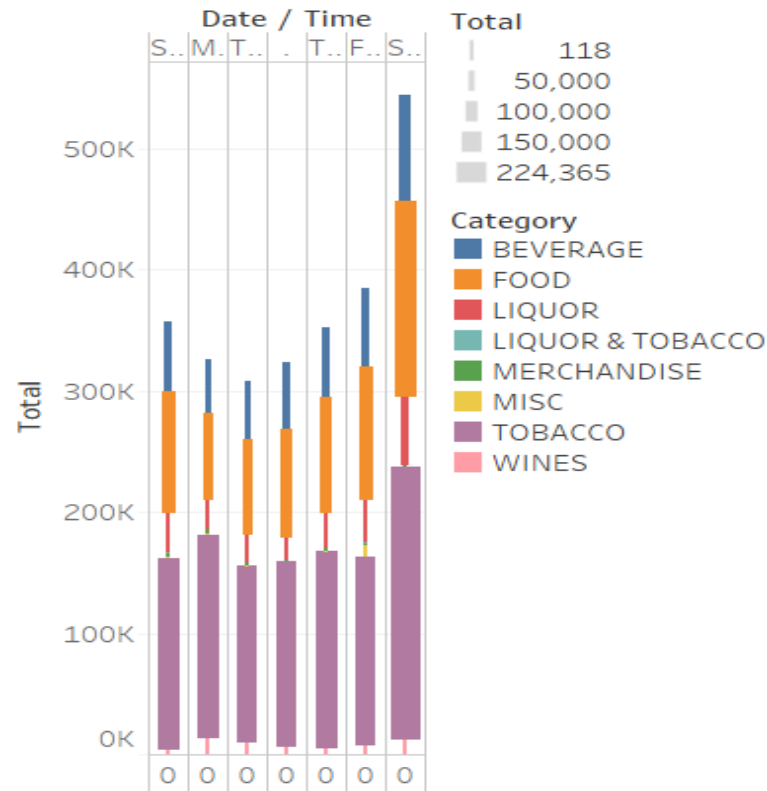
Sales is at peak on Fridays and Saturdays

High sales of Tobacco is observed on Mondays and Sundays

- High sales of Food on Sundays
- Sale of Food higher on Wednesday than Thursday (may be because of some offer)
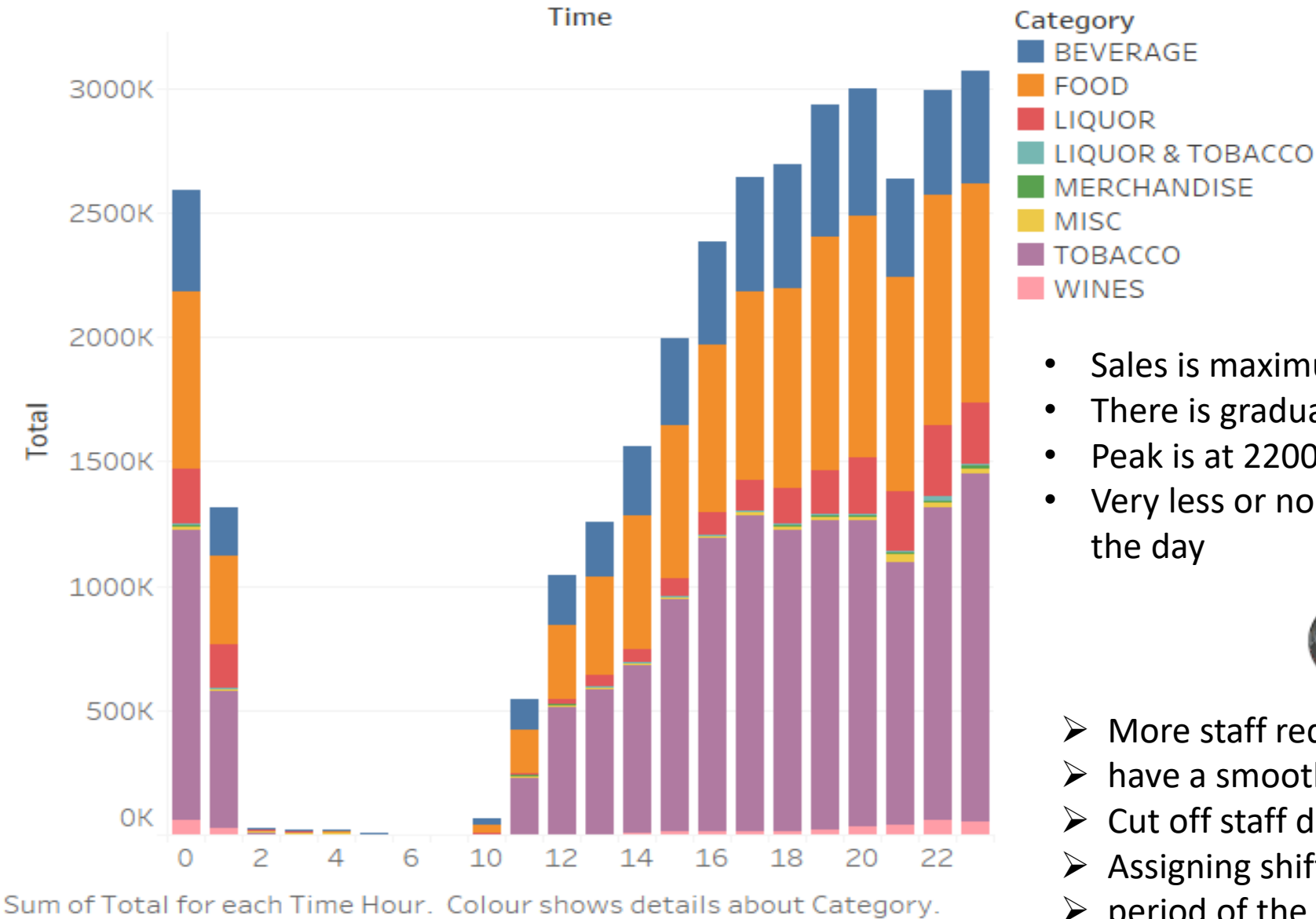
Sales of category based on time of the day

Sum of Total for each Time Hour. Colour shows details about Category.

Category
- BEVERAGE
- FOOD
- LIQUOR
- LIQUOR & TOBACCO
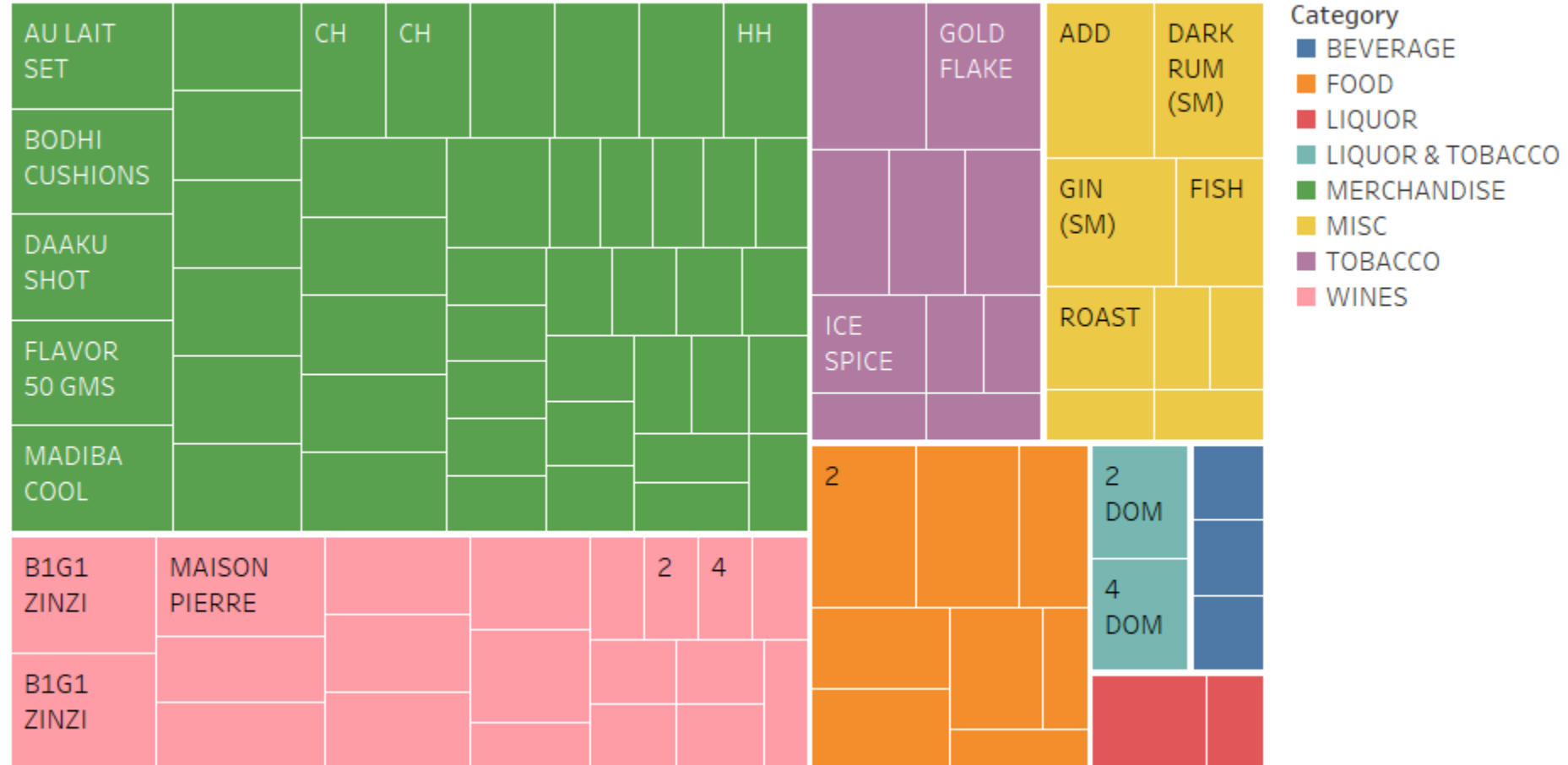- MERCHANDISE
- MISC
- TOBACCO
- WINES

- Sales is maximum from 1800 hrs to 2300
- There is gradual increase in sales after 1500 hrs
- Peak is at 2200 ~2300 hrs
- Very less or no sales during early wee hours of the day

> More staff required during peak time to
> have a smooth service.
> Cut off staff during low sales period.
> Assigning shift jobs based on the high sales
> period of the day

Least selling items in terms of Quantity category wise

AU LAIT SET
CH
CH
HH
BODHI CUSHIONS
DAAKU SHOT
FLAVOR 50 GMS
MADIBA COOL

GOLD FLAKE
ICE SPICE

ADD
DARK RUM (SM)
GIN (SM)
FISH
ROAST

B1G1 ZINZI
MAISON PIERRE
2
4
B1G1 ZINZI

2

2 DOM
4 DOM

Category
- ■ BEVERAGE
- ■ FOOD
- ■ LIQUOR
- ■ LIQUOR & TOBACCO
- ■ MERCHANDISE
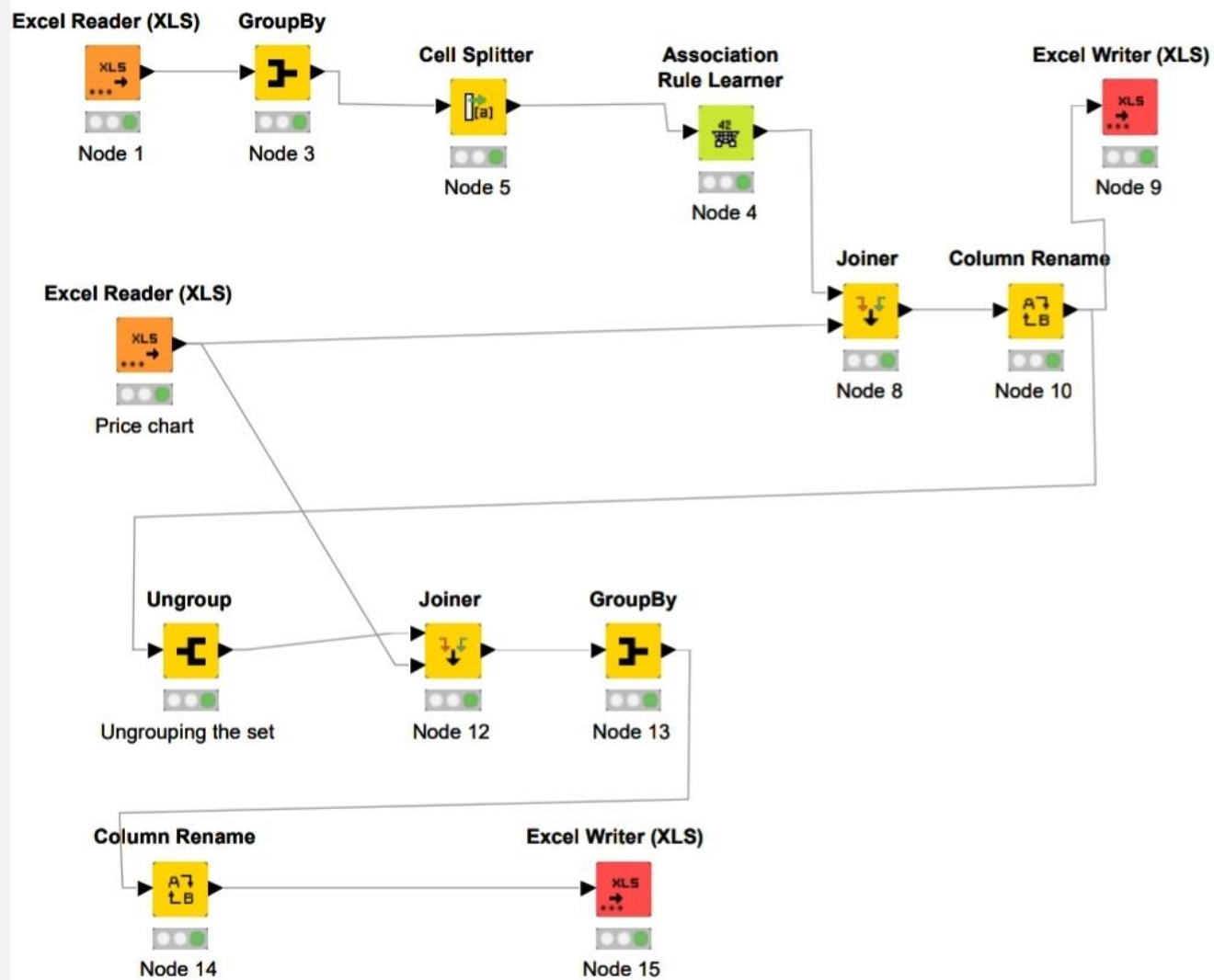- ■ MISC
- ■ TOBACCO
- ■ WINES

Item Desc. Colour shows details about Category. Size shows sum of Quantity. The marks are labelled by Item Desc. The view is filtered on Item Desc, which keeps 100 of 580 members.

Least selling items which can be removed from the menu

Item Desc	
MOTHERS DAY SPL	0.1
ADD BUTTERED TOAST	18.6
CUTTING GLASS	27.0
DIP BOWL	67.5
MUGS - PLAIN COLOUR	75.4
MOCAFE HOT CHOCOLATE(SF)	80.4
GOLD FLAKE ULTRA LIGHTS(20)	87.6
CH WRAPPING PAPER	90.0
DECAFFINATE COFFEE FRAPPE	92.8
CLASSIC REGULAR	93.6
INDIA KINGS OCEAN BLUE	109.8
ADD GROUND MEAT	111.4
ADD CHICKEN BACON	148.5
GREAT LAKES MUG SINGLE	159.8
ASH TRAYS	168.8
COUNTRY LEMONADE GLASS(HANSA)	168.8
2 AXE TWIST	173.3
CH TIN SMALL	179.6
CAPONATA	185.6
CLASSIC MENTHOL RUSH	199.9

Sum of Total broken down by Item Desc. The view is filtered on Item Desc, which keeps 20 of 580 members.

These least selling 20 items can be taken off the menu after a discussion with the customer, based on his inputs and future plans regarding those products / items.
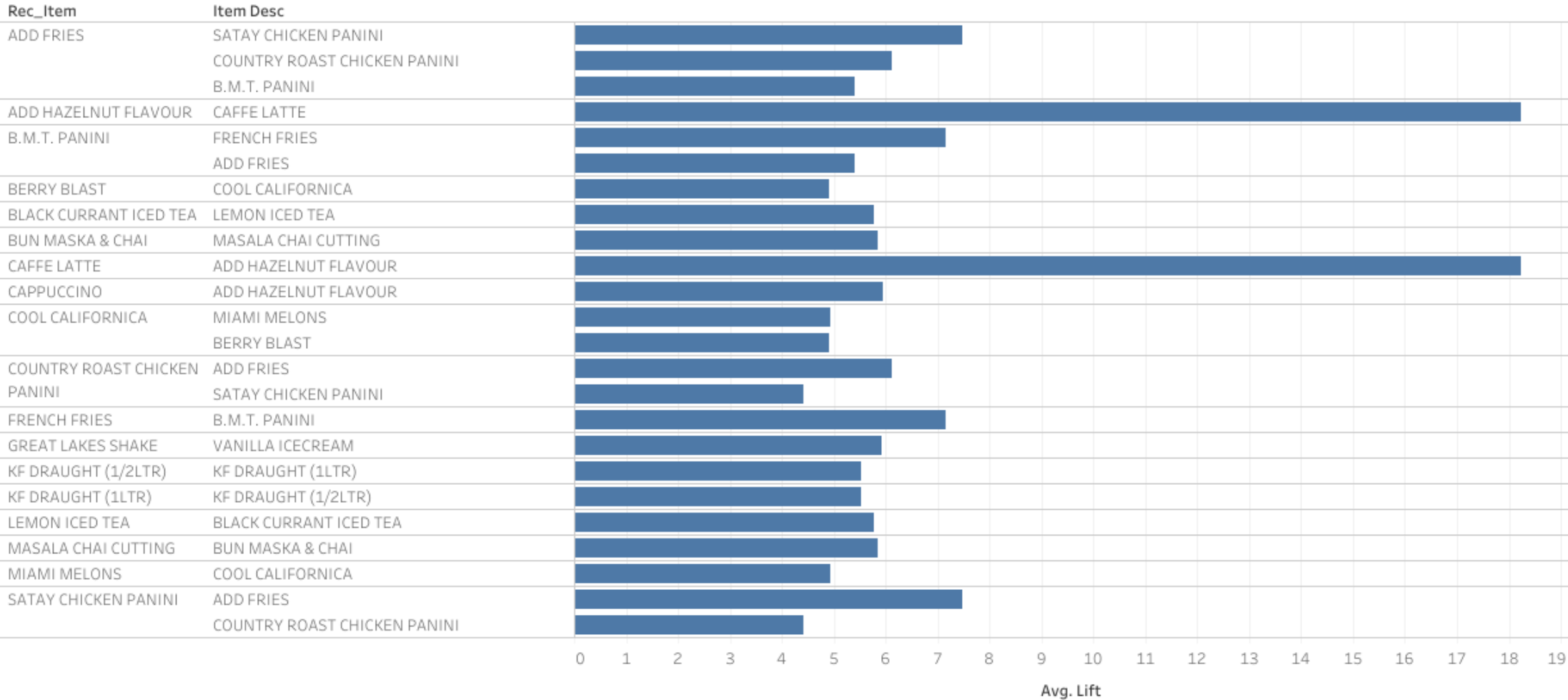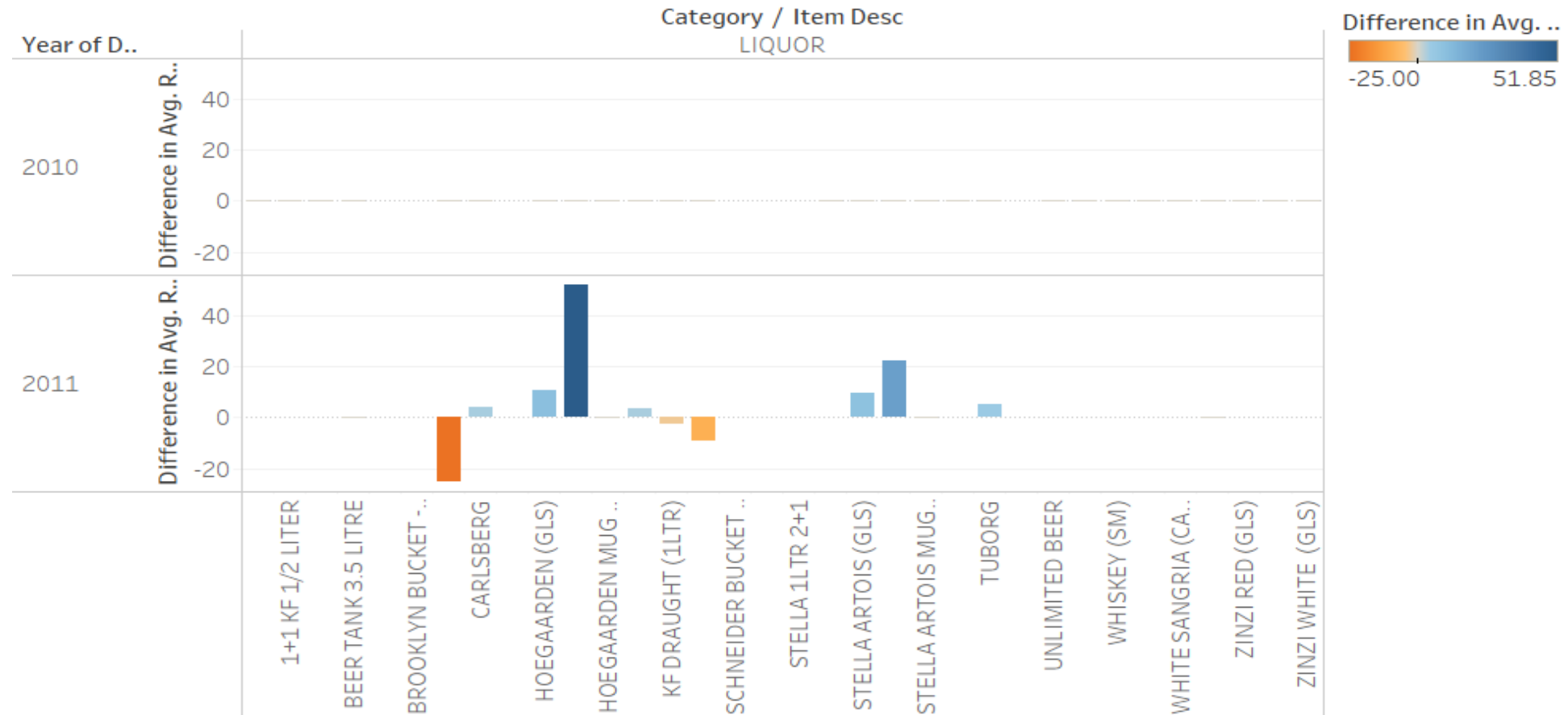
Menu Analysis
Meal add on suggested / Combo offers

Sheet 1

Rec_Item	Item Desc	Avg. Lift
ADD FRIES	SATAY CHICKEN PANINI	
	COUNTRY ROAST CHICKEN PANINI	
	B.M.T. PANINI	
ADD HAZELNUT FLAVOUR	CAFFE LATTE	
B.M.T. PANINI	FRENCH FRIES	
	ADD FRIES	
BERRY BLAST	COOL CALIFORNICA	
BLACK CURRANT ICED TEA	LEMON ICED TEA	
BUN MASKA & CHAI	MASALA CHAI CUTTING	
CAFFE LATTE	ADD HAZELNUT FLAVOUR	
CAPPUCCINO	ADD HAZELNUT FLAVOUR	
COOL CALIFORNICA	MIAMI MELONS	
	BERRY BLAST	
COUNTRY ROAST CHICKEN PANINI	ADD FRIES	
	SATAY CHICKEN PANINI	
FRENCH FRIES	B.M.T. PANINI	
GREAT LAKES SHAKE	VANILLA ICECREAM	
KF DRAUGHT (1/2LTR)	KF DRAUGHT (1LTR)	
KF DRAUGHT (1LTR)	KF DRAUGHT (1/2LTR)	
LEMON ICED TEA	BLACK CURRANT ICED TEA	
MASALA CHAI CUTTING	BUN MASKA & CHAI	
MIAMI MELONS	COOL CALIFORNICA	
SATAY CHICKEN PANINI	ADD FRIES	
	COUNTRY ROAST CHICKEN PANINI	

Price changes observed in comparison to last year

Change in rates over the year Liquor

Positive price change observed in case of Tobacco

Rate of Tobacco

Average of Rate for each Item Desc broken down by Category vs. Date Year. Colour shows Difference in Avg. Rate. The view is filtered on Category, which keeps TOBACCO.

Recommendations

- Inclusion of combo meals will help in boosting the revenue during the lean period and overall

- There are couple of items which contribute small portion of revenue for a category , hence these should be discontinued. As discussed before

- Pricing of popular items should be conducted well

- Dip in pricing of popular items is not recommended

- However certain items with price dip can help in increase in quantity and thus can lead to more revenues
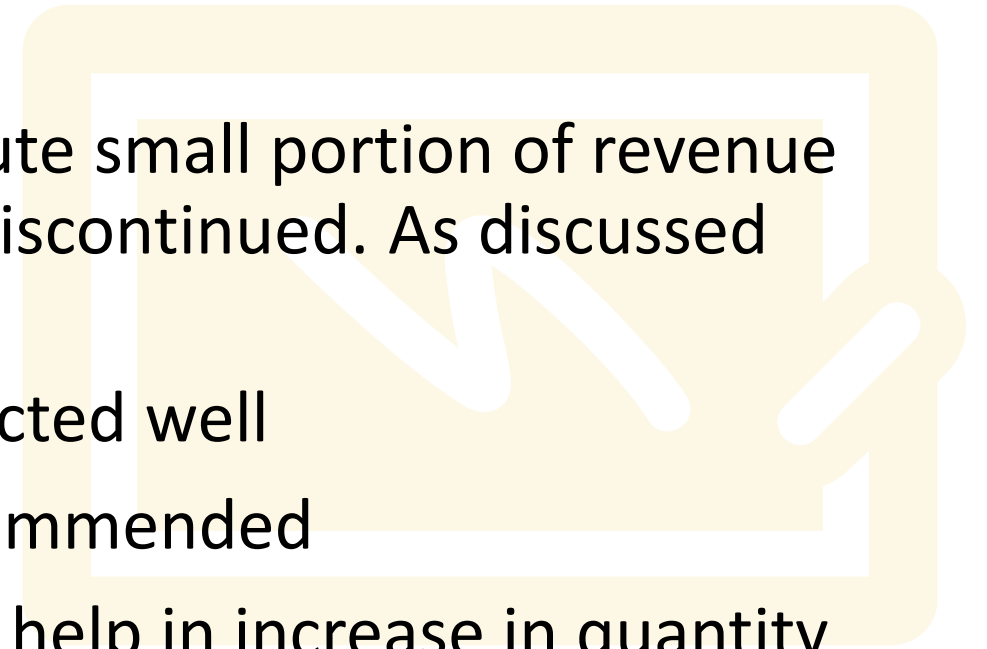
Recommendations

- Extra staff should be present during weekends for smooth operations. As sales of most products starts increasing on Friday and reaches a peak on Saturday till Sunday.

- Sale of Tobacco and liquor is high in late hours of night after 2200 hrs.

- Top selling Categories are Tobacco, Food, Liquor and Beverage.

- Sales of products increases from June and peak up in Dec month.
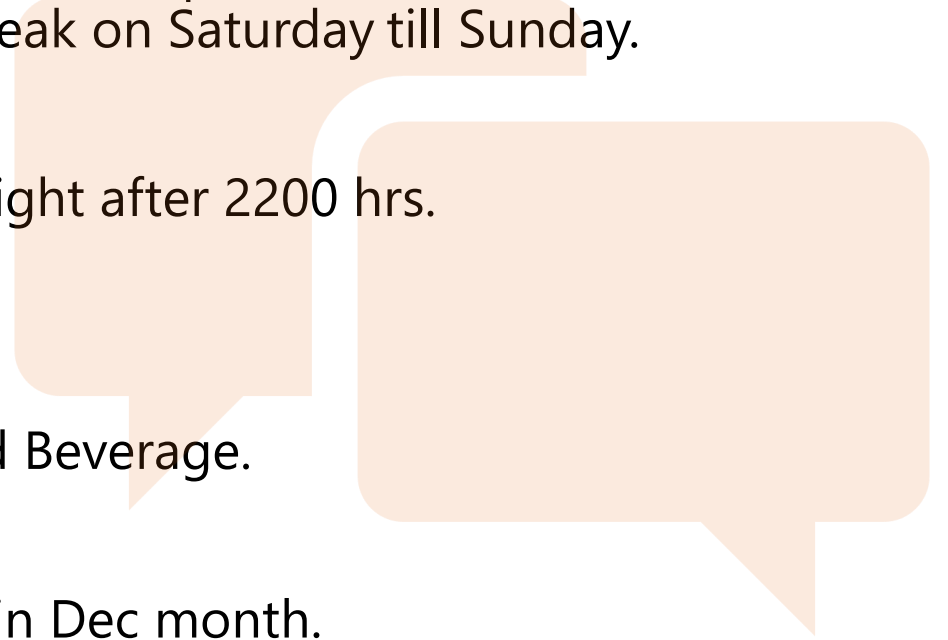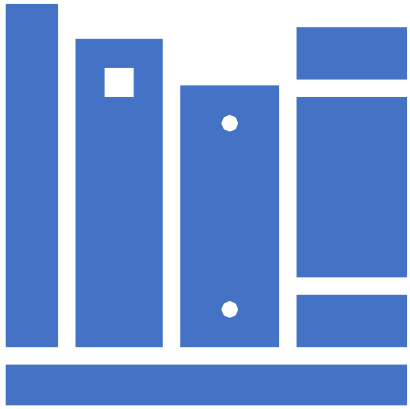
Thanks

Submitted by Manika Gupta

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