**Analysis of The Pizza Lounge 2015 Annual Sales Report**

**STEP 1:** All source files were imported in Power BI and data cleaning and transformations were performed. Data was checked for duplicates and missing values. No missing values were found.

**STEP 2:** After transformation, data modelling was performed and relationships were established between different sources having schema type as Snowflake schema.

**STEP 3:** New calculated columns were created using DAX queries for analysis. The details of all columns are discussed below:

**Table: order\_details**

**Columns: sale price, total price**

sale price = RELATED(pizzas[price])

total price = order\_details[Sale Price]\*order\_details[quantity]

**Table: orders**

**Columns: dayname, dayofmonth, hour, Month, monthname, quarter, weekday.**

dayname = FORMAT(orders[date], "dddd")

dayofmonth = orders[date].[Day]

hour = HOUR(orders[time])

Month = MONTH(orders[date])

monthname = orders[date].[Month]

quarter = orders[date].[Quarter]

weekday = WEEKDAY(orders[date],2)

**STEP 4:** A Separate Measures Table was created, capturing all the required measures. The details of all measures and insights drawn are discussed below:

**Total Orders:**

A measure was created for total orders by estimating the distinct count of ‘order\_id’.

**Total Revenue for the orders received:**

A measure was created for total revenue which was estimated by first calculating the ‘total price’ i.e., Price (per pizza) \* Order Qty, and then adding values for all records.

**Average Order Value:**

This was estimated by dividing Total Revenue by Total Orders.

Average Order Value = [Total Revenue] / [Total Orders]

**Distribution of Orders through different time frames:**

**Orders per Quarter:** Estimated by dividing the Total Orders by Quarters.

Orders per Quarter = [Total Orders]/DISTINCTCOUNT(orders[quarter])

Orders per Month and Orders per day were also added for a clear picture.

1. **Quarters:** The 4th Quarter recorded the lowest order (5,118) which is 220 less than the average line whereas 3rd Quarter recorded the highest order (5437).

2. **Months**: Of all the months in Q4, Only November (1.79K) peaked past the average (1.78K). May be Holidays contributed to the rise.

**Distribution of Revenue through different time frames:**

**Revenue per Quarter:** This was estimated by dividing the Total Revenue by Quarters.

Revenue per quarter = [Total Revenue]/DISTINCTCOUNT(orders[quarter])

I plotted line chart to observe the trend. Each **Revenue per month** and **Revenue per day** were added for a clear picture.

**1.** **Quarters:** The revenue for Quarter 4 (5,118 orders) which recorded lowest revenue as compared to Quarter 2 (5,425 orders) with $208K revenue.

**2. Months:** August didn’t record as high revenue when related with the orders. This effected the Q3 revenue. September, February and October fell below the average line. These months even fell into category of lowest ordered months.

**Revenue & Orders Relationship throughout the year:**

* We saw positive correlation between orders and revenue
* By Scatter Plot, I observed November and August stood as Outliers
* August recorded the lowest Average orders i.e. $37.09.
* November recorded relatively a higher record despite the lower number of orders because it has the highest quantities of pizza (2.38) in each order; 2.6% more than the average (2.32)
* On an average, November orders were worth $39.28 which 2.5% more than the overall average order revenue ($38.33).

**Peak Pizza Hour during each day:**

* Matrix was used to view the peak hours and off hours, and conditional formatting was applied on the background for clear visualizations.
* Peak hours averaged more than 12.36 orders per hour
* Calm Hours averaged less than 4.25 orders per hour

**Pizza’s Analysis:**

With an average price of $16.17 across all sizes, **Classic Deluxe Pizza** was the most ordered pizza. Despite this number, it only managed $38.4K in revenue behind Thai Chicken ($43.3K). Barbeque Chicken ($42.4K) and California Chicken ($41.4K).

* **Thai Chicken** is Business’s fav as it generated the most revenue ($43K). Actually its 5th in terms orders.
* Thai Chicken amassed this much revenue due to high average order value ($19.52)
* None of the top 3 pizza by revenue made it to top 3 by order.
* **Brie Currie Pizza** was only ordered 480 times; 180 less than the average orders per pizza type. It averaged $23.65 across all sizes making it most expensive pizza type
* Hence **Brie Currie Pizza** generated least revenue due to less number of order though it boast the best average order value.