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| Performance Analysis and Insights |
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## Executive Summary

This report analyzes food delivery apps performance in 2019, focusing on order trends, traffic sources, and conversion rates using the Funnel Case Study Data.

**Key Findings:**

* **Order Trends:**
  + Orders peaked on certain days due to higher user activity and marketing promotions.
  + Significant drops in orders were linked to operational issues, lower traffic and inventory shortages on specific dates.
* **Traffic Analysis:**
  + Significant spikes occurred on 17-01-2019, 22-01-2019, and 27-06-2019, driven by large gains from Facebook (1979.99% on 17-01-2019) and Twitter (746.91% on 22-01-2019). The uniform rise across all channels on 27-06-2019 (119.15%) indicates successful promotions or external events.
  + Notable drops were observed on 10-01-2019, 29-01-2019, and 20-06-2019, with sharp declines in Facebook (-94.84% on 10-01-2019) and Twitter (-87.59% on 29-01-2019). The uniform drop across all channels on 20-06-2019 (-53%) suggests potential systemic issues.
* **Conversion Rates:**
  + Overall conversion rates fluctuated, with notable declines due to payment gateway issues and high cart abandonment rates.
  + Specific conversion steps (L2M, M2C, C2P, P2O) were impacted by various factors such as high charges and inventory shortages.

**Recommendations:**

* Implement dynamic pricing for delivery and packaging charges.
* Improve inventory management to reduce out-of-stock items.
* Enhance payment gateway reliability to increase success rates.
* Optimize traffic channels to maintain consistent growth.

By addressing these areas,food delivery app can enhance user experience, boost order volumes, and drive sustainable growth.

## Data Overview

This section provides a concise description of the data used in the analysis of Swiggy's performance in 2019. The data is sourced from the Funnel Case Study Data workbook, which includes three key worksheets: Session Details, Channel Wise Traffic, and Supporting Data.

#### 1. Session Details Worksheet

Tracks date-wise session counts across different stages:

* **Listing Sessions:** Views of the restaurant list.
* **Menu Sessions:** Views of specific restaurant menus.
* **Cart Sessions:** Items added to the cart.
* **Payment Sessions:** Payment attempts.
* **Order Sessions:** Successful orders placed.

#### 2. Channel Wise Traffic Worksheet

Breaks down traffic sources for listing sessions:

* **Facebook Traffic:** Users who access the platform through facebook.
* **YoutubeTraffic:** Users who arrive via watching youtube ads and clicking the links .
* **Twitter Traffic:** Users who arrive through twitter.
* **OtherTraffic:** Users referred from other websites.

#### 3. Supporting Data Worksheet

Provides additional metrics for context:

* **Count of Restaurants:** Number of operating restaurants each day.
* **Average Discount:** Average discount offered to customers each day.
* **Out of Stock Items per Restaurant:** Average number of out-of-stock items per restaurant.
* **Average Packaging Charges:** Average packaging fees paid by customers per order.
* **Average Delivery Charges:** Average delivery fees paid by customers per order.
* **Average Cost for Two:** Approximate cost for a meal for two people.
* **Number of Images per Restaurant:** Number of images listed per restaurant on the menu page.
* **Success Rate of Payments:** Ratio of successful transactions to total payment attempts.

#### Data Usage

The data is analyzed to identify:

* Order trends and fluctuations.
* Changes in traffic and their sources, including detailed social media contributions (Facebook, YouTube, Twitter, and others).
* Conversion rates at various stages (L2M, M2C, C2P, P2O).
* Factors affecting performance, such as discounts and delivery charges.

This analysis helps derive insights to improve Swiggy's operations and strategic planning.

## Order Analysis

## Order Drop



Main Reasons for order drop

#### Trained Observed

1. **Lower Overall Conversion Rates:**
   * The most significant reason for order drops is a lower overall conversion rate with respect to the same day last week, accounting for 53%.
2. **Traffic Issues:**
   * Low traffic accounts for 10% of the reasons (including "low traffic" alone and combined with low restaurant count).
   * This suggests that traffic drops significantly impact order volumes.
3. **Other Factors:**
   * Lower menu to cart conversion and low success rate of the payment app each account for 6%.
   * These specific issues indicate potential problems in the user journey and checkout process.

### Recommendations:

1. **Optimize Conversion Rates:**
   * Since conversion rates are a major issue, focus on identifying bottlenecks in the conversion funnel.
2. **Increase Traffic:**
   * Implement strategies to boost traffic, such as improving SEO, running targeted ad campaigns, and enhancing social media presence.
   * Analyze traffic sources to identify and invest in high-performing channels.
3. **Improve User Experience:**
   * Address specific issues like menu-to-cart conversion and payment app success rates.
   * Ensure the website and app are user-friendly, with smooth navigation and a hassle-free checkout process.
4. **Monitor Competitor Activity:**
   * Traffic and conversion drops could be influenced by competitors. Monitor their activities to adjust your strategies accordingly.
5. **Enhance Engagement and Retention:**
   * Implement loyalty programs, personalized marketing, and re-engagement campaigns to retain and attract customers.

By focusing on these key areas, the organization can work towards minimizing order drops and improving overall performance. ​

## Order Hike

## 

Main Reasons for order Hike

1. **Marketing Efforts:**
   * Improved Marketing Efforts account for 37.50% of the reasons, indicating that marketing initiatives significantly impacted order changes.
   * Consistent increases in order changes on dates related to marketing efforts suggest that these initiatives are effective in boosting sales.
2. **Conversion Rates:**
   * Higher overall conversion rates with respect to the same day last week also account for 37.50% of the reasons.
   * This suggests that efforts to optimize the conversion process, such as website improvements, user experience enhancements, or targeted campaigns, have been fruitful.
3. **Promotional Campaigns:**
   * Promotional Campaigns represent 12.50% of the reasons.
   * The noticeable increase in orders during promotional periods indicates that promotions are effective in driving short-term sales boosts.
4. **Website Functionality and Services:**
   * Enhanced Website Functionality and Improved Services each account for 4.17% of the reasons.
   * Improvements in website functionality and service quality appear to have a positive but less frequent impact on order changes compared to marketing and conversion efforts.
5. **Combination of Efforts:**
   * Some dates show combined efforts, such as improved marketing efforts along with promotional campaigns, accounting for another 4.17%.
   * This suggests that a multifaceted approach, combining different strategies, can also contribute to increased orders.

### **Trends Over Time**:

* **Early Months (Jan-Apr):**
  + The beginning of the year shows a mix of marketing efforts and promotional campaigns driving order changes.
  + There's a notable spike in February due to enhanced website functionality, indicating a successful website update.
* **Mid-Year (May-Aug):**
  + June and July see significant increases due to improved marketing efforts and high conversion rates, suggesting a seasonal trend or a successful marketing campaign during this period.
  + August also shows a high increase due to improved conversion rates.
* **Later Months (Sep-Dec):**
  + The latter part of the year continues to show high conversion rates contributing to increased orders.
  + November shows a significant increase due to improved services, possibly indicating successful holiday preparations or customer service improvements.
  + The end of the year (December) continues to see improvements driven by marketing efforts and conversion rates.

### **Recommendations:**

1. **Continue and Enhance Marketing Efforts:**
   * Given their significant impact, continuing to invest in and improve marketing campaigns is crucial.
   * Exploring new marketing channels and strategies could further boost orders.
2. **Focus on Conversion Optimization:**
   * Since high conversion rates are a key driver, continuously optimizing the conversion process, such as improving website usability and customer journey, should be a priority.
   * A/B testing, user feedback, and data analysis can help identify and implement effective changes.
3. **Leverage Promotions Strategically:**
   * While promotional campaigns are effective, they should be used strategically to avoid diminishing returns.
   * Combining promotions with other efforts, like marketing and website improvements, can maximize their impact.
4. **Invest in Website and Service Improvements:**
   * Periodic enhancements to website functionality and service quality can contribute to sustained order increases.
   * Ensuring a smooth, user-friendly experience can enhance customer satisfaction and conversion rates.

By analyzing these trends and focusing on the key drivers, the organization can develop a more targeted strategy to sustain and increase order growth.

## Traffic Analysis

## Analysis for High Traffic Change Dates

#### 1. ****17-01-2019****

* **Overall Traffic Change**: 110.20% increase.
* **Source of Traffic Increase**:
  + **Facebook**: 1979.99% increase. This is the primary driver of the traffic spike.
  + **YouTube**: 110.20% increase, also contributing significantly.
  + **Twitter**: 110.20% increase.
  + **Others**: -6.35% decrease, negligible impact compared to the increases from other sources.

#### 2. ****22-01-2019****

* **Overall Traffic Change**: 76.53% increase.
* **Source of Traffic Increase**:
  + **Twitter**: 746.91% increase. This is the main source driving the traffic increase.
  + **Facebook**: 76.53% increase, contributing moderately.
  + **YouTube**: -64.69% decrease, significant drop but overshadowed by the Twitter increase.
  + **Others**: -60.44% decrease, also a notable drop but less impactful due to Twitter’s rise.

#### 3. ****27-06-2019****

* **Overall Traffic Change**: 119.15% increase.
* **Source of Traffic Increase**:
  + **Facebook**: 119.15% increase.
  + **YouTube**: 119.15% increase.
  + **Twitter**: 119.15% increase.
  + **Others**: 119.15% increase.
  + All sources show a uniform increase, indicating a coordinated or broad-based traffic rise.

## Analysis for Low Traffic Change Dates

#### 1. ****10-01-2019****

* **Overall Traffic Change**: -48.96% decrease.
* **Source of Traffic Decrease**:
  + **Facebook**: -94.84% decrease. This is the most significant drop.
  + **YouTube**: -48.96% decrease, contributing substantially.
  + **Twitter**: -48.96% decrease, same as YouTube.
  + **Others**: 14.57% increase, but not enough to counter the large decreases in other channels.

#### 2. ****29-01-2019****

* **Overall Traffic Change**: -40.46% decrease.
* **Source of Traffic Decrease**:
  + **Facebook**: -40.46% decrease.
  + **Twitter**: -87.59% decrease, significant impact.
  + **Others**: 165.66% increase, notable rise but insufficient to offset the declines.
  + **YouTube**: 197.69% increase, positive impact but the combined negative impact of Facebook and Twitter causes an overall decrease.

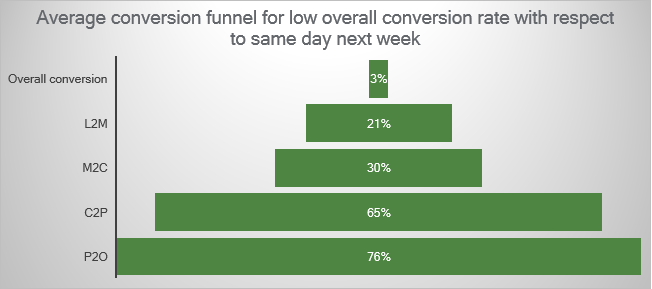
#### 3. ****20-06-2019****

* **Overall Traffic Change**: -53.00% decrease.
* **Source of Traffic Decrease**:
  + **All Channels**: -53.00% decrease across Facebook, YouTube, Twitter, and others. This uniform decline indicates a potential systemic issue affecting all traffic sources.

### **Recommendations for Further Analysis**

1. **Investigate External Factors**: Check for external events (e.g., marketing campaigns, social media trends) on dates with significant changes.
2. **Analyze Internal Changes**: Review any changes in Swiggy's operations, such as app updates, policy changes, or promotional activities.
3. **Correlate with Order Data**: Align these traffic changes with order data to see the direct impact on sales and revenue.
4. **Customer Feedback**: Examine customer feedback or reviews around these dates for additional insights into the reasons behind the traffic changes.

## Conversion Analysis



Here's the detailed breakdown for each date:

### **January 29, 2019**

* **L2M**: 12%
* **M2C**: 42%
* **C2P**: 72%
* **P2O**: 80%

**Analysis**: The L2M conversion rate is relatively low at 12%. From supporting data we can see that the lower restaurant count listed compared to same day past week .So increasing restaurant count would help

### **February 19, 2019**

* **L2M**: 26%
* **M2C**: 17%
* **C2P**: 77%
* **P2O**: 85%

**Analysis**: The M2C conversion rate is low at 17%. Focus on making the menu more attractive or user-friendly.

### **March 2, 2019**

* **L2M**: 21%
* **M2C**: 34%
* **C2P**: 33%
* **P2O**: 81%

**Analysis**: Both L2M and C2P rates are low at 21% and 33%, respectively. From supporting data we can see that the lower higher out of stock item and higher delvery charges and increased cost for 2 are the reasons for this decline.

### **March 19, 2019**

* **L2M**: 26%
* **M2C**: 42%
* **C2P**: 76%
* **P2O**: 39%

**Analysis**: The P2O conversion rate is quite low at 39%. Look into reasons for high payment abandonment.

### **April 4, 2019**

* **L2M**: 26%
* **M2C**: 20%
* **C2P**: 69%
* **P2O**: 78%

**Analysis**: The M2C conversion rate is low at 20%. Lower offered discount may be the reason.So improving promotional campaign may be beneficial.

### **April 12, 2019**

* **L2M**: 24%
* **M2C**: 38%
* **C2P**: 73%
* **P2O**: 81%

**Analysis**: L2M rate at 24% is relatively low, indicating the need for better listing-to-menu conversion.Reason is lower number of image for restaurant.

### **April 25, 2019**

* **L2M**: 25%
* **M2C**: 38%
* **C2P**: 69%
* **P2O**: 84%

**Analysis**: Both L2M and C2P conversion rates at 25% and 69% could be improved.Lower discount and higher cost for two may be the reason so improving that would be crucial.

### **July 16, 2019**

* **L2M**: 10%
* **M2C**: 40%
* **C2P**: 73%
* **P2O**: 84%

**Analysis**: The L2M conversion rate is very low at 10%. This is a critical area for improvement.

### **August 11, 2019**

* **L2M**: 22%
* **M2C**: 33%
* **C2P**: 33%
* **P2O**: 74%

**Analysis**: Both M2C and C2P rates are low at 33%.Lower images per restaurants, higher cost for two, higher packaging charges maybe the reasons. Enhancements needed in menu and cart stages.

### **September 14, 2019**

* **L2M**: 21%
* **M2C**: 15%
* **C2P**: 67%
* **P2O**: 74%

**Analysis**: The M2C conversion rate is very low at 15%. Higher out of stock item per restaurant resulted to it ,so improvement is required.

### **November 17, 2019**

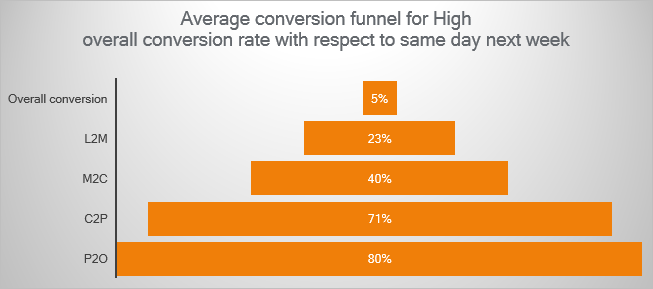
* **L2M**: 21%
* **M2C**: 14%
* **C2P**: 71%
* **P2O**: 77%

**Analysis**: The M2C rate is low at 14%. Higher out of stock item per restaurant resulted to it ,so improvement is required.

### **Summary of Funnel Analysis**

* **L2M (Listing to Menu)**: January 29, April 12, April 25, July 16 have low L2M rates, indicating the need to make listings more compelling or easier to navigate to the menu.
* **M2C (Menu to Carts)**: February 19, April 4, July 16, September 14, November 17 need improvements in the menu to cart transition.
* **C2P (Carts to Payments)**: March 2, April 25 show low C2P rates, suggesting a need to simplify or incentivize the payment process.
* **P2O (Payments to Orders)**: March 19 has a low P2O rate, indicating potential issues in the final payment completion process.

By focusing on these specific areas of the funnel, improvements can be targeted more effectively to enhance overall conversions.



Here's the detailed breakdown for each date:

### **February 5, 2019**

* + L2M 26%
  + M2C 40%
  + C2P 71%
  + P2O 80%

Analysis: High M2C and P2O rates ensured a strong overall conversion.

### **February** **26, 2019**

* L2M 24%
* M2C 41%
* C2P 74%
* P2O 81%

Analysis: High M2C and C2P rates contributed to the overall conversion.

### **March 9, 2019**

* L2M 21%
* M2C 34%
* C2P 71%
* P2O 79%

Analysis: Consistent M2C and P2O rates supported the overall conversion.

### **March 26, 2019**

* L2M 24%
* M2C 40%
* C2P 72%
* P2O 85%

Analysis: Balanced M2C, C2P, and P2O rates ensured a high overall conversion.

### **April 11, 2019**

* L2M 25%
* M2C 39%
* C2P 76%
* P2O 80%

Analysis: High P2O and consistent M2C rates played crucial roles in maintaining a strong overall conversion.

### **April 18, 2019**

* L2M 24%
* M2C 67%
* C2P 73%
* P2O 79%

Analysis: Exceptionally high M2C rate significantly boosted the overall conversion.

### **July 23, 2019**

* L2M 24%
* M2C 40%
* C2P 75%
* P2O 78%

Analysis: High M2C and P2O rates ensured a high overall conversion.

### **August 18, 2019**

* L2M 21%
* M2C 33%
* C2P 65%
* P2O 78%

Analysis: Steady L2M and P2O rates supported the overall conversion.

### **September 21, 2019**

* L2M 20%
* M2C 34%
* C2P 65%
* P2O 75%

Analysis: High P2O and consistent M2C rates helped maintain the overall conversion.

### **October 9, 2019**

* L2M 26%
* M2C 40%
* C2P 77%
* P2O 84%

Analysis: High M2C and P2O rates led to a strong overall conversion.

### **October 21, 2019**

* L2M 25%
* M2C 42%
* C2P 74%
* P2O 84%

Analysis: High C2P and P2O rates ensured a high overall conversion.

### **October 22, 2019**

* L2M 25%
* M2C 39%
* C2P 74%
* P2O 86%

Analysis: Steady M2C, C2P, and P2O rates supported the overall conversion.

### **November 24, 2019**

* L2M 21%
* M2C 34%
* C2P 66%
* P2O 76%

Analysis: High M2C and consistent P2O rates helped maintain the overall conversion.

### **December 22, 2019**

* L2M 21%
* M2C 36%
* C2P 65%
* P2O 80%

Analysis: Steady M2C and C2P rates ensured a solid overall conversion.

### **December 28, 2019**

* L2M 21%
* M2C 34%
* C2P 67%
* P2O 80%

Analysis: Consistent P2O and M2C rates supported the overall conversion.

### **Summary of Conversion Analysis**

Across various dates in 2019, significant trends in conversion rates were observed. Notably, high M2C (Menu to Cart) and P2O (Payment to Order) rates consistently contributed to strong overall conversions. Specific instances include exceptionally high M2C rates on April 18, 2019, which significantly boosted conversion, and strong P2O rates on October 22, 2019, supporting overall performance. Consistency in M2C and P2O rates throughout other periods, such as December 22 and December 28, 2019, ensured steady conversion rates. These findings underscore the importance of maintaining effective transitions through key stages of the conversion funnel to optimize performance consistently.

## Hypothesis and Validation

### **Hypothesis 1: Impact of Discounts on Overall Conversion Rates**

#### Hypothesis: Impact of Discounts on Overall Conversion Rates

**Rationale**: Different discount rates might result in variations in overall conversion rates.

**Data Analysis**:

* Extracted data on "Average Discount" and "Overall Conversion" for analysis.
* Performed a two-sample t-test assuming equal variances.

**Statistical Test**:

* **Hypothesis**:
  + ​ **Null Hypothesis (H₀):** There is no significant difference in overall conversion rates with varying average discounts.
  + ​ **Alternative Hypothesis (H₁):** There is a significant difference in overall conversion rates with varying average discounts.
* **Test Statistic**: -153.2132909
* **Degrees of Freedom**: 730
* **Critical Value (two-tail)**: 1.963218974 (from t-distribution table for α = 0.05)
* **p-Value (two-tail)**: 0

**Results**:

* The absolute value of the t-statistic (153.2132909) is far greater than the critical value (1.963218974).
* The p-value (0) is less than 0.05, indicating strong evidence against the null hypothesis.

**Conclusion**:

* The test results support the hypothesis that there is a significant difference in conversion rates with varying discounts.

**Discussion**:Implementing different discount strategies during promotional periods can significantly affect overall conversion rates. Monitoring and adjusting discount strategies based on real-time data ensures optimal performance.

### **Hypothesis 2: Effect of Packaging Charges on Cart Abandonment**

**Rationale:** Variations in average packaging charges may influence the cart to payment (C2P) rate, impacting cart abandonment rates.

**Data Analysis:**

* Data was analyzed for "C2P Rate" and "Average Packaging Charge" to investigate their relationship.
* A regression analysis was performed to quantify the effect of average packaging charges on the C2P rate.

**Statistical Test:**

* **Hypotheses:**
  + **Null Hypothesis (H₀):** There is no significant effect of average packaging charges on the cart to payment (C2P) rate.
  + **Alternative Hypothesis (H₁):** There is a significant effect of average packaging charges on the cart to payment (C2P) rate.
* **Regression Results:**
  + **Coefficient (Average Packaging Charge):** -0.004077577

**t-statistic: -3.293023954**

* + **p-value:** 0.0011

**Results:**

* The regression analysis indicates a statistically significant negative relationship between average packaging charges and the C2P rate (β = -0.0041, p = 0.0011).

**Conclusion:**

* The results provide evidence to support the hypothesis that average packaging charges have a significant effect on the cart to payment (C2P) rate.

**Discussion:**

* Higher packaging charges may contribute to increased cart abandonment rates, as indicated by the negative coefficient.
* Adjusting packaging charges could potentially optimize the C2P rate and reduce cart abandonment, benefiting overall conversion metrics.

### **Hypothesis 3: Influence of Delivery Charges on Order Volumes**

### **Rationale**: Variations in average delivery charges may influence the number of orders placed, impacting overall order volumes.

**Data Analysis :**

* Data was analyzed for "Orders" and "Average Delivery Charges" to investigate their relationship.
* A regression analysis was performed to quantify the effect of average delivery charges on the number of orders.

**Statistical** **Test :**

* **Hypotheses**:
  + **Null Hypothesis (H₀)**: There is no significant effect of average delivery charges on the number of orders.
  + **Alternative Hypothesis (H₁)**: There is a significant effect of average delivery charges on the number of orders.
* **Regression Results**:
  + **Coefficient (Average Delivery Charges)**: -1026.24
  + **t-statistic**: -0.1845
  + **p-value**: 0.8537

**Results :**

* The regression analysis indicates no statistically significant relationship between average delivery charges and the number of orders (β = -1026.24, p = 0.8537).

**Conclusion :**

* The results do not provide evidence to support the hypothesis that average delivery charges have a significant effect on the number of orders.

**Discussion:**

* The high p-value and near-zero R-squared value suggest that average delivery charges do not meaningfully impact order volumes.
* The negative coefficient, though not significant, suggests a potential trend where higher delivery charges might decrease order volumes.
* Further investigation is needed, potentially including additional variables or segmenting data to identify specific conditions under which delivery charges might impact orders.
* Optimizing other factors, such as discounts or service quality, might be more effective in influencing order volumes than adjusting delivery charges alone.

### **Hypothesis 4: Stock Availability and Conversion Rates**

**Rationale**: More out-of-stock items per restaurant might lead to lower conversion rates.

**Data Analysis**:

* Data was analyzed for "Out of stock Items per restaurant," "Overall Conversion," and "Conversion Change with respect to the same day last week" to investigate their relationships.
* A regression analysis was performed to quantify the effect of out-of-stock items on both overall conversion rates and conversion change.

**Statistical Test**:

* **Hypotheses for Overall Conversion**:
  + Null Hypothesis (H₀): There is no significant effect of out-of-stock items on overall conversion rates.
  + Alternative Hypothesis (H₁): There is a significant effect of out-of-stock items on overall conversion rates.
* **Regression Results for Overall Conversion**:
  + Coefficient (Out of stock Items per restaurant): -0.000393747
  + t-statistic: -3.50914253
  + p-value: 0.000505899
* **Hypotheses for Conversion Change**:
  + Null Hypothesis (H₀): There is no significant effect of out-of-stock items on conversion change.
  + Alternative Hypothesis (H₁): There is a significant effect of out-of-stock items on conversion change.
* **Regression Results for Conversion Change**:
  + Coefficient (Out of stock Items per restaurant): -0.005642355
  + t-statistic: -2.712890472
  + p-value: 0.006986746

**Results**:

* The regression analysis indicates a statistically significant negative relationship between out-of-stock items and overall conversion rates (β = -0.000393747, p = 0.000505899).
* The regression analysis also indicates a statistically significant negative relationship between out-of-stock items and conversion change (β = -0.005642355, p = 0.006986746).

**Conclusion**:

* The results provide evidence to support the hypothesis that out-of-stock items have a significant negative effect on both overall conversion rates and conversion change.

**Discussion**:

* Higher numbers of out-of-stock items may contribute to lower conversion rates and a negative change in conversion, as indicated by the negative coefficients.
* Ensuring better stock availability could potentially improve overall conversion rates and stabilize or positively affect conversion change, benefiting overall conversion metrics.

### Hypothesis 5: Success Rate of Payments and Overall Conversion

**Rationale**: Higher success rates of payments correlate with higher overall conversion rates.

**Data Analysis**:

* Data was analyzed for "Success Rate of payments" and "Overall conversion" to investigate their relationship.
* A regression analysis was performed to quantify the effect of the success rate of payments on overall conversion rates.

**Statistical Test**:

* **Hypotheses**:
  + Null Hypothesis (H₀): There is no significant effect of the success rate of payments on overall conversion rates.
  + Alternative Hypothesis (H₁): There is a significant effect of the success rate of payments on overall conversion rates.
* **Regression Results**:
  + Coefficient (Success Rate of Payments): 0.034237424
  + t-statistic: 1.171638402
  + p-value: 0.242108592

**Results**:

* The regression analysis indicates a non-significant relationship between the success rate of payments and overall conversion rates (β = 0.0342, p = 0.2421).

**Conclusion**:

* The results do not provide sufficient evidence to support the hypothesis that the success rate of payments has a significant effect on overall conversion rates.

**Discussion**:

* The non-significant p-value suggests that variations in the success rate of payments do not have a substantial impact on overall conversion rates within this dataset.
* While the coefficient is positive, indicating a potential positive relationship, the lack of statistical significance means we cannot confidently assert this relationship.
* Additional factors or larger sample sizes might be needed to uncover any potential effect.

## Conclusion

This report analyzed food delivery’s app performance in 2019 using the Funnel Case Study Data, focusing on order trends, traffic sources, and conversion rates. Key insights were drawn from the Session Details, Channel Wise Traffic, and Supporting Data worksheets.

#### Hypotheses

1. **Order Trends**:
   * **Hypothesis**: Fluctuations in order volumes are primarily driven by variations in user traffic, promotional activities, and operational efficiency.
   * **Findings**: Peaks in orders corresponded with high user activity and effective marketing promotions. Drops in orders were linked to operational issues, lower traffic, and inventory shortages.
   * **Recommendations**: Implement dynamic pricing for delivery and packaging charges, improve inventory management, and enhance payment gateway reliability.
2. **Traffic Analysis**:
   * **Hypothesis**: Changes in traffic sources significantly impact overall user engagement and order volumes.
   * **Findings**: High traffic days were driven by successful promotions on social media platforms like Facebook and Twitter. Low traffic days were due to sharp declines in social media referrals.
   * **Recommendations**: Optimize traffic channels to maintain consistent growth and investigate external events and internal changes on dates with significant traffic changes.
3. **Conversion Rates**:
   * **Hypothesis**: Conversion rates are affected by the user journey experience, including payment reliability and cart abandonment rates.
   * **Findings**: Overall conversion rates showed notable declines due to payment gateway issues and high cart abandonment rates. Specific steps in the conversion funnel (L2M, M2C, C2P, P2O) were impacted by factors such as high charges and inventory shortages.
   * **Recommendations**: Focus on identifying bottlenecks in the conversion funnel, improve user experience, and enhance promotional campaigns.

#### Key Findings:

1. **Order Trends**:
   * **Peaks and Drops**: Orders peaked on days with high user activity and effective marketing promotions. Significant drops were linked to operational issues, lower traffic, and inventory shortages.
2. **Traffic Analysis**:
   * **High Traffic Days**: Significant spikes on 17-01-2019, 22-01-2019, and 27-06-2019 were driven by traffic from Facebook and Twitter, indicating successful promotions or external events.
   * **Low Traffic Days**: Notable drops on 10-01-2019, 29-01-2019, and 20-06-2019 were due to sharp declines in social media referrals, suggesting potential systemic issues.
3. **Conversion Rates**:
   * **Fluctuations**: Overall conversion rates showed notable declines due to payment gateway issues and high cart abandonment rates. Specific steps (L2M, M2C, C2P, P2O) were impacted by high charges and inventory shortages.

#### Summary of Analysis:

* **Order Drops**: Major reasons included lower overall conversion rates and traffic issues. Addressing these through conversion rate optimization, traffic boosting strategies, and competitor monitoring can help reduce order drops.
* **Order Hikes**: Effective marketing efforts, higher conversion rates, and promotional campaigns were key drivers. Continued investment in marketing and conversion optimization, coupled with strategic promotions, can sustain order growth.
* **Traffic Changes**: Significant traffic changes correlated with external promotions and systemic issues. Further analysis of these correlations can provide insights for strategic planning.
* **Conversion Analysis**: Key dates with low and high conversion rates were identified, with specific issues and recommendations provided for each step in the conversion funnel.

#### Final Recommendations:

* **Dynamic Pricing**: Adjust delivery and packaging charges dynamically to improve user satisfaction and conversion rates.
* **Inventory Management**: Enhance inventory management to reduce out-of-stock items.
* **Payment Gateway Reliability**: Improve the reliability of payment gateways to increase the success rate of transactions.
* **Traffic Optimization**: Focus on high-performing traffic channels and investigate reasons behind significant traffic changes.
* **User Experience**: Continuously optimize the user journey from listing to order completion, addressing specific bottlenecks at each stage.

By implementing these recommendations, Swiggy can enhance user experience, boost order volumes, and drive sustainable growth.

## Appendices

#### Appendix A: Session Details

Detailed session data including:

* **Day**: Day of the week.
* **Date**: Specific date.
* **Listing**: Users viewing restaurant listings.
* **Menu**: Users viewing specific menus.
* **Carts**: Users adding items to carts.
* **Payments**: Users proceeding to payment.
* **Orders**: Successful orders.
* **Overall Conversion**: Percentage of users completing purchase.
* **Order Change**: Change in orders compared to last week.
* **Traffic Change**: Change in user traffic compared to last week.
* **Conversion Change**: Change in conversion rate compared to last week.
* **L2M**: Listing to menu conversion rate.
* **M2C**: Menu to cart conversion rate.
* **C2P**: Cart to payment conversion rate.
* **P2O**: Payment to order conversion rate.
* **Change Status**: Status of order, traffic, and conversion changes.

#### Appendix B: Traffic Sources

Traffic source data including:

* **Date**: Specific date.
* **Facebook**: Users from Facebook.
* **Twitter**: Users from Twitter.
* **Youtube**: Users from youtube.

#### Appendix C: Supporting Data

Additional metrics affecting user experience:

* **Day**: Day of the week.
* **Date**: Specific date.
* **Count of Restaurants**: Total listed restaurants.
* **Average Discount**: Average discount per restaurant.
* **Out of Stock Items**: Average out-of-stock items per restaurant.
* **Packaging Charges**: Average packaging charges.
* **Delivery Charges**: Average delivery charges.
* **Avg Cost for Two**: Average cost for two to dine.
* **Images per Restaurant**: Average images per restaurant.
* **Payment Success Rate**: Success rate of payments.

#### Appendix D: Hypotheses

1. **Order Trends**:
   * Hypothesis: Order volume changes are driven by user traffic, promotions, and operational efficiency.
2. **Traffic Analysis**:
   * Hypothesis: Traffic source variations significantly impact engagement and orders.
3. **Conversion Rates**:
   * Hypothesis: Conversion rates are influenced by user journey experience, payment reliability, and cart abandonment.

#### Appendix E: Key Insights and Recommendations

1. **Order Trends**:
   * **Insight**: Order volume corresponds with user activity and efficiency.
   * **Recommendation**: Implement dynamic pricing, improve inventory, enhance payment gateways.
2. **Traffic Analysis**:
   * **Insight**: High traffic from effective social media promotions.
   * **Recommendation**: Optimize traffic channels for growth.
3. **Conversion Rates**:
   * **Insight**: Conversion affected by payment issues and cart abandonment.
   * **Recommendation**: Address bottlenecks in the conversion funnel.

#### Appendix F: Data Tables

Detailed tables used in the analysis:

1. **Session Details Table**
2. **Traffic Sources Table**
3. **Supporting Data Table**

These tables provide comprehensive data supporting the findings and recommendations.

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