A/B Test Analysis : Foodtech Company

PRESENTED BY

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A/B Test Full Analysis & Business Recommendations

- A UK-based foodtech company conducted an A/B test to evaluate whether displaying larger food images on restaurant menu cards improves conversion rates.
- Test Duration: November 25 – November 30, 2024
- Location: London
- Groups:
  - Control Group (Smaller images) Contains 65,000 Users
  - Test Group (Larger images) Contains 35,000 Users
- Goal: Determine if larger images lead to higher conversion rates.
- Key Metrics: Conversion Rate, Drop-Off Rate, Engagement Behaviour

Conversion Rate Analysis

Key Findings From Analysis

- The **Test Group (Larger Images) had a higher conversion rate**, but the increase was relatively small.
- **Larger images helped users make faster purchasing decisions**, but they did **not drastically increase total purchases**.

Metric	Control Group	Test Group (Larger Images)	Difference
User-Based Conversion Rate (%)	38.2%	39.6%	**+1.4% increase**
Session-Based Conversion Rate (%)	24.6%	25.8%	**+1.2% increase**

Statistical Significance of Conversion Rates

We conducted a **Chi-Square test** to determine if the differences in conversion rates were **statistically significant**.

Entry to Shop → Order Paid (NOT Significant)

Metric	Result
Chi-Square Statistic	0.50
P-Value	0.479
Statistical Significance?	❌ NOT significant

Key Findings:
•The difference in conversion rates from entering a shop to placing an order is NOT statistically significant.
•This means larger images did not significantly affect the likelihood of users placing an order after viewing a restaurant.

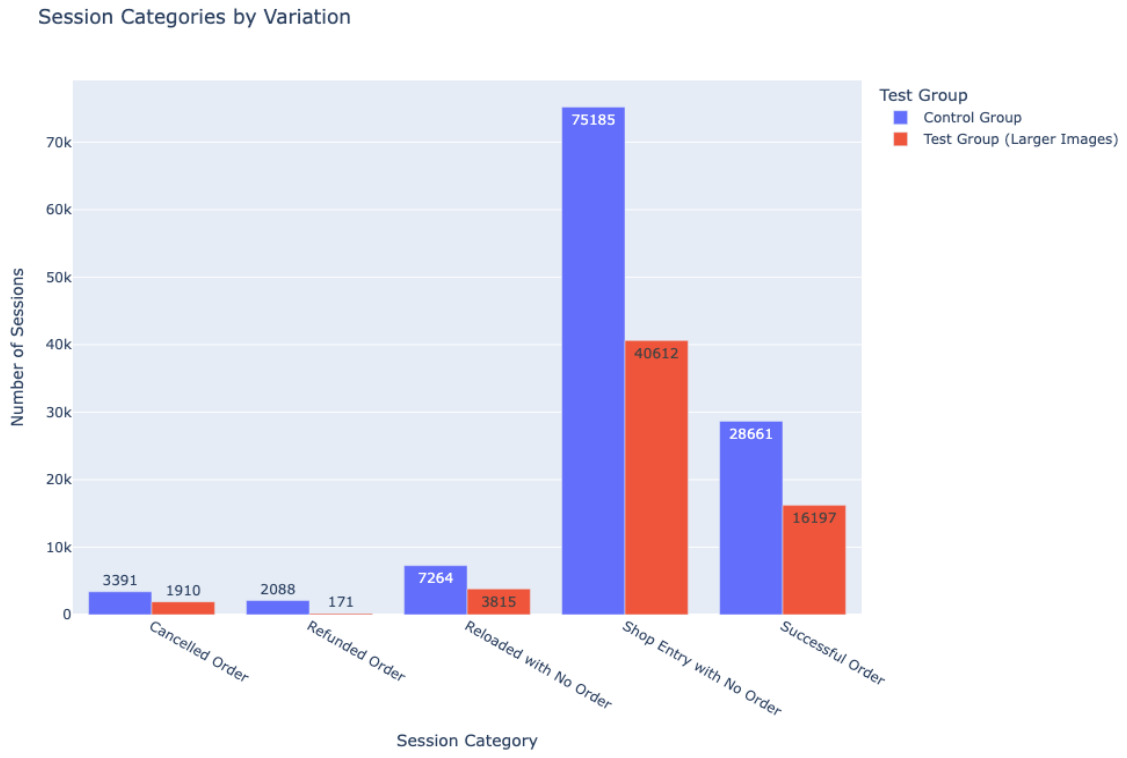
Entry to Shop → Successful Order (Statistically Significant)

Metric	Result
Chi-Square Statistic	18.42
P-Value	0.0000177
Statistical Significance?	✅ Significant

Key Findings:
•Larger images significantly increased the likelihood of a successful order.
•The Test Group had fewer order cancellations and refunds, meaning larger images helped users feel more confident in their choices..

DROP OFF RATE & USER ENGAGEMENT

- Most users drop off at the "Entry to Shop" stage, meaning they enter a restaurant but do not proceed to order.
- Reloading the page is a key behavior, suggesting users are browsing different restaurants before committing to a decision.
- The Test Group had fewer cancellations and refunds, meaning larger images helped users make more confident purchase decisions.

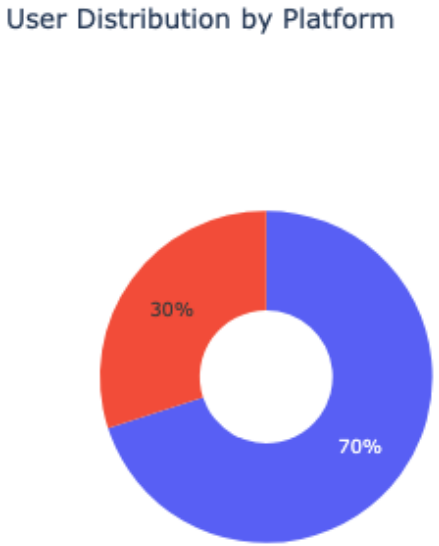


Drop-Off Stage	Control Group	Test Group (Larger Images)	Observation
Entry to Shop (Abandonment before order)	High	High	**Major drop-off occurs here**
Reload Page (Looking for more options)	Moderate	Moderate	**Users explored multiple restaurants before deciding**
Cancellation Rate	Higher	Lower	**Fewer cancellations in the Test Group**
Refund Rate	Higher	Lower	**Fewer refund requests in the Test Group**

Platform-Based Conversion Rates (iOS vs. Android)

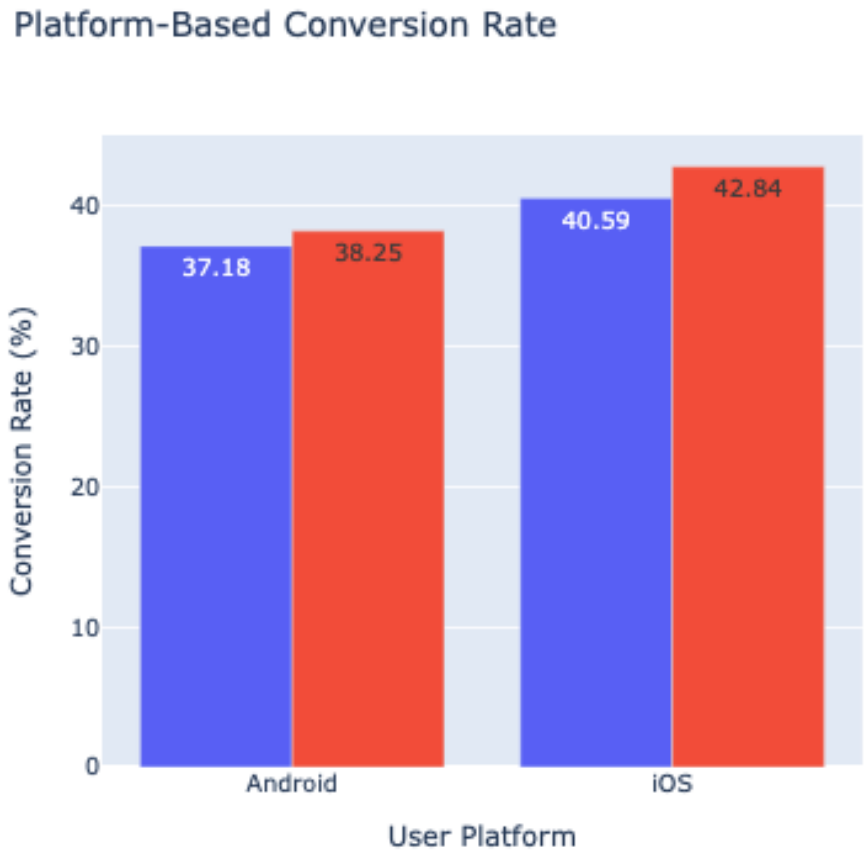
Key Findings

- More users come from Android compared to iOS.
- Test Group (Larger Images) performed better on both platforms
- iOS users were more likely to complete purchases compared to Android users.
- The increase in conversion rate was larger for **iOS (+2.25%)** than **Android (+1.07%)**.
- This suggests that iOS users rely more on visuals when making purchase decisions.



Conversion Rate (%)

Platform	Control Group	Test Group
Android	37.18%	**38.25%**
iOS	40.59%	**42.84%**



DECISION SPEED: HOW LONG BEFORE USER ORDER

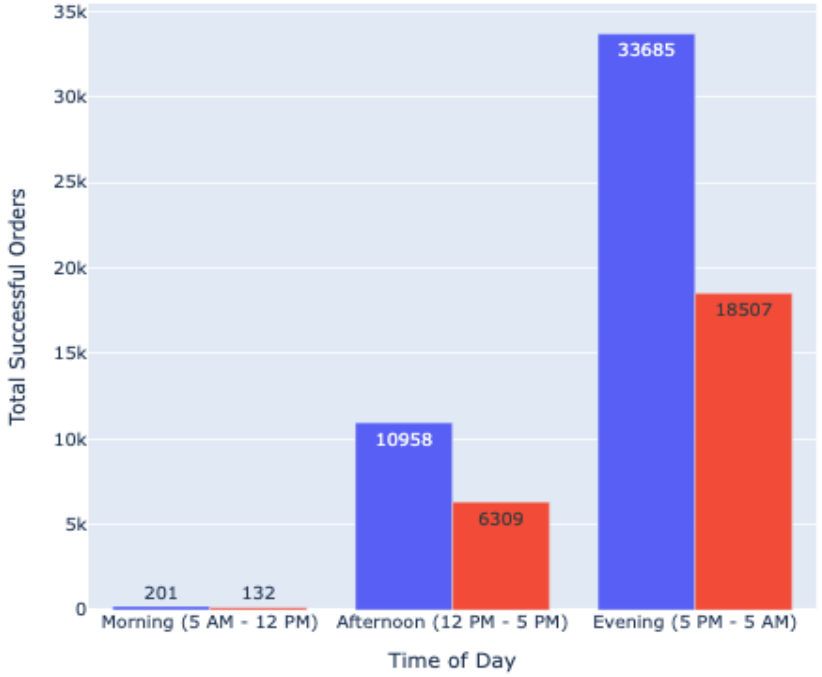
- Users in the Test Group made decisions faster, placing an order ~1.2 minutes quicker than the Control Group.
- They also required fewer sessions before converting, meaning they needed fewer visits before making a purchase.

Metric	Control Group	Test Group (Larger Images)	Difference
Avg Time Before Ordering (Minutes)	5 min	**3.8 min**	**1.2 min faster in the Test Group**
Avg Sessions Before Conversion	4.07	**3.87**	**Test Group converted faster**

Analysis by Time of Day

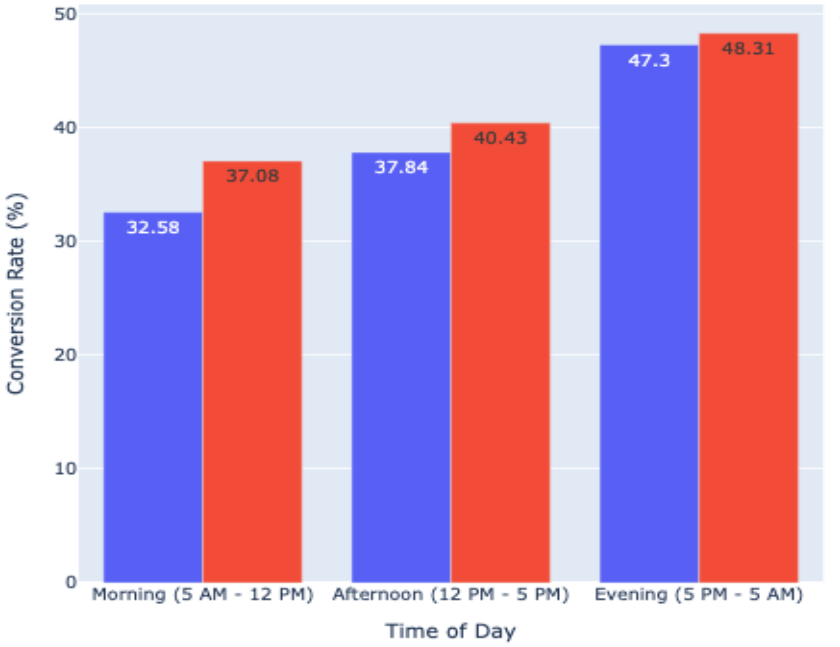
Total Successful Orders by Time Period

Time Period	Control Group	Test Group
Morning (5 AM - 12 PM)	**201**	132
Afternoon (12 PM - 5 PM)	**10958**	6309
Evening (5 PM - 5 AM)	**33685**	18507



Conversion Rates by Time Period

Time Period	Control Group	Test Group
Morning (5 AM - 12 PM)	32.58%	**37.08%**
Afternoon (12 PM - 5 PM)	373.84%	**40.43%**
Evening (5 PM - 5 AM)	47.30%	**48.31%**



RETURNING USER AND REPEAT ORDER

- The Test Group did not significantly impact repeat orders.
- Users returned to order again at the same rate, meaning larger images did not influence long-term retention.

Metric	Control Group	Test Group (Larger Images)	Observation
Returning Users Rate (%)	8.22%	**8.17%**	**No major difference**
Avg Time Between Repeat Orders (Hours)	40.29 hrs	**39.88 hrs**	**Minimal difference**

Final Recommendation

Larger images did not increase initial order placements but DID significantly improve successful order completion.

Users who ordered were more likely to keep their orders, reducing cancellations and refunds.

The business should adopt larger images but focus on improving restaurant discovery and pricing transparency to increase order placements.

Peak ordering times were in the evening (6 PM – 9 PM), aligning with dinner hours.

Run promotions during high-converting time slots to further boost engagement.

Consider incentives during late night orders like free delivery, or buy 1 get 1 free.

Over half of users drop off after entering a shop without ordering, meaning restaurant selection is a major issue.

Improve Restaurant Discovery & Filtering to Reduce Entry Drop-Off

Improve restaurant layout and search functionality add best sellers, top orders .

Add customer reviews, price estimates, and estimated delivery times upfront.

Larger images had a greater impact on iOS users than Android users

Leverage larger images in marketing for iOS users, as they responded better to the visual change.

Investigate why Android users converted at a lower rate, despite higher traffic.

Enhance Android UX/UI improvements to close the gap between Android and iOS conversions.

One important factor that must be considered is that this test was conducted during Black Friday week (November 25 - November 30, 2024). This may have artificially inflated conversion rates, impacting the results.

The company should conduct a follow-up A/B test outside of Black Friday to validate the findings.

Should the Business Adopt Larger Images?

✅ **Yes, but with improvements!**

Larger images help users order faster and **reduce refunds and cancellations.**

However, they do not significantly increase total conversions on their own.

The company should pair this update with restaurant search and filtering improvements.