

Online Store Revenue Growth



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Business Objective:
Increase entire Online
Store's revenue by 5%

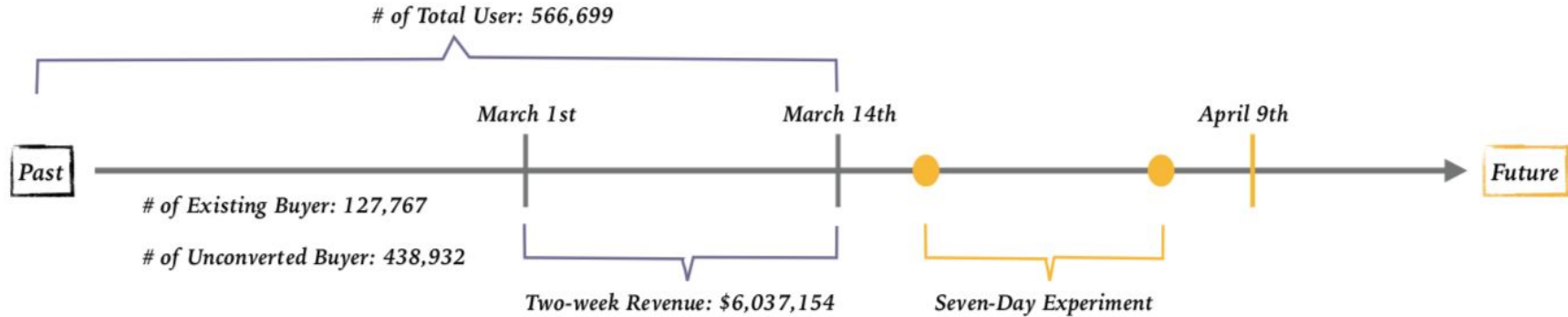
Exploratory Analysis

Motivation & Hypothesis

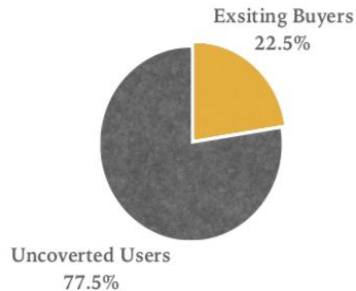
Implementation

Recommendation & Conclusion

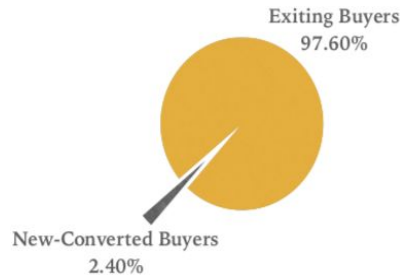
Key to Revenue Growth: Convert more Users & Encourage Users to add Payment Methods



Buyers' Composition



Two-Week Revenue Distribution



- Out of the all 0.57 million existing users, we had 77.5% remained unconverted . During the 14-day, the new converted bring 146k in sales. Therefore, converting more users is one way to boost revenue.
- Another key is to grow the size of pie by exploiting buyers' purchase power by adding (more) payment methods.

Over 95% of the Revenue Generated by Active Buyers

Group 1 Inactive I

- Users had never made purchase before
- Users did not purchase for last 8 weeks

Group 2 Potential

- Users who purchased before
- But did not purchase for last 8 weeks

Group 3 Inactive II

- No purchase history
- But purchased for last 8 weeks

Group 4 Active

- Purchased before
- Purchased items for last 8 weeks

Over 99% of the Revenue Generated by Buyers with Payment Methods Added

$6 < N_{\text{week}} \leq 8$

- If the user had ever added any payment methods: \$2,781,459
- If not: \$1,584

$4 < N_{\text{week}} \leq 6$

- If the user had ever added any payment methods: \$1,336,094
- If not: \$1,029

$2 < N_{\text{week}} \leq 4$

- If the user had ever added any payment methods: \$983,628
- If not: \$948

$0 < N_{\text{week}} \leq 2$

- If the user had ever added any payment methods: \$671,185
- If not: \$2,778

Group of Active

*Number of weeks(N_{week}) when user make a purchase during the 8-week

Opportunity in Raising “Place Order” Rate among Non-US Users

- In every part of the funnel, from top to bottom, US users have higher conversion rate than non-US users.
- Among the US users who clicked on “check out” button, 54.3% proceeded to click “place order”, while for non-US users the rate was only 23.8%, which suggesting opportunity for improvement.
- Similarly, the final rate of successful purchase is 4.6% higher in US.
- The last two bullets suggest non-US users might have **difficulties** in making payments or letting the payment go through, which might depend on the payment methods.

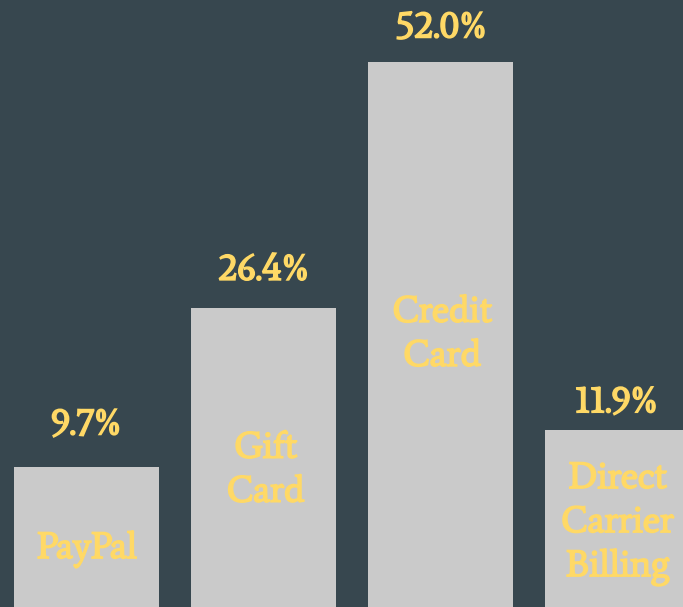


US Users		Non-US Users	
# of User	Conversion	# of User	Conversion
66,046		500,653	
↓	89.9%	↓	87.1%
59,375		436,265	
↓	97.1%	↓	92.9%
57,668		405,092	
↓	54.3%	↓	23.8%
31,336		96,431	
↓	85.4%	↓	80.8%
26,756		77,887	

Credit card is popular among Non-US Buyers who Successful Made Purchase

Findings

- Credit Card is the mainstream form of payment for non-US users who made purchase before.
- Gift Card also has a high penetration among non-US users, second to Credit Card, may be due to the availability.
- While online payment is becoming more and more popular, it's expected that Direct Carrier Billing will be a good choice.
- PayPal can be the key to improve transaction rate, when we take bank decline, risk decline and errors into consideration.



Recap & Hypothesis

Convert More Users into Active Group

Remind them to add a credit card once they create an account

Remind them to add a credit card every time they purchase

Reward them with a small amount gift card once they add a new payment method

According to previous exploratory analysis, we could conclude that:

- Over 95% of the revenue generated by active buyers.
- Among active users, over 99% of the revenue generated by buyers with payment methods added.
- From the purchase funnel, non-US users showed higher drop-off rate.
- Among non-US users who successfully made purchased, credit card is the mainstream form of payment.

Hypothesis:

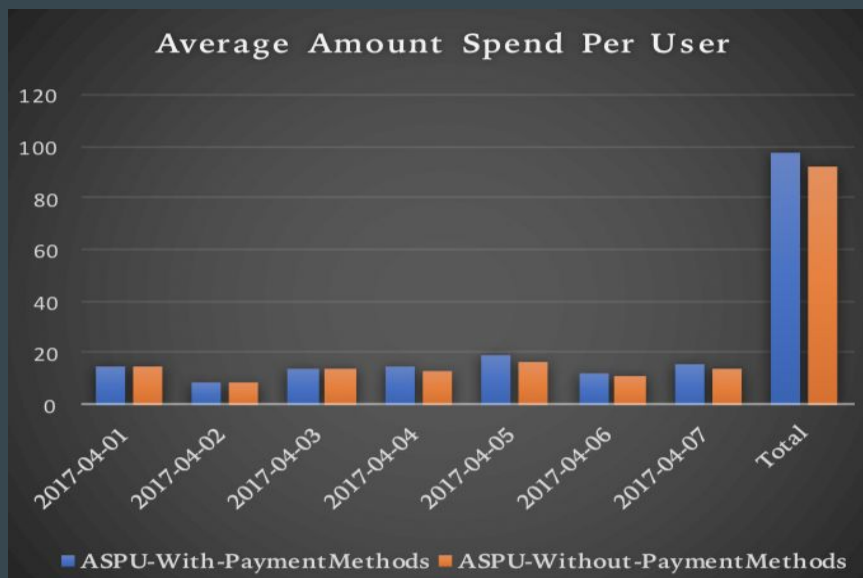
We assume that if the users have payment methods added, they will spend more money and make more purchases than the users without any payment method added

Experiment Implementation & Results

Group A	Group B	Keep Track	Success Metric
Receive push notifications of adding credit cards or any other payment methods, or get prompt of using the existing payment methods when making transactions	As Before	Keep track of the users' expenses at the Online Store for one week From 2017-04-01 To 2017-04-07	Percentage lift on revenue
 <p>Randomly divide users into two groups</p>			

Experiment Implementation & Result

	04-01	04-02	04-03	04-04	04-05	04-06	04-07	Total
AASPU-With Payment Method	14.4	8.7	13.8	14.7	19.1	11.6	15.5	97.8
AASPU-Without Payment Method	14.4	8.2	14.1	13.1	16.7	11.0	14.0	91.5



Revenue Increase(Overall)

6.6% > 5%

A/B Test Results Analysis:

T-statistics = 2.363 > 2.326

2.326 is for $df \gg 120$, Two-Tailed Test

P-value < 0.02

Experiment Conclusion: It's relatively safe to say that adding payment methods will increase the average amount of money spent per user

Recommendation & Conclusion

Recommendation 1

- Remind them to add a credit card once they create an account

Recommendation 3

- Reward them with a small amount gift card once they add any new payment methods, especially for adding gift card and credit card

Recommendation 2

- Remind them to add a credit card every time they purchase

Recommendation 4

- For users who unsaved payment method, email them with a coupon for saving a payment method