

A/B Test Result for Free Shipping Bar

01. Executive Summary

We suggest **NOT** rolling out the variation group - adding a free shipping bar under the checkout button. Because

a) **overall add-to-cart rate** doesn't have statistically significant improvement at both session-level and customer level,

b) **overall conversion rate** doesn't have statistically significant improvement at both session-level and customer level,

c) **revenue** doesn't have a statistically significant improvement in the variation group.

Although the free shipping bar seems to encourage our existing customers to convert faster, it didn't increase the shopping frequency nor did it increase our revenue. On the other hand, it would discourage new customers from purchasing when they see the minimum threshold is beyond reach. Certain product categories (dress, skirt) are easier to reach the free shipping threshold. Therefore more likely for customers to convert, while other categories may have a negative effect.

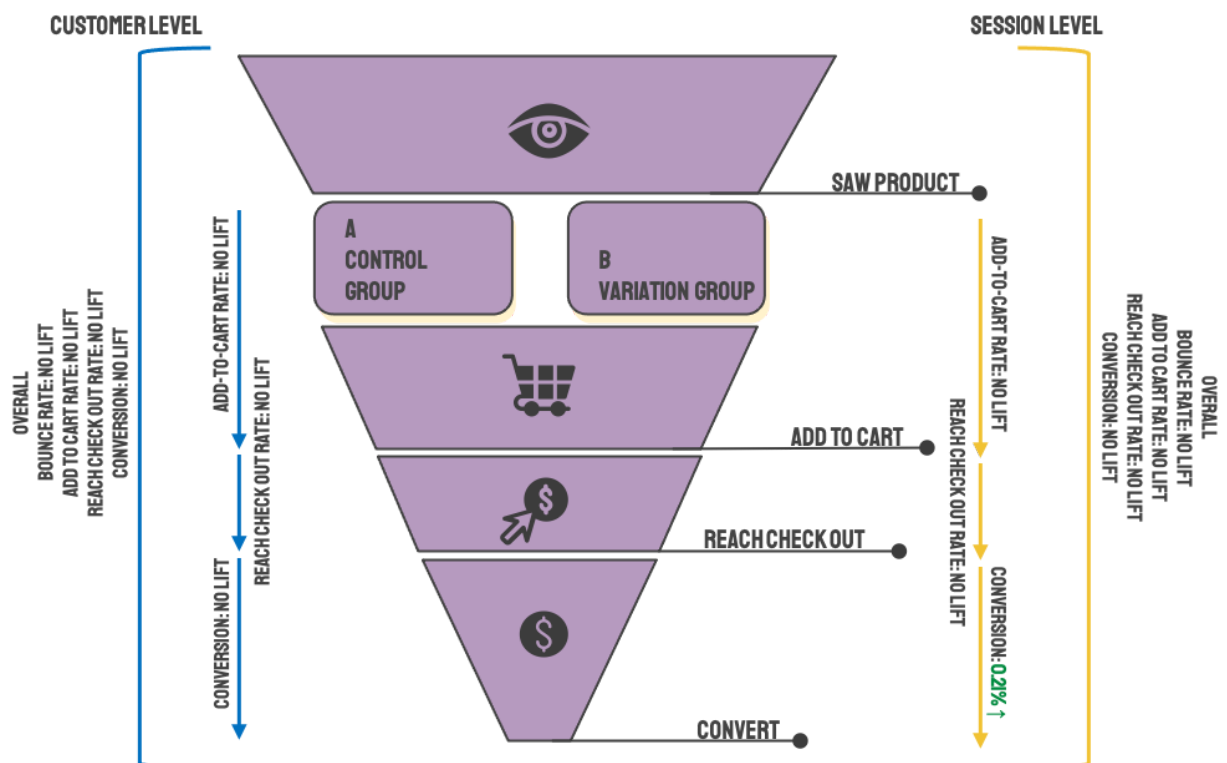


Image - 1 Customer Journey Funnel along with Key Metrics

02. Test Details

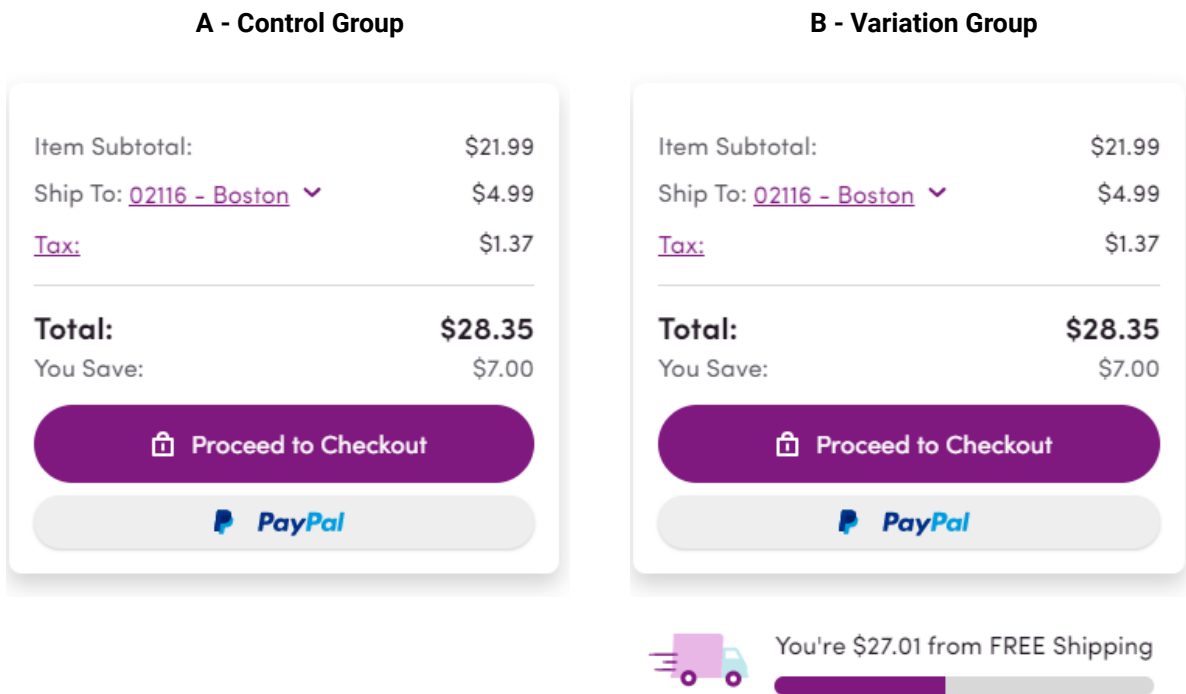


Image - 2 A/B Group Version

- **Test Duration:** 2019/06/14 - 2019/7/12
- **Device:** Desktop
- **Hypotheses** (metric growth estimation based on past test library):
 1. Adding a Free Shipping Bar under the checkout button will increase the overall add-to-cart rate by **0.5%**
 2. Adding a Free Shipping Bar under the checkout button will increase the overall checkout rate by **0.35%**
 3. Adding a Free Shipping Bar under the checkout button will increase revenue by **0.25%**

03. Result Analysis

i) Overall (see appendix 1 for data)

_____ A free shipping bar seems to encourage conversion when consumers are ready to checkout. It is possible that consumers who already reached the minimum threshold would proceed through the conversion without hesitation. But it doesn't affect consumers who are still shopping around.

- **Observation:** We saw a statistically significant increase of **0.21%** in reach-checkout /conversion at session-level. However, we didn't see the same significant lift at the overall session-level.

ii) Product Category

Here, we obtained some insights regarding the product category. The dress category is a key revenue driver for the business. The free shipping bar didn't change the purchase category across the control and the variation group. We did see an increase in Reachedcheckout/Converted step for the dress (+0.24%) and the skirt category (+0.77%) but not at the overall level. We think the products in the dress and skirt category are more likely to help consumers reach the minimum free shipping threshold therefore proceed to the next step. It is also possible that consumers who purchase these two categories have more strong demand for the specific product. Vice Versa, if the amount to reach the minimum threshold for free shipping is still a couple more products to go, it would discourage consumers from purchasing, especially the shoe category (see examples of the decrease at customer level in the shoe category).

- **Observation:**

- We saw an increase of 0.24% in Reachedcheckout / Converted in the dress category and an increase of 0.77% in the skirt category while seeing a decrease of -1.09% in the shoe category at session-level. However, no significant changes happened at the overall session-level.
- In the shoe category specifically, we saw a decrease of 1.27% in AddedToCart/CusID and a decrease of 1.78% in Converted/CusID at the overall customer level. Also, there was a 1.45% increase in bounced rate after seeing the product page and a decrease of 1.04% in AddedtoCart/SawProduct.
- Revenue is evenly distributed across the control and variation groups. The dress has always been the top seller on the platform. Dress accounts for 72% of total revenue, followed by the skirt 9%, the pants 8%, the tops 5%, and the shoes 5-6%. See the chart below.

Total Revenue by Product Category

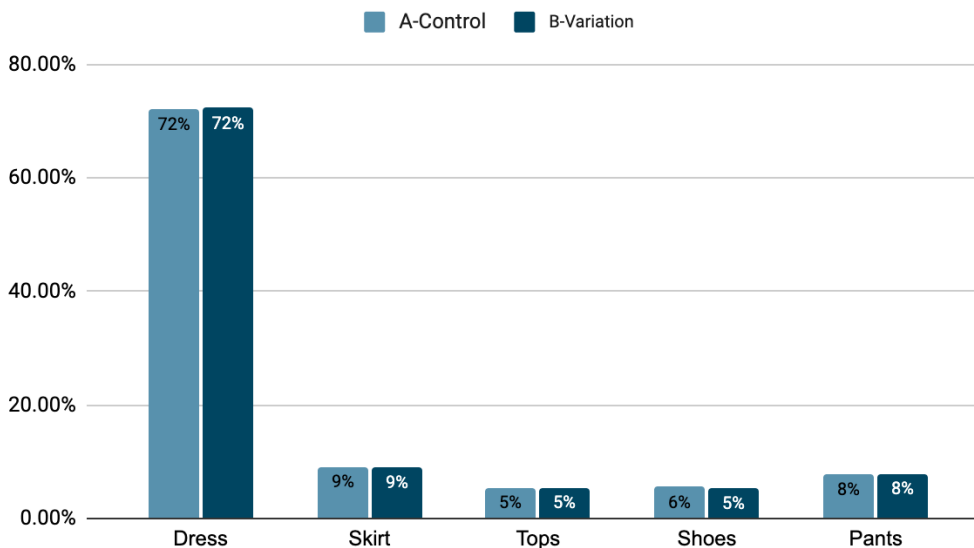


Image-3 Revenue Distribution across Product Category

iii) Visitor Type:

Free shipping bar may discourage consumers who are not familiar with our brand. As newbies to our brand, they seem to be more likely to give up their purchase if they didn't reach the minimum.

- **Observation:**
 - For the new visitors, we saw a decrease of 2.31% in ReachedCheckOut/SessionID and a decrease of 2.47% in Converted/SessionID. At the individual funnel level, we saw a 4.76% increase in bounce rate after seeing the product. Similarly, there was a decrease of 0.28% in AddedToCart/SawProduct and a 2.22% decrease in ReachedCheckOut/AddedToCart.
 - For email required visitors, we also saw a decreased AddedToCart/SawProduct of 0.45%.
 - No other significant changes for signed up with no purchase users and users with purchase history

iii) Marketing Channel

Normally, customers who came to our website via the retargeting campaign and paid search campaign usually are more familiar with our brand. We saw those customers are more likely to add products to their cart. Although there was a decrease in the step of added-to-cart to checkout, the overall added-to-cart rate increases, and no decrease in the overall checkout rate. One potential reason for this might be, customers who familiar with our brand are accumulating their potential purchase in the cart to reach the minimum threshold. They are regular shoppers.

- **Observation:**
 - For the retargeting audience, we saw an overall increased Add-to-Cart rate of 3.13% at the customer level. Similarly, a reduced bounce rate of 3.71% after seeing the product and a 2.25% increase in add-to-cart rate after seeing the product. However, there was -2.87% in ReachedCheckout/AddedtoCart.
 - For the paid search audience, we saw a +0.91% in added-to-cart at the overall customer level. Similarly, we observed a 0.70% increase in added-to-cart rate after seeing the product and a -0.74% from added-to-cart to reached-checkout.

04. Conclusion and Next Step

- Initially, the free shipping bar was expected to increase the total revenue within one order. However, we found that it didn't increase the add-to-cart rate nor as it increased the revenue. But we did find that existing customers with carts beyond the free shipping threshold are more likely to pull the trigger. But for new customers, the stated free shipping bar would discourage them from proceeding to the next step. This may be because their first purchase would be less likely more than \$100.
- Therefore, we suggest adjusting the minimum threshold for the new customers to increase their first conversion rate. Possible to provide first-timer coupon to help them easier to reach minimum shipping threshold

If you are interested in this project, please contact elenalamxd@gmail.com for more information.

- After rolling out this test, we need to closely monitor their following purchase frequency and the potential return request

05. Appendix

1) Overall Results

	Metric	Significant?	p-value	Percentage Lift	Absolute Lift
Customer Level	Bounced/CusID	N	0.4472	0.03%	0.01%
	AddedToCart/CusID	N	0.4202	-0.02%	-0.01%
	ReachedCheckout/CusID	N	0.3829	0.05%	0.02%
	Converted/CusID	N	0.2015	0.17%	0.06%
	Bounced/SawProduct	N	0.4791	0.01%	0.00%
	AddToCart/SawProduct	N	0.3247	-0.03%	-0.03%
	ReachedCheckout/AddToCart	N	0.3259	0.07%	0.04%
	Converted/ReachedCheckout	N	0.1429	0.12%	0.09%

	Metric	Significant	p-value	Percentage Lift	Absolute Lift
Session Level	Bounced/SessionID	N	0.4348	-0.03%	-0.01%
	AddedToCart/SessionID	N	0.3952	0.03%	0.01%
	ReachedCheckout/SessionID	N	0.4713	-0.01%	0.00%
	Converted/SessionID	N	0.1896	0.20%	0.02%
	Bounced/SawProduct	N	0.4262	0.03%	0.01%
	AddToCart/SawProduct	N	0.2160	0.09%	0.04%
	ReachedCheckout/AddToCart	N	0.3769	-0.04%	-0.02%
	Converted/ReachedCheckout	Y	0.0437	0.21%	0.15%

2) Revenue

	Significant?	p-value	Percentage Lift	Absolute Lift
Revenue	N	0.0706	-0.51%	-163%