Facebook Advertising Analysis Report

Group M

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Preview

- ❏ Key findings
- ❏ Analysis interpretations
- ❏ Conclusions
- ❏ Appendix

PART 01

Key Findings

- **Targeting & Advertisment Insights:**
  - Optimal choice of each factor:
    Cosmetic/Mobile/Photo Post/Higher Age Group
  - Design instruction: #Fashion & more specific CTA (Call to action)

- **New Design Experiment Insights:**
  - New design style is less appealing to older group
  - New design style underpeforms in retailer and department categories
  - Despite a dramatic increase in eCom for age 27, the increase in final average is cancelled out by the decreases above

PART 02

Targeting Insights

Cateory	Coefficient
Cosmetic	0.0
Retailer	-28.4
Department	-32.5
High End	-42.1
eCom	-42.6
General	-45.7

Ad Type	Coefficient
Photo Post	7.395
Link Post	0

Placement	Coefficient
mobile	33.65
desktop	0.0

Factor	Coefficient
ageMean	2.598849223

Finding:

Mobile Ads in **cosmetic** category, with **photo**, targeting **older group** tend to have a higher click per dollar.

Recommendation:

Allocate more budget and resources to ads with above attributes.

PART 02

Design Insights

Keywords	Coefficient
#Fashion	2.188221615
#Burlington Coat Factory	1.041831039
#Nordstrom	1.028788045
#Zappos.com	1.017145527
#Kate Spade	0.460312432
#Sears	0.211964143
#Bebe stores	0.013857282
#Talbots	-0.398454617
#Banana Republic (clothing retailer)	-0.711001132

Body	Coefficient
Click ""Like"" to see what's new in our stores for Spring!!	13.41
Click ""Like"" to become a fan of Retail Store X!	12.74
Share your favorite fresh Spring looks on our Facebook page. Click ""Like"" now!	12.04
What's your favorite Spring fashion trend? ""Like"" us and share!	0.51
Check out a sneak peak of what's new in our stores!	0.00
Need inspiration for your spring wardrobe? ""Like"" us for more!	-0.03

Finding:

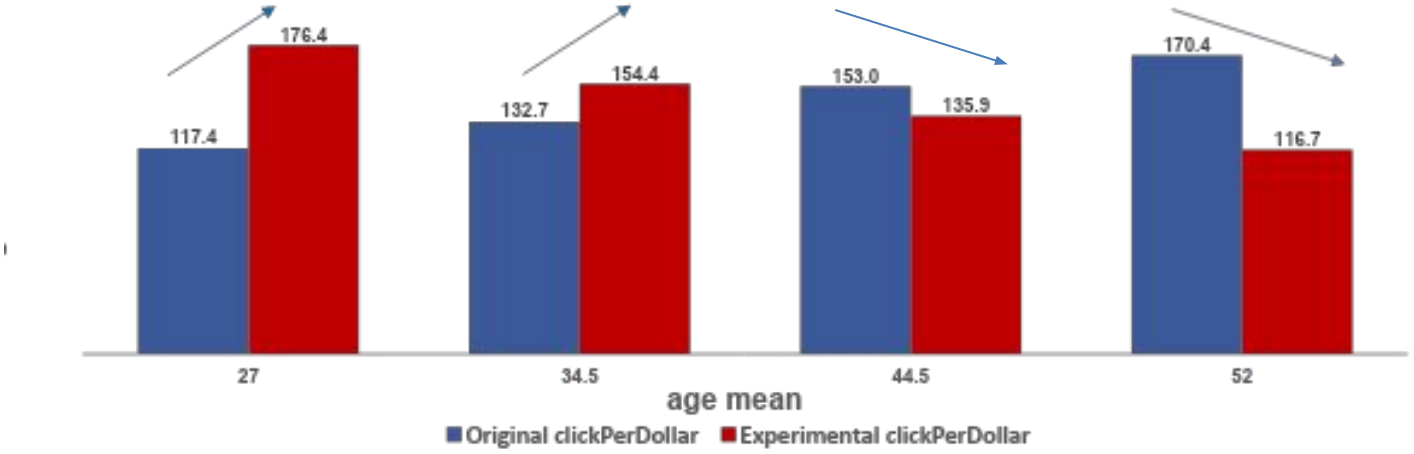
Ads with keywords including **Fashion** and body text with clear CTA such as “**click**” tend to have a higher click per dollar.

Recommendation:

Use clearer CTA text and fashion hashtag (when relevant) in future ad design.

PART 03

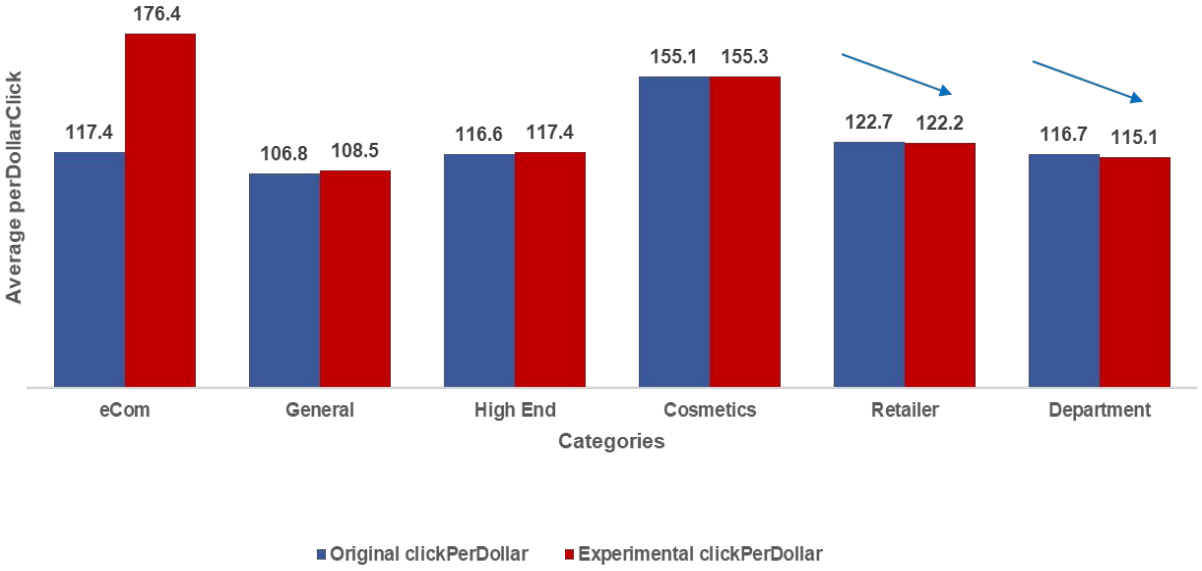
Experiment Insights - Age



There is a **50.3%** increase in the 27-year-old group and a **16.4%** increase in the 34.5-year-old group but the **average increase is offset by the decrease in age 44.5 and 52**.

PART 03

Experiement Insights - Category



After the new design, click per dollar increases significantly in the eCom category.

The increase is cancelled out by the decrease in retailer and departement categories.

PART 04

Conclusions

- **Targeting & Advertisments:**
  - Target with a focus on the following attributes Cosmetic/Mobile/Photo Post/Higher Age Group
  - Design text with #Fashion when relevant and more specific CTA

- **New Design Experiment:**
  - New design style is less appealing to older group, and underperform in retail and department categories.
  - Consider the tradeoff effects while applying new design, narrow down the target group to lower the spending.

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— Appendix —

Analysis Process

- **Predict the clickPerDollar by using regression result:**

```
> lmFB<- lm(clickPerDollar~factor(adType)+factor(category)+factor(placement)+factor(keywords)+
                factor(body)+ageMean,data=df)
  summary(lmFB)
  predict<- predict(lmFB,data=df)
  df_add<- cbind(df,predict)
```

- **Results of predicted clickPerDollar:**

predict
136.15496
136.15496
98.86373
232.02859
189.92759
203.62600

Analysis Process

- **Calculate the total margin and predicted score by using the formulas:**
- Total margin = 0.006*clickPerDollar
- Predicted score=Value/Dollar Spend = Total margin/$1

```
> df_add$Score<- 0.006* df_add$predict/1
```

Score
0.8169298
0.8169298
0.5931824
1.3921715
1.1395655
1.2217560

Analysis Process

- **Calculate the Extend(Whether targeted or not):**
- If Score -1>10%, then extend
- If Score-1<10%, then not extend

```
> df_add$Extend <- ifelse(df_add$Score-1>0.1,"Yes","No")
```

Extend
No
No
No
Yes
Yes

Analysis Process

- **Coefficient of linear regression to see the impact of each factor on clickPerDollar**

Ad Type	Coefficient
Photo Post	7.395
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Check out a sneak peak of what's new in our stores!	0.00
Need inspiration for your spring wardrobe? ""Like"" us for more!	-0.03

Factor	Coefficient
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Analysis Process

- Coefficient of linear regression to see the impact of each factor on clickPerDollar

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#Kate Spade	0.460312432
#Sears	0.211964143
#Bebe stores	0.013857282
#Talbots	0.009304753
#Banana Republic (clothing retailer)	-0.028767596
#Lucky Brand Jeans	-0.167120003
#American Eagle Outfitters	-0.200383135
#Shopping	-0.395438973
#Amazon.com, #EBay	-0.421027283
#Macy's	-0.575275429
#Dillard's	-0.629958840
#Gap (clothing retailer)	-0.741171679
#Anthropologie	-1.223708115
#Almay, #Clinique, #CoverGirl, #Maybelline, #Sephor	-1.319534778
#Kohl's	-1.650175901
#Lululemon Athletica	-1.740609691
#Urban Outfitters	-1.888073618
#Kmart	-2.242983779
#Old Navy	-2.283173747
#Ann Taylor (clothing retailer)	-3.288650147

Analysis Process

- **Linear regression with interaction effect of the experimental data**

```
> lmFB1<- lm(clickPerDollar~factor(adType)+factor(category)*ageMean+factor(placement)+factor(keywords)+
+               factor(body),data=df)
> summary(lmFB1)
```

```
factor(category)Department:ageMean                0.41373
factor(category)eCom:ageMean                     -0.36125
factor(category)General:ageMean                   0.36446
factor(category)High End:ageMean                  0.15944
factor(category)Retailer:ageMean                  0.33229
```

- **Linear regression with interaction effect of the experimental data**

```
> lmFB2<- lm(clickPerDollar~factor(adType)+factor(category)*ageMean+factor(placement)+factor(keywords)+
+                factor(body),data=df1)
> summary(lmFB2)
```

```
factor(category)Department:ageMean                0.430942
factor(category)eCom:ageMean                     -4.802540
factor(category)General:ageMean                   0.300612
factor(category)High End:ageMean                  0.079857
factor(category)Retailer:ageMean                  0.381682
```